

REVISION OF AUSTRALIAN OENOCHROMIDAE (LEPIDOPTERA). III*.

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[Read 21st May, 1930.]

Genus 25. OENOCHROMA.

Gn., *Lep.*, ix, p. 184; Prout, *Gen. Insect.*, *Oenochrom.*, p. 40.

Face with short anterior cone of scales. Palpi moderately long, obliquely ascending; second joint thickened, with loosely appressed hairs; terminal joint short, obtuse, porrect. Antennae of ♂ unipectinate, towards apex simple. Thorax stout; densely hairy beneath. Femora hairy. Fore tibiae sometimes with an apical hook. Forewings with 5 from middle of cell, 9 and 10 long stalked, 9 anastomosing with 8 forming a long and extremely narrow areole (probably the connection formed by the basal part of 9 not always developed), 11 free but closely approximated to both 10 and 12. Hindwings with 3 and 4 closely approximated at origin or connate, 5 from middle of cell, 6 and 7 closely approximated at origin or connate, 12 closely approximated to middle third of cell, thence diverging. Type *O. vinaria* Gn.

A characteristically Australian genus of moderate size showing little variation in structure, except that a hook is developed on the fore tibiae in the four species, *pallida*, *privata*, *polyspila* and *cynoptera*. This should not lead to generic separation, as these species are normal in all other respects, and do not seem to be specially closely allied. *O. vinaria* which has no tibial hook is very closely allied to *pallida*. The tarsi are spinulose except in *O. infantilis*.

Key to Species.

1. Hindwings with termen straight or nearly so 2
Hindwings with termen not straight 7
2. Forewings with apices shortly falcate 3
Forewings with apices not falcate 4
3. Fore tibiae without apical hook *vinaria*. 159
Fore tibiae with apical hook *pallida*. 160
4. Fore tibiae with apical hook; wings with postmedian transverse band best marked on underside *privata*. 163
Fore tibiae without apical hook; wings without postmedian band 5
5. Forewings without trace of antemedian line *orthodesma*. 161
Forewings with a dotted antemedian line 6
6. Wings and markings more or less tinged with crimson *phyllomorpha*. 162
Wings without any crimson tinge *subustaria*. 164
7. Hindwings rounded 8
Hindwings angled at or beneath middle 16
8. Forewings green or greenish-tinged 9
Forewings not greenish 10

* Continued from these PROCEEDINGS, IV, 1930, 40.

9. Forewings with an oblique yellow postmedian line *cerasiplaga*. 165
Forewings with postmedian line very obscure, whitish *infantilis*. 173
10. Forewings with three oblique reddish lines *ochripennata*. 166
Forewings not so 11
11. Wings with numerous whitish spots *polyspila*. 167
Wings without whitish spots 12
12. Forewings with a whitish-edged subterminal line 13
Forewings without subterminal line 14
13. Hindwings with transverse hyaline discal mark *turneri*. 170
Hindwings without hyaline discal mark *lissoscia*. 171
14. Forewings with white antemedian and postmedian lines *alpina*. 172
Forewings without white lines 15
15. Hindwings grey with antemedian and median transverse lines *decolorata*. 168
Hindwings white without lines *cynoptera*. 169
16. Wings with hyaline discal marks *quadrigramma*. 175
Wings without hyaline discal marks *vetustaria*. 174

159. OENOCHROMA VINARIA.

Gn., *Lep.*, ix, p. 185, Pl. 7, f. 2.—*Monoctenia decora* Wlk., *Char. Undescr. Lep.*, p. 76.—*Monoctenia vinaria* Meyr., *PROC. LINN. SOC. N.S.W.*, 1889, p. 1206.

Usually at once distinguishable by its crimson coloration, but some examples have pale-grey wings. These may be distinguished from *pallida* by the dark oblique line of forewings as well as by the crimson cilia. Mr. D. Goudie bred this species from larvae feeding on *Grevillea* sp.

North Queensland: Herberton. Queensland: Nambour, Caloundra, Brisbane, Toowoomba. New South Wales: Ebor, Sydney, Jervis Bay, Mt. Kosciusko (5,000 feet). Victoria: Melbourne, Beaconsfield, Birchip, Ararat. South Australia: Mt. Lofty, Adelaide. Western Australia: Perth, Dundas, Cunderdin.

160. OENOCHROMA PALLIDA.

Warr., *Novit. Zool.*, 1898, p. 231.—*Monoctenia pallidula* Luc., *Proc. Roy. Soc. Qld.*, 1898, p. 69 (published in 1899).

♂. 38-46 mm. ♀. 44-50 mm. Head and thorax pale-ochreous-grey, in ♀ pinkish-tinged; lower margin of face crimson-fuscous. Palpi 2; crimson-fuscous; lower surface and base whitish. Antennae crimson-fuscous, apical half whitish; pectinations in ♂ 6, apical two-fifths to one-half simple. Abdomen pale-ochreous-grey, in ♀ pinkish-tinged; beneath whitish. Legs whitish-ochreous, largely suffused with ochreous, and on anterior femora with dark-crimson, apices of all joints crimson-fuscous; fore tibiae with an anterior apical hook. Forewings elongate-triangular, costa straight almost to apex, apex acute, slightly produced, termen strongly sinuate beneath apex, apex bowed above middle, more strongly so in ♀, oblique; pale-ochreous-grey, in ♀ pinkish-tinged; costa coarsely strigulated with blackish or dark-fuscous; a very faint, pale, slightly outwardly curved, transverse line at one-fifth; a subcostal discal spot before middle, dark-fuscous or brown with hyaline centre; a straight whitish-ochreous line edged posteriorly with ochreous-brown from costa shortly before apex to two-thirds dorsum; a dark-brown or dark-fuscous marginal lunule on termen beneath apex; cilia ochreous-brown, apices sometimes fuscous. Hindwings with apex rounded, termen nearly straight; as forewings; postmedian line only slightly beyond middle, straight; a slight reddish-fuscous suffusion, in ♀ larger and pale-centred, on middle of costa. Under-side similar; forewings with a circular purple-fuscous blotch on dorsal end of antemedian line; lines reduced to fuscous or reddish-fuscous dots.

In the greyer forms of *O. vinaria* the postmedian lines of both wings are dark-edged anteriorly. Any doubt as to the distinctness of this species is resolved by the presence of the fore tibial hook.

North Australia: Melville Island. Queensland: Brisbane, Toowoomba. New South Wales: Broken Hill. Victoria: Ararat. Western Australia: Perth.

161. OENOCHROMA ORTHODESMA.

Monoctenia orthodesma Low., *Trans. Roy. Soc. S. Aust.*, 1894, p. 84.—*Oenochroma erubescens* Prout, *Gen. Insect.*, *Oenochrom.*, p. 42.

♂, ♀. 54-56 mm. Head and thorax pale-ochreous-grey. Palpi 1½; pale-ochreous-grey sometimes pinkish-tinged. Antennae pale-ochreous-grey, towards base pinkish-tinged; pectinations in ♂ 6, apical third simple. Abdomen grey-whitish faintly pinkish-tinged; beneath ochreous-whitish. Legs pale-ochreous, apices of all joints pinkish. Forewings elongate-triangular, costa straight almost to apex, apex pointed, termen bowed above middle, oblique; pale-ochreous-grey; costal edge sometimes ochreous towards base; no antemedian line; sometimes a median, subcostal, ochreous, discal dot; postmedian line from costa near apex to two-thirds dorsum, straight, ochreous, edged anteriorly with pale-yellow, slender towards costa, more pronounced towards dorsum; cilia ochreous. Hindwings with apex rounded, termen straight; colour as forewings, but tinged with pink at apex; postmedian line straight, from three-fifths costa not reaching dorsum. Underside whitish-ochreous; forewings with a fuscous-crimson tornal blotch.

Queensland: Brisbane, Southport. New South Wales: Sydney, Jervis Bay.

162. OENOCHROMA PHYLLOMORPHA.

Monoctenia phyllomorpha Low., *Proc. Linn. Soc. N.S.W.*, 1899, p. 86.—*Monoctophora stillans* Luc., *Proc. Roy. Soc. Qld.*, 1900, p. 44.—*Monoctenia subcarnea* Warr., *Novit. Zool.*, 1902, p. 348.

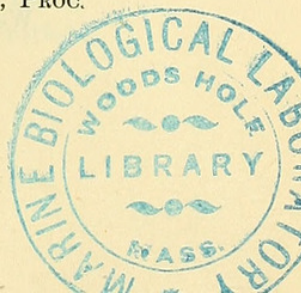
♂, ♀. 40-44 mm. Head and thorax pale-ochreous-grey usually suffused with pinkish. Palpi 1½; pinkish above, whitish with some pinkish irroration beneath. Antennae ochreous-whitish, more or less suffused with pinkish; pectinations in both sexes 6, apical fourth simple. Abdomen ochreous-whitish. Legs ochreous-whitish with some pinkish irroration. Forewings elongate-triangular, costa straight to near apex, apex acutely pointed, termen slightly sinuate beneath apex, nearly straight in ♂, slightly bowed in ♀; pale-ochreous-grey, more or less suffused with pinkish, rarely with fine fuscous transverse strigulae; markings rosy, fuscous-rosey, or fuscous; antemedian line from one-third costa to one-third dorsum, but usually obsolete towards costa, often interrupted, or reduced to dots; no discal dot; postmedian from beneath costa near apex to two-thirds dorsum, slightly sinuate, sometimes interrupted or reduced to dots; cilia fuscous, bases ochreous. Hindwings with apex rounded, termen straight; as forewings but without antemedian line. Underside of both wings grey-whitish with fuscous discal dot and postmedian line.

The impectinate antennae are alike in both sexes; an unusual character.

North Queensland: Cairns, Townsville. Queensland: Brisbane. New South Wales: Newcastle.

163. OENOCHROMA PRIVATA.

Hypographa privata Wlk., *Cat. Brit. Mus.*, xxi, p. 286.—*Monoctenia hypotaeniararia* Gn., *Ann. Soc. Ent. Fr.*, 1864, p. 15.—*Monoctenia subustaria* Meyr., *Proc. Linn. Soc. N.S.W.*, 1889, p. 1209, *nec* Wlk.



♂, ♀. 34-52 mm. Head and thorax pale-grey. Palpi in ♂ 1½, in ♀ 2; pale-grey. Antennae ochreous-grey; pectinations in ♂ 6, apical fourth simple. Abdomen pale-grey. Legs grey, more or less mixed with whitish; anterior tibiae with apical hook. Forewings elongate-triangular, costa straight almost to apex, apex acute, slightly produced, termen sinuate beneath apex, bowed in middle, oblique; pale-grey; some fine fuscous costal strigulae; first line and discal dot obsolete; a postmedian band, sometimes containing a median darker line, edged anteriorly by an oblique outwardly curved series of fine fuscous dots from midcosta to one-third dorsum, posteriorly by a similar line from three-fourths costa to three-fourths dorsum, band sometimes faintly ferruginous; cilia pale-grey, apices sometimes suffused or barred with fuscous. Hindwings with apex rounded, termen straight; as forewings; postmedian band more distinct, ferruginous or suffused with fuscous. Underside similar, but postmedian band much more distinct and ferruginous on both wings, dilated towards costa, narrowed towards dorsum, posterior edge irregularly dentate.

New South Wales: Sydney, Jervis Bay, Katoomba, Mittagong. South Australia: Penola.

164. OENOCHROMA SUBUSTARIA.

Phallaria subustaria Wlk., *Cat. Brit. Mus.*, xxi, 283.—*Monoctophora caprina* Luc., *Proc. Roy. Soc. Qld.*, 1900, 145.

♂, ♀. 36-42 mm. Head and thorax pale-grey. Palpi in ♂ 1½, in ♀ 2; pale-grey. Antennae pale-grey; pectinations in ♂ 6, apical fourth simple. Abdomen pale-grey, beneath whitish. Legs fuscous, more or less mixed with whitish, except anterior pair; posterior pair mostly whitish. Forewings elongate-triangular, costa straight almost to apex, apex acute, termen sinuate beneath apex, bowed above middle, more so in ♀, oblique; pale-grey with sparsely scattered fuscous scales; some short fuscous strigulae on costa; antemedian line at one-third, represented by three dark-fuscous dots, beneath costa, on cubital and on anal vein; discal dot obsolete; second line represented by a series of dark-fuscous dots, slightly sinuate, from costa shortly before apex to two-thirds dorsum; cilia pale-grey, sometimes pinkish-tinged, apices suffused or barred with fuscous. Hindwings with apex rounded, termen straight; as forewings but without antemedian line; postmedian line at three-fifths, nearly straight, becoming obsolete towards costa. Underside pale-grey; forewings with dotted postmedian line; hindwings with median discal dot, dotted postmedian line, and in ♂ with a small, subapical, dark-fuscous or reddish fuscous, subapical blotch.

Superficially similar above to *O. privata*, but easily distinguished by the underside, in addition to the absence of a fore tibial hook.

Queensland: Brisbane, Stradbroke Is. New South Wales: Jervis Bay.

165. OENOCHROMA CERASIPLAGA.

Oenochroma cerasiplaga Warr., *Novit. Zool.*, 1914, 425.—*Oenochroma artia* Turn., *Trans. Roy. Soc. S. Aust.*, 1922, 292.

Western Australia: Perth, Dardanup.

166. OENOCHROMA OCHRIPENNATA.

Phallaria ? ochripennata Wlk., *Cat. Brit. Mus.*, xxi, 284.—*Diamuna gastropacharia* Wlk., *ibid.*, 289.—*Monoctenia ochripennata* Meyr., *Proc. Linn. Soc. N.S.W.*, 1889, 1205.

Western Australia:

167. OENOCHROMA POLYSPILA.

Monoctenia polyspila Low., PROC. LINN. SOC. N.S.W., 1897, 263.—*Oenochroma guttilinea* Warr., Novit. Zool., 1903, 260.—*Oenochroma polyspila* Prout, Gen. Insect., Oenochrom., Pl. 1, f. 9.

♂. 32-38 mm. Head crimson-grey. Palpi $1\frac{1}{2}$; grey. Antennae pale-crimson-grey becoming crimson-fuscous towards base; pectinations 6, ochreous, apical third simple. Thorax pale-grey tinged with crimson and ochreous, darker anteriorly. Abdomen ochreous-whitish, with slight crimson irroration; beneath whitish. Legs whitish irrorated, and apices of joints annulated, with fuscous. Forewings elongate-triangular, costa straight, apex acute, termen rounded, slightly sinuate beneath apex, oblique; pale-ochreous-grey rosy-tinged; some scattered basal spots, and four oblique lines of spots white irrorated with fuscous, broadly margined with fuscous crimson; first line from one-third costa to one-fourth dorsum; second from two-thirds costa to mid-dorsum; third and fourth equidistant, parallel; a short fuscous streak on termen beneath apex; cilia ochreous, on apex fuscous. Hindwings with termen slightly rounded; as forewings, but with only three lines of dots. Under-side whitish; forewings with a postmedian fuscous line terminating in a subdorsal fuscous blotch; hindwings with a smaller fuscous blotch on costa at two-thirds.

♀. 40-42 mm. Colour uniform grey-pink; spots on wings much smaller, often clear white, with very fine fuscous margins. Antennae simple.

North Queensland: Cape York, Townsville.

168. OENCHROMA DECOLORATA.

Warr., Novit. Zool., 1896, 354

Head and thorax grey. Abdomen pale-grey. Forewings grey with fine darker irroration; antemedian represented by a short reddish line from costa; discal spot dark-grey, indistinct, followed by an obscure oblique central shade; postmedian line pale-ferruginous edged anteriorly with whitish; cilia purplish. Hindwings with termen rounded; grey; an antemedian purplish transverse line; a median ferruginous transverse line, becoming purplish towards costa, edged anteriorly with whitish. Underside of forewings whitish, with a postmedian series of dots on veins, and a small purple tornal blotch; of hindwings white along dorsum, termen broadly suffused with ferruginous.

I do not know this species. The above is a translation of Warren's description.

North Queensland: Cedar Bay near Cooktown.

169. OENOCHROMA CYCNOPTERA.

Monoctenia cycnoptera Low., Trans. Roy. Soc. S. Aust., 1894, 84.—*Oenochroma simplex* Warr., Novit. Zool., 1897, 206.

♂. 36-42 mm. ♀. 52 mm. Head and thorax pale-grey. Palpi 2; pale-grey. Antennae whitish-ochreous; unipectinate in both sexes, apical two-fifths simple, pectinations in ♂ 4, in ♀ $1\frac{1}{2}$. Abdomen pale-grey. Legs grey-whitish; anterior pair pale-grey; anterior tibiae with strong apical hook. Forewings narrowly triangular, costa straight almost to apex, apex pointed, in ♀ acute, termen sinuate beneath apex, bowed above middle, strongly oblique; pale-grey, with sparse dark-fuscous irroration or strigulae; a very faint oblique line from three-fourths dorsum towards apex, but scarcely reaching half-way, faintly ochreous; cilia pale-brownish or pale-ochreous with dark-fuscous bars opposite veins, and dark-fuscous for a short distance beneath apex. Hindwings with termen gently rounded; whitish

with slight dark-fuscous irroration towards termen and dorsum; cilia whitish. Underside whitish-grey; forewings with a fuscous discal mark and a fuscous or reddish blotch above tornus.

South Australia: Cardilho Downs, Lake Mulligan. Western Australia: Merredin. North-west Australia: Roeburne.

170. *OENOCHROMA TURNERI*.

Monoctenia turneri Luc., *Proc. Roy. Soc. Qld.*, 1892, 82.

♂, ♀. 45-48 mm. Head and thorax grey. Palpi 1½; grey, towards base reddish-tinged. Antennae grey; pectinations in ♂ 3. Abdomen grey; beneath purple-grey with transverse red bars. Legs grey with some fuscous and reddish irroration. Forewings elongate-triangular, costa bisinuate, apex obtusely pointed, termen bowed above middle, strongly oblique; grey with scanty fuscous irroration or strigulation; a short, strongly outwardly oblique white line from one-third costa, and a similar line on costa at two-thirds; a suffused darker oblique shade from one-third costa to near base of dorsum; a median, subcostal, transverse, red, discal mark; between this and apex a suffusedly darker area containing two or three red longitudinal streaks, a fine dentate line from a white mark on two-thirds costa to two-thirds dorsum; a subterminal fuscous line edged posteriorly by a white line, slightly wavy; cilia dark-grey. Hindwings with termen rounded; colour and cilia as forewings; a median, discal, transverse, bisinuate, hyaline mark; a slightly waved fuscous transverse line beyond middle; a transverse dark-grey shade before discal mark, and two similar but interrupted shades in terminal area. Underside of forewings pale-grey with slight fuscous strigulation; a transverse grey shade before middle; a dark-fuscous short outwardly oblique line followed by a small triangular spot on costa near apex; two incomplete, sinuate, interrupted, fuscous subterminal lines; a suffused dark-grey tornal blotch; of hindwings similar, but suffused with reddish; two longitudinal red streaks near tornus.

I have described this from the type in my collection and a ♀ in that of Mr. W. B. Barnard, and I know of a third example. It is near *O. lissoscia* which, however, lacks the dentate postmedian line on forewings, the hyaline discal mark on hindwings, and the red streaks.

Queensland: Brisbane.

171. *OENOCHROMA LISSOSCIA*.

Turn., *Trans. Roy. Soc. S. Aust.*, 1922, 292.

Queensland: National Park (3,500 feet).

172. *OENOCHROMA ALPINA*, n. sp.

Oenochroma alpina Goldfinch MS.

♀. 75 mm. Head and thorax fuscous. Palpi 1½; fuscous. Antennae reddish-fuscous. Abdomen fuscous. Legs reddish-fuscous. Forewings triangular, costa straight, apex rather acutely pointed, termen longer than dorsum, rounded, slightly sinuate beneath apex, strongly oblique; fuscous; costal edge narrowly whitish, strigulated with fuscous; a rather broad whitish line from two-fifths costa, bent inwards beneath costa, thence narrowly curved outwards, thence obliquely inwards to one-third dorsum, with a slight angle outwards on anal vein; a whitish line from costa shortly before apex, at first narrow but gradually becoming broader,

slightly outwardly curved, and strongly oblique to two-thirds dorsum; cilia fuscous. Hindwings with termen rounded; red; a rather broad, whitish subterminal line from three-fourths dorsum, becoming less distinct towards costa; a small fuscous tornal suffusion prolonged along anal vein; cilia reddish, on tornus and dorsum grey. Underside similar, but disc of forewings suffused with red except towards costa and termen, and without first line; hindwings reddish-fuscous.

A very fine and distinct species. Type in Coll. Goldfinch.

New South Wales: Mt. Kosciusko (5,000 feet), in December; one specimen.

173. OENOCROMA INFANTILIS.

Prout, *Gen. Insect.*, Oenochrom., p. 42.

♂. 30 mm. ♀. 32 mm. Head and thorax whitish tinged with greenish. Palpi $1\frac{1}{2}$; whitish with some crimson irroration. Antennae whitish; pectinations in ♂ 10, apical two-fifths simple. Abdomen and legs whitish. Forewings rather broadly triangular, costa straight almost to apex, apex pointed, termen nearly straight, oblique; greenish-white; an obscure, whitish, outwardly oblique line from one-third dorsum about half-way across disc; a second, similar, straight line from two-thirds dorsum almost to apex; a similar, parallel, subterminal line; cilia crimson-fuscous, on apex, tornus, and dorsum whitish. Hindwings with termen only slightly rounded; as forewings, but only postmedian line present. Underside whitish.

North Australia: Darwin, Melville Is. North Queensland: Chillagoe.

174. OENOCROMA VETUSTARIA.

Balliace vetustaria Wlk., *Cat. Brit. Mus.*, xxi, 1860, 290.—*Monoctenia digglesaria* Gn., *Ann. Soc. Ent. Fr.*, (4) iv, 1864, 15; Meyrick, *Proc. Linn. Soc. N.S.W.*, 1889, 1207.

♀. 52-54 mm. Head pale-grey. Palpi $1\frac{1}{2}$; whitish with a few crimson scales. Antennae grey. Thorax brownish-grey; anterior third pale-grey, the two colours separated sharply on a straight transverse line. Abdomen grey with slight brownish and dark fuscous irroration. Legs whitish irrorated with brown and fuscous. Forewings elongate-triangular, costa straight almost to apex, apex acute, produced, termen sinuate, bowed above middle, costal half obtusely dentate; grey with a few dark-fuscous scales, suffused with brownish except on a pale oblique band from dorsum before middle extending more than half-way to costa; a pale straight line from two-thirds dorsum almost to apex; cilia fuscous. Hindwings with termen acutely angled on vein 4, wavy; as forewings, but pale band is basal, and pale line transverse, slightly beyond middle. Underside of forewings suffused with brownish towards tornus; a transversely oval, annular, fuscous-brown, discal spot; a short fuscous-brown band from mid-dorsum not reaching middle of disc; postmedian line indicated by a few fuscous dots; of hindwings, grey irrorated with fuscous-brown, and suffused with brownish towards termen.

Though this very distinct species has a wide distribution it has been rarely taken.

Queensland: Nambour, Brisbane. Tasmania: Bothwell, Launceston.

175. OENOCROMA QUADRIGRAMMA.

Galanageia quadrigramma Luc., *Proc. Roy. Soc. Qld.*, 1900, 148.

♂. 48-52 mm. Head white with a few fuscous or brownish scales; face brown. Palpi $1\frac{1}{4}$; purple mixed with whitish and fuscous, basal joint brown. Antennae fuscous with white bars towards base, towards apex whitish-ochreous; pectinations in ♂ 6, apical one-fifth simple. Thorax brown. Abdomen brown, on mid-dorsum with bars of fuscous mixed with white. Legs fuscous-brown suffused and irrorated with white. Forewings elongate-triangular, costa straight, towards apex sinuate, apex pointed, termen strongly bowed above middle, obtusely dentate below middle; brown, sometimes with darker strigulae; costa strigulated with fuscous mixed with white; no antemedian line; a large, oval or reniform, subcostal, discal spot beyond middle; whitish, with a few darker scales, containing a hyaline crescent on its anterior margin, with a hyaline dot above it, both of these edged posteriorly with fuscous; a nearly straight but slightly waved pale line from costa shortly before apex to dorsum, shortly after middle; cilia brown, on tornal half of termen crimson-fuscous, bases white. Hindwings with termen strongly angled on vein 3, slightly curved above angle, with a slight angle beneath apex, more strongly dentate towards tornus; colour, discal spot, and cilia as forewings; the discal spot interrupts a pale transverse antemedian line edged anteriorly with fuscous. Underside similar.

A very distinct species, but allied to *O. vetustaria*.

Queensland: Coomera near Southport (R. Illidge. Dr. Lucas's type now in South Australian Museum), National Park (3,000 to 3,500 feet) in March. Three specimens.

Genus 26. ANTICTENIA.

Prout, *Gen. Insect.*, Oenochrom., p. 43.

Face smooth, not projecting. Tongue well-developed. Palpi short (under 1), porrect; second joint loosely rough-haired beneath; terminal joint small. Antennae short (under $\frac{1}{2}$); in ♂ imparipectinate, the inner pectinations short, outer long, extreme apex simple. Thorax stout, densely hairy beneath. Femora hairy. Tarsi finely spinulose. Forewings with 11 free, 10 and 9 long-stalked, their common stalk anastomosing with 8, 10 soon separating, 9 anastomosing for a longer distance (1 ♀), but more commonly 10 is free, and the portion of 9 connecting 10 and 8 is not developed (4 ♂, 3 ♀), so that 10 appears free, and 9 appears stalked with 8. Hindwings with 3 and 4 somewhat approximated, 5 from above middle of cell (about three-fifths from 4), 6 and 7 connate or short-stalked, 12 approximated to cell from one-fourth to middle.

Monotypical. Allied to *Oenochroma*, but differing in the antennae, palpi, and some details of the neurulation.

176. ANTICTENIA PUNCTIUNCULIS.

*Monoctenia punctiunculus** Luc., *Proc. Roy. Soc. Qld.*, 1892, 84.—*Oenochroma leucospila* Warr., *Novit. Zool.*, 1898, 230.

♂. 40-44 mm. ♀. 44-55 mm. Head and thorax pale-grey often reddish-tinged. Palpi less than 1; pale-grey sometimes reddish-tinged. Antennae whitish-grey; in

* This is an evident misprint. Lucas intended to call this species *M. punctiunculis* (ablative plural), the *Monoctenia* with the little dots. Compare *Leucania labeculis* Luc. described on the same page. Both Lucas and Warren fixed on the same character for their names, that is, the whitish spots in the dark blotches on the underside of the hindwings.

♂ bipectinated to apex, inner row 1, outer row 5. Abdomen pale-grey, sometimes reddish-tinged, with sparse fuscous irroration. Legs pale reddish or grey. Forewings elongate-triangular, costa straight almost to apex, apex obtusely pointed, termen slightly bowed above middle, strongly oblique; pale grey, often reddish-tinged, with some fuscous strigulae; basal area to antemedian line darker, antemedian line from one-third costa to one-third dorsum, outwardly curved, slightly dentate, fuscous-brown or brown; a median, subcostal, fuscous, discal dot; postmedian line from costa near apex to two-thirds dorsum, nearly straight, fuscous or brown with pale anterior edge; a subapical fuscous or brownish spot; cilia reddish-grey or fuscous. Hindwings with termen only slightly rounded; as forewings but without antemedian line; a transverse line just beyond middle. Under-side of forewings similar, but without antemedian line; of hindwings similar, with in addition a small reddish apical blotch containing two whitish marginal spots.

North Queensland: Townsville. Queensland: Duaringa, Yeppoon, Brisbane, Toowoomba.

Genus 27. CARTHAEA.

Wlk., *Cat. Brit. Mus.*, xiv, 1314; Prout, *Gen. Insect.*, Oenochrom., p. 44.

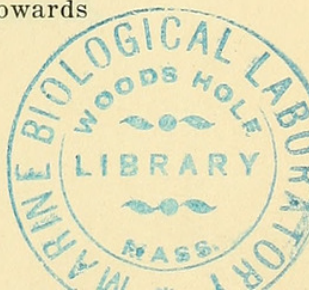
Face flat, but clothed with dense hairs so as to appear projecting. Palpi rather long, obliquely ascending; second joint clothed with long hairs; terminal joint rather long, cylindrical, obtuse. Antennae slightly over $\frac{1}{2}$; in ♂ bipectinate to apex, pectinations long. Thorax stout, hairy with a slight posterior crest, densely hairy beneath. Femora and tibiae densely hairy. Tarsi strongly spinulose. Forewings with 7 and 8 stalked, 9 and 10 long-stalked, areole not developed (owing to disconnection of 8 and 9), 11 free. Hindwings with cell about $\frac{1}{2}$, 3 and 4 separate, 5 from somewhat above middle of cell, 7 from before upper angle well separated from 6, 12 somewhat approximated to cell as far as middle, gradually diverging. Frenulum strongly developed.

There is only one species which is confined to Western Australia. This magnificent insect, from its large size, and ample wings bearing large ocelli, somewhat resembles the Saturniadae.

177. CARTHAEA SATURNIODES.

Wlk., *Cat. Brit. Mus.*, xiv, 1314.

♂, ♀. 80-98 mm. Head and thorax grey with fine white irroration; face ochreous-brown. Palpi $2\frac{1}{2}$; pale grey, second joint fringed with dense ochreous-brown hairs. Antennae grey; pectinations in ♂ 10, ochreous-brown. Abdomen ochreous-brown; dorsum, except margins, fuscous grey. Forewings triangular, costa gently arched, apex subrectangular, termen rounded; grey or brownish-grey, finely irrorated with whitish; a broad white line, edged posteriorly with dark grey, from one-fourth costa, outwardly oblique and sinuate, with a strong posterior tooth beneath middle, thence inwardly sinuate to one-fourth dorsum; a median, circular, subcostal ocellus, brown edged with blackish and containing a slender whitish lunule, its extremities directed posteriorly; a broad white line, edged anteriorly with dark grey, from three-fourths costa, crenulate, outwardly curved, sinuate towards tornus, on which it ends; cilia brownish-grey. Hindwings with termen gently rounded; whitish-grey, apical area widely suffused with crimson; a large, circular, median ocellus, blackish, containing a fine incomplete bluish ring, excentric outwardly, with a short line of the same colour on its inner side; a curved line posterior to this, crimson becoming brown towards



dorsum, edged posteriorly with a whitish line; a transversely elongate crimson blotch towards apex; cilia grey, towards apex of wing crimson-brown. Underside whitish-grey; a large posterior crimson suffusion on forewings; ocelli of both wings as on upper surface of hindwings; a postmedian line crimson in forewings, brown in hindwings, in both edged posteriorly by a white line.

Western Australia: Waroona, Collie, Guildford, Jandikot.

Genus 28. GASTROPHORA.

Gn., *Lep.*, ix, 187; Meyr., *PROC. LINN. SOC. N.S.W.*, 1889, 1202; Prout, *Gen. Insect.*, *Oenochrom.*, p. 44.

Face shortly rough-haired. Palpi moderate, porrect; second joint with long rough hairs beneath; terminal joint short. Antennae in ♂ more than $\frac{1}{2}$, bipectinate to apex, pectinations long; in ♀ less than $\frac{1}{2}$, shortly bipectinate to apex. Thorax stout, hairy beneath. Abdomen stout, disproportionately long. Femora hairy. Posterior tibiae smooth. Tarsi very minutely spinulose. Forewings with 6 separate, connate, or stalked with 7, 8, 9 and 10 stalked, 9 anastomosing with 8, forming a narrow areole, 11 free. Hindwings with cell about one-half in ♂, three-fifths in ♀, 5 from well above middle of cell (two-thirds), 6 and 7 short-stalked, 12 approximated to cell to three-fourths, gradually diverging.

Contains only one species, which is large, very distinct and confined to eastern Australia. Structurally its chief peculiarities are the unduly long abdomen, difference of wing-shape in the two sexes, and stalking of 6 and 7 of hindwings.

178. GASTROPHORA HENRICARIA.

Gn., *Lep.*, ix, 187, Pl. xxi, f. 4; Meyr., *PROC. LINN. SOC. N.S.W.*, 1889, 1202; Prout, *Gen. Insect.*, *Oenochrom.*, Pl. i, f. 7.

Queensland: Brisbane, Mt. Tambourine, Stanthorpe. New South Wales: Glen Innes. Victoria: Melbourne, Beaconsfield, Gisborne. South Australia: Mt. Lofty.

Genus 29. ARHODIA.

Gn., *Lep.*, ix, p. 185; Meyr., *PROC. LINN. SOC. N.S.W.*, 1889, 1201; Prout, *Gen. Insect.*, *Oenochrom.*, p. 45.

Face smooth, not projecting. Palpi short, ascending, shortly rough-haired, terminal joint minute. Antennae of ♂ bipectinate, pectinations long; of ♀ shortly bipectinate, but not to apex. Thorax stout, hairy beneath. Femora hairy. Fore tibiae with subapical hair-tuft on flexor surface. Posterior tibiae without middle spurs. Tarsi not spinulose. Forewings without areole (owing to disconnection of 8 and 9), 9 and 10 stalked, 11 free. Hindwings with 5 from above middle of cell (three-fifths to two-thirds), 6 and 7 closely approximated at origin, almost connate, 12 approximated to cell from one-fourth to middle, gradually diverging.

There is only one species, which varies much in size and colour, but is easily recognized.

179. ARHODIA LASIOCAMPARIA.

Gn., *Lep.*, ix, p. 186; Meyr., *PROC. LINN. SOC. N.S.W.*, 1889, 1202.—*Arhodia retractaria*, Wlk., *Cat. Brit. Mus.*, xxi, 282.—*Nigasa subpurpurea* Wlk., *ibid.*, 287.—*Arhodia semirosea* Wlk., *Trans. Ent. Soc. Lond.*, (3) i, 267.—*Monoctenia ozora* Swin., *Ann. Mag. Nat. Hist.*, (7) ix, 1902, 167.

North Queensland: Cape York, Cairns. Queensland: Clermont, Brisbane, Toowoomba, Charleville, Stanthorpe. New South Wales: Sydney. Victoria: Melbourne, Beaconsfield, Warragul, Marysville, Gisborne, Sea Lake. Tasmania: Hobart. South Australia: Mt. Lofty, Pinnaroo. Western Australia: Perth. North-west Australia: Sherlock River.

Genus 30. HOMOSPORA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1904, 229; Prout, *Gen. Insect.*, Oenochrom., p. 45.

Face with strong conical corneous projection. Palpi short, ascending, shortly rough-scaled; terminal joint minute. Antennae bipectinate to apex, pectinations long in ♂, short in ♀. Thorax stout, hairy beneath. Femora hairy. Posterior tibiae without middle spurs. Tarsi not spinulose. Forewings with 9 and 10 stalked, 9 anastomosing with 8 to form a long narrow areole, 11 closely approximated to 12, or anastomosing at a point with 12. Hindwings with 5 from well above middle of cell (three-fourths), 6 and 7 connate, 12 closely approximated to cell as far as middle, gradually diverging.

Monotypical; allied to *Arhodia*.

180. HOMOSPORA RHODOSCOPIA.

Onychodes ? rhodoscopia Low., *Trans. Roy. Soc. S. Aust.*, 1902, 228.—*Homospora procrita* Turn., *ibid.*, 1904, 230.—*Homospora lymantriodes* Prout, *Novit. Zool.*, 1913, 391.

North Queensland: Stewart River, Townsville. North-west Australia: Derby, Hammersley Range, Sherlock River.

I think *lymantriodes* is merely a paler local race of this species.

Genus 31. GERUSIA.

Warr., *Novit. Zool.*, 1907, 118; Prout, *Gen. Insect.*, Oenochrom., p. 54.

Face not projecting, smooth, with a slight tuft on lower margin. Palpi moderate or rather short, porrect or slightly ascending; second joint rough-scaled; terminal joint short. Antennae in ♂ bipectinate to apex, pectinations long, in ♀ shortly bipectinate, apex simple. Thorax moderately stout, somewhat hairy beneath. Femora hairy. Anterior tibiae with a slender hair-tuft on flexor surface. Posterior tibiae with two pairs of spurs. Tarsi minutely spinulose. Forewings with 11 anastomosing first with 12 and then with 10, 9 and 10 long-stalked, 9 anastomosing with 8 to form a long narrow areole. Hindwings with 5 from middle of cell, 6 and 7 separate, 12 anastomosing strongly with cell to about middle.

Type, *G. virescens* Warr., from New Guinea. Immediately distinguished from its allies by the anastomosis of 12 of hindwings with cell. This has apparently been an independent development, as there appears to be no close relationship to *Hypographa*. There are three known Australian species, all variable, and several in New Guinea.

- | | |
|--|-------------------------|
| 1. Wings with distinct transverse lines | 2 |
| Wings without distinct transverse lines | <i>rubricosa</i> . 183 |
| 2. Hindwings densely strigulated | <i>excusata</i> . 181 |
| Hindwings not, or only slightly, strigulated | <i>multicolor</i> . 182 |

181. GERUSIA EXCUSATA.

Monoctenia excusata Wlk., *Cat. Brit. Mus.*, xxi, 280.

♂, ♀. 38-50 mm. Head whitish or grey-whitish; face fuscous or brown, inferior tuft whitish. Palpi $1\frac{1}{2}$; reddish-brown or fuscous, more or less mixed with whitish or pale-ochreous. Antennae grey, near base whitish; pectinations in ♂ 8, in ♀ $1\frac{1}{2}$. Thorax grey, sometimes tinged with brownish or whitish-ochreous. Abdomen grey, sometimes ochreous-tinged, sometimes with pairs of fuscous dorsal dots. Legs whitish or pale-ochreous variably strigulated with reddish-brown and fuscous. Forewings triangular, costa in ♂ slightly and evenly arched, in ♀ strongly sinuate, apex pointed, slightly produced, more so in ♀, termen obtusely angled on veins 6 and 4, thence strongly oblique; grey, usually ochreous- or brownish-tinged, with some scattered fuscous strigulae; a fuscous line from one-fifth costa to one-third dorsum, strongly bent outwards from margins, more or less developed; a suffused fuscous median line from midcosta obliquely outwards, angled in disc and continued to mid-dorsum, but this is not always present; an angled line from three-fourths costa, slender and usually dotted beneath angle, to three-fourths dorsum; sometimes a short fuscous streak from costa before apex, edged posteriorly with white; beneath this are frequently two blackish dots; sometimes a blackish spot above tornus; cilia fuscous, sometimes tinged with ochreous or reddish-brown, on tornus grey. Hindwings with termen rounded, crenulate or in ♀ dentate towards apex; pale-ochreous densely strigulated with fuscous; a wavy fuscous antemedian transverse line; a more rounded and slightly dentate postmedian line; often some fuscous suffusion before termen; cilia as forewings. Underside similar but more ochreous; markings less distinct; sometimes a dark-fuscous blotch on forewing beyond middle, and a white dot or elongate mark beneath apex.

Queensland: Brisbane, Toowoomba, National Park (3,000 feet). New South Wales: Katoomba. Victoria: Melbourne.

182. GERUSIA MULTICOLOR.

Onychodes multicolora Luc., *Proc. Roy. Soc. Qld.*, 1892, 81.—*Onychodes rubra* Warr., *Novit. Zool.*, 1897, 27.

♂, ♀. 40-44 mm. Head whitish or grey-whitish; face brown, inferior tuft whitish. Palpi $1\frac{1}{4}$; brown or reddish-brown, sometimes mixed with whitish. Antennae grey, towards base grey-whitish; pectinations in ♂ 10, in ♀ 2. Thorax grey or grey-whitish. Abdomen grey or grey-whitish; sometimes with a median dorsal series of fuscous spots. Legs brownish; posterior pair grey-whitish. Forewings triangular, costa in ♂ slightly and evenly arched, in ♀ sinuate, apex acute, slightly produced, more strongly so in ♀, termen angled or dentate on veins 6 and 4, thence strongly oblique; pale-grey or grey-whitish, sometimes pinkish- or purplish-tinged; transverse lines variably developed, very distinct, or slender, or even obsolete, brownish or fuscous; first from one-fourth costa to one-fourth dorsum, outwardly curved; second from two-fifths costa to mid-dorsum, slightly outwardly curved, suffused; third from two-thirds costa, outwardly oblique, acutely angled beneath costa, thence inwardly oblique and sinuate to three-fourths dorsum; in some examples the second and third lines are partly double; sometimes a subcostal discal dot precedes third line; rarely a small fuscous apical suffusion; more often one or two subapical fuscous dots; cilia dark-grey or brownish, pale-grey on tornus. Hindwings with termen rounded, slightly angled on veins 6 and 4; as forewings, but sometimes suffused with pale pink; without first line;

sometimes a subterminal series of fuscous spots. Underside grey or brownish; markings usually less distinct; sometimes a white patch strigulated with fuscous on dorsum of hindwing.

Like *G. excusata*, very variable. From that species it may best be distinguished by the absence of heavy strigulation of hindwings, the shorter palpi, and the longer antennal pectinations.

North Queensland: Herberton, Mackay. Queensland: Gympie, Brisbane, Toowoomba. New South Wales: Sydney, Mittagong.

183. *GERUSIA RUBRICOSA*, n. sp.

rubricosus, reddish.

♀. 46-52 mm. Head pinkish-white; face brown, inferior tuft pinkish-white. Palpi $1\frac{1}{4}$; pale-reddish. Antennae pale-grey, towards base pinkish-white; pectinations in ♀ 2. Thorax and abdomen pale-reddish. Legs pale-reddish. Forewings triangular, costa in ♀ slightly sinuate, apex acute and produced, termen strongly bowed, not distinctly angled; pale-reddish; sometimes a few scattered fuscous scales; lines slightly darker, suffused, or partly obsolete; first at one-fifth, outwardly curved; second at two-fifths, rather broadly suffused; third from two-thirds costa to two-thirds dorsum, strongly sinuate, towards dorsum nearly approximated to second line; one or two whitish subapical dots surrounded by fuscous irroration; cilia concolorous. Hindwings with termen rounded, sometimes slightly angled on veins 6 and 4; as forewings, but paler. Underside of forewings whitish, except towards costa in basal two-thirds; terminal area and whole of hindwings darker red; apical markings of forewings more distinct.

North Queensland: Cairns. Queensland: Brisbane, Toowoomba. Three specimens; type in Coll. Barnard.

Genus 32. *CIRCOPETES*.

Prout, *Gen. Insect.*, *Oenochrom.*, p. 53.

Face not projecting, slightly rough-scaled. Palpi short, obliquely ascending; second joint thickened with dense rough scales; terminal joint short. Antennae of ♂ bipectinate to apex, pectinations long, of ♀ dentate. Thorax stout, beneath densely hairy. Femora hairy. Posterior tibiae with two pairs of spurs. Tarsi spinulose. Forewings with 11 free, 10 and 9 long-stalked from cell, 9 anastomosing with 8 soon after origin, forming a long narrow areole, but sometimes the connecting part of 9 is not developed, leaving the areole open. Hindwings with 3 and 4 separate, 5 from much above middle of cell (two-thirds), 6 and 7 connate or closely approximated at origin, 12 closely approximated to cell from one-fourth to two-thirds.

Monotypical. Best distinguished from *Onychodes* by the origin of 5 of hindwings from much nearer 6 than 4; from *Gerusia* by the non-anastomosis of 12 with cell.

184. *CIRCOPETES OBTUSATA*.

Monoctenia obtusata Wlk., *Cat. Brit. Mus.*, xxi, 279; Meyr., *Proc. Linn. Soc. N.S.W.*, 1889, 1207.—*Monoctenia himeroides* Wlk., *ibid.*, 279.—*Arhodia modesta* Warr., *Novit. Zool.*, 1904, 485.

♂, ♀. 48-60 mm. Head pale-grey; face reddish-fuscous, lower edge, sometimes lateral edges, and some irroration, ochreous-whitish. Palpi 1; ochreous-whitish

irrorated with reddish-fuscous; terminal joint reddish-fuscous. Antennae pale-grey; pectinations in ♂ 8. Thorax and abdomen pale-grey. Legs grey-whitish irrorated with reddish-fuscous. Forewings elongate-triangular, costa straight, apex pointed, very slightly produced, termen sinuate beneath apex, strongly bowed above middle, thence only slightly rounded; pale-grey with fine fuscous strigulae more or less developed; a short oblique fuscous costal mark at one-fourth, with dots on median and anal veins indicating antemedian line; an oblique suffused fuscous mark on midcosta, indicating a median line, angulated beneath costa, but rarely developed; usually a fuscous, pale-centred, discal dot beyond middle; sometimes a fuscous mark on three-fourths costa, indicating commencement of a fine postmedian line, which is rarely present; cilia fuscous, apices usually whitish. Hindwings with termen gently rounded, wavy; colour as forewings; a transverse, fuscous, antemedian line; usually followed by a pale-centred discal dot; dorsal edge, except near base, whitish irrorated with dark-fuscous. Underside of forewings grey with pale-centred discal dot, and large, round, blackish, supraternal blotch; of hindwings like upperside, but with also usually a dark grey tornal suffusion prolonged to mid-disc, and sometimes a similar apical spot.

North Queensland: Cairns, Herberton, Townsville. Queensland; Gayndah, Brisbane, Toowoomba. Victoria: Melbourne. Tasmania: Lilydale. Western Australia: Perth, Waroona.

Genus 33. ONYCODES.

Gn., *Lep.*, ix, 142; Prout, *Gen. Insect.*, Oenochrom., p. 51.

Face smooth, not projecting. Palpi short or moderate, obliquely ascending; second joint shortly rough-scaled; terminal joint minute. Antennae bipectinate in both sexes, pectinations in ♂ very long, in ♀ moderate, extending to apex or nearly to apex. Thorax stout or moderate, moderately hairy beneath. Femora slightly hairy. Anterior tibiae with a long slender subterminal tuft on flexor surface. Posterior tibiae with two pairs of spurs. Tarsi minutely spinulose. Forewings with 11 free, or anastomosing with 12, 10 and 9 stalked, 9 connected with 8 soon after separating to form a long narrow areole, but sometimes the connecting bar fails to chitinize, leaving the areole open. Hindwings with 3 and 4 separate, 5 from middle of cell, 6 and 7 separate, connate, or short-stalked, 12 approximated to cell from one-fourth to middle, gradually diverging.

Type, *O. traumataria* Gn. *O. lutosaria* Gn. differs from this species in the stronger palpi and the anastomosis of 11 and 12 of the forewings, but I regard these differences as only specific.

185. ONYCODES TRAUMATARIA.

Gn., *Lep.*, ix., 143, Pl. ix, f. 8.—*Chilma flagrantaria* Wlk., *Cat. Brit. Mus.*, xxvi, 1692.

♂. 40-48 mm. Head pinkish-white; fillet yellow; face dark-red. Palpi 1, slender; ochreous-whitish, pinkish-tinged. Antennae pale-ochreous-grey; pectinations darker, very long (16) and extending to apex. Thorax yellow or orange, anteriorly pale-pink. Abdomen yellow or orange, sometimes with a few paired fuscous dorsal dots. Legs pinkish-ochreous. Forewings triangular, costa straight, sinuate before apex, apex pointed, termen slightly rounded, sinuate beneath apex; 11 free; yellow, orange, or ochreous, with few fine fuscous strigulae; a pinkish broadly-suffused line on costa before middle; dark-fuscous costal spots on

middle, three-fourths, and before apex; a brownish-ochreous line extends from subapical spot to three-fifths dorsum, variably developed, sometimes entire and straight, sometimes represented by a series of spots, which may be curved inwards above dorsum and succeeded by a large supraternal spot; extreme apex pink or pinkish-white; cilia brownish-fuscous, beneath apex sometimes pink. Hindwings with termen slightly rounded, not produced at tornus; as forewings, except for costal and apical markings. Underside darker; forewings, except dorsal and apical areas, more or less suffused with reddish; hindwings with reddish blotches on apex and tornus.

♀. 38-44 mm. Head and thorax pale-grey, pinkish-white, or crimson. Antennal pectinations 2. Forewings with termen doubly sinuate, apex produced; greyish-ochreous, pinkish-white, or crimson, more heavily strigulated and spotted than in ♂. Hindwings vary similarly.

This handsome and variable species is found in the southern mountains and Tasmania. Though often similar to the following species, it may always be distinguished by the hindwings not being produced at tornus, and by the ♂ antennae.

New South Wales: Barrington Tops, Mt. Kosciusko (4,500 feet). Victoria: Beaconsfield, Lorne, Sale, Gisborne, Mt. St. Bernard (5,000 feet). Tasmania: Hobart, Beaconsfield, Ulverstone, Zeehan, Strahan.

186. ONYCODES RUBRA.

♀ *Xenosuma rubra* Luc., *Proc. Roy. Soc. Qld.*, 1891, 81.—♂ *Arrhodia ? illidgei* Luc., *Proc. Linn. Soc. N.S.W.*, 1893, 139.

♂. 34-36 mm. Head whitish; fillet orange; face fuscous. Palpi 1, slender; ochreous or reddish, towards base whitish. Antennae pale-ochreous; pectinations 10, reduced to serrations at apex. Thorax and abdomen pale-ochreous or whitish-grey. Legs pale-ochreous irrorated and annulated with brownish-fuscous. Forewings triangular, costa straight, sinuate before apex, apex round-pointed, termen slightly rounded; 11 free; pale ochreous or whitish-grey, with some fine fuscous strigulae; costal edge ochreous; three small fuscous dots on veins representing basal line; a fuscous costal spot at middle, and a second, larger, at three-fourths; a fuscous line from costa near apex to dorsum at or beyond middle, sometimes reduced to a series of dots; sometimes followed by a large dark-fuscous supraternal spot, which may be double; sometimes a very slender, whitish, dentate, subterminal line; extreme apex tinged with pink; cilia brownish-ochreous. Hindwings with termen slightly rounded, produced at tornus; colour, cilia and transverse line as forewings. Underside ochreous or grey with slender postmedian line on forewings.

♀. 45-50 mm. Head pinkish or crimson, fillet orange, face reddish. Antennal pectinations 2½. Forewings with costa doubly sinuate, apex produced; pinkish-grey, pinkish-ochreous, or crimson; markings usually indistinct; a small fuscous dot on costa at three-fourths, which rarely gives rise to a brownish-ochreous line, angulated beneath costa, to dorsum beyond middle; the line from costa before apex is sometimes distinct, but often reduced to a series of minute dots, sometimes a dark-fuscous spot before dorsum.

Like the preceding, this is a variable species. Lucas's type *rubra* is in my collection.

Queensland: Caloundra, Brisbane. New South Wales: Sydney.

187. ONYCODES LUTOSARIA.

Arhodia ? lutosaria Feld., *Reise Novara*, Lep., Pl. 124, figs. 15, 16.—*Onychodes lutosaria* Meyr., PROC. LINN. SOC. N.S.W., 1889, 1200.

♀. 72 mm. Head fuscous-brown, anteriorly greyish-ochreous; fillet pink; face fuscous-brown, inferior tuft ochreous-whitish. Palpi 1½, thickened with densely appressed scales; ochreous-yellow spotted with crimson, apex greyish-ochreous. Antennae pink, more whitish towards apex; pectinations in ♀ 1. Thorax stout; greyish-ochreous; underside ochreous-yellow. Abdomen greyish-ochreous, posteriorly with a median dorsal line and some scattered irroration crimson. Legs ochreous-yellow spotted with crimson, anterior pair crimson except coxae. Forewings elongate-triangular, costa straight, slightly sinuate before apex, apex pointed, strongly produced, termen rather strongly bowed in middle, thence nearly straight; 11 anastomosing with 12; greyish-ochreous with crimson fuscous spots; costal edge crimson; a few fuscous strigulae beneath costa, above dorsum, and in posterior part of disc; a spot beneath costa at one-fifth, another on midcosta, a third on costa at three-fourths; a small subcostal median discal spot; a subdorsal spot at one-fourth, and two placed transversely at middle; a slightly sinuate line from apex to three-fourths dorsum, at first continuous and crimson-tinged, but soon reduced to a series of small spots; a subterminal spot above middle, two spots below middle posterior to oblique line, and one above tornus; cilia greyish-ochreous, beneath apex crimson-tinged. Hindwings somewhat elongate, termen gently rounded; pale orange; a crimson fuscous discal spot; a grey tornal suffusion; a curved, acutely-dentate, transverse, postmedian line; three crimson-fuscous spots arranged parallel to termen towards tornus; cilia pale-orange, towards tornus crimson-tinged, on tornus grey. Underside orange-yellow, with crimson-fuscous strigulae and discal spots; upper part of oblique line of forewing developed; a large irregular supraternal blotch on hindwings crimson-fuscous and white.

Queensland: National Park (2,500 feet). New South Wales: ———. Victoria: Fernshaw, Beaconsfield, Lorne, Gisborne.

Genus 34. CERNIA.

Wlk., *Cat. Brit. Mus.*, xx, 267; Prout, *Gen. Insect.*, Oenochrom., p. 51.

Face smooth, not projecting. Palpi moderate in ♂, long in ♀, porrect; second joint thickened with loosely appressed scales; terminal joint short in ♂, longer in ♀, cylindrical, obtuse. Antennae of ♂ shortly bipectinate, towards apex simple. Thorax stout, beneath densely hairy. Femora hairy. Posterior tarsi with two pairs of spurs; in ♂ dilated with internal groove and tuft. Tarsi minutely spinulose. Forewings with 10 from stalk of 7, 8, 9, 11 from cell anastomosing first with 12, then with 10, 10 approximated to 9 but not anastomosing, areole absent. Hindwings with 3 and 4 separate, 5 from much above middle of cell (two-thirds), 6 and 7 separate, 12 approximated to cell from one-fourth to middle, abruptly diverging.

Monotypical. The neuration is curiously identical with that of some Geometridae; nevertheless, I think it should be referred here.

188. CERNIA AMYCLARIA.

Wlk., *Cat. Brit. Mus.*, xx, 267.—*Pseudoterpna diphtherina* Meyr., *Trans. Ent. Soc. Lond.*, 1889, 496.—*Monoctenia odontias* Low., *Trans. Roy. Soc. S. Aust.*, 1894, 83.—*Aspidoptera ambiens* Luc., *Proc. Roy. Soc. Qld.*, 1899, 147.

♂, ♀. 32-38 mm. Head dark-reddish; face with paired whitish spots at upper and lower margins; palpi in ♂ 2, in ♀ 2½; dark-reddish, bases of joints and extreme apex whitish. Antennae whitish-ochreous, towards base dark-reddish; pectinations in ♂ 2. Thorax and abdomen pale-grey, more or less pinkish-tinged. Legs whitish mottled with dark-red; posterior tibiae of ♂ dilated with internal groove and tuft. Forewings triangular, rather narrow, costa straight to near apex, apex pointed, termen strongly rounded, crenulate; pale-grey, more or less pinkish-tinged; costal edge ochreous strigulated with dark-red and dark-fuscous; a median, subcostal, discal dot or transverse mark, fuscous or reddish; a fuscous sinuate line of dots from four-fifths costa to three-fourths dorsum, continuous towards costa, on dorsum followed by a short parallel dark-fuscous streak; terminal edge reddish; cilia dark-fuscous, apices usually white in concavities. Hindwings with costa emarginate towards apex, apex acutely rectangular, termen angled on vein 4, wavy, but not rounded above and beneath angle; colour and cilia as forewings; a small grey-whitish blotch, irrorated and capped with blackish on costa above emargination at two-thirds; from this proceeds a line of fine dots, sometimes obsolete to two-thirds dorsum. Underside similar, markings distinct, sometimes a suffused reddish terminal blotch above middle in both wings.

North Queensland: Dunk Is., Townsville. Queensland: Duaringa, Gayndah, Brisbane, Southport, Coolangatta, Toowoomba. New South Wales: Sydney, Jervis Bay. Also from New Guinea.

Genus 35. EUMELEA.

Duncan, *Nat. Hist. Exot. Moths*, 1841, p. 215; MEYR., *PROC. LINN. SOC. N.S.W.*, 1889, 1197; Prout, *Gen. Insect.*, *Oenochrom.*, p. 61.

Face smooth, lower edge slightly prominent. Palpi rather long, ascending, rather slender; second joint shortly rough-scaled; terminal joint smooth, cylindrical, obtuse. Antennae nearly as long as forewings, slender, and simple in both sexes. Thorax slender, slightly hairy beneath. Legs very long and slender. Femora hairy. Posterior tibiae with two pairs of spurs. Tarsi minutely spinulose. Forewings with 7, 8, 9 stalked, no areole, 10 and 11 arising separately from cell, 11 anastomosing first with 12, then with 10. Hindwings with 3 and 4 separate, 5 from well above middle of cell (three-fifths to two-thirds), 6 and 7 stalked, 12 approximated to cell as far as middle, thence gradually diverging.

Type, *E. rosalia* Stoll. Prout gives *sanguinata* Warr. (*rosalia* Dunc., *nec* Cram.) as the type, but in Seitz' *Macrolepidoptera* he does not mention Warren's species, and apparently merges it in *rosalia*. A singular and isolated genus.

The species are both similar and variable and yet await a final division, but the Australian forms are at present three, all from Queensland, and can be certainly distinguished.

1. Forewings with a nearly straight strongly oblique postmedian line from three-fourths costa *duponchelii*. 191
- Forewings with postmedian line curved, from before two-thirds costa 2
2. Wings finely strigulated; posterior tibiae of ♂ smooth *rosalia*. 189
- Wings coarsely strigulated; posterior tibiae of ♂ hairy on flexor surface *stipata*. 190

189. EUMELEA ROSALIA.

Stoll, *Cram. Pap. Exot.*, iv, 1781, 152, Pl. 368; *Eumelea sanguinata* (Warr.) *australiensis* Warr., *Novit. Zool.*, 1897, 29.

♂, 48-54 mm.; ♀, 52-58 mm. Head yellow; anterior part of crown and upper part of face more or less mixed with crimson. Palpi in ♂ 2-2½, in ♀ 2½-3; yellow, more or less mixed with crimson. Antennae five-sixths; dark-reddish becoming ochreous-whitish towards apex. Thorax and abdomen yellow, sometimes reddish-tinged. Legs yellowish, more or less irrorated with crimson-red; posterior tibiae of ♂ fringed with long hairs on flexor surface. Forewings triangular, costa gently and evenly arched, apex round-pointed, termen slightly rounded, slightly oblique; yellow or orange, rather coarsely strigulated with crimson-red or grey; the following markings are usually traceable: an outwardly curved line from one-fifth costa to one-fifth dorsum; a pale-centred, subcostal, discal spot before middle; a suffused, outwardly curved line from two-thirds costa to three-fifths dorsum; rarely also a suffused subterminal line; cilia yellow, reddish-fuscous, or crimson-red. Hindwings with termen slightly rounded; colour and cilia as forewings; a suffused median transverse line; often a small yellow apical spot. Underside similar.

Distinct from *E. stipata* in wing-shape, coloration, longer palpi, and hairy posterior tibiae of ♂. It is incompletely sexually dimorphic; most of the males are crimson-red, but very few females; most of the females are yellow, but very few males; the distinction between red forms and yellow is, however, bridged by intermediate forms. This species is certainly *australiensis* Warr.; for its identification with *rosalia* Stoll I rely on Mr. L. B. Prout.

North Queensland: Cairns, Herberton, Townsville. Queensland: Yeppoon. Also from the Archipelago.

190. EUMELEA STIPATA, n. sp.

Eumelea rosalia form *stipata* Prout, *Seitz Macrolep.*, Indo-Aust. Geom. p. 32.

♂, 45-50 mm.; ♀, 55 mm. Head crimson; fillet and two spots on lower margin of face yellow. Palpi 1½, in ♀ 2; external surface crimson, lower margin and internal surface yellow. Antennae five-sixths; dark crimson becoming grey towards apex. Thorax and abdomen crimson. Legs pale-yellow mixed with crimson; posterior tibiae of ♂ smooth. Forewings triangular, costa straight but arched before apex, apex rounded, termen nearly straight, moderately oblique; pale-crimson, sometimes yellowish-tinged, finely and densely strigulated throughout with dark-crimson; costal edge narrowly yellow interrupted by strigulae; usually no markings, but sometimes obscure antemedian and postmedian lines and a pale-centred discal spot partly developed; cilia crimson. Hindwings with termen gently rounded; colour and cilia as forewings. Underside similar.

The smooth posterior tibiae of the ♂ are sufficient evidence that this species is distinct from the following. By the practised eye it may be readily distinguished by its uniform dark-crimson coloration in contrast to the yellow and red of the latter species.

North Queensland: Cape York, Cooktown, Cairns. It has not yet been recognized outside Australia, but doubtless will be.

191. EUMELEA DUPONCHELII.

Montrousier, 1856.—*Eumelea obliquifascia* Warr., *Novit. Zool.*, 1894, 375.

♀. 60-63 mm. Head yellow; some irroration on crown and upper half of face, red. Palpi 2½; yellow irrorated with red. Thorax and abdomen yellow mixed with

crimson-red. Legs yellow mixed with fuscous-crimson. Forewings triangular, costa moderately and uniformly arched, apex pointed, termen slightly rounded, moderately oblique; orange-yellow coarsely strigulated and spotted with orange-brown; an incomplete outwardly curved line from one-fifth costa to one-fourth dorsum; a broadly suffused, nearly straight line from three-fourths costa to dorsum beyond middle; a pale-centred, subcostal, discal spot before middle; cilia fuscous. Hindwings with termen very slightly rounded; colour and cilia as forewings; a suffused transverse line before middle. Underside similar.

I have only two ♀ examples, but understand that the colour varies as in *rosalia*. For the identification I am indebted to Mr. L. B. Prout.

North Queensland: Cairns, Innisfail. Also from New Guinea and Moluccas.

Genus 36. CELERENA.

Wlk., *Trans. Ent. Soc. Lond.*, 1862, 71; Prout, *Gen. Insect.*, *Oenochrom.*, p. 96.

Face smooth, rounded, slightly projecting. Palpi rather short, ascending, rather slender; second joint shortly rough-scaled; terminal joint short, smooth-scaled. Antennae of ♂ simple. Thorax rather slender; hairy beneath. Femora hairy. Hindlegs of ♂ much modified and distorted. Tarsi not spinulose. Forewings with 11 and 10 long-stalked, their common stalk anastomosing with 12, 10 approximated to 9 (sometimes anastomosing with it). Hindwings with 3 and 4 separate, 5 from above middle of cell, 6 and 7 approximated at origin, 11 from near base, running into 12, 12 parallel but not approximated to cell as far as middle, thence gradually diverging.

Type, *C. divisa* Wlk., from India. A rather large Papuan genus, of which one species occurs in India, and one reaches North Queensland. It appears to be rather distantly allied to *Eumelea*, but shows important differences in the neuration. The males show many secondary sexual characters.

192. CELERENA GRISEOFUSA.

Warr., *Novit. Zool.*, 1896, 281; Turn., *Trans. Roy. Soc. S. Aust.*, 1922, 294.

Antennae of ♂ with a dorsal median tuft of long scales. Abdomen of ♂ densely hairy beneath. Hindlegs of ♂ with femora short, thickened, and densely hairy; tibiae much dilated, densely hairy, with long crooked median spurs and a single terminal spur; first tarsal joint much swollen. Forewing of ♂ with a large basal fovea beneath, elongate and gradually disappearing distally, unscaled above and beneath.

North Queensland: Claudie River. Also from New Guinea (Fergusson Is.).

Genus 37. AXIAGASTA, n. gen.

ἀξιαγαστος, worthy of admiration.

Face smooth, not projecting. Palpi of ♂ short, ascending, closely appressed to face; second joint thickened with appressed scales; terminal joint minute; of ♀ moderate, porrect; second joint rather slender; terminal joint moderate, cylindrical, obtuse. Antennae of ♂ bipectinate, towards apex dentate, pectinations moderate. Thorax moderate, not crested; beneath somewhat hairy. Femora smooth. Posterior tibiae with two pairs of spurs. Tarsi not spinulose. Forewings with 5 from much above middle of cell, 7, 8, 9 stalked, 10 and 11 long-stalked, their common stalk anastomosing with 12. Hindwings with 3 and 4 separate, 5 from much above middle of cell (three-fourths), 6 and 7 separate, 12 approximated to cell to beyond middle, thence gradually diverging.

The difference in the palpi of the two sexes is noteworthy. The genus is allied to *Zeuctophlebia*, the neururation of the forewings differing in the non-development of the basal connecting portion of 9 between 10 and 8, so that 9 has been "captured" by 8.

193. AXIAGASTA RHODOBAPHES, n. sp.

ροδοβαφης, rosy-suffused.

♂, 26 mm.; ♀, 32 mm. Head and thorax whitish tinged with rosy; face more or less fuscous. Palpi of ♂ 1, ascending and appressed to face; of ♀ 2, porrect; rosy mixed with fuscous, towards base white. Antennae grey-whitish; pectinations in ♂ 5, ochreous-fuscous. Abdomen whitish, towards base rosy tinged, apices of segments and some irroration fuscous. Legs rosy; femora and posterior pair whitish. Forewings triangular, costa straight, slightly arched before apex, apex round-pointed, termen rounded, oblique; whitish suffused with pale-rosy with some fine sparse fuscous irroration; costal edge deeper rosy; a very faint, outwardly curved line from two-fifths costa to two-fifths dorsum; a similar line from four-fifths costa to four-fifths dorsum, indented above dorsum; both lines are obsolete in ♀; a faint, fuscous, median, transverse, subcostal, discal mark; an interrupted dark-fuscous terminal line; cilia whitish, rosy-tinged. Hindwings with termen rounded; as forewings but without first line; discal mark more distinct. Underside paler, without lines, but with dark-fuscous discal spots on both wings.

Queensland: Gayndah in November; two specimens received from Dr. Hamilton Kenny.

Genus 38. AMPHICLASTA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1906, 132; Prout, *Gen. Insect.*, Oenochrom., p. 50.

Face somewhat projecting, clothed with rough scales. Tongue present. Palpi moderate, porrect; second joint densely clothed with rough scales; terminal joint very short, obtuse. Antennae of ♂ bipectinate, base and apical one-sixth simple, pectinations moderate (3). Thorax stout, with a small posterior crest above; beneath densely hairy. Femora hairy. Posterior tibiae with two pairs of spurs. Tarsi finely spinulose. Forewings with 7, 8, 9 stalked, 10 and 11 long-stalked from cell, 10 anastomosing with 9 to form an apparent areole. Hindwings with 3 and 4 separate, 5 from middle of cell, 6 and 7 separate, 12 closely approximated to cell as far as two-thirds, separating rather abruptly.

Monotypical. The long-stalking of 10 and 11 is an exceptional character. The true areole has been lost; the apparent areole represents the posterior portion of the double areole that is found in other genera.

194. AMPHICLASTA LYGAEA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1906, 132.

New South Wales: Bourke. Victoria: Birchip. South Australia: Pinnaroo.

Genus 39. ZEUCTOPHLEBIA.

Warr., *Novit. Zool.*, 1896, 355; Prout, *Gen. Insect.*, Oenochrom., p. 32.

Face smooth without tuft. Tongue present. Palpi moderate, porrect, thickened with appressed scales; terminal joint concealed. Antennae of ♂ bipectinate, pectinations long, not extending to apex. Thorax and abdomen slender;

the former hairy beneath. Femora smooth. Tarsi spinulose. Forewings with 7 and 8 stalked from upper angle of cell, 9, 10 and 11 long-stalked, their common stalk anastomosing with 12; 9 and 10 then anastomosing with 8 to form a large areole from which 8, 9, 10 arise by a common stalk. Hindwings with 6 and 7 approximated at origin, 12 connected with cell at about one-third by 11, closely approximate to cell to about two-thirds, thence diverging.

Type, *Z. squalidata* Wlk. This genus is isolated. In neuration it is nearest *Celerena*, but there can be no really close relationship. *Zeuctophlebia* differs from all other genera, in which 12 of the hindwings is closely appressed to the cell, by the retention of vein 11, and this must be an archaic character. In my introductory remarks, 11 is said to run into 12. This is quite incorrect; 11 anastomoses strongly with 10, while 12 anastomoses at a point with their common stalk.

Key to Species.

1. Face red; apex of forewing acute *squalidata*. 195
- Face grey; apex of forewing not acute *tapinodes*. 196

195. ZEUCTOPHLEBIA SQUALIDATA.

Fidonia squalidata Wlk., *Cat. Brit. Mus.*, xxvi, 1671.—*Zeuctophlebia rufipalpis* Warr., *Novit. Zool.*, 1896, 355.

♂, ♀. 22-30 mm. Head pale-reddish; face dark-red. Palpi 1½; red mixed with dark-fuscous. Antennae grey; pectinations in ♂ 6. Thorax grey tinged with reddish and irrorated with fuscous. Abdomen whitish, bases of segments irrorated with dark-fuscous and rarely also with reddish. Legs dark-fuscous, more or less mixed with red; tarsi annulated with whitish-ochreous. Forewings triangular, costa slightly arched, apex acute, termen slightly rounded, slightly oblique; whitish more or less suffused with pale-reddish and irrorated with dark-fuscous; costal edge reddish; first line from one-third costa to one-third dorsum, slender, reddish-fuscous, sometimes slightly dentate; a median, subcostal, blackish, discal dot; second line from two-thirds costa obliquely outwards, acutely angled in disc above middle; thence nearly straight to two-thirds dorsum, slender, whitish, edged on both sides with reddish-fuscous; usually a subterminal series of dark-fuscous dots with pale haloes; a terminal series of dark-fuscous dots; cilia whitish, bases reddish-tinged, with a fuscous median line. Hindwings with termen rounded; as forewings, but without first line. This attractive little species deserved a better name.

North Queensland: Herberton. Queensland: Yeppoon, Gympie, Nambour, Brisbane, Stradbroke Is., Mt. Tambourine, Coolangatta, National Park (3,000 ft.), Toowoomba, Bunya Mts. (3,000 feet), Killarney. Tasmania: Launceston.

196. ZEUCTOPHLEBIA TAPINODES.

Turn., *Trans. Roy. Soc. S. Aust.*, 1904, 228.

♂, ♀. 23-26 mm. Head pale-grey; face darker. Palpi 1; whitish, apex grey. Antennae grey; pectinations in ♂ 8. Thorax and abdomen grey with a few fuscous scales. Legs grey; posterior pair ochreous-whitish. Forewings triangular, costa straight to near apex, apex round-pointed, termen slightly rounded, slightly oblique; pale-grey sparsely irrorated, and costa strigulated, with fuscous; first line from one-fourth costa to one-fourth dorsum, usually represented by three fuscous dots, rarely continuous, sometimes obsolete; a median, subcostal, blackish, discal dot; sometimes a faint, fuscous, transverse, median line just posterior to

discal dot; postmedian line from three-fourths costa to two-thirds dorsum, slender, fuscous, sinuate, finely dentate; sometimes a faint fuscous subterminal line; cilia grey. Hindwings with termen rounded; grey; a fuscous discal dot at about one-third; sometimes a faintly darker transverse line at one-third; sometimes a very slender dentate transverse line beyond middle; an interrupted fuscous terminal line; cilia grey.

Queensland: Caloundra in August, Stradbroke Island, Coolangatta in November; six specimens.

Genus 40. PHYSETOSTEGE.

Warr., *Novit. Zool.*, 1896, 99; Prout, *Gen. Insect.*, Oenochrom., p. 86.

Face smooth, not projecting. Tongue well developed. Palpi moderate, ascending; second joint thickened with appressed hairs; terminal joint short, porrect, obtuse. Antennae of ♂ bipectinate, towards apex simple, each pectination ending in a long terminal bristle. Thorax and abdomen moderately slender; the former not hairy beneath. Femora smooth. Posterior tibiae of ♂ slightly dilated with internal groove and tuft. Tarsi minutely spinulose. Forewing of ♂ with a large sub-basal fovea between cell and anal vein; 2 from two-thirds, 3 from shortly before angle, areole present, 10 arising separately from areole, 11 anastomosing first with 12 and then with areole. Hindwings with 2 from three-fifths, 3 from shortly before angle, 5 from middle, 6 and 7 separate, 7 arising from shortly before angle, 12 swollen at base, connected with cell near base, thence diverging.

So far only one species has been recorded. This and the following genus are allied to *Encryphia*.

197. PHYSETOSTEGE MIRANDA.

Warr., *Novit. Zool.*, 1896, 99.

♂, 36 mm.; ♀, 42 mm. Head and thorax reddish-brown. Palpi 2½; reddish-brown. Antennae reddish-brown; pectinations in ♂ 3½, apical one-sixth simple. Abdomen reddish-brown, apices of third, fourth and fifth segments white or whitish on dorsum. Legs reddish-brown partly suffused with fuscous; tarsi broadly annulated with whitish. Forewings triangular, rather narrow, costa straight except near base and apex, apex pointed, termen very slightly rounded, rather strongly oblique; reddish-brown with fine fuscous strigulations most developed towards costa; antemedian line from one-third costa to one-third dorsum, slightly outwardly curved, dark-reddish; an inconspicuous, median, subcostal, dark, transverse, discal mark; postmedian from beneath three-fourths costa to two-thirds dorsum, angled obtusely outwards above middle, incurved above and below angle, dark-reddish edged posteriorly with pale-reddish-ochreous; cilia reddish. Hindwings with termen strongly rounded; as forewings, but without antemedian line and discal mark; postmedian angled in middle and slightly dentate, sometimes preceded by a fuscous or blackish suffusion towards costa.

My examples closely correspond to the New Guinea form. I have not seen any like those described by Warren as *miranda rufata*, which perhaps is a distinct species.

North Queensland: Kuranda near Cairns in September, October and November; three specimens received from Mr. F. P. Dodd. Also from New Guinea.

Genus 41. NOREIA.

Wlk., *Cat. Brit. Mus.*, xxiv, 1092; Prout, *Gen. Insect.*, Oenochrom., p. 84.

Face smooth, not projecting. Tongue well developed. Palpi short, ascending, rather slender; terminal joint minute. Antennae of ♂ shortly ciliated. Thorax and abdomen slender; the former not hairy beneath. Femora smooth. Posterior tibiae of ♂ slightly dilated with internal groove and tuft. Tarsi spinulose. Forewings with 2 from two-thirds, 3 from near angle, areole present, 7, 8, 9, 10 stalked from areole, 11 anastomosing first with 12, then with areole. Hindwings of ♂ sometimes with a tuft of hairs on vein 2 on underside; 2 from three-fourths, 3 from near angle, 5 from about middle, 6 and 7 separate, 7 arising shortly before upper angle, 12 approximated to cell near base, thence diverging.

Type, *N. perdensata* Wlk., from India. A genus of about ten species ranging from India to New Guinea. It is allied to *Physetostege* and *Encryphia*.

198. NOREIA VINACEA.

Prout, *Novit. Zool.*, 1899, 13.—*Idiodes lorosticha* Turn., *Trans. Roy. Soc. S. Aust.*, 1906, 135.

♂, ♀. 44 mm. Head whitish-grey; face fuscous-brown. Palpi short, not reaching middle of face; fuscous-brown. Antennae grey, towards base ochreous-tinged. Thorax and abdomen grey, purplish-tinged. Legs ochreous-grey. Forewings triangular, costa straight to two-thirds, thence arched, apex acute, very slightly produced, termen straight, slightly oblique; grey, purplish-tinged; costal edge pale-ochreous; antemedian line from one-fifth costa to one-third dorsum, slender, straight, fuscous-brown; a subcostal, dark-fuscous, discal dot before middle; a well-marked, straight, fuscous-brown line from apex to two-thirds dorsum, sometimes connected by a fine line with three-fourths costa; cilia concolorous. Hindwings with termen moderately rounded; in ♂ with a small tuft of pale hairs on vein 2 at about one-fourth on underside; as forewings, but without antemedian line, discal dot at about one-third, minute or obsolete; postmedian at about middle, transverse.

Mr. L. B. Prout informs me that there is a long series from Queensland in Coll. Rothschild, and that he considers my name to be a synonym of *N. vinacea*.

North Queensland: Kuranda near Cairns in April and May; two specimens received from Mr. F. P. Dodd. Also from New Guinea.

Genus 42. ENCRYPHIA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1904, 228.

Face smooth, without tuft. Palpi moderately long, porrect; second joint thickened with appressed hairs; terminal joint short, obtuse. Antennae of ♂ bipectinate, pectinations slender, moderately long, not extending to apex, each accompanied by a long bristle (about twice its length), which arises proximally from its base. Thorax and abdomen slender; the former not hairy beneath. Femora smooth. Posterior tibiae of ♂ dilated with internal groove and tuft. Tarsi spinulose. Forewings with 11 from cell anastomosing first with 12 and then with 10, 10 stalked with 7, 8, 9, anastomosing again with 9 beyond 7, from areole so formed 8, 9, 10 arise by a common stalk. Hindwings with 6 and 7 separate, 7 arising before angle, 12 connected by a short bar with cell near base, thence gradually diverging.

Only the following species is known. The double areole has been modified by the stalking of vein 10 and the long anastomosis with vein 12, but is essentially the same structure as that of *Nearcha* and *Taxeotis*. The antennal structure is peculiar. The connection in the hindwings of 12 with the cell represents vein 11, which has been lost in most of the genera.

199. ENCRYPHIA FRONTISIGNATA.

Tacparia ? *frontisignata* Wlk., *Cat. Brit. Mus.*, xxvi, 1523.—*Tephрина punctilineata* Wlk., *ibid.*, xxxv, 1661.—*Nearcha paraptila* Meyr., *Proc. Linn. Soc. N.S.W.*, 1889, 1156.—*Encryphia argillina* Turn., *Trans. Roy. Soc. S. Aust.*, 1904, 228.

♂, ♀. 30-38 mm. Head grey, sometimes reddish or ochreous-tinged; face purple-fuscous. Palpi $2\frac{1}{4}$ to $2\frac{1}{2}$; ochreous-fuscous. Antennae grey; pectinations in ♂ $1\frac{1}{2}$. Thorax and abdomen grey, sometimes reddish or ochreous-tinged, sometimes with sparse dark-fuscous irroration; abdomen in ♂ with two pairs of dense fuscous lateral tufts. Legs grey, sometimes reddish or ochreous-tinged. Forewings triangular, costa nearly straight, arched before apex, apex pointed, termen slightly rounded, slightly oblique; grey, sometimes reddish or ochreous-tinged, with more or less fuscous irroration or strigulation, sometimes confined to costal area; costal edge reddish-ochreous; first line from one-fourth costa to one-fourth dorsum, in ♂ reduced to three or more dark fuscous dots partly surrounded by ferruginous-fuscous scales, rarely obsolete, in ♀ continuous, reddish-ochreous sometimes mixed with fuscous, rarely obsolete; a median subcostal, dark-fuscous, discal mark or dot, sometimes faint or obsolete; postmedian line from three-fourths costa to before two-thirds dorsum, strongly outwardly curved in ♂ with subcostal and median rounded projections, in ♀ only slightly curved, in ♂ formed of dark fuscous dots usually connected by a ferruginous-fuscous line, in ♀ slender and like first line, but sometimes broadly suffused with fuscous; sometimes a subterminal series of fuscous dots; cilia concolorous. Hindwings with termen rounded; as forewings, but without first line and discal dot.

North Queensland: Townsville. Queensland: Bundaberg, Eidsvold, Gayndah, Brisbane, Rosewood, Toowoomba, Dalby.

Genus 43. DERAMBILA.

Wlk., *Cat. Brit. Mus.*, xxvi, 1630; Prout, *Gen. Insect.*, Oenochrom., p. 72.

Face smooth, not projecting. Tongue present. Palpi moderate, slender, smooth-scaled, porrect or ascending; second joint with an apical whorl of short hairs; terminal joint minute. Antennae of ♂ ciliated. Thorax and abdomen slender; the former smooth beneath. Legs long and slender. Femora smooth. Posterior tibiae without middle spurs; in ♂ more or less dilated; terminal spurs in ♂ sometimes minute or absent. Tarsi not spinulose. Forewings with 2 from middle of cell, 3 and 4 widely separate, 5 from middle, 6 from upper angle, 7, 8, 9 stalked from before angle, 10 absent (coincident with 9), 11 connate with 7, 8, 9, immediately running into 12. Hindwings with 2 from middle, 3 and 4 widely separate, 5 from middle, 6 and 7 connate or stalked, 12 approximated to cell opposite origin of 11, which runs into it, thence diverging.

Type, *D. punctisignata* Wlk., from Africa. The genus is of moderate size, characteristic of the African and Indo-Malayan regions, extending to the coast of North Queensland and North Australia.

Key to Species.

1. Hindwings with 6 and 7 long-stalked 2.
Hindwings with 6 and 7 connate or short-stalked *permensata*. 203
2. Palpi 2 3
Palpi 1½ *liosceles*. 202
3. Forewings with submarginal line and several dots in median area *idiosceles*. 201
Forewings without submarginal line and with only one dot in median area
..... *catherina*. 200

As the species are very similar, I give a key based on the ♂ secondary characters.

1. Antennae biciliate in tufts, ciliations long 2
Antennae evenly ciliated, ciliations moderate or short 3
2. Posterior tibiae grooved externally and without terminal tuft *catherina*. 200
Posterior tibiae not grooved but with terminal tuft *idiosceles*. 201
3. Posterior tibiae wholly smooth *liosceles*. 202
Posterior tibiae densely hairy on internal surface *permensata*. 203

200. DERAMBILA CATHERINA.

Zanclopteryx permensata Meyr., PROC. LINN. SOC. N.S.W., 1892, 674, *nec* Wlk.—
Derambila catherina Prout, *Gen. Insect.*, Oenochrom., p. 74.

♂, ♀. 20-23 mm. Head and thorax white. Palpi 2; white; second joint with an apical, terminal with a subapical, fuscous ring. Antennae whitish-grey; in ♂ biciliate in tufts, ciliations 3. Abdomen white; dark-fuscous dorsal dots on third and fourth, and sometimes also on second, segments; underside grey. Legs pale-grey; femora and posterior pair white; posterior tibiae of ♂ thickened and deeply grooved on their external surface, terminal spurs short, tarsi longer than tibiae. Forewings triangular, costa straight, apex acute, termen very slightly rounded; white with pale-fuscous dots; costal edge sometimes strigulated with fuscous; a subcostal dot at three-fifths, a subdorsal dot at one-third, and a dot on median slightly beyond them; a slightly darker median discal dot; a line of fine dots from five-sixths costa, at first parallel to termen, bent inwards below middle, and ending on two-thirds dorsum; a darker series of interneural terminal dots; cilia white. Hindwings with termen rounded; 6 and 7 stalked; white with fuscous dots; a median discal dot; a line of fine dots from three-fourths costa to three-fourths dorsum, strongly outwardly curved; terminal dots and cilia as forewings.

This is a common species in North Queensland, but has not yet been recorded south of Townsville. The ♂ may be easily recognized by the structure of the posterior legs.

North Australia: Darwin. North Queensland: Cape York, Dunk Is., Palm Is., Townsville, Charters Towers.

201. DERAMBILA IDIOSCELES, n. sp.

ἰδιοσκελής, with peculiar legs.

♂, ♀. 20-24 mm. Head and thorax white. Palpi 2; white; second joint with an apical, terminal with a subapical, fuscous ring. Antennae grey, towards base whitish; in ♂ biciliate in tufts; ciliations 3. Abdomen white; a blackish transverse bar on third segment, sometimes also a blackish dot on second segment; underside grey. Legs white; anterior pair fuscous; posterior tibiae of ♂ somewhat

enlarged, smooth, terminal spurs minute; a dorsal terminal tuft of scales, tarsi two-thirds, first tarsal joint shorter than second. Forewings triangular, costa straight to near apex, apex acute, termen slightly sinuate; white with pale-fuscous markings; a few pale-fuscous strigulae on costa towards base; a line from one-fourth costa to one-fourth dorsum, outwardly oblique from both margins, interrupted and widely open in middle; a blackish median discal dot; a dot between this and mid-costa, and two dots in a line between this and mid-dorsum; a nearly straight line of dots from five-sixths costa to three-fourths dorsum, interrupted beneath middle; two or three subterminal dots; an interrupted pale-fuscous submarginal line; a terminal series of black interneural dots; cilia white. Hindwings with termen rounded; 6 and 7 stalked; white with pale-fuscous markings; a sinuate, median, transverse line of dots; several dots in disc following this; an interrupted subterminal line, strongly outwardly curved in middle; submarginal line, terminal dots, and cilia as forewings.

The terminal tuft and minute spurs of the ♂ posterior tibiae, together with the first joint of ♂ posterior tarsi being shorter than first joint, are peculiar characters. The markings are more numerous than in *catherina* and differently arranged.

North Australia: Melville Is. North Queensland: Cape York. Five specimens.

202. DERAMBILA LIOSCELES, n. sp.

λειοσκέλης, smooth-legged.

♂. 28 mm. Head and thorax white; centre of face more or less grey. Palpi $1\frac{1}{4}$; white; apex of second joint grey. Antennae whitish-grey; terminal joints expanded at apices; evenly and shortly ciliated ($\frac{1}{2}$) in ♂. Abdomen white; sometimes a transverse, blackish, dorsal bar on third segment; underside grey. Legs whitish; anterior pair grey; posterior tibiae of ♂ somewhat enlarged, smooth, without spurs; posterior tarsi of ♂ about three-fourths. Forewings triangular, costa straight to two-thirds, thence arched, apex acute, termen slightly sinuate; white with pale-fuscous markings; a dot on dorsum at one-fourth and another on median beyond this; a median discal dot; a slightly sinuate line of dots from five-sixths costa to dorsum slightly beyond middle; a submarginal line, not always distinct; a terminal series of blackish interneural dots, sometimes narrowly connected; cilia white. Hindwings with termen rounded; 6 and 7 short-stalked; white with pale-fuscous markings; a median discal mark; a subterminal series of fine dots from five-sixths costa, at first rounded, thence strongly sinuate and bent to end on dorsum at three-fifths; submarginal line, terminal dots, and cilia as forewings.

North Queensland: Kuranda near Cairns in November and May; two specimens received from Mr. F. P. Dodd. Also from Timor.

203. DERAMBILA PERMENSATA.

Zanclopteryx permensata Wlk., *Cat. Brit. Mus.*, xxvi, 1619.—*Zanclopteryx guttilinea* Wlk., *ibid.*, xxxvi, 1635.

♂, ♀. 30-32 mm. Head white, anterior margin grey; face, except margins, grey. Palpi $1\frac{1}{4}$, ascending, terminal joint porrect; white; terminal joint and apex of second joint fuscous. Antennae whitish-grey; in ♂ evenly and moderately ciliated ($1\frac{1}{2}$). Thorax white. Abdomen white; underside grey; in ♂ with a

median pale ochreous tuft of hairs. Legs white; anterior pair grey; posterior tibiae of ♂ much dilated, densely clothed with long hairs on inner surface, terminal spurs absent; tarsi $\frac{1}{2}$. Forewings triangular, costa straight to three-fourths, thence arched, apex acute, termen slightly sinuate; white with fuscous dots; a sub-basal dot at one-fourth, and a dot on median beyond this; a discal dot rather beyond middle, sometimes larger and blackish; a series of fine dots on veins from five-sixths costa, at first parallel to termen, then bent inwards, and continued to dorsum slightly beyond middle; a terminal series of interneural blackish dots; cilia white. Hindwings with termen gently rounded, tornus prominent; 6 and 7 connate or separate; white with fuscous dots; a median discal dot, sometimes blackish; a subterminal series of fine dots, strongly outwardly curved in middle, from five-sixths costa to three-fifths dorsum; terminal dots and cilia as forewings.

North Australia: Darwin. North Queensland: Cape York. Also from Tenimber Is., Timor and Java.

Genus 44. OZOLA.

Wlk., *Cat. Brit. Mus.*, xxiv, 1080; Prout, *Gen. Insect.*, *Oenochrom.*, p. 93.

Face smooth. Palpi moderate, porrect, rather slender; second joint rough-scaled above towards apex; terminal joint short, truncate. Antennae about three-fourths; in ♂ ciliated. Thorax slender; not hairy beneath. Femora smooth. Posterior tibiae with a single median and two terminal spurs in both sexes; in ♂ more or less dilated, with internal groove and tuft. Tarsi not spinulose. Forewings with 10 absent (coincident with 9), 7, 8, 9 stalked from well before upper angle of cell, 11 arising from near 7, 8, 9, anastomosing strongly with 12, then with 10. Hindwings with 3 and 4 separate, 5 from middle of cell, 6 and 7 separate, 11 from near base, running into 12, 12 widely separated from cell.

Type, *O. microniaria* Wlk., from India. A moderately large genus ranging from India throughout the Archipelago, with one species in Africa. Many of the species have narrow forewings falcate at the apex.

1. Hindwings with termen strongly angled on vein 6 *basisparsata*. 204
- Hindwings with termen rounded *exigua*. 205

204. OZOLA BASISPARSATA.

Carima basisparsata Wlk., *Cat. Brit. Mus.*, xxvi, 1631.

♂, ♀. 34-36 mm. Head brown-whitish. Palpi $1\frac{1}{4}$; fuscous; bases of first and second joints whitish. Antennae brown-whitish; ciliations in ♂ $1\frac{1}{2}$. Thorax and abdomen brown-whitish with a few fuscous scales. Legs whitish with slight fuscous irroration; posterior tibiae of ♂ dilated, with internal groove and tuft. Forewings narrow-triangular, elongate, costa nearly straight, but strongly arched before apex, apex acute, slightly produced, termen strongly angled on vein 4, slightly concave above and below angle, very oblique; brown-whitish variably suffused with brownish and with very sparse fuscous irroration; sometimes a curved, broadly suffused, antemedian line; postmedian line very slender, pale-grey, from three-fifths costa, outwardly curved beneath costa, thence straight to four-fifths dorsum, sometimes obscured by brownish suffusion; a subterminal line of confluent fuscous dots from costa to vein 5, or continued further, some-

times the area between this and postmedian line is darkly suffused; cilia fuscous-brown, apices brown-whitish, between veins 3 and 4 wholly whitish. Hindwings subquadrate, termen sharply angled on vein 6; as forewings, with the addition of a dark-fuscous discal dot before middle. Underside whitish irrorated with brown; markings as on upper side but more distinct; a discal dot on forewing.

North Queensland: Cairns, Townsville. Also from Borneo and Malay Peninsula.

205. *OZOLA EXIGUA*.

Swin., *Trans. Ent. Soc. Lond.*, 1902, 645.

♂, ♀. 24-32 mm. Head ochreous-whitish; face with a transverse brownish bar. Palpi $1\frac{1}{4}$; fuscous-brown, towards base ochreous-whitish. Antennae ochreous-grey-whitish; ciliations in ♂ $1\frac{1}{2}$. Thorax and abdomen ochreous-whitish, sometimes with a few fuscous scales. Legs ochreous-whitish partly suffused and irrorated with brown; posterior tibiae of ♂ dilated with internal groove and tuft. Forewings narrow-triangular, elongate, costa straight almost to apex, apex acute, slightly produced, termen sinuate, oblique; ochreous-whitish irrorated, and costa strigulated with fuscous-brown; a distinct fuscous-brown, outwardly-curved antemedian line from one-fourth costa to one-fourth dorsum; a median subcostal discal dot; a similar postmedian line from two-thirds costa to three-fourths dorsum, sinuate, sometimes wavy; a small irregular fuscous blotch on termen beneath apex, connected by a distinct line with costa before apex; a lesser terminal blotch above tornus; in ♀ most of the area beyond the postmedian line is darkly suffused; cilia fuscous, between terminal blotches whitish. Hindwings with termen rounded; as forewings, but without tornal blotch, antemedian and postmedian lines meeting on costa. Underside similar.

North Australia: Darwin. North Queensland: Palm Islands. Also from New Guinea.

Species unknown or wrongly referred to this family.

As already mentioned I refer the genus *Diceratucha* Swin., to the Notodontidae and the genera *Dirce* Prout (*Oenone* Meyr., praeocc.) and *Xenomusa* Meyr., to the Boarmiadae.

206. *Aspilates* (Meyr., nec Treit.) *chordota* Meyr., *Proc. LINN. Soc. N.S.W.*, 1899, 1196, belongs to the Boarmiadae. I have examined the type.
207. *Hypographa reflua* Luc., *Proc. Roy. Soc. Qld.*, 1898, 70.
208. *Onychodes fulgurans* Luc., *ibid.*, 70 (misprinted *fulguraus*).
209. *Arhodia orthotoma* Low., *Trans. Roy. Soc. S. Aust.*, 1894, 83, is a synonym of *Orsonota clelia* Cram. (Boarmiadae).
210. *Arhodia porphyropa* Low., *Trans. Roy. Soc. S. Aust.*, 1898, 42, belongs to the Geometridae.
211. *Monoctenia niphosema* Low., *Trans. Roy. Soc. S. Aust.*, 1908, 114, belongs to Noctuidae.
212. *Dichromodes* ? *triglypta* Low., *ibid.*, 114, belongs to the genus *Sterrha*.
213. *Epidesmia unilinea* Swin., *Trans. Ent. Soc. Lond.*, 1902, is a synonym of *Heteralex aspersa* Warr. The type is from China, not Tasmania.

INDEX TO GENERA.

Adeixis	14	Dinophalus	17	Oenochroma	25
Amphiclasta	38	Ecphyas	6	Onycodes	33
Antasia	3	Enchocrana	19	Ozola	44
Antictenia	26	Encryphia	42	Phallaria	24
Arcina	10	Epidesmia	9	Phrixocomes	12
Arhodia	29	Eumelea	35	Physetostege	40
Axiagasta	37	Gastrophora	28	Sarcinodes	21
Bradystena	11	Gerusia	31	Satraparchis	8
Carthaea	27	Homospora	30	Symphylistis	16
Cathaemacta	5	Hypographa	20	Systatica	7
Celerena	36	Lissomma	18	Tapinogyna	4
Cernia	34	Macroctenia	22	Taxeotis	2
Circopetes	32	Monoctenia	23	Xenogenes	15
Derambila	43	Nearcha	1	Zeuctophlebia	39
Dichromodes	13	Noreia	41		

INDEX TO SPECIES.

Synonyms, unrecognized species, and species wrongly referred to this family, in *italics*.

acrothecta	27	<i>carbonata</i>	70	epaeneta	153
adelia	20	caronia	9	epigaea	43
<i>adelpha</i>	28	catherina	200	epigypsa	15
aenigmatodes	40	cerasiplaga	165	epiodes	149
aesia	79	chilonaria	54	eremaea	133
<i>agnata</i>	3	<i>chordota</i>	206	eremophila	33
ainaria	74	chrysoplaca	128	<i>erubescens</i>	161
<i>albitacta</i>	123	<i>cirrhoplaca</i>	82	estigmara	71
alloceros	41	<i>collineata</i>	26	euprepes	82
alpina	171	<i>compacta</i>	152	euscia	114
<i>ambiens</i>	188	compar	44	eustrotiodes	129
ampycteria	144	compsotis	83	exaereta	37
amyclaria	188	confluaria	98	exigua	205
anelictis	88	consignata	122	eximia	156
<i>anemodes</i>	10	<i>corrogata</i>	13	<i>exocha</i>	103
angasi	87	<i>costinotata</i>	71	excusata	181
anthracopa	21	curtaria	13	explanata	100
<i>areniferata</i>	26	cyanorrhæa	131	<i>explicataria</i>	26
<i>argillina</i>	199	cynoptera	169	exsectaria	35
<i>argyritis</i>	64	<i>cygnaea</i>	47	exsignata	103
aridaria	6	dasyzōna	3	falernaria	157
aristadelpha	94	decolorata	168	<i>flagrantaria</i>	185
aristarcha	150	<i>decora</i>	159	flavicapitata	45
<i>artia</i>	165	<i>delogramma</i>	17	<i>fraternaria</i>	157
atmoscia	146	denticulata	91	frontisignata	199
atrosignata	118	<i>dentigeraria</i>	92	fulgorigera	64
atyla	12	<i>devitata</i>	101	<i>fulgurans</i>	208
<i>aurinaria</i>	54	<i>diasemaria</i>	74	<i>fulvida</i>	82
basisparsata	204	<i>didymochroa</i>	26	galactica	72
<i>bathrosema</i>	145	diffusaria	95	<i>gastropacharia</i>	166
benecristata	2	<i>digglesaria</i>	174	goniogramma	29
berthoudi	125	dilutaria	139	griseofusa	192
bigeminata	32	<i>diphtherina</i>	188	<i>guttilinea</i> Wlk.	203
bijugata	51	disputata	92	<i>guttilinea</i> Warr.	167
blechra	19	<i>divergentaria</i>	74	haematopa	77
brachygrammella	59	drakei	140	henricaria	178
buffalaria	5	<i>dryina</i>	39	himerata	141
<i>calladelpha</i>	156	duponchelii	191	<i>himeroides</i>	184
<i>calypsis</i>	35	egenata	25	hiracopis	145
<i>capitata</i>	45	emplecta	97	holopsara	49
<i>caprina</i>	164	endela	39	holoscia	30

<i>holzi</i>	152	<i>ophiucha</i>	113	<i>retractaria</i>	179
<i>hypenaria</i>	55	<i>ophiusaria</i>	158	<i>rhodobaphes</i>	193
<i>hypotaenaria</i>	163	<i>ophla</i>	10	<i>rhodoscopa</i>	180
<i>icelodes</i>	116	<i>oraula</i>	28	<i>rimosa</i>	123
<i>idiocrana</i>	132	<i>orectis</i>	104	<i>rosalia</i>	189
<i>idiosceles</i>	201	<i>oriphoetes</i>	90	<i>rostrata</i>	99
<i>illidgei</i>	186	<i>ornata</i>	126	<i>rubra</i> Luc.	186
<i>inconcisata</i>	17	<i>orphnina</i>	42	<i>rubra</i> Warr.	182
<i>incongrua</i>	143	<i>orthodesma</i>	161	<i>rubricosa</i>	183
<i>indicataria</i>	115	<i>orthogramma</i>	126	<i>rufipalpis</i>	195
<i>infantilis</i>	173	<i>orthosticta</i>	24	<i>rufula</i>	78
<i>inostentata</i>	127	<i>orthotis</i>	84	<i>sanguinata</i>	189
<i>insignata</i>	127	<i>orthotoma</i>	209	<i>saturnioides</i>	177
<i>inspersa</i>	55	<i>orthozona</i>	85	<i>schistacearia</i>	71
<i>intermixtaria</i>	22	<i>oxyderces</i>	54	<i>scothima</i>	75
<i>intextata</i>	17	<i>oxyptera</i>	1	<i>semicanescens</i>	105
<i>ioneura</i>	80	<i>ozora</i>	179	<i>semifusca</i>	26
<i>ischnota</i>	69	<i>pachygramma</i>	63	<i>semitrosea</i>	179
<i>isomeris</i>	16	<i>pallida</i>	160	<i>serpentaria</i>	135
<i>isophanes</i>	23	<i>pallidula</i>	160	<i>sigmata</i>	106
<i>lacista</i>	148	<i>paraptila</i>	199	<i>simplex</i>	169
<i>laetabilis</i>	76	<i>partitaria</i>	86	<i>smerintharia</i>	155
<i>lasiocamparia</i>	179	<i>pelopa</i>	21	<i>squalidata</i>	195
<i>lechriomita</i>	137	<i>perfabricata</i>	57	<i>staurotis</i>	7
<i>leptocyma</i>	130	<i>perichroa</i>	46	<i>stereospila</i>	38
<i>leptogramma</i>	109	<i>perinipha</i>	73	<i>steropias</i>	67
<i>leptozona</i>	111	<i>perlinearia</i>	26	<i>stilbiata</i>	121
<i>leucospila</i>	176	<i>permensata</i>	203	<i>stillans</i>	162
<i>limosa</i>	110	<i>personalis</i>	112	<i>stipata</i>	190
<i>linda</i>	118	<i>petrilineata</i>	122	<i>strophiodes</i>	95
<i>liosceles</i>	202	<i>phaedropa</i>	56	<i>subcarnea</i>	162
<i>liospora</i>	108	<i>phaeopa</i>	34	<i>subcelata</i>	11
<i>lissophrica</i>	102	<i>phaeostrophia</i>	88	<i>subflava</i>	74
<i>lissoscia</i>	171	<i>philodora</i>	14	<i>subfulvida</i>	152
<i>loxomochla</i>	48	<i>phlegetonaria</i>	151	<i>subpurpurea</i>	179
<i>loxosticha</i>	198	<i>phoenicina</i>	60	<i>subustaria</i>	164
<i>lutosaria</i>	187	<i>phricocyma</i>	18	<i>subvelaria</i>	23
<i>lygaea</i>	194	<i>phyllomorpha</i>	102	<i>tapinodes</i>	196
<i>lygrodes</i>	107	<i>plusiata</i>	121	<i>teliferata</i>	41
<i>lymantriodes</i>	180	<i>poecilotis</i>	81	<i>thermistis</i>	47
<i>macrodonta</i>	147	<i>polyspila</i>	167	<i>transactaria</i>	4
<i>macrophyes</i>	136	<i>porphyropa</i>	210	<i>transcissata</i>	62
<i>mesodonta</i>	120	<i>postcarneata</i>	154	<i>traumataria</i>	185
<i>mesogonia</i>	96	<i>postmarginata</i>	138	<i>tricolor</i>	52
<i>mesozona</i>	92	<i>privata</i>	163	<i>tridentata</i>	81
<i>metaxanthana</i>	74	<i>procrita</i>	180	<i>triglypta</i>	212
<i>minela</i>	36	<i>promelanaria</i>	22	<i>triparata</i>	119
<i>minuta</i>	142	<i>prosedra</i>	4	<i>tristificata</i>	4
<i>miranda</i>	197	<i>pseudophaes</i>	8	<i>trychnoptila</i>	65
<i>modesta</i>	184	<i>ptilomacra</i>	68	<i>tryxaria</i>	56
<i>molybdaria</i>	70	<i>punctilineata</i>	199	<i>turneri</i>	170
<i>multicolor</i>	182	<i>punctiunculis</i>	176	<i>uncta</i>	8
<i>mundiferaria</i>	45	<i>pygmaea</i>	134	<i>undulifera</i>	135
<i>nephrocrossa</i>	7	<i>pyrosema</i>	10	<i>uniformis</i>	103
<i>nexistriga</i>	66	<i>quadrigramma</i>	175	<i>unilinea</i>	213
<i>niphosema</i>	211	<i>quaternaria</i>	158	<i>ursaria</i>	1
<i>nullata</i>	11	<i>raynori</i>	117	<i>usurpatrix</i>	124
<i>obliquifascia</i>	191	<i>recisa</i>	7	<i>vetustaria</i>	174
<i>obtusata</i> Wlk.	101, 184	<i>reflua</i>	207	<i>vinacea</i>	198
<i>ochripennata</i>	166	<i>replicataria</i>	61	<i>vinaria</i>	159
<i>odontias</i> Low	188	<i>reserata</i>	23	<i>wayii</i>	158
<i>odontias</i> Meyr.	92	<i>reservata</i>	58	<i>xanthastis</i>	50
<i>ophiosema</i>	112	<i>resignata</i>	4	<i>xanthogramma</i>	31



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