

REVISION OF AUSTRALIAN LEPIDOPTERA. OECOPHORIDAE. I.

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Though the family name Oecophoridae was used by Stainton (*British Lepidoptera*, 1859), we owe its present definition, subsequently slightly expanded to include the "Depressariades", to Mr. E. Meyrick, F.R.S. (*Trans. Ent. Soc. Lond.*, 1883). This author also laid the foundations of our knowledge of the Australian genera and species in a series of papers (These PROCEEDINGS, 1882-1888), in which he described 756 species, of which less than one-seventh were previously known. More recently (*Gen. Insectorum*, 1922) he has published a revision of the whole family containing 2,765 species, of which about 1,500 are Australian. The classification has been recast and many corrections as well as additions have been made.

This great work will long remain the leading authority on the Oecophoridae, but no work on this family for a long time to come will approach finality. Especially is this the case with the species found in Australia, where the family is predominant. It still remains true, as Meyrick remarked in 1888, that no collection can be made in any untouched locality without the immediate discovery of new forms. He added, what is still true, that the generic classification of this mass of species is difficult; the points of structure, on which it is necessary to rely, are in some cases slight, in others difficult of observation, and some errors of judgment are unavoidable. A close study extending over many years has confirmed my admiration for the general accuracy of Meyrick's work, but has revealed many details, which in my opinion (no doubt I am sometimes mistaken) require alteration. Meyrick was not acquainted with all of the Australian species which have been described since 1888, and for some of the errors in his latest revision I have been myself responsible. Many hundred new species now await description, and to do this satisfactorily I find it necessary to examine critically all of those previously described, so far as I am able to procure examples. In this I have received much assistance from the South Australian Museum, which contains most of Lower's and many of Meyrick's recent types. Some of the latter have also been lent to me by Mr. Geo. Lyell. For the new species, apart from my own collecting, I am indebted to the same sources, to the National Museum, to Mr. W. B. Barnard, Mr. G. M. Goldfinch, and others. Unfortunately there are many described species and a few genera, which I have not seen or recognized. In this revision they are marked with a †.

In dealing with this mass of more than 2,000 species, conciseness is necessary, and the publication must be in parts. A key to the genera contained in each part will be given, and I hope at the end to give a general key to the whole. After the definition of each genus the species assigned to it will be enumerated in order. This is necessary (i) to indicate the right position of the new species, (ii) to indicate most briefly what alterations I consider should be made in the

generic allocation of previously described species, and so save printing these in the text. The references will for economy of space be contracted as far as possible. I will assume the reader to be acquainted with Meyrick's revision.

The Oecophoridae are probably, as Meyrick suggests, descended from the Hyponomeutidae and themselves ancestral to the Cosmopterygidae, being also allied collaterally to the Gelechiidae and Xyloryctidae. The family is distinguished normally by the following characters: Head smooth or loosely scaled, side-tufts more or less raised. Tongue present. Antennae less than 1; in male usually ciliated, but sometimes simple; basal joint with a pecten in most genera, but this may be fugitive or absent. Labial palpi long, recurved, sickle-shaped, acute. Maxillary palpi minute or obsolete. Posterior tibiae rough-haired above. Forewings with 2 from or from near angle, 7 and 8 stalked or rarely coincident. Hindwings not over 1, elongate-ovate, sometimes broadly ovate or lanceolate, termen not indented or sinuate, 3 and 4 connate, 6 and 7 separate, parallel, 12 free.

To these characters there are some exceptions, for instance in *Sphaerelictis* the tongue is absent, in *Peritorneuta* the antennae are as long as forewings, in *Eupselia* the labial palpi are rather short, in *Tetraconta* the maxillary palpi are well developed, in a few the hindwings are over 1, or 3 and 4 of the hindwings are separate, or 6 and 7 of the hindwings are approximated at origin. These cases must be decided on a balance of characters, but rarely present any real difficulty. Usually the Oecophoridae may be distinguished from the Gelechiidae and Xyloryctidae by their neurulation alone. If not, the peculiar shape of the hindwing in most Gelechiidae, the presence of an antennal pecten (always absent in the Xyloryctidae, rare in the Gelechiidae), the narrower hindwings, and the absence of any connection between the subcostal vein and the cell in the hindwings, will prove helpful. The Cosmopterygidae may be distinguished by the narrowly lanceolate hindwings with 6 and 7 approximated or stalked. The Hyponomeutidae have 7 and 8 of the forewings often separate, the posterior tibiae usually smooth, the palpi shorter, and the hindwings often over 1.

The classification of the genera is difficult. Meyrick places them in five groups, which are on the whole natural, though based on very fine distinctions. Although I recognize his fifth group the "Depressariades" as for the most part natural, the character on which it is based, "Antennae in male minutely and irregularly ciliated or simple", often fails. If antennal ciliations of $\frac{1}{2}$ be considered minute, as would be necessary to include some species of *Eupselia* and *Eutorna*, it would include also some species of *Barea*, *Trachypepla*, *Elaeonoma*, *Eulechria*, and *Machimia*. If a stricter definition be adopted, it would still include *Mimodoxa* and *Macrobathra* as well as *Callithauma*. The genus *Sphyrelata* I do not place in this group, but in the "Eulechriades". The "Scaeosophides" are a small group with specialized hindwings. The "Oecophorides" are a natural section, though *Borkhausenia* approaches *Eulechria* so closely as to be sometimes confused with it: There is no natural division between the "Eulechriades" and the "Philobotides", indeed the line drawn between the two genera *Eulechria* and *Philobota* is, as I shall point out, an artificial one, though necessary. The same applies to the genera *Machimia* and *Heliocausta*, and these two with their allies appear to form a group apart from the great *Eulechria-Philobota* group, which contains most of our Australian species. On account of the enormous number of species in this last group the distinctions between the genera have to be very finely drawn. Although the genera may be on the whole natural, they are sometimes more or less artificial,

and probably not always monophyletic. This is unavoidable in the present state of our knowledge. We must divide the species into manageable groups, which should be as natural as possible, and be content with an imperfect classification, until a better is possible.

I have indicated the known distribution of each species as concisely as possible. The localities are conceived as having radii of 25 or 30 miles, or on the inland plains of 50 or 60 miles, unless some well-defined break such as a high altitude intervenes. For instance, "Atherton" denotes the whole Atherton Tableland, and "Tweed Heads" ranges from Southport in Queensland to Cudgen and Murwillumbah in New South Wales. As to origin of the Australian genera and species, I can state here my views only very briefly. I conceive that the *Eulechria-Philobota* group developed in the Tertiaries in a subarid continent occupying roughly the present area of Western Australia, which for convenience I have termed "Austral Land". Meanwhile a long narrow island or series of islands, which I have termed "Tasman Land", extending from the Atherton Tableland to Tasmania, developed a wholly distinct fauna, ultimately derived from Papuan and Antarctic sources. After the union of these two land masses the Austral fauna, aided by progressive desiccation, assumed the ascendancy. The Tasman fauna became restricted for the most part to the eastern Cordillera and Tasmania, and even there has been subjected to severe competition. During periods of heavy rainfall, of which the last occurred during the Pleistocene, some of its genera and species were able to traverse South to South-west Australia. More modern severe desiccation has divided the true Austral fauna into three sections: (1) those adapted to severe arid conditions and ranging over most of the continent, (2) those restricted to South-west Australia, (3) those restricted to South-east Australia. In the north the family is less dominant, though still well represented. In Pleistocene times an elevation of the Cape York Peninsula, Torres Straits, and southern New Guinea admitted a host of Indomalayan lepidoptera, of which, however, very few were Oecophoridae. On the contrary, a greater number of Australian genera of this dominant and aggressive group entered New Guinea, and a few spread far beyond.

Key to Genera.

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| 1. Forewings with 7 and 8 coincident | 6. <i>Metaphrastis</i> |
| Forewings with 7 and 8 stalked | 2. |
| 2. Forewings with 7 to termen | 3. |
| Forewings with 7 to costa | 4. |
| 3. Forewings with 2 and 3 coincident | 9. <i>Mixodetis</i> |
| Forewings with 2 and 3 separate | 10. <i>Periallactis</i> |
| 4. Hindwings with 4 and 5 coincident | 15. <i>Endrosis</i> |
| Hindwings with 5 separate | 5. |
| 5. Hindwings with 3 and 4 well separate | 6. |
| Hindwings with 3 and 4 nearly approximated, connate, stalked, or coincident .. | 12. |
| 6. Antennae without basal pecten | 7. |
| Antennae with basal pecten | 9. |
| 7. Hindwings with hyaline patch beneath cell | 5. <i>Morphotica</i> |
| Hindwings without hyaline patch | 8. |
| 8. Maxillary palpi minute | 3. <i>Heureta</i> |
| Maxillary palpi relatively long, drooping | 4. <i>Tetraconta</i> |
| 9. Thorax with a posterior crest | 12. <i>Oenochrodes</i> |
| Thorax without posterior crest | 10. |
| 10. Palpi with apical tuft on second joint | 14. <i>Palimmeces</i> |
| Palpi without tuft on second joint | 11. |
| 11. Palpi with second joint not nearly reaching base of antennae | 11. <i>Paratheta</i> |
| Palpi with second joint reaching base of antennae | 13. <i>Artiastis</i> |

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| 12. Forewings with 2 and 3 connate or stalked | 13. |
| Forewings with 2 and 3 separate | 16. |
| 13. Antennae with basal joint forming a small eyecap | 19. <i>Hoplostega</i> |
| Antennae without eyecap | 14. |
| 14. Palpi with second joint three times length of face | 18. <i>Baryzancla</i> |
| Palpi with second joint less than twice length of face | 15. |
| 15. Palpi with small anterior tuft on second joint | 20. <i>Goniobela</i> |
| Palpi without tuft on second joint | 21. <i>Leptocroca</i> |
| 16. Hindwings lanceolate | 17. |
| Hindwings not lanceolate | 20. |
| 17. Antennae with basal pecten | 7. <i>Satrapia</i> |
| Antennae without basal pecten | 18. |
| 18. Palpi with second joint reaching base of antennae | 19. |
| Palpi with second joint not reaching base of antennae | 8. <i>Ochlogenes</i> |
| 19. Hindwings with 3 and 4 coincident | 1. <i>Mimodoxa</i> |
| Hindwings with 3 and 4 approximated, connate, or stalked | 2. <i>Macrobathra</i> |
| 20. Hindwings broadly ovate | 17. <i>Telanepsia</i> |
| Hindwings elongate-ovate | 21. |
| 21. Hindwings with 5 approximated at origin to 6 | 16. <i>Scotodryas</i> |
| Hindwings with 5 not approximated to 6 | 22. |
| 22. Thorax crested | 22. <i>Phanerolopha</i> |
| Thorax not crested | 23. |
| 23. Hindwings with 3 and 4 stalked, 5 connate | 23. <i>Trinaconeura</i> |
| Hindwings with 3 and 4 connate, 5 separate | 24. <i>Borkhausenia</i> |

1. Gen. MIMODOXA.

Low., *Trans. Roy. Soc. S. Aust.*, 1901, p. 96. Type, *M. dryina* Low.

Palpi long, recurved; second joint reaching base of antennae, slightly thickened with appressed scales; terminal joint as long as second, slender, acute. Antennae with basal joint elongate, somewhat thickened, without pecten, ciliations in male short or minute (in *M. dryina* $\frac{1}{2}$, in *M. metallica* minute). Forewings with 7 and 8 stalked, 7 to costa. Hindwings broadly lanceolate; 3 and 4 coincident, 5, 6, 7 parallel, discocellular oblique between 6 and 7.

A simple development of *Macrobathra* differing in the loss of vein 4 of hindwings. Most of the known species are from the inland region of South-east Australia.

Six species: 1, *dryina* Low., *Tr. R.S.S. Aust.*, 1901, p. 97 (Milmerran, Q.; Broken Hill).—2, *loxospila*, n. sp. (Toowoomba).—3, *metallica* Low., *ibid.*, 1899, p. 111 (Broken Hill).—4, *empyrophanes*, n. sp. (Birchip).—5, *tricommatia*, n. sp. (Broken Hill).—6, *phaulophanes*, n. sp. (Kewell).

2. MIMODOXA LOXOSPILA, n. sp.

λοξοσπιλος, with oblique spots.

♂, ♀. 12–13 mm. Head white. Palpi blackish; basal two-thirds of second joint whitish. Antennae blackish; ciliations in male minute. Thorax grey-whitish. Abdomen dark fuscous; tuft whitish. Legs whitish; tibiae and tarsi with broad blackish bars; anterior pair grey. Forewings narrow, costa gently arched, apex pointed, termen very oblique; blackish with white markings; a broad greyish-white dorsal streak from base to beyond middle, indented in middle; an oblique streak from costa at one-fourth nearly reaching dorsal streak; a similar streak from midcosta; a costal spot before apex; an elongate spot above tornus nearly reaching dorsal streak; cilia white, on apex blackish, on tornus grey. Hindwings broadly lanceolate; dark grey; cilia over 1, grey.

Queensland: Toowoomba in October; two specimens received from Mr. W. B. Barnard, who has the type.

4. *MIMODOXA EMPYROPHANES*, n. sp.

ἐμπυροφανής, scorched-looking.

♀. 16–18 mm. Head reddish-brown; face whitish. Palpi reddish-brown-whitish; apical half or more of terminal joint fuscous. Antennae dark fuscous. Thorax dark fuscous. Abdomen grey. Legs fuscous ringed with reddish-brown-whitish; posterior pair mostly whitish. Forewings elongate, narrow, costa slightly arched, apex pointed, termen very oblique; dark fuscous; three costal spots, whitish more or less tinged with reddish-brown, first at one-fifth, second larger on middle, third at four-fifths; sometimes an additional spot on termen above tornus, and this may be confluent with third costal spot; cilia grey, on apex fuscous. Hindwings broadly lanceolate; grey; cilia 1, grey.

Victoria: Birchip in September, October, and May (Goudie); four specimens received from the National Museum, Melbourne, which has the type.

5. *MIMODOXA TRICOMMATICA*, n. sp.

τρικομματικός, with three commas.

♂. 17 mm. Head and palpi brown-whitish. Antennae fuscous; ciliations in male two-thirds. Thorax brown. Abdomen grey. Legs pale fuscous; posterior pair partly whitish. Forewings elongate, narrow, costa gently arched, apex pointed, termen extremely oblique; dorsal area grey-brown; three large whitish costal spots at one-fifth, two-fifths, and four-fifths, each preceded by a large dark fuscous spot completely occupying interval and giving off an inferior process bent forwards and partly enclosing each whitish spot; an apical fuscous spot; cilia grey. Hindwings lanceolate; grey; cilia 1, grey.

New South Wales: Broken Hill in September; one specimen. Type in South Australian Museum. This was confused by Lower with the very distinct *M. metallica*.

6. *MIMODOXA PHAULOPHANES*, n. sp.

φauλοφανής, mean-looking.

♀. 14 mm. Head white. Palpi white; terminal joint except base fuscous. Antennae fuscous. Thorax pale fuscous. (Abdomen missing.) Legs pale fuscous with whitish rings. Forewings elongate, very narrow, costa gently arched, apex pointed, termen extremely oblique; pale fuscous; three suffused whitish costal spots at one-fourth, middle, and before apex; cilia whitish, apices grey. Hindwings lanceolate; pale grey; cilia 1, pale grey.

Allied to the preceding, but with apices of palpi fuscous, and forewings without defined fuscous markings.

Victoria: Kewell in October; one specimen. Type in Coll. Lyell.

2. Gen. *MACROBATHRA*.

Meyr., PROC. LINN. SOC. N.S.W., 1885, p. 799. Type, *M. chrysotoxa* Meyr.

Labial palpi long or very long; second joint reaching or exceeding base of antennae, slightly or moderately thickened with appressed scales; terminal joint as long as second or somewhat shorter ($\frac{3}{4}$ –1), slender, acute. Maxillary palpi short, slender, appressed to tongue. Antennae with basal joint elongate, without pecten; ciliations in male very short or minute. Forewings with 7 and 8 stalked, 7 to costa. Hindwings with 3 and 4 stalked or rarely connate or closely approximated, 5, 6, 7 nearly parallel, discocellulars outwardly oblique from 4 to 5, inwardly oblique from 6 to 7.

The maxillary palpi are better developed than is usual in this family, but are considerably shorter than in *Tetraconta*. The antennal ciliations are usually from $\frac{1}{4}$ to $\frac{1}{2}$, but may be much shorter. In the hindwings 5 arises from the middle or above middle of cell.

This is a large genus probably of considerable antiquity. Its immediate ancestor is probably *Tetraconta*, and with this genus, *Mimodoxa*, and *Heureta* it forms an isolated group in the Australian fauna. There is a close superficial resemblance to *Limnoecia* in the Cosmopterygidae, and there may be some real relationship. That genus is best distinguished by 6 and 7 of hindwings being approximated closely at base and diverging.

Besides the Australian species there is 1 known from New Ireland, 11 from India, 7 from Africa, and 1 from Madagascar. Meyrick suggests India as the country of origin, and explains the preponderance of the genus in Australia by favourable conditions and the predominance of *Acacia*, on which feed the larvae of most of the species. I think it is much more probable that the genus developed in Austral Land, and from thence has successfully invaded other regions. It is already known to be fairly well represented in Western Australia, which has never had any resident microlepidopterist, and no doubt many more species remain to be discovered there.

Eighty-seven species: 7, *porphyrea* Meyr., P.L.S.N.S.W., 1885, p. 820 (Sydney).—8, *isoscelana* Low., *Tr. R.S.S. Aust.*, 1893, p. 182 (Bunya Mts.; Barrington Tops; Mt. Lofty).—†9, *anemodes* Meyr., P.L.S.N.S.W., 1885, p. 819 (Wirrabara).—10, *phryganina*, n. sp. (Toowoomba).—11, *nephelomorpha* Meyr., *ibid.*, 1885, p. 820 (Dalby, Toowoomba to Hobart).—12, *brontodes* Meyr., *ibid.*, 1885, p. 821 (Rosewood; Toowoomba).—13, *unguinosa*, n. sp. (Toowoomba).—14, *lychnophora*, n. sp. (Bunya Mts.).—15, *syncoma* Low., *ibid.*, 1899, p. 112 (Broken Hill).—16, *astrota* Meyr., *Exot. Micro.*, i, p. 216 (Atherton).—†17, *micropis* Low., *Tr. R.S.S. Aust.*, 1894, p. 102 (Duaringa).—18, *ceraunobola* Meyr., P.L.S.N.S.W., 1885, p. 818 (Bunya Mts. to Hobart).—19, *philopsamma* Low., *Tr. R.S.S. Aust.*, 1900, p. 47 (Adelaide).—20, *diplochrysa* Low., *ibid.*, 1894, p. 105 (Cape York to Brisbane).—21, *puncticulata* Turn., *ibid.*, 1896, p. 32 (Brisbane to Sydney).—22, *euspila*, n. sp. (Sydney).—23, *myriophthalma* Meyr., P.L.S.N.S.W., 1885, p. 822 (Brisbane to Melbourne). = *chrysospila* Turn., *Tr. R.S.S. Aust.*, 1896, p. 33.—24, *chrysospila* Meyr., P.L.S.N.S.W., 1885, p. 822 (Townsville to Sydney). = *chrysobaphes* Turn., *Tr. R.S.S. Aust.*, 1896, p. 32.—†25, *hexadyas* Meyr., P.L.S.N.S.W., 1906, p. 35 (Rosewood).—26, *rubicundella* Wlk., xxix, p. 649 (Brisbane; W.A.: Kimberley). = *rosea* Turn., *Tr. R.S.S. Aust.*, 1896, p. 33.—†27, *hyalistis* Meyr., P.L.S.N.S.W., 1888, p. 1679 (W.A.: York).—28, *drosera* Low., *Tr. R.S.S. Aust.*, 1901, p. 96 (Broken Hill).—29, *centrosphena*, n. sp. (W.A.: Albany).—30, *epimela* Low., *ibid.*, 1894, p. 106 (Duaringa, Brisbane).—31, *hemitropa* Meyr., P.L.S.N.S.W., 1885, p. 817 (Katoomba, Adelaide, Wirrabara).—†32, *gastroleuca* Low., *Tr. R.S.S. Aust.*, 1905, p. 109 (Broken Hill).—33, *synastra* Meyr., P.L.S.N.S.W., 1885, p. 815 (St. Helen's, Tas.; W.A.: York, Geraldton).—34, *xuthocoma* Meyr., *ibid.*, 1885, p. 813 (Sydney, Glen Innes). = *galenaea* Meyr., *Tr. R.S.S. Aust.*, 1902, p. 167.—35, *leucopeda* Meyr., P.L.S.N.S.W., 1885, p. 813 (Darwin, Eidsvold, Brisbane, Sydney).—36, *rhodospila* Meyr., *ibid.*, 1885, p. 814 (Toowoomba, Sydney).—37, *synacta* Meyr., *Exot. Micro.*, ii, p. 364 (Yatala, S.A.).—38, *alternatella* Wlk., xxix, p. 644; Meyr., P.L.S.N.S.W., 1885, p. 812. = *obliquata* Luc., *P.R.S.Q.*, 1901, p. 90 (Gympie to Hobart; W.A.: Perth, York).—†39, *parthenistis* Meyr., P.L.S.N.S.W., 1888, p. 1678 (W.A.: Carnarvon).—†40, *harmostis* Meyr., *ibid.*, 1888, p. 1678 (W.A.: Geraldton).—†41, *homocosma* Meyr., *Tr. R.S.S. Aust.*, 1902, p. 167 (Duaringa).—42, *melanota* Meyr., P.L.S.N.S.W.,

1885, p. 809 (Toowoomba, Sea Lake).—43, *baliomitra*, n. sp. (Sydney).—44, *psathyroides*, n. sp. (Bunya Mts.).—45, *phernaea* Low., *ibid.*, 1899, p. 112 (Broken Hill).—46, *niphadobola* Meyr., *ibid.*, 1885, p. 81 (Herberton, Brisbane, Rosewood, Toowoomba). = *vexillariata* Luc., *P.R.S.Q.*, 1901, p. 90.—47, *bigerella* Wlk., xxix, p. 644 (Brisbane, Toowoomba, Bunya Mts., Pt. Lincoln). = *crymalea* Meyr., P.L.S.N.S.W., 1885, p. 816.—48, *arrectella* Wlk., xxix, p. 643 (Darwin; Cairns to Sydney). = *argonota* Meyr., P.L.S.N.S.W., 1885, p. 811; *decataea* Meyr., *Exot. Micro.*, i, p. 216; *opposita* Meyr., *ibid.*, ii, p. 364.—49, *leucozancla*, n. sp. (Cape York).—50, *tetraleuca*, n. sp. (Charleville).—51, *stenosema*, n. sp. (Darwin).—52, *callispila* Turn., P.L.S.N.S.W., 1916, p. 334 (Darwin, Cape York).—53, *honoratella* Wlk., xxx, p. 1030 (Duaringa to Brisbane). = *chlorosoma* Meyr., P.L.S.N.S.W., 1885, p. 810.—54, *callipetala*, n. sp. (Darwin, Cape York, Cairns).—55, *exaeta* Turn., *ibid.*, 1916, p. 335 (Cairns).—56, *aneurae*, n. sp. (Charleville).—†57, *zonodesma* Low., *ibid.*, 1900, p. 414 (Broken Hill).—†58, *notozyga* Meyr., *Exot. Micro.*, i, p. 217 (Atherton).—†59, *sarcoleuca* Meyr., *ibid.*, i, p. 296 (Duaringa).—60, *polypasta*, n. sp. (Charleville).—61, *chryseostola*, n. sp. (Rockhampton).—62, *endesma* Low., P.L.S.N.S.W., 1900, p. 415 (Duaringa).—63, *trithyra* Meyr., *ibid.*, 1885, p. 808 (Toowoomba, Sydney, Cooma, Mt. Lofty).—64, *platychroa* Low., *Tr. R.S.S. Aust.*, 1897, p. 270 (Brisbane, Katoomba, Gisborne, Castlemaine).—65, *melanargyra* Meyr., P.L.S.N.S.W., 1885, p. 817 (Brisbane, Stanthorpe).—66, *lamprotypa*, n. sp. (Brisbane, Toowoomba, Melbourne).—67, *anacampta* Meyr., *Exot. Micro.*, i, p. 217 (Atherton, Brisbane).—68, *constrictella* Wlk., xxix, p. 467 (Sydney, Beaconsfield, Mt. Lofty; W.A.: Waroona, Bridgetown); Meyr., P.L.S.N.S.W., 1885, p. 818.—69, *pompholyctis* Meyr., *ibid.*, 1888, p. 1677 (W.A.: York, Waroona, Merredin).—†70, *aphristis* Meyr., *ibid.*, 1888, p. 1677 (W.A.: Northampton, Carnarvon).—71, *euryleuca* Meyr., *ibid.*, 1885, p. 808 (Rockhampton to Brisbane).—72, *melanomitra* Meyr., *ibid.*, 1885, p. 807 (Bathurst, Mt. Lofty, Wirrabara, Quorn).—73, *platyzona*, n. sp. (Toowoomba).—74, *xanthoplaca* Meyr., *Tr. R.S.S. Aust.*, 1902, p. 167 (Melbourne, Castlemaine; W.A.: Mullewa).—75, *dispila*, n. sp. (Cape York).—76, *desmotoma* Meyr., P.L.S.N.S.W., 1885, p. 806 (Brisbane to Melbourne).—77, *heminephela* Meyr., *ibid.*, 1885, p. 806 (Dalby to Hobart).—†78, *dasyplaca* Low., *Tr. R.S.S. Aust.*, 1894, p. 103 (Tasmania).—†79, *anemarcha* Meyr., P.L.S.N.S.W., 1885, p. 805 (Launceston).—†80, *asemanta* Low., *Tr. R.S.S. Aust.*, 1894, p. 103 (Tasmania).—81, *mesopora* Meyr., P.L.S.N.S.W., 1885, p. 804 (Yeppoon to Gisborne).—82, *paracentra* Low., *Tr. R.S.S. Aust.*, 1893, p. 182 (Brisbane, Gisborne).—†83, *crococosma* Meyr., *Exot. Micro.*, ii, p. 509 (Cairns).—84, *allocrana* Turn., P.L.S.N.S.W., 1916, p. 1336 (Innisfail).—†85, *heterozona* Meyr., *ibid.*, 1888, p. 1676 (W.A.: Northampton).—86, *trimorpha* Meyr., *ibid.*, 1888, p. 1675 (W.A.: Geraldton, Carnarvon).—87, *euryxantha* Meyr., *ibid.*, 1885, p. 803 (Duaringa).—88, *rhythmodes* Turn., *ibid.*, 1916, p. 335 (Cairns).—89, *monostadia* Meyr., *ibid.*, 1885, p. 803. = *gonoloma* Low., *Tr. R.S.S. Aust.*, 1894, p. 104 (Rockhampton, Duaringa, Rosewood, Toowoomba).—90, *chrysotoxa* Meyr., P.L.S.N.S.W., 1885, p. 804 (Brisbane to Hobart).—†91, *hamaxitodes* Meyr., *ibid.*, 1885, p. 802 (Sydney).—92, *nimbifera*, n. sp. (Macpherson Range).—93, *embroneta*, n. sp. (Brisbane).

62. MACROBATHRA ENDESMA LOW.

Head white; side-tufts and posterior margin dark fuscous. Antennae grey; basal joint expanded towards apex, dark fuscous; ciliations in male minute. Abdomen pale grey. Among allied species this may be distinguished by the small size (10–11 mm.) and wholly white tegulae (not fuscous at base).

53. MACROBATHRA HONORATELLA Wlk.

I identified this with *M. chlorosoma* Meyr. in 1901 by comparison of my own series with Walker's type in the British Museum. In his revision Meyrick identifies it with *M. endesma* Low. This cannot be, if Walker's dimensions are correct—"length of body 3 lines; of the wings 8 lines". This would correspond to about 6 mm. and 17 mm., rather more than the size of the former species, but very much larger than the latter. Walker's description is probably inexact, but the posterior thoracic dark spot is present in the former species, which is a common Brisbane insect, and very likely to have been received from Mr. Diggles.

48. MACROBATHRA ARRECTELLA Wlk.

This is a common Brisbane species and occurs here and elsewhere in two forms. The less common form, in which the sub-basal fascia of forewings is interrupted above middle, has been described as *arrectella* Wlk. and *opposita* Meyr.; the form with the fascia complete as *argonota* Meyr. and *decataea* Meyr.

52. MACROBATHRA CALLISPILA Turn.

The sub-basal fascia of forewings is considerably broader than in *M. honoratella*, the abdomen is more decidedly yellow, and the basal area of the hindwings in the male is suffused with whitish and irrorated with fuscous. It is very similar to *M. exaeta*, but in addition to this last character may be distinguished by the black spot on base of tegulae.

88. MACROBATHRA RHYTHMODES Turn.

This may be distinguished from allied species by its fuscous head, face, and palpi, and the broad yellow band on forewings extending well beyond middle.

82. MACROBATHRA PARACENTRA Low.

This is a true *Macrobathra* very like *M. mesopora*, but without the anterior fascia on forewing.

MACROBATHRA MONOXANTHA Meyr.

Exot. Micro., ii, p. 509.

This, if I have identified it correctly, is a *Limnoecia*.

10. MACROBATHRA PHRYGANINA, n. sp.

φρυγανίος, like a dry stick.

♀. 16 mm. Head and thorax brown. Palpi brown; terminal joint fuscous anteriorly. Antennae fuscous with brownish annulations. Abdomen fuscous. Legs brown; hairs on posterior tibiae pale ochreous. Forewings narrow, costa strongly arched, apex pointed, termen very oblique; basal half dark brown, apical half pale brown, border well defined from two-fifths costa obliquely outwards, sharply angled in disc to end on mid-dorsum, from its apex a short suffused pale longitudinal streak; a whitish spot on one-fifth costa; cilia brown. Hindwings fuscous-brown, towards apex fuscous; cilia fuscous.

Queensland: Toowoomba in December; one specimen received from Mr. W. B. Barnard.

13. MACROBATHRA UNGUINOSA, n. sp.

unguinus, oily.

♀. 15 mm. Head white. Palpi whitish; terminal joint fuscous anteriorly. Antennae blackish. Thorax dark fuscous. Abdomen grey. Legs fuscous; tibiae

and tarsi ringed with whitish. Forewings narrow, costa slightly arched, apex acute, termen extremely oblique; brown-whitish with patchy fuscous irroration; a sharply defined transverse fuscous basal fascia; patches of irroration on costa before and beyond middle, on tornus, termen and apex; cilia brown-whitish, on tornus grey. Hindwings and cilia grey.

Queensland: Toowoomba in October; one specimen received from Mr. W. B. Barnard.

14. *MACROBATHRA LYCHNOPHORA*, n. sp.

λυχνόφορος, carrying a light.

♂, ♀. 19–21 mm. Head ochreous-whitish sometimes suffused with fuscous-brown. Palpi fuscous; second joint mostly whitish or whitish only at base. Antennae fuscous; in male annulated with whitish, ciliations minute. Thorax fuscous. Abdomen greyish-ochreous. Legs fuscous with ochreous rings. Forewings rather narrow, costa gently arched, apex pointed, termen very oblique; dark fuscous; an oblique whitish fascia from costa near base to one-fourth dorsum, often suffusedly produced along dorsum to tornus, but this fascia is often reduced by fuscous suffusion to a narrow line on its normal anterior edge; usually a whitish dot on midcosta; a round snow-white costal spot at four-fifths; cilia fuscous, on tornus sometimes ochreous. Hindwings broadly lanceolate; grey; cilia three-fourths, grey.

This species is exceptionally variable in the occasional suffusion of the sub-basal fascia, but the shining white apical spot appears to be constant.

Queensland: Bunya Mts. (3,000 ft.) in January; five specimens; New South Wales: Allyn River in December (Goldfinch).

22. *MACROBATHRA EUSPILA*, n. sp.

εὐσπίλος, prettily spotted.

♂. 12 mm. Head ochreous-whitish. Palpi ochreous-whitish; extreme apex fuscous. Antennae with basal joint dark fuscous (remainder broken off). Thorax dark fuscous. Abdomen dark fuscous; tuft grey-whitish. Legs dark fuscous; posterior tarsi mostly whitish. Forewings with an expansile tuft of long whitish hairs from base beneath; broadly lanceolate; dark fuscous; markings clear pale yellow edged with blackish; a broad sub-basal fascia contracted on costa; a spot on midcosta; another opposite to it on dorsum beyond middle; a minute dot in disc at three-fourths; a subterminal fascia, broad on costa, narrowing abruptly in disc; cilia fuscous. Hindwings lanceolate; grey; cilia over 1, grey.

Very distinct, but nearest *M. myriophthalma* Meyr.

New South Wales: Sydney (Woy Woy) in March; one specimen (Nicholson). Type in Coll. Goldfinch.

29. *MACROBATHRA CENTROSPHENA*, n. sp.

κεντροσφήνος, with central wedge.

♂, ♀. 16–18 mm. Head and thorax grey. Palpi whitish-grey; basal half of second joint dark fuscous. Antennae dark fuscous; ciliations in male $\frac{1}{2}$. Legs dark fuscous, posterior pair grey; tibiae and tarsi with whitish rings. Forewings elongate, suboblong, costa moderately arched, apex rounded, termen obliquely rounded; grey; markings dark fuscous; a slender transverse sub-basal fascia; a transverse wedge from mid-dorsum moderately broad at base; narrowing to an apex just below one-third costa; a moderate fascia from two-thirds costa to

tornus, suffused at extremities; cilia grey, apices grey-whitish. Hindwings and cilia grey.

Western Australia: Albany in February and March; two specimens received from Mr. W. B. Barnard, who has the type.

43. *MACROBATHRA BALIOMITRA*, n. sp.

βαλιομιτρος, with spotted girdle.

♀. 11 mm. Head grey-whitish; back of crown and side-tufts dark fuscous. Palpi white; apex of second joint, and terminal joint except base, fuscous. Antennae fuscous. Thorax fuscous; tegulae except base white. Abdomen grey; median dorsal area pale ochreous-brown; tuft and underside grey-whitish. Legs fuscous; tibiae and tarsi with white rings; posterior tibiae mostly white. Forewings narrow, not dilated, costa gently arched, apex pointed, termen very oblique; dark fuscous; markings white; a broad oblique fascia near base sparsely irrorated with fuscous throughout, posterior edge from one-fourth costa to near mid-dorsum; a small spot on midcosta; a spot on dorsum before tornus, irrorated with fuscous; a spot on costa before apex; cilia fuscous. Hindwings lanceolate; grey; cilia 1, grey.

The two costal spots are clear white. The irroration of the fascia and dorsal spot is a peculiar character.

New South Wales: Sydney in April; one specimen. Type in Coll. Lyell.

44. *MACROBATHRA PSATHYRODES*, n. sp.

ψαθυρωδης, delicate.

♀. 12 mm. Head grey-whitish; side-tufts and posterior edge fuscous. Palpi whitish; terminal joint $\frac{3}{4}$, outer surface fuscous. Antennae dark fuscous sharply annulated with white. Thorax white; anterior edge fuscous. Abdomen pale grey. Legs fuscous with whitish rings. Forewings elongate, narrow, costa slightly arched, apex obtusely pointed, termen extremely oblique; dark fuscous with white markings; a rather narrow oblique fascia from one-fifth costa to one-third dorsum; a small spot on midcosta and another smaller above middorsum; a larger spot on three-fourths costa, opposite to it a smaller spot on tornus; cilia dark fuscous, towards tornus grey. Hindwings lanceolate, pale grey; towards base thinly scaled and translucent; cilia $1\frac{1}{2}$, pale grey.

Distinguished by its small size, absence of posterior spot on thorax, annulated antennae, narrow forewings, with anterior dorsal spot not touching margin.

Queensland: Bunya Mts. (3,500 ft.) in October; one specimen.

49. *MACROBATHRA LEUCOZANCLA*, n. sp.

λευκοζαγκλος, with white sickles.

♂. 17-18 mm. Head ochreous-whitish. Palpi whitish; terminal joint sometimes slightly irrorated with grey. Antennae grey-whitish, including basal joint; ciliations in male minute. Thorax whitish; a narrow line on anterior edge and a posterior spot blackish. Abdomen grey; base of dorsum ochreous-tinged. Legs fuscous with ochreous-whitish rings; anterior tibiae and tarsi whitish. Forewings with costa slightly arched, apex pointed, termen very oblique; blackish with whitish markings; a small spot on one-fifth costa and a larger and broader spot on one-third dorsum opposite; a spot on midcosta, another larger on dorsum before tornus, and a large costal subapical spot; cilia blackish, on tornus grey.

Distinct by the whitish head, palpi and forelegs. The allied *M. arrectella* has the posterior margin of head, basal joint of antennae, and a broad anterior spot on thorax blackish.

North Queensland: Cape York in April; two specimens received from Mr. W. B. Barnard.

50. *MACROBATHRA TETRALEUCA*, n. sp.

τετραλευκος, four times white.

♂. 16-17 mm. Head white; side-tufts and posterior edge blackish. Palpi white; apex of terminal joint fuscous. Antennae blackish with whitish annulations; ciliations in male minute. Thorax white; anterior edge and a posterior spot blackish. Abdomen grey. Legs fuscous with whitish rings. Forewings with costa gently arched, apex obtusely pointed, termen very oblique; blackish with white markings; a moderate fascia from one-fifth costa to one-fourth dorsum, constricted on costa; a rounded spot on midcosta, and another larger on costa at four-fifths; a large triangular spot on dorsum before tornus; a minute tornal dot; cilia fuscous-grey, on dorsal spot whitish. Hindwings broadly lanceolate; grey; cilia 1, grey.

Similar to *M. honoratella*, but the markings are white without ochreous tinge, the antennae annulated with whitish almost to apex, the median costal spot of forewings larger, and the abdomen grey.

Queensland: Charleville in September; two specimens.

51. *MACROBATHRA STENOSEMA*, n. sp.

στενοσημος, with narrow markings.

♀. 15-16 mm. Head white; side-tufts and posterior margin dark fuscous. Palpi whitish; second joint with some fuscous suffusion towards apex; terminal joint almost as long as second, sides fuscous. Antennae whitish, towards base annulated with dark fuscous; basal joint expanded at apex, dark fuscous. Thorax white; anterior edge dark fuscous. Abdomen pale ochreous suffused with grey towards apex. Legs fuscous with whitish rings. Forewings rather narrow, costa gently arched, apex pointed, termen oblique; dark fuscous with white markings; a uniformly narrow fascia from one-fourth costa to one-third dorsum; a triangular spot on midcosta, and another on dorsum before tornus; a larger spot on four-fifths costa; cilia dark fuscous, on dorsal spot whitish. Hindwings broadly lanceolate; grey; cilia 1, grey.

This may be distinguished by its antennae from both *M. honoratella* and *M. arrectella*. The sub-basal fascia is less oblique, narrower than in the former, and not constricted on costa.

Northern Territory: Darwin; two specimens received from Mr. G. F. Hill.

54. *MACROBATHRA CALLIPETALA*, n. sp.

καλλιπεταλος, prettily winged.

♂, ♀. 13-15 mm. Head pale ochreous. Palpi pale ochreous; terminal joint as long as second, towards apex fuscous. Antennae dark fuscous with 3 or 4 white rings in middle; ciliations in male minute. Thorax dark fuscous. Abdomen dark fuscous; tuft in male pale ochreous. Legs fuscous with whitish rings. Forewings rather narrow, costa gently arched, apex pointed, termen very oblique; dark fuscous; markings pale ochreous edged with blackish; a moderate sub-basal fascia from one-fifth costa to one-fourth dorsum; a spot on midcosta, and another on

dorsum at two-thirds; a larger spot on costa before apex; cilia dark fuscous. Hindwings broadly lanceolate; grey; cilia 1, grey.

The midcostal and dorsal spot are usually well separated, but sometimes connected by a blackish spot. In one example they are completely fused, forming a second fascia. In the natural position the median white rings of the antennae lie over the sub-basal fascia. The wholly fuscous thorax and uniformly yellow markings are distinctive characters.

North Australia: Darwin. North Queensland: Cape York, in April and June; Cairns, in August. Six specimens.

56. *MACROBATHRA ANEURAE*, n. sp.

♂, ♀. 15–18 mm. Head white, sometimes with pale fuscous suffusion or irroration; face white. Palpi white; apex of second joint and anterior edge of terminal joint sometimes fuscous. Antennae fuscous with a few whitish annulations towards base; ciliations in male $\frac{1}{2}$. Abdomen whitish-grey. Legs fuscous with whitish rings. Forewings rather narrow, costa gently arched, apex rather obtusely pointed, termen very oblique; pale fuscous; markings white; a moderate slightly oblique sub-basal fascia, sometimes partly suffused with pale ochreous externally and towards dorsum; a small triangular spot on midcosta and another on dorsum before tornus, both sometimes partly suffused; a larger triangular spot on costa before apex; cilia grey, bases paler and irrorated with pale fuscous. Hindwings broadly lanceolate; grey; cilia 1, grey.

The pale fuscous colour of this species is distinctive.

Queensland: Charleville in September; locally abundant among *Acacia aneura*; twelve specimens.

60. *MACROBATHRA POLYPASTA*, n. sp.

πολυπαστος, much sprinkled.

♂, ♀. 18 mm. Head whitish; crown sometimes pale brown. Palpi whitish; terminal joint and apex of second joint fuscous. Antennae dark fuscous annulated with whitish; ciliations in male minute. Thorax pale brown or fuscous; margins and a transverse postmedian line sometimes narrowly white. Abdomen whitish-grey. Legs fuscous with whitish rings; posterior pair mostly whitish. Forewings narrow, costa gently arched, apex rather obtusely pointed, termen very oblique; fuscous-brown; two broad transverse fasciae, white finely irrorated with fuscous-brown; first sub-basal, edged anteriorly with fuscous, extending to one-third; second median, anteriorly irregularly indented in middle; a triangular white subapical costal spot, giving off a fine white strongly sinuate line to termen above tornus; cilia fuscous-brown, on tornus grey. Hindwings broadly lanceolate; grey; cilia 1, grey, more or less ochreous-tinged.

Not near any other species.

Queensland: Charleville in September; two specimens.

61. *MACROBATHRA CHRYSSEOSTOLA*, n. sp.

χρυσεοστολος, in golden clothing.

♂, ♀. 18 mm. Head white; side-tufts ochreous-brown. (Palpi broken off.) Antennae dark fuscous with white annulations. Thorax white; anterior margin and a posterior spot ochreous-brown. Abdomen ochreous. Legs fuscous tinged with ochreous-brown; tibiae and tarsi with whitish rings. Forewings narrow, elongate, not dilated, costa nearly straight, apex round-pointed, termen very oblique; ochreous-brown with some patchy fuscous irroration; markings white;

a very slender basal fascia prolonged slightly on dorsum; a broad fascia, its anterior edge straight, sub-basal, slightly oblique, posterior edge from one-fourth costa to one-third dorsum, wavy, outwardly curved; a small spot on midcosta; a minute median subdorsal dot; a large spot on three-fourths costa almost or quite continuous with a similar spot on two-thirds dorsum; a more or less developed spot before upper part of termen; cilia ochreous, apices paler, a median line, an apical bar, and a supraternal spot fuscous. Hindwings lanceolate; cilia over 1, ochreous, on tornus and dorsum grey.

Queensland: Rockhampton in July; two specimens received from Mr. G. M. Goldfinch, who has the type.

66. *MACROBATHRA LAMPROTYPA*, n. sp.

λαμπροτυπος, brilliantly marked.

♂, ♀. 14-18 mm. Head reddish-brown; face whitish. Palpi whitish-brown; terminal joint about as long as second, fuscous except at base. Antennae blackish annulated with silvery-grey; ciliations in male $\frac{1}{2}$. Thorax dark fuscous. Abdomen fuscous; tuft ochreous-whitish. Legs dark fuscous with ochreous-whitish rings. Forewings with costa gently arched, apex pointed, termen oblique; blackish; a dark leaden-metallic basal fascia; a rather narrow oblique fascia from one-fifth costa to one-third dorsum, silvery-white becoming silvery-grey on dorsum; a silvery-white spot on midcosta; a silvery-violet bar from two-thirds dorsum, more or less constricted in middle, slightly outwardly oblique to beyond midcostal spot; a curved fascia from four-fifths costa to tornus, constricted in middle, white suffused more or less with rosy-violet, in middle silvery-metallic; cilia fuscous. Hindwings broadly lanceolate; grey; cilia 1, grey.

Queensland: Brisbane in August and September; Toowoomba in October. Victoria: Melbourne. Five specimens. I have reared one example from a larva feeding on *Acacia penninervis*.

73. *MACROBATHRA PLATYZONA*, n. sp.

πλατυζωνος, broadly girt.

♀. 20 mm. Head white. Palpi white; terminal joint black. Antennae black. Thorax black. Abdomen pale ochreous. Legs blackish; tibiae and tarsi ringed with whitish-ochreous. Forewings narrow, costa moderately arched, apex pointed, termen very obliquely rounded; black with white markings; a broad suboval transverse sub-basal fascia; a broad streak from two-thirds costa obliquely inwards, ending abruptly above middle of disc; a tornal spot; a dot above mid-dorsum and another at apex; cilia blackish, on apical spot white, on tornus pale ochreous. Hindwing fuscous; cilia grey, towards tornus ochreous-tinged.

A fine and distinct species.

Queensland: Toowoomba in October; one specimen received from Mr. W. B. Barnard, who has the type.

75. *MACROBATHRA DISPILA*, n. sp.

δισπιλος, two-spotted.

♂. 15-16 mm. Head whitish-ochreous; side-tufts and posterior margin dark fuscous. Palpi pale ochreous with slight fuscous irroration; terminal joint four-fifths, fuscous except towards base. Antennae dark fuscous; ciliations in male minute. Thorax dark fuscous. Abdomen pale ochreous; sides fuscous; tuft grey. Legs dark fuscous with ochreous rings. Forewings with costa moderately arched, apex pointed, termen very oblique; dark fuscous; a large oval oblique

white spot from costa at one-fifth to near dorsum at one-fourth; a subtriangular white spot on costa at four-fifths; cilia dark fuscous. Hindwings broadly lanceolate; grey; cilia 1, grey.

North Queensland: Cape York in April, May and June; four specimens received from Mr. W. B. Barnard, who has the type.

92. *MACROBATHRA NIMBIFERA*, n. sp.

nimbiferus, clouded.

♀. 20 mm. Head white. Palpi white; terminal joint pale fuscous anteriorly. Antennae brownish, towards base dark fuscous. Thorax fuscous; tegulae and a transverse postmedian bar grey-whitish. Abdomen pale grey. Legs fuscous; tibiae and tarsi ringed with grey-whitish; posterior tibiae mostly ochreous-whitish. Forewings not narrow, costa moderately arched, apex pointed, termen very oblique; whitish; an oblique fuscous basal fascia, sharply defined, its anterior edge from near base of costa to one-fourth dorsum; a grey spot on costa at two-thirds; a median grey spot on fold suffusedly connected with dorsum and basal fascia; apical third of wing suffused with grey, except a triangular spot on costa before apex, and a dot on termen below middle, which are white; cilia grey. Hindwings broadly lanceolate; grey; cilia 1, whitish-grey.

Queensland: National Park (3,000 ft.) in December; one specimen.

93. *MACROBATHRA EMBRONETA*, n. sp.

ἐμβρονητος, thunderstruck.

♂. 17 mm. Head white, centre of crown grey. Palpi white irrorated with dark fuscous. Antennae dark fuscous; ciliations in male 1/5. Thorax grey. Abdomen whitish-grey; tuft ochreous-whitish. Legs dark fuscous; tibiae and tarsi with white rings. Forewings lanceolate, obtuse; fuscous, towards dorsum grey; a blackish streak from base of costa to tornus, giving off a branch in mid-disc towards but not reaching apex; cilia grey, on costa and apex fuscous with white bars. Hindwings broadly lanceolate; grey; cilia 1, grey.

Queensland: Brisbane in December; one specimen.

3. Gen. *HEURETA*, n.g.

εὐπετος, discovered.

Tongue present. Palpi with second joint reaching base of antennae, thickened with appressed scales, somewhat rough anteriorly; terminal joint $\frac{3}{4}$, slender, acute. Antennae without basal pecten; ciliations in male moderately long (2). Forewings with 7 to costa. Hindwings ovate-lanceolate; 3 and 4 widely separate, nearly parallel, 5 from above middle of cell, discocellular between 6 and 7 inwardly oblique.

Differs from *Macrobathra* in the neuration of the hindwings. Only the type species is known: 94, *cirrhodora* Meyr., Exot. Micro., i, p. 296 (Birchip).

4. Gen. *TETRACONTA*, n.g.

τετρακοντος, with four darts (palpi).

Tongue present. Maxillary palpi long (about $\frac{1}{2}$ length of face), apparently two-jointed (probably really three-jointed), drooping; second joint slightly dilated and loose-scaled; terminal joint minute. Labial palpi long, slender; second joint exceeding base of antennae; terminal joint not much shorter than second. Antennae without basal pecten; basal joint long and dilated towards apex;

ciliations in male minute. Forewings with 7 to costa. Hindwings with 3 and 4 separate, 5 from middle of cell, 6 and 7 separate, parallel.

The solitary species has all the appearance of a *Macrobathra*, but with important structural differences. The large maxillary palpi are very unusual in the family.

95. TETRACONTA CLEPSIMORPHA, n. sp.

κλεψιμορφος, of misleading appearance.

♂, ♀. 11-14 mm. Head white anteriorly, black posteriorly and laterally; face and maxillary palpi white. Labial palpi white with some fuscous irroration; terminal joint except apex fuscous. Antennae fuscous. Thorax white. Abdomen blackish; tuft and underside whitish. Legs blackish; tibiae and tarsi with whitish rings. Forewings narrow, costa gently arched, apex pointed, termen very oblique; black with white markings; a moderately broad oblique fascia from one-fifth costa to one-third dorsum; a spot on midcosta, another on costa before apex, and a third on tornus, varying in size; sometimes a spot on dorsum opposite median costal spot, which then appears to form an interrupted fascia; cilia black, on tornus grey. Hindwings broadly lanceolate; grey; cilia over 1, grey.

Queensland: Toowoomba in October; ten specimens received from Mr. W. B. Barnard, who has the type.

†5. Gen. MORPHOTICA Meyr.

Exot. Micro., i, p. 297.

Tongue present. Palpi very long; second joint exceeding base of antennae, thickened with appressed scales; terminal joint longer than second, very slender, acute. Antennae with basal joint long, without pecten; in male moderately ciliated. Forewings with 7 to costa. Hindwings ovate-lanceolate; an elongate hyaline patch beneath cell, 2, 3, and 4 somewhat approximated towards base.

I have not seen this genus, of which only the type species is known. It appears to be near *Heureta*, but with longer palpi, and some differences in the hindwings.

†96, *mirifica* Meyr., *Exot. Micro.*, i, p. 297 (Darwin).

†6. Gen. METAPHRASTIS Meyr.

PROC. LINN. SOC. N.S.W., 1907, p. 134.

Tongue present. Palpi with second joint reaching base of antennae, scales appressed; terminal joint as long as second, slender, acute. Antennae with stalk somewhat rough-scaled on dorsum towards base, without pecten; ciliations in male moderately long. Forewings with 2 from angle, 7 and 8 coincident. Hindwings elongate-ovate; 3 and 4 coincident, 5, 6, 7 parallel.

Also represented only by a single species, which is unknown to me. Meyrick regards it as a derivative of the Palaearctic genus *Dasycera*.

†97, *acrochalcha* Meyr., P.L.S.N.S.W., 1907, p. 134 (W.A.: Albany, York).

7. Gen. SATRAPIA Meyr.

PROC. LINN. SOC. N.S.W., 1885, p. 823.

Tongue present. Palpi smooth; second joint not reaching base of antennae; terminal joint shorter than second, acute. Antennae with basal pecten; ciliations in male long. Forewings with 7 to costa. Hindwings lanceolate; 3 and 4 connate,

5 from above middle of cell, nearer 6 than 4, 6 and 7 separate, diverging. Only the type species is known.

98, *thesaurina* Meyr., P.L.S.N.S.W., 1885, p. 823 (Sydney, Melbourne, Adelaide.)

8. Gen. OCHLOGENES Meyr.

PROC. LINN. SOC. N.S.W., 1885, p. 797. Type, *O. advectella* Wlk.

Head with smoothly appressed scales. Palpi smooth; second joint not reaching base of antennae; terminal joint shorter than second. Antennae without pecten; ciliations in male short. Forewings narrow; 7 to costa. Hindwings under 1, ovate-lanceolate; 3 and 4 connate, 5 from lower angle of cell.

Two species: 99, *advectella* Wlk., xxix, p. 647 (Duarina to Launceston; W.A.: Albany).—100, *cirrhostola*, n. sp. (Macpherson Range).

100. OCHLOGENES CIRRHOSTOLA, n. sp.

κυρροστολος, clothed in pale yellow.

♂. 10 mm. Head whitish-ochreous. Palpi whitish-ochreous; base of second joint externally, and extreme apex of terminal joint fuscous. Antennae whitish-ochreous annulated with fuscous; ciliations in male $\frac{1}{2}$. Thorax whitish-ochreous with some fuscous scales anteriorly. Abdomen pale grey; tuft whitish-ochreous. Legs fuscous; middle and posterior tarsi with whitish-ochreous rings; posterior pair except tarsi whitish-ochreous. Forewings narrow, suboblong, costa gently arched, apex rounded, termen obliquely rounded; whitish-ochreous irrorated with fuscous, very sparsely in disc, more densely towards margins; stigmata blackish, rather elongate, first discal just before middle, plical well before it, second discal at two-thirds; cilia whitish-ochreous with median and terminal lines of fuscous irroration. Hindwings narrowly elongate-ovate; whitish-grey; cilia whitish-grey.

Queensland: National Park (2,500 ft.) in open forest in November; one specimen.

9. Gen. MIXODETIS Meyr.

Trans. Roy. Soc. S. Aust., 1902, p. 172. Type, *M. ochrocoma* Low.

Palpi rather short and stout, curved, ascending; second joint not nearly reaching base of antennae, slightly rough anteriorly, with a slight anterior angular projection at apex; terminal joint shorter than second, stout, slightly rough anteriorly. Antennae with basal pecten; in male shortly ciliated. Forewings narrow, 7 to termen. Hindwings lanceolate, cilia over 2; 2 to 7 nearly parallel.

Three species: 101, *ochrocoma* Low., P.L.S.N.S.W., 1899, p. 100 (Broken Hill).—102, *calyptra* Low., *ibid.*, 1899, p. 100 (Broken Hill).—103, *lasiomela* Low., *ibid.*, 1899, p. 101 (Broken Hill).

10. Gen. PERIALLACTIS Meyr.

Tr. R.S.S. Aust., 1902, p. 172. Type, *P. monostrophia* Low.

Palpi moderately long, slender, recurved; second joint not reaching or just reaching base of antennae, smooth, but sometimes loose-scaled towards apex (*monostrophia*); terminal joint shorter than second. Antennae with basal pecten; ciliations in male moderately long. Forewings lanceolate; 7 to termen. Hindwings ovate-lanceolate or lanceolate; 3 and 4 widely separate (*panarga*, *homopasta*) or separate but somewhat approximated (*monostrophia*, *aclina*), 5 approximated at base to 4, or even connate (*panarga*).

A natural genus, which although small shows some range of variation. The termination of 7 of forewings below apex makes it difficult to believe that this and the preceding genus are rightly placed here.

Four species: 104, *monostropha* Low., *Tr. R.S.S. Aust.*, 1897, p. 57 (Gisborne); Meyr., *ibid.*, 1902, p. 173.—105, *panarga*, n. sp. (Toowoomba).—106, *homopasta*, n. sp. (Toowoomba).—107, *aclina*, n. sp. (Gisborne).

105. PERIALLACTIS PANARGA, n. sp.

παναργος, wholly white.

♂. 13 mm. Head and thorax whitish (rubbed). Palpi whitish; second joint scarcely reaching base of antennae, outer surface grey; terminal joint $\frac{2}{3}$. Antennae white, becoming grey towards apex; ciliations in male $2\frac{1}{2}$. Abdomen pale grey. Legs: anterior pair fuscous; middle pair grey; posterior pair whitish. Forewings lanceolate; white; cilia white. Hindwings lanceolate; whitish; cilia $1\frac{1}{2}$, whitish.

Queensland: Crow's Nest, near Toowoomba, in November; one specimen.

106. PERIALLACTIS HOMOPASTA, n. sp.

όμοπαστος, uniformly sprinkled.

♂. 12 mm. Head whitish. Palpi whitish; second joint not reaching base of antennae, grey on external surface; terminal joint $\frac{1}{2}$. Antennae whitish, towards apex pale grey; ciliations in male 3. Thorax whitish irrorated with fuscous. Abdomen pale grey. Legs: anterior pair fuscous; middle pair grey; posterior pair whitish. Forewings lanceolate; white rather densely and evenly irrorated with fuscous; cilia white irrorated with fuscous, apices grey. Hindwings lanceolate; grey; cilia $1\frac{1}{2}$, grey.

Queensland: Crow's Nest, near Toowoomba, in September; one specimen.

107. PERIALLACTIS ACLINA, n. sp.

άκλεινος, inglorious.

♀. 14 mm. Head and thorax fuscous-brown. Palpi with second joint not reaching base of antennae, terminal joint $\frac{2}{3}$; brownish, apex of second joint and terminal joint except apex fuscous. Antennae pale brownish. Abdomen brownish. Legs fuscous-brown; posterior pair whitish-brown. Forewings lanceolate; pale brown with a few marginal blackish scales, more numerous towards apex; stigmata blackish, first discal at one-fourth, plical well beyond it, second discal at two-thirds; cilia pale brown. Hindwings broadly lanceolate; whitish; cilia 1, whitish.

Victoria: Gisborne in March; one specimen received from Mr. Geo. Lyell, who has the type.

11. Gen. PARATHETA Meyr.

Trans. Roy. Soc. S. Aust., 1902, p. 173. Type, *P. syrtica* Meyr.

Palpi rather short, slender, curved, ascending; second joint not nearly reaching base of antennae, smooth-scaled; terminal joint shorter than second. Antennae with basal pecten; in male shortly ciliated. Forewings narrow; 7 to costa. Hindwings ovate-lanceolate; 3, 4, 5 separate, nearly parallel.

Meyrick has recorded also one species from North America.

Two species: 108, *euspila*, n. sp. (Sydney).—109, *syrtica* Meyr., *Tr. R.S.S. Aust.*, 1902, p. 174 (Brisbane to Hobart).

108. PARATHETA EUSPILA, n. sp.

εὐσπίλος, well spotted.

♂. 14 mm. Head white. Palpi with second joint not reaching base of antennae, terminal joint $\frac{3}{4}$; white mixed with blackish. Antennae white with fine blackish annulations; ciliations in male nearly 1. Thorax and abdomen whitish-grey. Legs fuscous; posterior pair whitish. Forewings narrow, costa moderately arched, apex pointed, termen very obliquely rounded; white, margins rather densely and broadly irrorated with grey; stigmata blackish; first discal at one-third, large transversely, and confluent with plical, which lies slightly before it; two dots placed transversely in middle, one subcostal, one median, and a median dot at two-thirds, sometimes lengthened obliquely; cilia grey. Hindwings ovate lanceolate; whitish, at apex greyish-tinged; cilia 1, whitish.

New South Wales: Sydney in September; one specimen received from Mr. G. M. Goldfinch, who has the type.

12. Gen. OENOCHRODES Low.

Trans. Roy. Soc. S. Aust., 1907, p. 115.

Palpi moderately long, recurved, ascending; second joint reaching base of antennae, thickened with appressed scales, rough in apical half anteriorly; terminal joint shorter than second, slender. Antennae with basal pecten; in male shortly ciliated. Thorax with a posterior crest. Forewings with 7 to costa. Hindwings elongate-ovate; 3 and 4 widely separate, 5 from below middle of cell.

Allied to *Artiastis*. There is only one known species: 110, *crossoxantha* Low., *Trans. Roy. Soc. S. Aust.*, 1907, p. 115 (Sea Lake, Hoyleton, Pinnaroo).

13. Gen. ARTIASTIS Meyr.

Proc. Linn. Soc. N.S.W., 1888, p. 1674. Type, *A. tepida* Meyr.

Palpi moderately long, recurved, ascending; second joint reaching base of antennae, with appressed scales; terminal joint shorter than second, slender. Antennae with basal pecten; ciliations in male long. Forewings with 7 to costa. Hindwings ovate-lanceolate; 3 and 4 widely separate, 5 from middle at cell.

Four species: †112, *heliacma* Meyr., *P.L.S.N.S.W.*, 1888, p. 1674 (Bathurst; Petersburg, S. Aust).—113, *tepida* Meyr., *ibid.*, 1888, p. 1674. = *leptomera* Low., *ibid.*, 1900, p. 412 (Brisbane to Melbourne).—114, *ptochopa* Meyr., *ibid.*, 1888, p. 1675 (Toowoomba to Tasmania).—115, *philoscia* Meyr., *Tr. R.S.S. Aust.*, 1902, p. 174 (Brisbane to Gisborne and Quorn).

14. Gen. PALIMMECES Turn.

Proc. Linn. Soc. N.S.W., 1916, p. 338.

Palpi long, curved, ascending; second joint very long, much exceeding base of antennae, anteriorly with long loose hair forming an apical tuft; terminal joint $\frac{1}{2}$. Antennae with basal pecten; in male shortly ciliated. Forewings with 7 to costa. Hindwings elongate-ovate; 3, 4, 5 closely approximated at origin.

Probably allied to *Artiastis*. There is only one species: 111, *ithysticha* Turn., *P.L.S.N.S.W.*, 1916, p. 339 (Toowoomba, Glen Innes).

15. Gen. ENDROSIS Hb.

Verz., p. 401.

Palpi rather long, curved, ascending; second joint reaching base of antennae, smooth; terminal joint shorter than second. Antennae with basal pecten; cilia-

tions in male moderately long. Forewings narrow; 7 to costa. Hindwings lanceolate, cilia $1\frac{1}{2}$; a small dorsal hyaline area near base; 3 and 4 stalked, 5 absent.

The type species is found in or near houses throughout the world, and has been artificially introduced. There is a second species in South Africa.

116, *lactella* Schiff., *Syst. Verz. Schmet. Wien*, p. 139; Meyr., P.L.S.N.S.W., 1897, p. 426 (probably throughout Australia).

16. Gen. SCOTODRYAS, n.g.

σκοτοδρυας, a dusky woodnymph.

Tongue present. Palpi moderately long; second joint with appressed scales, but somewhat rough anteriorly, reaching base of antennae; terminal joint about $\frac{2}{3}$, rather thick, acute. Antennae without basal pecten; ciliations in male rather long. Thorax smooth. Posterior tibiae with long hairs on dorsum. Forewings with 2 from near angle, 7 to costa. Hindwings with 3 and 4 connate, 5 from above middle, arising from much nearer 6 than 4 ($\frac{3}{4}$), 6 and 7 well separate at origin, at first parallel, then diverging.

The affinities of this genus are uncertain. In spite of the neurulation of the hindwings I see no relationship to the Hyponomeutidae.

117. SCOTODRYAS HOLOCAUSTA, n. sp.

όλοκαυστος, wholly scorched.

♂, ♀. 16–18 mm. Head, thorax, and palpi reddish-brown. Antennae grey; ciliations in male $2\frac{1}{2}$. Abdomen grey; apices of segments whitish. Legs reddish-brown; posterior pair paler. Forewings suboblong, not dilated, costa moderately arched, apex rounded, termen obliquely rounded; reddish-brown; a hemispherical dorsal blotch from $\frac{1}{4}$ to $\frac{3}{4}$, reaching middle of disc, darker brown, slenderly outlined by a whitish line which is sometimes broken in middle; cilia reddish-brown. Hindwings whitish, more or less suffused with grey except at base; cilia grey, on dorsum and tornus whitish.

Queensland: Mt. Tambourine in November; National Park (3,000–3,500 ft.) in December. Victoria: Melbourne; Beaconsfield in December. Seven specimens.

(To be continued.)



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