

THE
PROCEEDINGS
OF THE
LINNEAN SOCIETY
OF
NEW SOUTH WALES

FOR THE YEAR

1913

Vol. XXXVIII.

WITH THIRTY PLATES.

SYDNEY:

PRINTED AND PUBLISHED FOR THE SOCIETY

BY

W. A. PEPPERDAY & CO., 119A PITT STREET

AND

SOLD BY THE SOCIETY

—
1914.

5572 W

W. A. PEPPERDAY AND CO.,
GENERAL PRINTERS,
119a PITT STREET, SYDNEY.



CONTENTS OF PROCEEDINGS, 1913.

PART I. (No. 149).

(Issued 17th September, 1913.)

	PAGES
Presidential Address delivered at the Thirty-eighth Annual General Meeting, March 26th, 1913, by W. W. FROGGATT, F.L.S....	1-42
Notes on Australian Marine <i>Algæ</i> , i. By A. H. S. LUCAS, M.A., B.Sc. (Plates i.-v.)	49-60
Revision of Australian Species of the Subfamilies <i>Cyphaleinæ</i> and <i>Cnodaloninæ</i> [COLEOPTERA: <i>Tenebrionidæ</i>]. By H. J. CARTER, B.A., F.E.S. (Plates vi.-vii.)...	61-105
Stratigraphical Geology of the Permo Carboniferous System in the Maitland-Branxton District; with some Notes on the Permo-Carboniferous Palæogeography in New South Wales. By A. B. WALKOM, B.Sc., Linnean Macleay Fellow of the Society in Geology. (Plates viii.-xiii.)..	114-145
The Geology of the Permo-Carboniferous System in the Glendonbrook District, near Singleton, N.S.W. By A. B. WALKOM, B.Sc., Linnean Macleay Fellow of the Society in Geology. (Plate xiv.)	146-159
Notes on some recently discovered Occurrences of the Pseudomorph, Glendonite. By A. B. WALKOM, B.Sc., Linnean Macleay Fellow of the Society in Geology	160-168
Studies in Australian <i>Microlepidoptera</i> . By A. JEFFERIS TURNER, M.D., F.E.S.	174-228
Hon. Treasurer's Financial Statement, Balance Sheet, etc.	42-47
Elections and Announcements	48, 106, 169
Notes and Exhibits	48, 106, 169

PART II. (No. 150).

(Issued 5th November, 1913).

	PAGES
Some Descriptions of new Forms of Australian <i>Odonata</i> . By R. J. TILLYARD, M.A., F.E.S. (Plate xv.)	229-241
Notes from the Botanic Gardens, Sydney. No.18. By J. H. MAIDEN and E. BETCHE	242-252
Studies on Australian Mollusca. Part xi. By C. HEDLEY, F.L.S. (Plates xvi.-xix.)... ..	258-339
Revision of the <i>Amycterides</i> . Part ii. <i>Talaurinus</i> (continued) [COLEOPTERA]	340-394
Elections and Announcements	253, 395
Notes and Exhibits	253-255, 395-400
Report of proceedings in connection with the presentation of a portrait in oils of the late Prof. W. J. Stephens, M.A., for some time President of the Society	255-257

PART III. (No. 151).

(Issued 19th December, 1913).

	PAGES
Descriptions of two new Species of <i>Cicindela</i> [COLEOPTERA : <i>Carabidæ</i>] from Western Australia. By THOMAS G. SLOANE ...	401-403
Revisional Notes on Australian <i>Carabidæ</i> . Part iv. The Genus <i>Notonomus</i> . By THOMAS G. SLOANE	404-449
On a Case of Natural Hybridism in the Genus <i>Grevillea</i> [N.O. PROTEACEÆ]. By J. J. FLETCHER. [Title]	449
Revision of the Australian <i>Curculionidæ</i> belonging to the Subfamily <i>Cryptorhynchidæ</i> [COLEOPTERA]. Part xii. By ARTHUR M. LEA, F.E.S.	451-489
The Geology and Petrology of the Great Serpentine Belt of New South Wales. Part i. Introduction. By. W. N. BENSON, B.A., B.Sc. (Plates xx.-xxi.)	491-517
The Development of the N.O. <i>Myrtaceæ</i> . By E. C. ANDREWS, B.A., F.G.S.... ..	529-568
Discussion	521
Elections and Announcements	450, 525
Notes and Exhibits	518, 525

PART IV. (No. 152).

(Issued 23rd March, 1914).

	PAGES
The Geology and Petrology of the Great Serpentine Belt of New South Wales. Part ii. The Geology of the Nundle District. By W. N. BENSON, B.A., B.Sc. (Plates xxii.-xxiv.)... ..	569-596
Descriptions of three new Species of <i>Myrtaceæ</i> . By R. T. BAKER, F.I.S. (Plates xxv.-xxvi.)	597-602
New Fossorial <i>Hymenoptera</i> from Australia and Tasmania. By ROWLAND E. TURNER, F.Z.S., F.E.S.	608-623
Hydrocyanic Acid in Plants. Part ii. Its Occurrence in the Grasses of New South Wales. By JAMES M. PETRIE, D.Sc., F.I.C., Linnean Macleay Fellow of the Society in Biochemistry	624-638
Notes on the Indigenous Plants in the Cobar District, N.S.W. No. ii. By ARCHDEACON F. E. HAVILAND	639-655
The Geology and Petrology of the Great Serpentine Belt of New South Wales. Part iii. Petrology. By W. N. BENSON, B.A., B.Sc. (Plates xxvii.-xxix.)	662-724
Contributions to our Knowledge of Soil-Fertility. Nos. vii.-xi. By R. GREIG-SMITH, D.Sc., Macleay Bacteriologist to the Society	725-746
A Revision of the <i>Culicidæ</i> in the Macleay Museum, Sydney. By FRANK H. TAYLOR, F.E.S., Entomologist to the Australian Institute of Tropical Medicine. (Plate xxx.)	747-760
Note on the Occurrence of Strychnicine. By JAMES M. PETRIE, D.Sc., F.I.C., Linnean Macleay Fellow of the Society in Biochemistry	761-764
Study of the <i>Odonata</i> of Tasmania in relation to the Bassian Isthmus. By R. J. TILLYARD, M.A., F.E.S., Science Research Student in the University of Sydney	765-778
Elections and Announcements	603, 656
Notes and Exhibits	603-607, 656-661
List of Donations and Exchanges, 1912-13	779-801
Title-page	i.
Contents	ii.
List of Plates	vii.
List of new Generic Names	vi.
Corrigenda	vi.
Index	i.-xl.

CORRIGENDA.

- Page 65, line 15—for *Lygestria*, read *Lygestira*.
 Page 65, line 26—for *L sulci-*, read *L. sulci-*
 Page 67, line 13—for *metallicus* Westw., read *metallicus* Macl.
 Page 76, line 34—for *P. elongatus* Macl., read *P. elongatulus* Macl.
 Page 99, line 3—for *C. Mastersi*, read *P. Mastersi*.
 Page 99, line 5—for *C. aculeatus*, read *P. aculeatus*.
 Page 104, line 9—for *C. varicolor*, read *T. varicolor*.
 Page 109, line 11—for *Sturnus vulgarus*, read *Sturnus vulgaris*.
 Page 119, line 30—for *Mourlonia rotundatum*, read *Mourlonia rotundata*.
 Page 272, line 28—for STRIGELLA SINCERA, read STRIGILLA SINCERA.
 Page 539, line 3—under Western Australia, read *Actinodium*, 1 species.
 Page 563, line 5—for *Poranthera* [preoccupied], read *Porantheris*.
 Page 564, line 21—for *Porantheras*, read *Porantheres*.
 Page 651, line 4—for POLYGONUM PLEBIUM, read POLYGONUM PLEBEIUM.
 Page 653, line 35—for P. TASMANICA, read F. TASMANICA.
 Page 662, line 5—for Plates xxv-xxvii., read Plates xxvii.-xxix.
 Pages 664, 666, 667, 669, in the references to figs.1-6—for Pl. xxv., read Pl. xxvii.
 Pages 673, 674, 675, 681, 689, in the references to figs.7-11—for Pl. xxvi., read Pl. xxviii.
 Pages 694, 697, 699, in the references to figs 13-15—for Pl. xxvii., read Pl. xxix.

LIST OF NEW GENERIC NAMES PROPOSED IN
THIS VOLUME(1913).

	PAGE.		PAGE.
<i>Bolbophanes</i> [Coleoptera]	... 86	<i>Peritalaurinus</i> [Coleoptera]	... 384
<i>Corymbosa</i> (Myrtaceæ) 562	{	<i>Poranthera</i> *[Myrtaceæ] ... 563
<i>Cyclophanes</i> [Coleoptera]	... 92		<i>Porantheris</i> [Myrtaceæ]. See
<i>Dicherotropis</i> [Coleoptera]	... 388	{	Corrigenda.
<i>Euthorybeta</i> [Lepidoptera]	... 200	<i>Retizafra</i> (subgen.)[Mollusca]	... 326
<i>Lataurinus</i> [Coleoptera]	... 383	<i>Sclerorrhinella</i> [Coleoptera]	... 388
<i>Napeccates</i> [Lepidoptera]	... 218	<i>Synechodes</i> [Lepidoptera]	... 200
<i>Naricava</i> [Mollusca] 294	<i>Tanaoctena</i> [Lepidoptera]	... 204
<i>Ophthalmamycterus</i> [Coleoptera]..	386	<i>Trychnomera</i> [Lepidoptera]	... 199
<i>Pachypropterus</i> [Coleoptera] ...	461		

* Preoccupied. See Corrigenda.

LIST OF PLATES.

PROCEEDINGS, 1913.

- Plate i.—*Spermatochneus lejolisii* (Thur.) De Toni.
Plate ii.—*Nitophyllum sinuosum* [Tetrasporangiferous Plant].
Plate iii.————— [Cystocarpiferous Plant].
Plate iv.—*Sondera bennettiana* (Harv.) F. v. M.
Plate v.—*Ulva lactuca* L.; *Bryopsis baculifera* J. Ag.
Plates vi.-vii.—Australian *Cyphaleinæ*.
Plate viii.—Comparative Series of Sections of Greta Coal-seams south of Branxton.
Plate ix.—Geological Map of part of the Hunter River District.
Plate x.—Map showing approximately the Western Limit of the Lower Marine Sea in New South Wales.
Plate xi.—Map showing approximately the distribution of the land and sea during the deposition of the Greta Coal-Measures in New South Wales.
Plate xii.—Map showing approximately the extent of the Upper Marine Sea in New South Wales.
Plate xiii.—Map showing approximately the extent of the inland Sea, in which were deposited the Upper Coal-Measures.
Plate xiv.—Geological Map of the Glendonbrook District, N.S. W.
Plate xv.—New Forms of Australian *Odonata*.
Plates xvi.-xix.—Types of Australian *Mollusca*.
Plate xx.—Geological Map of the Bingara and Tamworth District, N.S. W.
Plate xxi.—Geological Sections across the Bingara, Tamworth, and Nundle District, N.S. W.
Plate xxii.—Geological Map of the Nundle District.
Plate xxiii.—View looking up Munro's Creek, Nundle District.
Plate xxiv.—Swamp Creek Falls, dropping behind a shutter-like mass of spilite.
Plate xxv.—*Melaleuca Maidenii*, n.sp.
Plate xxvi.—*Melaleuca Smithii*, n.sp.
Plates xxvii.-xxix.—Photomicrographs illustrating the Petrology of the Great Serpentine Belt.
Plate xxx.—*Culicada vittiger* (Skuse); *Edeomyia venustipes* (Skuse).

STUDIES IN AUSTRALIAN MICROLEPIDOPTERA.

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

This paper is intended to be a supplement to Mr. Meyrick's paper on the Australian *Plutellidæ* in these Proceedings (1907, p.47). It describes new species, and gives further localities. Mr. Meyrick has since divided this group into several families, which I prefer to regard as subfamilies. But the *Adelinæ* have no near relationship to the other subfamilies, and are included here for convenience, as they have been recently monographed by Mr. Meyrick in the "Genera Insectorum."

Subfam. GRACILARIANÆ.

In his monograph in the "Genera Insectorum," Mr. Meyrick has substituted older names for two of his genera, and has added a few new species. These will be referred to below.

Gen. EPICEPHALA.

This is an Australian genus of some extent, also represented in India and South Africa. I have already nine species. They are mostly closely allied, and difficult to discriminate. The larval habits are interesting. Dr. T. Bancroft first called my attention to those of the species *E. frugicola*. To open a green fruit-capsule, and to find inside a perfect moth fully fledged, was a novel and startling experience. The blackish markings on the hindwings of the male only, in two species, are an unusual character, and very helpful to the recognition of the species.

EPICEPHALA ALBISTRIATELLA.

Gracilaria albistriatella Turn., Trans. R. Soc. S. Australia, 1894, p.129.

Correctly referred to this genus; the frontal tuft is easily abraded.

Q.: Brisbane, in March and April; Caloundra, in August; Nambour, in April; Stanthorpe, in February.

EPICEPHALA COLYMBETELLA.

Brisbane, also in June.

EPICEPHALA TRIGONOPHORA.

Q.: Brisbane, in April; Bunya Mountains, in December.

EPICEPHALA ACROBAPHES.

The blackish suffusion of the apical half of the hindwings is present only in the male, of which I have now two examples.

Q.: Stradbroke Island, also in April.

EPICEPHALA AUSTRALIS.

Q.: Brisbane, from May to November.

EPICEPHALA EUGONIA, n.sp. [εὐγωνίος, well-angled.]

♀. 6 mm. Head and palpi snow-white. Antennæ grey. Thorax and abdomen grey. Legs white. Forewings grey; markings snow-white; a rather broad streak along whole of dorsum; a slender streak from $\frac{1}{4}$ costa obliquely outwards, joining dorsal streak at $\frac{3}{4}$; a second streak from costa at $\frac{3}{5}$, very obliquely outwards; a third short streak from $\frac{4}{5}$ costa; two streaks from dorsum just before tornus, very oblique, nearly touching second dorsal streak in disc; an outwardly curved silvery streak from costa before apex to midtermen; a dark fuscous dot in disc just beyond this; cilia white, apices grey, on dorsum wholly grey. Hindwings and cilia grey.

Near *E. trigonophora*, but more neatly marked, the costal streaks narrower, and the first of them joining dorsal streak. There seems to be no fuscous line around apex and termen, but as to the colour of the thorax, I cannot be certain, as it has been discoloured by grease, though the type is otherwise in good condition. Type in Coll. Turner.

Q.: Brisbane, in December; one specimen.

EPICEPHALA FRUGICOLA, n.sp. [Frugicolus, inhabiting fruit].

♂♀. 8-9 mm. Head white. Palpi white; external surface of labial palpi grey, except at base and apex. Antennæ ochreous-grey. Thorax and abdomen ochreous-grey; the former with a

white spot in centre; tuft whitish. Legs grey, with whitish annulations. Forewings ochreous-grey, with white streaks; a rather ill-defined dorsal streak, incised near base, broad towards base, towards tornus narrow or interrupted; three short oblique costal streaks from $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$; three oblique dorsal streaks, first from mid-dorsum, sometimes meeting first costal streak, second obscurely double from $\frac{3}{4}$, third from near tornus; a silvery transverse streak from costa slightly beyond third streak to tornus; a short blackish longitudinal line in apical part of disc; a white spot on tornus; a dark fuscous line around apical portion of costa and termen; cilia white, apices fuscous opposite apex, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

Q.: Brisbane, in December and February, bred abundantly from the seed-capsules of *Phyllanthus Ferdinandii*. The larvæ feed on the seeds, and the imagines are found in the ripe capsules, many days before they are liberated by the dehiscence of the fruit. They are victimised by two species of hymenoptera, one reddish and the other blackish, and these do not wait for dehiscence, but escape by boring their way through the capsules.

EPICEPHALA LOMATOGRAPHA, n.sp. [*λωματογραφος*, marginally inscribed].

♂♀. 9-10 mm. Head and palpi white; external surface of labial palpi grey. Antennæ grey. Thorax grey, with a large central white spot. Abdomen grey. Legs white annulated with grey. Forewings ochreous-grey, with white markings; a streak along dorsum, broad at base, becoming very narrow towards tornus, its upper edge irregularly excavated; costal streaks very short, dot-like, at $\frac{1}{3}$, $\frac{1}{2}$, and $\frac{2}{3}$; a double oblique streak from costa at $\frac{5}{6}$ to termen; followed by a suffused fuscous spot; a white spot on tornus; a dark fuscous line around apical portion of costa and termen; cilia white, apices fuscous, on dorsum grey. Hindwings grey; in ♂ with narrow dark fuscous streaks on costa to middle and on dorsum to $\frac{1}{3}$.

Distinguished by the very short costal streaks, the absence of the first dorsal streak, and especially by the dark fuscous streaks on hindwing of ♂. Type in Coll. Turner.

N.Q.: Mourilyan Harbour, near Innisfail, in June.—Q.: Stradbroke Island, commonly taken in November and April.

EPICEPHALA NEPHELODES, n.sp. [*νεφελωδης*, cloudy].

♂. 9-10 mm. Head whitish-ochreous; face and palpi white; outer surface of labial palpi whitish-grey. Thorax and abdomen grey. Legs white, with blackish annulations. Forewings grey without ochreous tinge; markings white, rather indistinct; an irregularly outlined streak along dorsum; short oblique costal streaks at $\frac{1}{3}$, $\frac{1}{2}$, and $\frac{2}{3}$; a double outwardly oblique streak from tornus; a transverse silvery line from $\frac{5}{6}$ costa to tornus; followed by a round blackish dot; a white spot on tornus; a dark fuscous line around apical part of costa and termen; cilia white, apices fuscous opposite apex, on dorsum grey. Hindwings and cilia grey.

Distinguished by the ochreous-tinged crown, the absence of ochreous tinge in forewings, the blackish annulations on the legs, and the absence of dark markings on hindwings of ♂. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in June and September; three specimens.

Gen. ACROCERCOPS.

Acrocercops Wallengren, Ent. Tidskr., ii., p.95(1881).

Conopomorpha Meyr., Trans. N.Z. Inst., 1885, p.183.

A large genus universally distributed.

ACROCERCOPS MENDOSA.

Meyr., Gen. Insect., Gracilariadæ, p.16.

N.Q.: Kuranda, near Cairns; in October(Dodd).

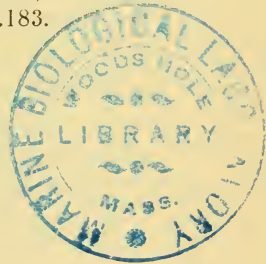
ACROCERCOPS HIEROCOSMA.

Meyr., Gen. Insect., Gracilariadæ, p.18.

N.A.: Port Darwin(Dodd).

ACROCERCOPS ORDINATELLA.

N.Q.: Kuranda, near Cairns.—Q.: Gympie, in April; Nambour, in November; Mt. Tambourine, in November and February; Burpengary, near Brisbane, in May. A number bred from larvæ mining the leaves of *Litsea dealbata*.



ACROCERCOPS IRRORATA.

Q.: Brisbane, in December, January, March, and May.

ACROCERCOPS TRICUNEATELLA.

Q.: Brisbane, from December to February.

ACROCERCOPS AUTADELPHA.

Q.: Mt. Tambourine, in February; from larvæ on *Banksia*.

ACROCERCOPS ZAPLACA.

Q.: Caloundra, in August.

ACROCERCOPS HOPLOCALA.

Q.: Mt. Tambourine, in October and November.

ACROCERCOPS CALICELLA.

Q.: Brisbane, from June to September.

ACROCERCOPS EUCHLAMYDA.

Q.: Brisbane, in August, September, and March.

ACROCERCOPS OBSCURELLA.

O.: Brisbane, in September and April; Toowoomba, in September.

ACROCERCOPS EUPETALA.

Q.: Nambour, in October and March; Brisbane, in August and November.

ACROCERCOPS EUMETALLA.

Q.: Toowoomba, in September; Warwick, in October.

ACROCERCOPS HELIOPLA.

Q.: Brisbane, in August.

ACROCERCOPS ALYSIDOTA.

Q. Brisbane, in August.

ACROCERCOPS TRISTANIÆ.

Q.: Brisbane, also in April.

ACROCERCOPS PARALLELA.

N.Q.: Kuranda, near Cairns, in October.—Q.: Nambour, in December; Brisbane, from July to November; Caloundra, in August.

ACROCERCOPS NEREIS.

Q.: Brisbane, in August and September; Toowoomba, in September.

ACROCERCOPS LACINIELLA.

Q.: Brisbane, in August and September; Mt. Tambourine, in October.

ACROCERCOPS OPHIODES.

Q.: Brisbane, in August and September; Warwick, in October.

ACROCERCOPS PYRIGENES.

Q.: Brisbane, in November, March, and April; Nambour, in November, December, and March.

ACROCERCOPS PLEBEIA.

Q.: Brisbane, in November, January, and April; Warwick, in October.

ACROCERCOPS UNILINEATA.

Q.: Brisbane; Coolangatta, in May.

ACROCERCOPS SYMPHYLETES, n.sp. [*συμφυλετης*, of the same tribe].

♂ 7-8 mm. Head snow-white. Palpi white; apex of second joint dark fuscous. Antennæ grey; basal joint white. Thorax white, anterior edge grey. Abdomen pale grey. Legs dark fuscous, with white annulations. Forewings grey, with three white transverse fasciæ, edged with a few dark fuscous scales, first at $\frac{1}{4}$, broad, gradually increasing in breadth from costa to dorsum; second at middle, similar to first; third at $\frac{3}{4}$, similar but rather less broad; a minute white dot on costa before apex, a second on mid-termen, and a third, rather larger, on extreme apex; cilia grey, on apex white. Hindwings and cilia grey.

Extremely like *A. autadelpha*, but with the thorax grey anteriorly, and base of forewings not white. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; two specimens received from Mr. F. P. Dodd.

ACROCERCOPS LEUCOTOMA, n.sp. [λευκοτομος, divided by white].

♀. 6 mm. Head grey; face and palpi white. Antennæ grey. Thorax grey, with a transverse median white line. Abdomen fuscous; beneath white, barred with fuscous. Legs fuscous, with white annulations. Forewings dark grey, with white markings edged with darker scales; a transverse fascia at $\frac{1}{4}$, broadening towards dorsum; a second fascia just beyond middle, also broadening towards dorsum; a minute dot on costa at $\frac{3}{4}$; a larger spot on costa midway between this and apex; and another, also larger, on costa just before apex; cilia grey, on subapical spot white. Hindwings and cilia grey.

Belonging to the *autadelpha*-group, distinguished by having two fasciæ, and three spots, but no spot on dorsum. Type in Coll. Turner.

Q.: Brisbane, in March; one specimen.

ACROCERCOPS APOBLEPTA, n.sp. [ἀποβλεπτος, admired].

♀. 7 mm. Head and palpi white. Antennæ grey, towards base white. Thorax pale ochreous-brown, with a posterior white dot. Abdomen grey. Legs white, annulated with fuscous. Forewings pale ochreous-brown; five white transverse fasciæ partially edged with fuscous scales; first narrow, basal; the others broad, nearly equal on costa and dorsum, with straight edges; second at $\frac{1}{4}$, third at middle, fourth before $\frac{3}{4}$, and fifth apical; fourth fascia traversed by four longitudinal dark fuscous streaks; a white costal dot between second and third fasciæ; cilia white, apices dark fuscous, on dorsum grey. Hindwings and cilia grey.

Of the *autadelpha*-group, immediately distinguished by the curiously striated fourth fascia. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; two specimens, received from Mr. F. P. Dodd.

ACROCERCOPS TETRACHORDA, n.sp. [τετραχορδος, four-stringed].

♂. 6 mm. Head white. Palpi white; outer surface of second joint fuscous. Antennæ grey; basal joint white. Thorax and abdomen grey. Legs dark fuscous, annulated with white. Forewings grey; four broad white parallel-sided fasciæ, partly edged

with dark fuscous scales; first basal, second at $\frac{1}{3}$, third at $\frac{3}{5}$, fourth apical; a fuscous dot on extreme apex; cilia white, apices fuscous, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner

N.Q.: Kuranda, near Cairns; one specimen received from Mr. F. P. Dodd.

ACROCERCOPS MACARIA, n.sp. [*μακαριος* happy].

♂. 6 mm. Head and palpi snow-white. Antennæ dark grey; basal joint white. Thorax white. Abdomen grey. Legs white, with dark fuscous annulations. Forewings rather dark ochreous-brown; four transverse snow-white fasciæ neatly edged with blackish; first at $\frac{1}{5}$, rather broader on dorsum; second at $\frac{2}{5}$, equally broad on both margins; third at $\frac{4}{5}$, narrow on costa, expanding towards dorsum; fourth apical; extreme apex dark fuscous; cilia white, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

Q.: Bribie Island, near Caloundra, in September; five specimens, bred from larvæ mining blotches in the leaves of *Halfordia drupifera*.

ACROCERCOPS HEDYMOPA, n.sp. [*ἡδυμοπος*, sweet, pleasant].

♂♀. 6 mm. Head and palpi white, labial palpi with slender fuscous annulations. Antennæ whitish-grey. Thorax white. Abdomen ochreous-whitish. Legs white, with blackish annulations. Forewings white, sparsely irrorated with fuscous scales; a blackish dot on base of costa; five transverse ochreous fasciæ; first slender, basal; second broad, sharply defined, and narrowly edged with fuscous scales, sub-basal; third and fourth similar at $\frac{1}{3}$ and $\frac{2}{3}$; fifth midway between fourth and apex, slender, ill-defined; a suffused ochreous apical spot; cilia white, with a basal blackish dot on apex, apices fuscous, on dorsum whitish-grey. Hindwings grey; cilia whitish-grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, and Atherton, in June; seven specimens.

ACROCERCOPS OCHROPTILA, n.sp. [*ὠχροπτιλος*, with pale wings].

♂. 10 mm. Head and palpi white. Antennæ grey, basal joint white. Thorax pale ochreous-grey. Abdomen grey. Legs whitish;

tarsi with fuscous annulations. Forewings pale ochreous-grey; markings whitish, ill-defined; an indistinct spot on mid-dorsum; a transverse fascia at $\frac{2}{3}$; a second midway between this and apex, and a third just before apex; cilia pale ochreous-grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Townsville, in February; one specimen, received from Mr. F. P. Dodd.

ACROCERCOPS STEREOMITA, n.sp. [*στερεομιτος*, with straight threads].

♀. 7-8 mm. Head and palpi snow-white; labial palpi annulated with fuscous at apex of second and middle of terminal joints. Antennæ fuscous. Thorax white, lateral and posterior margins dark grey. Abdomen dark grey. Legs fuscous, with longitudinal white streaks. Forewings dark grey; markings white, edged with blackish; a slender streak on costa from base to $\frac{3}{4}$; a broader streak containing a few blackish scales on dorsum from base through tornus to mid-termen; a narrow outwardly oblique streak from costa near apex to termen; cilia white, with a blackish bar before middle, apices fuscous, on dorsum pale grey. Hindwings and cilia pale grey. Type in Coll. Turner.

Q.: Brisbane, in October; two specimens.

ACROCERCOPS POLIOCEPHALA, n.sp. [*πολιοκεφαλος*, grey-headed].

♀. 7 mm. Head grey; face and palpi white; labial palpi grey on external surface. Antennæ dark fuscous. Thorax fuscous. Abdomen dark grey. Legs fuscous, with inconspicuous whitish annulations. Forewings dark bronzy fuscous; an ochreous-whitish line along dorsum from base to middle, expanding into a large blotch at its extremity; a quadrangular dark-centred ochreous-whitish spot on dorsum at $\frac{3}{4}$; three or four dots of same colour on dorsum beyond this; a fine whitish subapical streak from costa to termen; cilia whitish, interrupted by fuscous near tornus, and with a strong median dark fuscous bar opposite apex, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

Q.: Brisbane, in March; one specimen,

ACROCERCOPS EPIMICTA, n.sp. [ἐπίμικτος, mixed, confused].

♂♀. 7-9 mm. Head white. Palpi white; labial palpi with three fuscous annulations, on base and apex of second joint, and just before apex of terminal joint. Antennæ white, annulated with pale fuscous. Thorax pale fuscous, with posterior and lateral white spots. Abdomen pale fuscous or grey, towards base whitish. Legs fuscous, with white annulations. Forewings pale fuscous-ochreous; markings white, somewhat confused; a dot on base of costa, a second on costa near base, and a third on dorsum near base; an irregular spot on costa at $\frac{1}{4}$, confusedly prolonged posteriorly; spots on dorsum at $\frac{1}{4}$, just before, and at middle, extended posteriorly in disc; a streak from midcosta very obliquely outwards, and a similar streak from costa at $\frac{2}{3}$, a streak from dorsum at $\frac{3}{4}$, very obliquely outwards, nearly touching extremity of second costal streak; a dot on $\frac{5}{6}$ costa, giving off a fine straight streak to tornus; a dark fuscous subapical spot; cilia white, bases and apices dark fuscous, on dorsum pale grey. Hindwings and cilia pale grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in October.—Q.: Brisbane, in January and March; Toowoomba, in April. Five specimens.

ACROCERCOPS SYMPLOCA, n.sp. [συμπλοκος, interwoven, complex].

♂. 10 mm. Head, thorax, and palpi snow-white. Antennæ grey-whitish. Abdomen grey-whitish. Legs white, sharply annulated with fuscous. Forewings in ♂ with a tuft of long expansible hairs from base of dorsum beneath; ochreous-grey; markings white edged with pale fuscous; a short basal subcostal streak; a blotch on base of dorsum containing a circular grey spot; an outwardly curved transverse fascia at $\frac{1}{5}$, succeeded by a fine short costal streak; a very irregular fascia from midcosta to mid-dorsum, much expanded posteriorly on costa, and containing several grey dots; an irregular broad-based short costal streak at $\frac{3}{5}$; a wedge-shaped costal streak at $\frac{7}{8}$, and another before apex; a short broad dorsal line before tornus; a blotch just beyond tornus, reaching half across disc; apical area fuscous; cilia grey-whitish, with a median fuscous line, on costa before apex white, on tornus and dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

Q.: Coolangatta, in May; several pupæ, each under a slight web on the upper sides of the leaves of a large trailing bean, at Point Danger; two moths bred. The species attributed to Coolangatta, belong equally to New South Wales and Queensland, the locality being situated exactly on the artificial boundary line between these States.

ACROCERCOPS SPODOPHYLLA, n.sp. [*σποδοφυλλος*, with ashen leaves (wings)].

♂♀. 7-8 mm. Head, palpi, antennæ, thorax, and abdomen grey-whitish. Legs whitish; tarsi faintly annulated with pale grey. Forewings grey-whitish; a white subapical fascia gradually dilating from costa to tornus; cilia grey-whitish. Hindwings and cilia pale grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in June; five specimens.

ACROCERCOPS MELANOMMATA, n.sp. [*μελανομματος*, black-edged].

♂♀. 7-8 mm. Head, palpi, and thorax white. Antennæ grey. Abdomen grey-whitish, with a dark fuscous penultimate ring. Legs white; tarsi with fuscous annulations. Forewings whitish or grey-whitish; a suffused grey fascia from $\frac{3}{4}$ costa to before tornus; a large blackish subapical spot extending from costa to tornus, and a smaller apical spot; cilia grey-whitish. Hindwing pale grey; cilia whitish.

Readily distinguished from the preceding, to which it is allied, by the terminal blackish dots of forewings. Type in Coll. Turner.

N.Q.: Cairns, Kuranda, and Atherton, in June and July; four specimens.

Gen. PHRIXOSCELES.

Phrixosceles, Meyr., Journ. Bombay Nat. Hist. Soc., xviii., p. 814(1908); Gen. Insect., Gracilariadæ, p. 13.

I regard this as a derivative of *Cyphosticha*, to which it is closely akin, differing only in the bristly hairs on the middle tibiæ. Meyrick enumerates five species, of which four are Indian, and one (unknown to me) Australian. I add four new species, all minute and delicate insects.

PHRIXOSCELES LITHOGRAPHA.

Meyr., Gen. Insect., Gracilariadæ, p. 13.

N.Q.: Kuranda, near Cairns, in October (Dodd).

PHRIXOSCELES LECHRIOTOMA, n.sp. [*λεχριοτομος*, obliquely divided].

♀. 6 mm. Head and palpi white. Antennæ white, towards apex grey. Thorax white. Abdomen whitish. Legs white; middle and posterior tibiæ and proximal tarsal joints with long loose hairs on upper surface. Forewings white; markings very pale ochreous mixed with pale fuscous; an ill-defined suffusion along dorsum nearly to middle, connected by some irroration with midcosta, an inwardly oblique fascia from $\frac{2}{3}$ costa to dorsum, sharply defined anteriorly by a pale fuscous line; beyond this, disc is more suffused; cilia white, on dorsum grey-whitish. Hindwings and cilia grey-whitish. Type in Coll. Turner.

N.Q.: Cardwell, in August; one specimen.

PHRIXOSCELES ZOPHOPASTA, n.sp. [*ζοφοπαστος*, dusky-sprinkled]

♂. 8 mm. Head white. Palpi white; apex of second joint dark fuscous. Antennæ white, with fuscous annulations. Thorax white, mixed with fuscous. Abdomen whitish-grey. Legs fuscous, with white annulations; posterior pair mostly white; middle tibiæ and proximal tarsal joints much thickened with long hairs; posterior tibiæ and first two tarsal joints with rather long hairs on upper surface. Forewings white, thinly irrorated with fuscous scales; the irroration is denser on dorsum, where it forms a series of ill-defined spots and dots; cilia on costa white, on dorsum pale grey. Hindwings and cilia pale grey. Type in Coll. Turner.

Q.: Brisbane, in September; one specimen.

PHRIXOSCELES HOLOTELES, n.sp. [*ὁλοτελης*, perfect].

♂♀. 6-8 mm. Head and palpi white. Antennæ much longer than forewings; fuscous, towards base whitish. Thorax whitish. Abdomen grey, beneath whitish. Legs whitish, with fuscous annulations; middle and posterior tibiæ and proximal tarsal joints with rather long loose hairs on upper surface. Forewings with basal half white, with three inwardly oblique dark fuscous fasciæ con-

taining more or less of pale ochreous, posterior half dark fuscous; a whitish spot over tornus; a white streak from $\frac{5}{8}$ costa nearly to tornus, broadening beneath; two fine white longitudinal streaks beyond this; a white apical dot; cilia dark fuscous, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

Q.: Eumundi, near Nambour, in March; eight specimens, all taken at one spot at one time.

PHRIXOSCELES NIPHADIAS, n.sp. [*νιφας*, a snowflake].

♂♀. 6-8 mm. Head, palpi, and thorax snow-white. Antennæ grey, towards base white. [Abdomen broken]. Legs white, with fuscous annulations; middle and posterior tibiæ and proximal tarsal joints with long loose hairs on upper surface. Forewings snow-white, with some fuscous irroration; apical area pale ochreous-fuscous, sharply defined anteriorly; bounded by an inwardly oblique line from costa near apex to midtermen; cilia fuscous, on dorsum grey. Hindwings and cilia grey.

Allied rather closely to the preceding. Type in Coll. Turner.

N.Q.: Cairns, in October; three specimens.

Gen. CYPHOSTICHA.

A small genus, so far as known. Meyrick enumerates one species from Ceylon, and two from Australia, to which I am able to add three more.

CYPHOSTICHA ALBOMARGINATA.

Q.: Brisbane, in March; one specimen, corresponding accurately with Stainton's description, and certainly referable to this genus. The middle tibiæ and first two tarsal joints are thickened with scales throughout.

CYPHOSTICHA PANDOKSA, n.sp. [*πανδοξος*, all-glorious].

♀. 10 mm. Head yellow; face and palpi white. Antennæ grey. Thorax brown-purple, with a large yellow central spot. Abdomen grey; undersurface white. Legs whitish-ochreous; tarsi with fuscous annulations; middle tibiæ and first two tarsal joints much

thickened with fuscous scales. Forewings brown-purple; along costa, mixed with ochreous; a very irregular, bright yellow, broad dorsal streak, twice indented in basal $\frac{1}{4}$, interrupted at mid-dorsum, ending in a discal projection shortly before tornus; a white subapical costal spot, with a dark fuscous discal spot beneath it; cilia ochreous, with a dark fuscous postmedian line, on costal spot white, towards tornus with basal portion white, on dorsum grey. Hindwings and cilia grey.

Very similar to *C. pyrochroma*, differing in the forewings having no opaline streak, the dorsal line being interrupted, and the presence of a white subapical costal spot, also in the dark fuscous middle tibiæ. Type in Coll. Turner.

Q.: Stradbroke Island, in April; one specimen.

CYPHOSTICHA PANCONITA, n.sp. [*παγκονιτος*, all-dusty]

♂♀. 9-10 mm. Head and palpi whitish. Antennæ dark grey. Thorax whitish, with some fine fuscous irroration. Abdomen grey. Legs whitish, with fuscous annulations; middle tibiæ much thickened with dark fuscous scales; middle tarsi not thickened. Forewings white, with ill-defined fasciæ, ochreous densely irrorated with dark fuscous; first fascia very broad, extending from base to $\frac{1}{4}$; second moderate, median; third from $\frac{3}{4}$ costa to tornus, confusedly extended on dorsum and termen; cilia ochreous-whitish, more or less interrupted by fuscous at apex and above tornus, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in September, October, and November.—Q.: Brisbane, in March.—N.S.W.: Murwillumbah, in December. A long series.

Gen. PARECTOPA.

Parectopa Clemens, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 210.

Macarostola Meyr., Proc. Linn. Soc. N.S.Wales, 1907, p. 62.

A moderately large genus, found in all regions.

PARECTOPA THALASSIAS.

Q.: Stradbroke Island, in September.

PARECTOPA TRAPEZOIDES.

Correctly referred to this genus; the posterior tibiæ are smooth.
N.Q.: Kuranda, near Cairns.

PARECTOPA FORMOSA.

Q.: Brisbane, and Stradbroke Island, from August to April, probably throughout the year; Mt. Tambourine, in November and January; Toowoomba, in September.

PARECTOPA POLYPLACA.

I have gone fully into the distinctions between this and the next species, in Trans. R. Soc. S. Australia, 1900, p. 20.

Q.: Maroochydore, near Caloundra, in August; Brisbane, in August, September, October, and April; Mount Tambourine, in March; Coolangatta, in May. The Duaringa locality requires confirmation.

PARECTOPA IDA.

N.Q.: Cairns, in June; Herberton, in February.—Q.: Brisbane, in July, August, and April; Toowoomba, in September.

PARECTOPA CHALCEOPLA, n.sp. [*χαλκεοπλος*, with brazen armour].

♂. 9 mm. Head and thorax brassy-white; face and palpi white. Antennæ grey-whitish. [Abdomen broken]. Legs white, with pale fuscous annulations. Forewings white, with brilliant brassy reflections; a rather broad grey streak on dorsum from $\frac{1}{4}$ to middle; a broad pale brownish fascia from $\frac{4}{5}$ costa to tornus; a large oval blackish apical spot; cilia whitish, with a narrow fuscous bar at apex, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; one specimen, received from Mr. F. P. Dodd.

PARECTOPA THIOSEMA, n.sp. [*θειοσημος*, sulphur-marked].

♂. 8 mm. Head ochreous-fuscous; face pale yellowish. Palpi whitish, apices fuscous. Antennæ fuscous, towards base whitish. Thorax and abdomen ochreous-fuscous. Legs ochreous-fuscous; posterior pair whitish; all tarsi whitish, with fine fuscous annula-

tions. Forewings ochreous-fuscous, with purplish reflections; a pale yellow wedge-shaped mark from costa at $\frac{1}{5}$, directed obliquely outwards, broad on costa, its edges irregularly dentate, its apex above middle of dorsum; cilia ochreous-fuscous, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Stannary Hills; one specimen, received from Dr. Thomas Bancroft.

PARECTOPA EURYTHIOTA, n.sp. [*εὐρυθειωτος*, broadly sulphur-marked].

♀. 9 mm. Head and thorax brownish; face ochreous-whitish. Palpi ochreous-whitish; apex fuscous. [Antennæ broken]. Legs ochreous-whitish, annulated with fuscous. Forewings pale brownish, with purple reflections; a pale yellowish costal spot near base; a pale yellow triangular fascia before middle, very broad on costa, narrowing to a point on mid-dorsum; edged with fuscous, and containing a few fuscous scales; cilia brownish, on dorsum grey. Hindwings and cilia grey.

Closely allied to the preceding, but quite distinct in its markings. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; one specimen, received from Mr. F. P. Dodd.

Gen. GRACILARIA.

A large and cosmopolitan genus.

GRACILARIA CRASIPHILA.

Meyr., Gen. Insect., Gracilariadæ, p. 27.

N.A.: Port Darwin (Dodd).

GRACILARIA IOPHANES.

Meyr., Gen. Insect., Gracilariadæ, p. 27.

N.Q.: Kuranda, near Cairns, in October (Dodd).

GRACILARIA LEUCOLITHA.

Meyr., Gen. Insect., Gracilariadæ, p. 30.

N.A.: Port Darwin (Dodd).

GRACILARIA OENOPELLA.

Q.: Stradbroke Island, in December.

GRACILARIA OCTOPUNCTATA.

N.Q.: Kuranda, near Cairns.

GRACILARIA PLAGATA.

Q.: Brisbane, in September and March.

GRACILARIA ALBISPERSA.

Q.: Brisbane, in September and March.

GRACILARIA ALBICINCTA.

Q.: Brisbane, in September and October.

GRACILARIA XANTHOPHARELLA.

N.Q.: Herberton, in January.—Q.: Brisbane, in November; Mt. Tambourine, in December; Coolangatta, in May.

GRACILARIA EUGLYPTA.

N.Q.: Cairns, in September.

GRACILARIA XYLOPHANES.

Q.: Brisbane, in September, December, January, and April; Mt. Tambourine, in November and December.

GRACILARIA EURYCNEMA.

Q.: Brisbane, in August, September, and December; Toowoomba, in April.

GRACILARIA PLAGIOTOMA, n.sp. [$\pi\lambda\alpha\gamma\iota\sigma\tau\omicron\mu\omicron\varsigma$, obliquely divided].

♂♀. 9 mm. Head brown-reddish; face white. Palpi white; terminal joint with a dark fuscous subapical ring. Antennæ dark grey, with paler annulations. Thorax white; patagia brown-reddish. Abdomen grey-whitish. Legs dark purple-fuscous; posterior pair brown-whitish; all tarsi white, with fine fuscous annulations. Forewings brown-reddish with purple reflections; markings white, sharply defined; an outwardly oblique fascia from $\frac{1}{3}$ costa to before mid-dorsum, slightly broader on costa; a large suboval spot on costa beyond $\frac{2}{3}$; cilia brown-reddish mixed

with dark fuscous, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Kamerunga, near Cairns, in July; six specimens, taken at one spot.

GRACILARIA ÆGLOPHANES, n.sp. [ἀγλοφάνης, brilliant, lustrous].

♀. 10 mm. Head white. Palpi white; second joint fuscous toward apex; terminal joint with fine median and subapical rings. Antennæ grey. Thorax grey, with a large central snow-white spot. Abdomen grey. Legs dark fuscous; posterior pair whitish; all tarsi white, with fuscous annulations. Forewings ochreous-grey; markings lustrous snow-white, narrowly edged with blackish scales; a large spot on base of dorsum, nearly reaching costa; a fascia before middle, broad on dorsum, gradually attenuating almost to a point on costa at $\frac{1}{3}$; a second similar fascia from tornus to $\frac{2}{3}$ costa; a terminal spot; cilia grey, Hindwings and cilia grey.

In general appearance this recalls *Acrocercops autadelpha*. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in June; one specimen.

GRACILARIA PANCHRISTA, n.sp. [παγχρίστος, all unctuous].

♀. 11-12 mm. Head, palpi, and antennæ brownish-ochreous. Thorax glossy ochreous. Abdomen grey. Legs brownish-fuscous; posterior pair brown-whitish; anterior and middle tarsi white, with fine brownish-fuscous annulations. Forewings ochreous, with an unctuous gloss, faintly strigulated transversely with brownish fuscous, and with brownish-fuscous dots; a dot at $\frac{1}{8}$ above fold, a second beneath costa at $\frac{1}{4}$, and a third on midcosta; a series of numerous very fine costal, and another of fainter dorsal dots; a purple iridescence along termen; cilia ochreous, with a double fuscous line about middle, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

This and the following five species are closely akin, and need careful discrimination.

N.Q.: Kuranda, near Cairns, in November; Townsville, in February; two specimens, received from Mr. F. P. Dodd.

GRACILARIA THIOPHYLLA, n.sp. [*θειοφυλλος*, sulphur-winged].

♀. 8 mm. Head pale ochreous; face white. Palpi white; terminal joint with a fuscous subapical ring. Antennæ whitish-grey, basal joint white and rather stout. Thorax pale ochreous. Abdomen grey. Legs brownish-ochreous; posterior pair and all tarsi whitish. Forewings pale ochreous, without strigulations, but with dark fuscous dots; a minute dot above fold near base; a second larger, roundish, above fold at $\frac{1}{4}$; a third on costa beyond middle; a series of minute dots on basal half of costa, and on termen; cilia fuscous, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Townsville, in July; one specimen.

GRACILARIA MEGALOTIS.

Gracilaria megalotis Meyr., Journ. Bombay Nat. Hist. Soc., xviii., p.830(1908).

♂. 9-10 mm. Head and thorax pale yellowish. Palpi ochreous-whitish. Antennæ grey, towards base yellowish; with a short tuft of scales on apex of basal joint. Abdomen grey. Legs ochreous-whitish; middle tibiæ much thickened with dark brown scales. Forewings pale yellow, with fine fuscous strigulations; with purple iridescence to oblique light; two oblique lines of brown fuscous dots from costa at $\frac{1}{4}$ and middle, converging to a point on dorsum before middle; a similar subapical line; cilia pale yellowish, apices fuscous. Hindwings and cilia grey.

N.Q.: Kuranda, near Cairns, in October; two specimens. Also from India.

GRACILARIA XYSTOPHANES, n.sp. [*ξυστοφανης*, polished].

♂. 8 mm. Head pale yellowish; face shining white. Palpi ochreous-whitish; terminal joint dark fuscous beneath. Antennæ whitish-ochreous, with fuscous annulations. Thorax pale yellow. Abdomen grey. Legs fuscous; posterior pair whitish; anterior and middle tarsi white, with fuscous annulations. Forewings pale lustrous golden-yellow; many purple-fuscous dots near base and apex, with two rows parallel to dorsum, one above and one beneath fold; cilia pale yellow, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in June; one specimen.

GRACILARIA PERIXESTA, n.sp. [*περιξέστος*, polished].

♀. 8 mm. Head and thorax yellow; face whitish. Palpi whitish; terminal joint, except apex, fuscous. Antennæ fuscous, with whitish annulations. Abdomen grey. Legs fuscous; posterior pair and all tarsi whitish; anterior coxæ yellowish. Forewings yellow, with a brassy gloss; base of costa fuscous; a fuscous dot in disc beneath midcosta, and a second above tornus; cilia yellow, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

Q.: Caloundra, in August; one specimen.

GRACILARIA EUXESTA, n.sp. [*εὐξέστος*, polished].

♂. 6 mm. Head yellowish; face ochreous-whitish. Palpi ochreous-whitish; apex of terminal joint fuscous. Antennæ grey. Thorax and abdomen grey. Legs fuscous; tarsi, except at apices of joints, whitish. Forewings pale yellow, with a glossy lustre, and fine transverse fuscous strigulations sparsely but evenly distributed; a fuscous dot in disc at $\frac{1}{3}$, a second slightly beyond middle, and a third, rather larger, at apex; some fuscous irroration along termen; cilia fuscous, on dorsum grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; one specimen, received from Mr. F. P. Dodd.

Subfam. ZELLERIANÆ.

MACARANGELA LEUCOCHRYSA.

Q.: Caloundra, in August.—N.S.W.: Sydney, also in March.

ZELLERIA CYNETICA.

In this species, the terminal joint of the labial palpi is thickened with scales, so as to appear club-shaped.

Q.: Brisbane, in August; Mount Tambourine, in November and February; Killarney, in October.

ZELLERIA ARÆODES.

Best distinguished from the preceding, which it nearly resembles, by the slender, acute, terminal joint of palpi.

Q.: Brisbane, in August.

ZELLERIA CALLIDOKA.

Q.: Stanthorpe, in February.

ZELLERIA SIGILLATA.

N.S.W.: Glen Innes, in March.

ZELLERIA NOTOLEUCA, n.sp. [*νωτολευκος*, dorsally white].

♀. 9 mm. Head and palpi white. Antennæ grey, annulated with dark fuscous; basal joint white. Thorax white; patagia and a lateral stripe ochreous-fuscous. Abdomen dark fuscous, towards base pale ochreous-fuscous. Legs whitish annulated with fuscous. Forewings with costa nearly straight; brassy-fuscous, with some purple reflections, and fine transverse fuscous strigulations; a broad white dorsal streak from base to $\frac{3}{4}$, its upper edge irregularly indented; a white streak along termen from tornus nearly to apex, becoming slender and interrupted towards apex; two minute subapical costal white dots; cilia brassy-fuscous, with a fine basal dark fuscous line around apex, white beneath apex, thence grey. Hindwings and cilia grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in October; one specimen, received from Mr. F. P. Dodd.

XYROSARIS DRYOPA.

Q.: Brisbane, in September and January.

Subfam. *CYCLOTORNINÆ.*Gen. *CYCLOTORNA.*

Of this very peculiar and isolated genus, Mr. Meyrick has described two new species, both agreeing closely in structure with the type, except that, in one of them, vein 4 of the hindwings has become absent by coalescence with vein 3. Of the habits of a fourth species here described, I have no knowledge, nor have I any record of the circumstances of its capture. The other three species were bred, some ten years ago, by Mr. F. P. Dodd. Their life-histories, which have been recently published (Trans. Ent. Soc. 1911, p.577) are of extraordinary interest.

CYCLOTORNA MONOCENTRA.

N.Q. Townsville, in November and April.

CYCLOTORNA EXPERTA.

Meyr., Trans. Ent. Soc. 1911, p.589.

N.Q.: Townsville, from October to January (Dodd).

CYCLOTORNA DIPLOCENTRA, n.sp. [*διπλοκεντρος*, with double centre].

♀. 30 mm. Head, thorax, and legs brownish-fuscous, finely irrorated with whitish. Antennæ fuscous. Abdomen brownish-fuscous. Forewings elongate-oval, costa rather strongly arched, apex rounded, termen obliquely rounded, dorsum strongly arched before middle; brownish-grey, finely irrorated with whitish, and with sparsely scattered dark fuscous scales; two roundish dark fuscous discal spots; first above $\frac{2}{3}$ dorsum, second larger, beneath $\frac{2}{3}$ costa; cilia grey, with some whitish irroration. Hindwings and cilia fuscous. Type in Coll. Turner.

Q.: Brisbane; one specimen.

CYCLOTORNA EGENA, n.sp.

Meyr., Trans. Ent. Soc. 1911, p.590.

♀. 12-13 mm. Head whitish. Antennæ, thorax, and abdomen fuscous. Legs pale fuscous; posterior pair ochreous-whitish. Forewings elongate-oval, costa rather strongly arched, apex rounded, termen obliquely rounded, dorsum strongly arched before middle; a hyaline fovea on underside beneath costal vein at $\frac{1}{4}$; fuscous, with fine whitish irroration; a suffusedly darker roundish spot above dorsum beyond middle, and a second in mid-disc at $\frac{2}{3}$; cilia grey, with some whitish irroration. Hindwings with vein 4 absent; grey; cilia grey.

N.Q.: Townsville, in October and December; two specimens, of which one is in Coll. Lyell, received from Mr. F. P. Dodd.

Subfam. HYPONOMEUTINÆ.

HYPONOMEUTA INTERNELLUS.

N.Q.: Townsville, in August.—Q.: Brisbane, in November, January, and June; Mount Tambourine, in October and December; Killarney, in October.—N.S.W.: Glen Innes, in October; Ben Lomond, in January; Gosford, in August.

HYPNOMEUTA MYRIOSEMUS.

N.Q.: Townsville, in July and August.—Q.: Brisbane, in August; Mount Tambourine, in November and January; Coolangatta, in January and May. I do not think that *H. paurodes* Meyr., is a distinct species.

ATTEVA CHAROPIS.

N.Q.: Kuranda, near Cairns, in October and November.

ATTEVA NIPHOCOSMA.

N.Q.: Cape York; Cairns, in August; Townsville, in February and April.—Q.: Brisbane, in March.

ATTEVA ALBIGUTTATA.

N.S.W.: Tweed River.

TONZA PURELLA.

N.A.: Port Darwin, in February.—Q.: Brisbane, in February, March, and April; Stradbroke Island; Rosewood, in March; Coolangatta, in May.

ANTICRATES PARAXANTHA.

In my example, 2 and 3 of forewings are stalked.

N.Q.: Stannary Hills.

ANTICRATES METRETA.

I cannot re-examine the type, but have before me one female example with the following neuration—forewings with 2 and 3 stalked, 7, 8, 9 separate. Hindwings with 3 and 4 short-stalked, 6 and 7 widely separate at base, parallel.

N.Q.: Kuranda, near Cairns, in December (Dodd).

ANTICRATES ZAPYRA.

My example agrees exactly with Mr. Meyrick's description, but 7 and 8 of forewings are long-stalked. Veins 2 and 3 of forewings are separate, but closely approximated; 3 and 4 of hindwings are connate.

N.Q.: Kuranda, near Cairns, in March (Dodd).

ANTICRATES PHÆDIMA, n.sp. [*φαιδιμος*, brilliant].

♂. 18 mm. Head pale yellow. Palpi ochreous-whitish; second joint dark fuscous on outer surface. Antennæ pale fuscous. Thorax dark fuscous, with an ochreous-whitish bar across middle of patagia. Abdomen pale red. Legs whitish-red; anterior pair fuscous. Forewings rather narrow-elongate, costa gently arched, apex rounded, termen oblique, slightly bowed; 2 and 3 stalked, 7 to 9 separate; whitish-yellow, markings dark fuscous; a triangular basal spot; a suffused triangular blotch on costa from $\frac{1}{8}$ to middle; an oblique fascia twice constricted or interrupted in disc, from $\frac{1}{4}$ dorsum to $\frac{3}{4}$ costa; an oblong spot on $\frac{3}{4}$ dorsum; a narrow mark on midtermen; cilia whitish-yellow, on midtermen and tornus dark fuscous. Hindwings elongate-ovate; red, towards base paler; cilia red, paler towards tornus. Type in Coll. Turner.

Q.: Mt. Tambourine, in November; one specimen.

Gen. LACTURA.

In this genus, vein 7 of forewings may run to hindmargin, to apex, or to a little on the costal side of apex.

LACTURA EGREGIELLA.

This species shows considerable variability in the forewings, which are grey, with white or whitish-ochreous blotches, of which the three basal appear constant, the remainder being very variable; the reddish lines also vary, and may be obsolete.

Q.: Eidsvold; Gayndah, in October; Brisbane, in October, January, and February; Rosewood, in March; Bunya Mountains, in December.

LACTURA DIVES.

N.A. Port Darwin, in January (Dodd).

LACTURA LÆTIFERA.

Q.: Gympie, in October.

LACTURA SUFFUSA.

N.Q.: Cairns, in February, March, and April.—Q.: Gympie; Brisbane, in November and February.

LACTURA PILCHERI.

Q.: Brisbane, in November and March.

LACTURA CRISTATA.

Q.: Gympie, in April; Brisbane, in March.

LACTURA CALLIPHYLLA.

Q.: Mount Tambourine, in November, February, and March (not from Brisbane); Coolangatta, in March.—N.S.W.: Tweed River, in October.

LACTURA ERYTHRACTIS.

N.A.: Port Darwin, in October.—N.Q.: Thursday Island; Cape York; Stannary Hills; Townsville, in January.

LACTURA MACTATA.

N.Q.: Kuranda, near Cairns, in October and April; Innisfail, in November; Atherton, in June.

LACTURA PTEROPECILA, n.sp. [*πτεροποικιλος*, with variegated wings].

♀. 20 mm. Head yellow. Palpi fuscous; terminal joint ochreous-whitish. Antennæ fuscous; basal joint pale yellow. Thorax fuscous, with a posterior yellow spot. Abdomen fuscous; extreme base and apex reddish; under surface yellowish, with a reddish lateral line. Legs reddish; anterior pair fuscous; middle tibiæ, apex of posterior tibiæ, and all tarsi fuscous. Forewings elongate-oval, costa strongly arched, apex rounded, termen obliquely rounded; 7 and 8 stalked, 7 to apex or costa; yellow; markings fuscous; a broad line on costa from base to $\frac{1}{4}$; a broadly Y-shaped blotch with its base on midcosta, the limbs diverging widely in disc; beneath this, three small discal dots, the first two forming a transverse pair, and a dot on mid-dorsum; a large terminal blotch containing a yellowish spot before middle; cilia yellow, on apex and tornus fuscous. Hindwings elongate-ovate; dark fuscous, extreme base red; cilia fuscous.

Nearest to *L. cristata*. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in December and April; two specimens.

Gen. *TRYCHNOMERA*, n.g. [*τρυχνομηρος*, rough-thighed].

Labial palpi moderate, porrect, smooth-scaled; terminal joint stout. Maxillary palpi rudimentary. Posterior tibiæ with long hairs on upper surface. Forewings with 11 veins, 7 and 8 coincident. Hindwings ovate, cilia extremely short; 3 and 4 remote at origin, 4 and 5 short-stalked, 6 and 7 remote at origin, tolerably parallel.

Closely allied to *Lactura*, the neuration of the hindwings being identical, and that of the forewings differing only by the coincidence of 7 and 8, but differing conspicuously in the hairy posterior tibiæ.

TRYCHNOMERA ANTHEMIS, n.sp. [*ἀνθεμῖς*, a flower].

♀. 31 mm. Head and palpi reddish-orange. Antennæ whitish-yellow; basal joint reddish-orange. Thorax and abdomen pale purple-reddish; base of patagia whitish-yellow. Legs whitish-yellow; anterior pair reddish-orange. Forewings oval, costa strongly arched, apex rounded, termen obliquely rounded; pale purple-reddish; costal, dorsal, and terminal edges reddish-orange, except where occupied by pale markings; markings whitish-yellow; an elongate spot on costa at $\frac{1}{4}$, and another rather shorter at $\frac{3}{4}$; two round subdorsal spots at $\frac{1}{4}$ and middle, and at dot at $\frac{3}{4}$; an apical spot; an elongate terminal spot from slightly beneath this to tornus; cilia whitish-yellow, before apex and on tornus reddish-orange. Hindwings and cilia pale red. Beneath pale red with a whitish-yellow terminal fascia on forewings. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in April; one specimen, received from Mr. F. P. Dodd.

CEBYSA LEUCOTELES.

N.S.W.: Glen Innes, in March.—Tasm.: Hobart.

PIESTOCEROS CONJUNCTELLA.

Q.: Nambour, Brisbane, and Stradbroke Island, in October and November.



Gen. *SYNECHODES*, n.g. [*συνεχωδης*, apparently connecting].

Head with appressed scales. Tongue developed. Palpi moderate, somewhat ascending, thickened with appressed scales; terminal joint short, rather obtuse. Maxillary palpi obsolete. Antennæ of ♂ thickened, and broadly laminate, the laminations closely appressed. Posterior tibiæ rough-haired above. Forewings with all veins present and separate, 7 to apex, 11 from middle, no secondary cell. Hindwings with all veins present, 3 and 4 connate, 5, 6, 7 parallel.

Near *Miscera*, differing in the palpi and ♂ antennæ; also with affinity to *Tortyra*, being, in fact, intermediate between the two genera.

SYNECHODES CONIOPHORA, n.sp. [*κονιοφορος*, dust-covered].

♂. 16-17 mm. Head dark fuscous. Palpi white, terminal and apical part of second joint dark fuscous. Antennæ dark fuscous, with an ochreous ring at $\frac{2}{3}$. Thorax dark fuscous; patagia orange, with a few fuscous scales. Abdomen dark fuscous, with some pale ochreous scales on apices of segments. Legs dark fuscous, with whitish annulations. Forewings somewhat dilated posteriorly, costa straight, slightly arched towards apex, apex rounded, termen obliquely rounded; dark fuscous, evenly dusted with pale ochreous scales; two or three orange suffused sub-basal spots in disc arranged transversely, and closely connected; cilia fuscous. Hindwings dark fuscous; a pale ochreous median streak from base, broadening costally and reaching middle of disc; cilia pale ochreous. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in March; three specimens, received from Mr. F. P. Dodd.

Gen. *EUTHORYBETA*, n.g. [*εὐθωρυβητος*, easily confounded].

Head loosely scaled. Tongue well developed. Palpi moderate, ascending, second joint densely rough-haired beneath; terminal joint short, obtuse. Maxillary palpi obsolete. [Antennæ in ♂ unknown]. Posterior tibiæ rough-scaled above. Forewings with all veins present and separate, 7 to apex. Hindwings with seven veins, 3 and 4 coincident, 5, 6, 7 parallel.

Closely allied to *Miscera*, but distinguishable by the loss of vein 4 in hindwings. Type *E. xanthoplaca*.

EUTHORYBETA XANTHOPLACA, n.sp. [*ξανθοπλακος*, broadly yellow].

♀. 14 mm. Head fuscous, posteriorly fringed with ochreous; face whitish, upper third fuscous. Palpi white, apices of second and terminal joints fuscous. Antennæ fuscous. Thorax and abdomen fuscous, with a few whitish scales. Legs fuscous, annulated with whitish and whitish-ochreous. Forewings somewhat dilated posteriorly, costa straight, apex rounded, termen not oblique, rounded beneath; fuscous, with a few scattered white scales; a patch of whitish irroration from mid-dorsum nearly to costa; a white dot on costa at $\frac{2}{3}$, with a line of irroration between it and tornus; a similar subterminal line; cilia fuscous, apices pale ochreous from beneath apex nearly to mid-termen. Hindwings fuscous; a broad ochreous-yellow subbasal fascia; cilia fuscous, apices whitish-ochreous, towards termen wholly whitish-ochreous. Type in Coll. Turner.

Q.: Stradbroke Island, in September. - N.S.W.: Sydney (Lyell). Two specimens.

EUTHORYBETA OCHROPLACA, n.sp. [*ὀχροπλακος*, broadly pale].

♀. 18 mm. Head fuscous, posteriorly fringed with ochreous. Palpi white, apices of second and terminal joints fuscous. Antennæ fuscous. Thorax fuscous, a white dot on each shoulder, and a pair of white dots near posterior edge. Abdomen fuscous; bases of first two segments whitish. Legs whitish, annulated with whitish and whitish-ochreous. Forewings only slightly dilated, costa straight, apex rounded, termen rather obliquely rounded; fuscous, markings white; a subcostal dot near base; a suffused spot in disc before middle, connected with dorsum; a spot on costa at $\frac{3}{4}$, and another in disc just above tornus; cilia fuscous. Hindwings fuscous; a broad white subbasal fascia; cilia fuscous, towards tornus with white apices. Type in Coll. Turner.

Q.: Stanthorpe, in February; one specimen.

MISCERA LEUCOPIS.

Vic.: Wallington, near Geelong, in February; Dimboola, in November. Two ♀ examples, in Coll. Lyell.

MISCERA MESOCHRYSA.

W.A.: Waroona, in November.

MISCERA DESMOTONA.

N.S.W.: Sydney, in March.—Vic.: Wandin, in November.

MISCERA CENTROPUS.

W.A.: Waroona, in December and January; one example, in Coll. Lyell. The forewings without whitish spot, but with some whitish irroration near base and beyond middle.

MISCERA HOLODISCA.

W.A.: Waroona, in November; two specimens, taken on the same day, a wasted male, and a female differing from type in forewings having a white spot at $\frac{2}{3}$, a whitish erect mark on mid-dorsum, and some whitish irroration towards termen.

MISCERA MICRASTA.

W.A.: Waroona, in December and January.

MISCERA HETEROZYGA, n.sp. [ἑτεροζυγος, unevenly yoked].

♂. 20-22 mm. Head blackish; posterior edge and face ochreous. Palpi $2\frac{1}{2}$; blackish, undersurface, except at apex, with long ochreous hairs. Antennæ blackish; pectinations $2\frac{1}{2}$. Thorax blackish, with a posterior pair of orange-ochreous spots. Abdomen blackish, with an orange-ochreous ring on 4th segment; tuft large, expanded, blackish, sides orange-ochreous. Legs blackish; tibiæ banded with ochreous; tarsi annulated with whitish; spurs whitish. Forewings elongate, rather abruptly dilated posteriorly, costa sinuate, apex rounded, termen obliquely rounded; blackish; an orange streak at basal third of costa; an orange spot in disc at $\frac{4}{5}$, connected by a line with $\frac{3}{5}$ dorsum; cilia fuscous, apices whitish. Hindwings with disc scaleless, translucent; some

ochreous and fuscous scales on veins; extreme base and a broad terminal band blackish; cilia whitish, bases more or less fuscous.

♀. 22-25 mm. Head and face blackish, with a few ochreous scales between antennæ. Palpi with appressed scales; whitish-ochreous; terminal and apex of second joint blackish; antennæ with an ochreous ring at $\frac{3}{4}$; thickened, slightly serrate towards apex. Thorax with patagia orange. Abdomen orange, except at apex; no tuft. Tibiæ without orange bands. Forewings with costa straight to near apex; blackish, evenly dusted with whitish-ochreous scales; an orange subbasal fascia not reaching dorsum; an outwardly oblique orange band from $\frac{2}{3}$ costa to mid-disc, nearly joined by another very oblique band from $\frac{1}{3}$ dorsum; cilia fuscous. Hindwings orange; base of costa and a broad terminal band blackish; cilia orange. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in January, February and April; four specimens, received from Mr. F. P. Dodd, two of each sex.

MISCERA ANDROGYNA, n.sp. [*ἀνδρογυνος*, having the characters of both sexes].

♀. 25 mm. Head orange. Palpi 3, loosely haired beneath; ochreous, mixed with fuscous on upper surface. Antennæ blackish; in ♀ with a single row of long pectinations(2). Thorax blackish; tongue orange; patagia orange except in centre. Abdomen orange; apex and four rings on 3rd, 4th, 6th, and 7th segments, blackish. Legs dark fuscous, with some ochreous scales; dorsum of middle and posterior tibiæ with orange hairs; tarsi with some whitish scales. Forewings with termen slightly sinuate, apex rounded, termen obliquely rounded; blackish; dorsal edge orange; an orange basal fascia produced along costa; a large posterior orange blotch, not quite reaching termen, broadly connected with dorsum beyond middle; cilia fuscous. Hindwings orange; a narrow blackish terminal band from apex not reaching tornus; cilia on band fuscous, on tornus orange. Type in Coll. Turner.

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

MISCERA LYGROPIS, n.sp. [*λυγρωπις*, gloomy].

♂. 39-41 mm. Head fuscous. Palpi with appressed scales; fuscous, beneath whitish. Antennæ dark fuscous; pectinations 4. Thorax and abdomen dark fuscous. Legs fuscous, with some ochreous hairs. Forewings elongate, posteriorly dilated, costa nearly straight to near apex, apex rounded, termen slightly rounded, slightly oblique; dark fuscous; a slightly paler discal dot at $\frac{2}{3}$; cilia fuscous. Hindwings dark fuscous; two elongate pale ochreous antemedian spots, nearly confluent; hairs on vein 1c pale ochreous; cilia pale ochreous, with a dark fuscous basal line.

Distinguished from *M. desmotona* by the longer antennal pectinations, absence of white markings on forewings, and obscuration of dorsal spot of hindwings. Type in Coll. Turner.

Q.: Stradbroke Island, in January; five specimens.

MISCERA PAMMELAS, n.sp. [*παμμελας*, all-black].

♂. 38 mm. Head dark fuscous. Palpi slightly rough-scaled; dark fuscous, beneath whitish. Antennæ dark fuscous; pectinations 2. Thorax and abdomen dark fuscous. Legs dark fuscous, with ochreous hairs. Forewings elongate, posteriorly slightly dilated, costa straight to near apex, apex rounded, termen scarcely rounded, moderately oblique; dark fuscous; cilia dark fuscous. Hindwings dark fuscous; cilia fuscous. Type in Coll. Lyell.

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

Gen. ΤΑΝΑΟΚΤΕΝΑ, n.g. [*ταναοκτενος*, with long combs].

Head with appressed scales. Tongue minute. Palpi moderate, porrect, diverging; second joint rather long, thickened with appressed scales beneath; terminal joint short, slender, acute. Maxillary palpi obsolete. Antennæ with strong basal eyecap of broad overlapping scales; in ♂ with a single row of long pectinations. Posterior tibiae smooth. Forewings with 2 from well before angle, 7 separate, running to termen just below apex, 8 and 9 stalked. Hindwings with 4, 5, 6, and 7 parallel.

TANAOCCTENA OOPTILA, n.sp. [ὠοπτιλος, oval-winged].

♂. 14-16 mm. Head and palpi ochreous-whitish. Antennæ ochreous-whitish; in ♂ with a single row of long pectinations (5). Thorax pale fuscous; in ♂ with a pencil of hairs anteriorly extending backwards beneath root of forewing. Abdomen pale grey. Legs pale fuscous; posterior pair ochreous-whitish. Forewings elongate-oval, costa strongly arched, apex rounded, termen obliquely rounded; ochreous-whitish, with irregular fuscous suffusion which tends to form transverse lines; a dark fuscous median discal dot at $\frac{1}{3}$, and a second before $\frac{2}{3}$; two closely approximated lines from costa at $\frac{1}{4}$, diverging in disc, the first inwardly curved to $\frac{1}{4}$ dorsum, the second outwardly to mid-dorsum; a pale area around first discal dot; two suffused lines between this and second dot; cilia grey-whitish. Hindwings ovate, ciliations $\frac{1}{4}$; whitish; cilia whitish. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in July; two specimens, received from Mr. F. P. Dodd.

IMMA ALBIFASCIELLA.

N.Q.: Kuranda, near Cairns, in December and April; Townsville, in March.

IMMA ACOSMA.

Tortricomorpha leiochroa Low., Trans. Roy. Soc. S. Aust., 1903, p.69, is a synonym.

N.A.: Port Darwin.—N.Q.: Townsville, in June and July.—Q.: Brisbane, in September, October, November, February, April, and May; Rosewood, in March; Warwick, in March.—N.S.W.: Jenolan, in February.

IMMA MARILEUTIS.

N.Q.: Cape York; Kuranda, near Cairns, in April.

IMMA LYRIFERA.

Imma lyrifera Meyr., Trans. Ent. Soc. 1910, p.466.

N.Q.: Atherton. Also from Louisiades.

My example lacks the interneural streaks on forewing, but otherwise agrees exactly with the description.

IMMA PLATYXANTHA, n.sp. [*πλατυξάνθος*, broadly yellow].

♂. 20 mm. Head yellow-ochreous. Palpi yellow-ochreous, anteriorly fuscous. Antennæ yellow-ochreous; ciliations in ♂ $\frac{2}{3}$. Thorax pale ochreous-fuscous, with a yellow-ochreous central spot. Abdomen fuscous; beneath ochreous-whitish. Forewings dilated posteriorly, costa gently arched, apex rectangular, termen gently bowed, scarcely oblique; pale fuscous, with large yellow-ochreous blotches; a small subcostal basal spot; a large squarish blotch on costa near base, nearly touching a smaller spot on $\frac{1}{4}$ dorsum; a second rounded spot on costa before middle, nearly touching a large squarish blotch on mid-dorsum; a spot on costa at $\frac{2}{3}$; a triangular spot on costa immediately before apex; a dark fuscous terminal line not extending to tornus; cilia pale fuscous. Hindwings dark fuscous; cilia fuscous, on dorsum whitish. Type in Coll. Lyell.

N.Q.: Kuranda, near Cairns, in April; one specimen, received from Mr. F. P. Dodd.

IMMA ATROSIGNATA.

Tortricomorpha atrosignata Feld., Reise Novara, Pl.108, f.3.

♂. 20 mm. Head, palpi, antennæ, thorax, and abdomen fuscous. Antennal ciliations in ♂ minute. Legs fuscous; tarsi with apices of segments and under surface whitish; anterior femora whitish posteriorly; anterior tibiæ whitish, with two fuscous bars on anterior surface, one at base, the other before apex; posterior and middle tibiæ in ♂ densely hairy beneath. Forewings dilated posteriorly, costa almost straight, apex round-pointed, termen bowed, oblique; 7 and 8 stalked, 8 to termen; fuscous; a slightly darker crescentic mark at end of cell; cilia fuscous. Hindwings fuscous-grey; towards base and dorsum thinly sealed and translucent; an elongate wedge-shaped deep black mark on either side of antemedian vein from base to near, but not touching termen; cilia pale grey, with a darker basal line.

Conspicuously distinct by the black band on hindwings. Felder's figure is poor, but I do not think there can be much doubt as to the identification.

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

IMMA LOXOSCIA, n.sp. [*λοχοςκιος*, obliquely shaded].

♂. 18-20 mm. Head and palpi ochreous-whitish. Antennæ ochreous-whitish; ciliations in ♂ 1. Thorax ochreous-whitish, irrorated with grey. Abdomen grey; beneath ochreous-whitish. Legs ochreous-whitish; anterior and middle tibiæ and all tarsi grey, with ochreous-whitish annulations. Forewings elongate-triangular, costa obtusely angled beyond middle, apex rectangular, termen straight, slightly rounded towards tornus, dorsum strongly angled at $\frac{1}{4}$; ochreous-whitish usually irrorated with grey; a grey or fuscous line on dorsum from base to $\frac{1}{4}$; a slightly waved oblique fuscous line from costa just beyond middle to dorsum near tornus; beyond this ground-colour is more brownish and usually with fuscous irroration; a dark fuscous terminal line narrowing beneath and not reaching tornus, its anterior edge with minute dentations; cilia grey, bases paler, with a dark sub-basal line opposite upper $\frac{2}{3}$ of termen. Hindwings with termen rounded and slightly waved; dark grey; cilia whitish, with a grey sub-basal line. Type in Coll. Turner.

N.A.: Port Darwin, in December.—N.Q.: Townsville, in December and March. Four specimens, received from Mr. F. P. Dodd.

IMMA CLEIS.

Feld., Reise Nov., Pl. 130, f. 22.

♂♀. 30-34 mm. Head and palpi ochreous; face sometimes fuscous. Antennæ ochreous sometimes suffused or barred with fuscous; antennæ in ♂ serrate with long cilia ($2\frac{1}{2}$) in tufts. Thorax and abdomen blackish; the latter usually pale ochreous beneath. Legs fuscous; anterior pair ochreous. Forewings broadly triangular, costa moderately arched, apex rounded, termen bowed, slightly oblique; blackish; an orange fascia from midcosta to dorsum before tornus; outwardly oblique and slightly curved; cilia blackish. Hindwings broader than forewings; blackish; a broad orange median fascia; cilia blackish.

In specimens from Port Darwin and Cape York, the fasciæ are broader, and the antennæ ochreous. In those from Cairns, the fasciæ are narrower and deeper orange, and diminish towards tornus. It is a large and conspicuous insect, very different from its Australian congeners.

N.A.: Port Darwin, in November and March.—N.Q.: Cape York; Kuranda, near Cairns, in February and May.

Gen. CALLIZYGA.

Callizyga Turn., Trans. Roy. Soc. S. Aust., 1894, p. 132.

Head with closely appressed hair-scales, forming a strong anterior projection between antennæ. Palpi rather stout, smooth, erect; second joint reaching to base of antennæ; terminal joint $\frac{2}{3}$ of second, nearly as stout, apex obtusely rounded. Antennæ in ♂ with long ciliations. Posterior tibiæ rough-haired above. Forewings with 7 and 8 stalked, 8 to termen. Hindwings with cilia very short; 3 and 4 approximated at origin, 5, 6, and 7 parallel.

Though not closely related to any genus known to me, I think *Callizyga* must be placed in this group. The palpi and neuration of forewings are those of *Imma*. The neuration of the hindwings suggests a closer relationship with the *Lactura*-group.

CALLIZYGA DISPAR.

Callizyga dispar Turn., Trans. Roy. Soc. S. Aust., 1894, p. 132.

N.Q.: Kuranda, near Cairns, in January.—Q.: Brisbane.

Subfam. GLYPHIPTERYGINÆ.

EPICRUSA THIASARCHA.

N.Q.: Kuranda, near Cairns, from June to November.

EPICRUSA AMBROSIA.

N.Q.: Kuranda, near Cairns, from September to November; Townsville.—Q: Burpengary, near Brisbane, in December.

TORTYRA LIBANOTA

Tortyra libanota Meyr., Trans. Ent. Soc. 1910, p. 463.

N.Q.: Townsville. Also from Louisiades.

TORTYRA EXANTHISTA.

Tortyra exanthista Meyr., Trans. Ent. Soc., 1910, p. 464.

This is the species which Mr. Meyrick described, in his revision, as *T. prodigella* Wlk.

N.Q.: Kuranda, near Cairns, in November, February, March, and April.

BRENTHIA QUADRIFORELLA.

N.Q.: Kuranda, near Cairns, in June and September.

BRENTHIA HECATÆA.

N.Q.: Kuranda, near Cairns, in October.

BRENTHIA PAMPECILA, n.sp. [*παμποικιλος*, all variegated].

♂. 8 mm. Head ochreous. Palpi white towards base, second joint towards apex blue, terminal joint fuscous. Antennæ whitish-ochreous; ciliations in ♂ $1\frac{1}{2}$. Thorax and abdomen ochreous-fuscous. Legs ochreous-fuscous; tarsi annulated with white; spurs white. Forewings dilated posteriorly, costa gently arched, more strongly towards apex, apex rounded, termen straight, moderately oblique; pale ochreous, towards costa and termen and in mid-disc orange-red; with numerous purple-fuscous lines forming an intricate pattern; five short costal streaks metallic-purple, the first four commencing as white costal dots at $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$ and $\frac{5}{6}$, the last small, subapical; a large triangular dorsal fuscous blotch on base extending to $\frac{1}{4}$ dorsum, acutely angled in disc, containing an orange-red spot; nine lines from dorsum beyond this, all narrow, extending $\frac{2}{3}$ across disc, those in centre connected or anastomosing; a fuscous spot on tornus and three more on termen; cilia on costa white, on termen pale ochreous, on tornus fuscous, a fuscous apical line opposite apex. Hindwings ochreous-grey; cilia grey, with a darker basal line. Type in Coll. Lyell.

N.Q.: Townsville, in December; one specimen, received from Mr. F. P. Dodd.

CHOREUTIS BJERKANDRELLA.

N.Q.: Kuranda, near Cairns, in March.—Q.: Brisbane, from October to February; Mount Tambourine, in September; Stan-

thorpe, in February.—N.S.W.: Tabulam, in December; Mt. Kosciusko (3,000ft.), in March.—Vic.: Gisborne, in December.

SIMÆTHIS BASALIS.

N.Q.: Kuranda, near Cairns, in February; Innisfail, in November and May. The Brisbane locality is doubtful.

SIMÆTHIS LIMONIAS.

N.Q.: Kuranda, near Cairns, in October and March; Innisfail, in November.

SIMÆTHIS SYCOPOLA.

Q.: Brisbane, in April.

SIMÆTHIS OPHIOSEMA.

N.Q.: Townsville, in December, January, February, and March.

SIMÆTHIS METALLICA.

N.Q.: Kuranda, near Cairns, in December and April; Townsville, in March.—Q.: Brisbane, in January.

SIMÆTHIS PERIPLOCA, n.sp. [*περιπλοκος*, entangled, intricate].

♂♀. 15-17 mm. Head grey, with fine whitish irroration. Palpi white, ringed with dark fuscous. Antennæ blackish, ringed with white; ciliations in ♂ 4. Thorax and abdomen ochreous-grey; the former with some whitish irroration. Legs dark fuscous, with white annulations; posterior tarsi with white basal rings on first and second joints, third joint wholly white. Forewings broadly triangular, costa strongly arched, apex rectangular, termen slightly bowed, moderately oblique; ochreous-grey; markings formed by bands of fine white irroration; some white irroration near base; first fascia sub-basal; second at $\frac{1}{3}$, broad and straight-edged; third and fourth from $\frac{2}{3}$ costa, separated only by a fine line of ground-colour, parallel, acutely and irregularly angled, diverging on dorsum to $\frac{3}{4}$ and tornus; an oval spot in disc before third line, occupying a large concavity formed by this line; cilia fuscous, with a darker basal line, apices white on costa before apex, on termen beneath apex, and again sometimes below middle. Hind-

wings ochreous-grey; a short whitish subterminal line above tornus; cilia grey, extreme bases whitish, succeeded by a dark grey line. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, and Townsville, in November; two specimens received from Mr. F. P. Dodd, of which ♀ is in Coll. Lyell.

GLYPHIPTERYX PROTOMACRA.

W.A.: Waroona, in October.

GLYPHIPTERYX ACINACELLA.

Q.: Stradbroke Island, in October.

GLYPHIPTERYX PALÆOMORPHA.

N.Q.: Kuranda, near Cairns, in October.—Q.: Nambour, in September, December, and April.

GLYPHIPTERYX EUTHYBELEMNA.

Vic.: Gisborne, in November.

GLYPHIPTERYX MACRANTHA.

Vic.: Gisborne, also in January and March.

GLYPHIPTERYX PLATYDISEMA.

Vic.: Gisborne, in November. Mr. G. Lyell informs me that this is the ♀ of *G. palæomorpha*, and that he has taken the two forms *in cop.*, on several occasions.

GLYPHIPTERYX METEORA.

Q.: Mt. Tambourine, in September.

GLYPHIPTERYX CHRYSOPLANETIS.

Q.: Brisbane, in October, November, and December; Mt. Tambourine, in February; Helidon, in April; Toowoomba, in November and April; Stanthorpe.

GLYPHIPTERYX LEUCOCERASTES.

Q.: Brisbane, in September; Mount Tambourine, in November.

GLYPHIPTERYX DROSOPHAES.

Vic.: Beaconsfield, in October.

GLYPHIPTERYX ASTERIELLA.

Vic.: Gisborne, in March; Loch, in April.

GLYPHIPTERYX ISOZELA.

N.S.W.: Mt. Kosciusko (3,000 to 5,000ft.), in March.—Vic.: Mt. Macedon, in December; Mt. St. Bernard (5,000ft.), in February.

The specimens from Mt. Kosciusko and Mt. St. Bernard appear to form a local race, in which the first costal streak does not reach the second dorsal spot, the two being rather widely separate on fold.

GLYPHIPTERYX PARAZONA.

Vic.: Gisborne, in April; Mt. St. Bernard, in February.

GLYPHIPTERYX CYANOPHRACTA.

N.S.W.: Mt. Kosciusko (5,000ft.), in March.

GLYPHIPTERYX IOMETALLA.

N.Q.: Cairns, in August.—Q.: Brisbane, in August, September, and October; Coolangatta, in December.

GLYPHIPTERYX ARGYROSEMA.

Q.: Dulong, near Nambour, in April; Mt. Tambourine, in February; Toowoomba, in October.

GLYPHIPTERYX PHOSPHORA.

Q.: Mt. Tambourine, in November; Toowoomba, in November.—N.S.W.: Glen Innes, in December.

GLYPHIPTERYX CALLISCOPA.

Vic.: Gisborne, in March; Beaconsfield, in March; Mt. St. Bernard, in February.—Tasmania: Hobart, in February.

GLYPHIPTERYX COMETOPHORA.

Vic.: Beaconsfield, in October.

GLYPHIPTERYX GEMMIPUNCTELLA.

N.Q.: Herberton, in February.—Q.: Brisbane, in May.—Vic.: Sale, in March.

GLYPHIPTERYX TRIPSELIA.

Vic.: Mt. St. Bernard, in February.

GLYPHIPTERYX CYANOCHALCHA.

Vic.: Gisborne, from January to March.

GLYPHIPTERYX POLYCHROA.

N.S.W.: Mt. Kosciusko (5,000-6,000ft.), in March.

GLYPHIPTERYX PYRISTACTA, n.sp. [*πυριστακτος*, streaming with fire].

♂♀. 12-14 mm. Head, thorax, and antennæ dark fuscous. Palpi dark fuscous, bases ochreous. Abdomen orange-ochreous; terminal segments and a series of median dorsal dots dark fuscous. Legs fuscous, annulated with whitish-ochreous; posterior tibiæ ochreous, except at apex; apex of posterior tarsi snow-white. Forewings elongate, termen incised beneath apex; dark fuscous; an antemedian fascia commencing as a broad greenish or purple metallic line from $\frac{1}{3}$ costa, expanding in disc into a broadly triangular orange spot, with base on dorsum; a short metallic line with green and purple lustre from midcosta obliquely outwards; a similar line from $\frac{2}{3}$ costa to tornus; on costa, these lines form white dots, and there are two white dots on costa beyond them; another brilliant metallic line on termen; cilia pale ochreous. Hindwings fuscous; base broadly ochreous; cilia ochreous, with a fuscous basal line, obsolete towards tornus. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; two specimens, received from Mr. F. P. Dodd.

GLYPHIPTERYX LYCNOPHORA, n.sp. [*λυχνοφορος*, carrying a light].

♀. 6 mm. Head and thorax bronzy-grey. Palpi white, with three dark fuscous rings. Antennæ fuscous. Abdomen dark grey. Legs dark fuscous; tarsi with white annulations. Forewings bronzy-grey; six white costal streaks partly edged with dark fuscous; first at $\frac{1}{3}$, short, strongly outwardly oblique; second from middle, similar but longer; third from $\frac{2}{3}$, less oblique, silvery at apex; fourth, fifth, and sixth short, rather inwardly oblique, subapical; a short, very slender white streak from above mid-dorsum

to fold at $\frac{3}{4}$; a silvery erect mark from tornus, and a second along termen at middle; a round black apical spot; cilia white, bases bronzy, indented beneath apex, and with a dark fuscous apical hook. Hindwings and cilia grey.

This minute species appears to be nearest *G. autopetes*. Type in Coll. Turner.

Q.: Caloundra, in September; one specimen.

GLYPHIPTERYX HARPOGRAMMA, n.sp. [*ἀρπογράμμος*, sickle-marked].

♂. 5 mm. Head and thorax bronzy-grey. Palpi whitish. Antennæ grey. Abdomen grey. Legs grey; tarsi with white annulations. Forewings bronzy-grey; five short white costal streaks between $\frac{2}{3}$ and apex; a white sickle-shaped streak from mid-dorsum; curved obliquely outwards and gradually narrowing to a sharp point, its outer edge sometimes ill-defined; a white dot on dorsum; two purplish-metallic dots, or an ill-defined metallic blotch between this and second costal streak; cilia white, bases bronzy grey, incised beneath apex. Hindwings and cilia grey.

Near *G. acinacella*, but much smaller and paler, the palpi without blackish rings, no metallic spots near termen, and no apical dark hook in cilia. The last is present in my examples of *G. acinacella*. Type in Coll. Turner.

N.Q.: Cardwell, in August; Mourilyan Harbour, near Innisfail, in July; two specimens.

GLYPHIPTERYX ARGYROTOXA, n.sp. [*ἀργυροτόξος*, with silver bow].

♀. 6 mm. Head and thorax silvery grey-whitish. Palpi whitish. Antennæ pale grey. Abdomen and legs grey-whitish. Forewings pale bronzy-grey; a broad, ill-defined silvery-white oblique streak from mid-dorsum; four silvery-white costal streaks; first from beyond middle, strongly outwardly oblique; second from $\frac{2}{3}$, moderately oblique, long, ending in a silvery spot above tornus; third and fourth very short, subapical; a small black apical spot; cilia whitish, bases fuscous, incised beneath apex. Hindwings and cilia grey-whitish. Type in Coll. Turner.

Q.: Brisbane, in May; one specimen.

GLYPHIPTERYX CHALCERES, n.sp. [*χαλκηρως*, inlaid with brass].

♂♀. 7-11 mm. Head and thorax bronzy-fuscous. Palpi whitish, with four dark fuscous rings; second joint with rough projecting scales beneath. Antennæ fuscous. Abdomen fuscous; apex of tuft whitish. Legs fuscous, annulated with white; spurs white. Forewings rather pale bronzy-fuscous; a large whitish sub-basal dorsal blotch sometimes narrowly connected with costa; a squarish rather irregularly edged whitish spot on costa beyond middle; five whitish costal streaks, the first three with brassy lustre except at bases, partially edged with dark fuscous; first at $\frac{2}{5}$, short, slightly oblique, sometimes running into second dorsal spot; second from $\frac{3}{5}$, rather longer, oblique; third from before $\frac{4}{5}$, like second; fourth and fifth short, subapical; a brassy-metallic spot on tornus, and two on termen, one above and one below incision; a blackish apical spot; cilia whitish, bases bronzy-fuscous, incised beneath apex, with an apical blackish hook, on tornus fuscous. Hindwings and cilia grey.

Near *G. meteora*, but forewings paler, dorsal spot not clear white, and basal spot not forming a complete fascia. Type in Coll. Turner.

Q.: Mt. Tambourine, in September; five specimens.

GLYPHIPTERYX CHALCODÆDALA, n.sp. [*χαλκοδαϊδαλος*, wrought with brass].

♂. 11 mm. Head and thorax bronzy-fuscous. Palpi white, four rings and apex blackish; scales short. Antennæ fuscous. Abdomen fuscous; apex of tuft whitish. Legs fuscous, with white annulations, spurs white. Forewings with 7 and 8 separate; rather pale bronzy-fuscous; markings more or less edged with fuscous; two short whitish erect streaks from dorsum, first sub-basal, second from middle; six violet-metallic costal streaks, whitish on costa; first from $\frac{1}{4}$, moderately long, somewhat oblique; second similar, from $\frac{3}{8}$; third longer, from middle; fourth from $\frac{5}{8}$, like third; fifth from $\frac{3}{4}$, very short; sixth from $\frac{7}{8}$, like fifth; a metallic dot in mid-dise before third costal streak, and a second similar dot below and beyond it; a metallic streak from tornus nearly meeting fourth

costal streak; metallic discal dots opposite apices of fifth and sixth streaks; a metallic line along lower part of termen; cilia bronzy-fuscous, apices white, incised with white beneath apex, a dark fuscous apical hook, on tornus dark fuscous. Hindwings and cilia dark grey. Type in Coll. Turner.

Q.: Mt. Tambourine, in March; one specimen.

GLYPHIPTERYX RHANTERIA, n.sp. [*ῥαντηριος*, sprinkled].

♂♀. 7 mm. Head and thorax bronzy-fuscous. Palpi white, with four blackish rings. Antennæ fuscous. Abdomen fuscous; apex of tuft whitish. Legs dark fuscous, with whitish annulations. Forewings ochreous-fuscous mixed with fuscous, and partly sprinkled with whitish; a transverse fascia of whitish irroration at $\frac{1}{3}$, its anterior edge concave; five very short whitish costal streaks, the second or third more or less prolonged obliquely by whitish irroration; a white dot on $\frac{3}{4}$ dorsum, and another at tornus; cilia dark fuscous, incised with white beneath apex. Hindwings grey; much paler towards base; cilia grey.

Very distinct by the whitish irroration of forewings and absence of metallic lustre. Type in Coll. Turner.

Q.: Brisbane, in November and January; three specimens.

GLYPHIPTERYX HYPERLAMPRA, n.sp. [*ὑπερλαμπρος*, exceeding bright].

♂♀. 8-9 mm. Head and thorax dark fuscous. Palpi white, four rings and apex blackish. Antennæ dark fuscous. Abdomen dark fuscous. Legs dark fuscous, with whitish annulations. Forewings bronzy-ochreous, markings outlined with dark fuscous; a bluish-metallic streak from base along fold to $\frac{1}{2}$; six bluish-metallic costal streaks, white on costa; first from $\frac{1}{4}$, moderately long, strongly oblique; second similar but longer, from $\frac{3}{8}$ nearly to fold; third similar but short, from $\frac{5}{8}$; fourth from $\frac{3}{4}$, as long as first; fifth from $\frac{7}{8}$, extremely short; sixth from before apex to termen at incision; a bluish-metallic dot on fold opposite apex of first streak; a blackish tornal blotch containing a violet-metallic dot;

an erect violet-metallic mark on tornus; a violet-metallic line on lower part of termen; a blackish apical spot; cilia whitish, bases fuscous, incised beneath apex. Hindwings and cilia dark grey. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns; two specimens, received from Mr. F. P. Dodd.

GLYPHIPTERYX PYROPHORA, n.sp. [*πυροφορος*, fiery].

♂. 10-12 mm. Head, thorax, and abdomen bronzy-fuscous; apex of tuft whitish. Palpi white, annulated with black; with loose rough hairs beneath. Antennæ fuscous. Legs bronzy-fuscous; apices of tarsal joints narrowly white. Forewings shining bronzy-fuscous; with four narrow violet-silvery transverse fasciæ; first from $\frac{1}{5}$ costa to $\frac{1}{3}$ dorsum, becoming white on dorsum; second from $\frac{2}{5}$ costa to mid-dorsum; third very slender, bowed outwards, from $\frac{4}{5}$ costa to termen above tornus; fourth subapical, white at each end; a violet-silvery spot on midcosta, touching a large tornal blotch, which reaches nearly across wing; lower part of blotch black, containing five or six golden and violet-silvery spots; upper part of blotch golden, interrupted by five slender longitudinal black striæ; cilia bronzy-fuscous, apices paler, interrupted by white on costa before apex and on termen slightly above middle. Hindwings and cilia dark fuscous. Type in Coll. Turner.

N.S.W.: Red Range, near Glen Innes, in March; three specimens.

GLYPHIPTERYX LEUCOPLACA, n.sp. [*λευκοπλακος*, broadly white].

♂. 13-16 mm. Head and thorax fuscous. Palpi with very long dense hairs beneath; whitish mixed with fuscous. Antennæ fuscous. Abdomen fuscous; tuft whitish. Legs fuscous, with obscure whitish annulations. Forewings fuscous; markings white, without metallic lustre; a broad streak from base of dorsum obliquely upwards, truncate, a large triangular spot on dorsum at $\frac{2}{5}$, its apex reaching half across disc; a dot on $\frac{1}{3}$ costa; a fascia from costa beyond middle, broad on costa where it is divided into two limbs, much constricted below middle, ending on $\frac{1}{5}$ dorsum; a short broad

streak from costa at $\frac{4}{5}$, with a narrower streak shortly beyond it; a subterminal series of five shining white dots, one subapical, one opposite incision, and three between this and tornus; cilia white, bases fuscous, incised beneath apex, on apex and tornus fuscous. Hindwings and cilia grey.

The hairiness of the palpi, which is a variable feature in this genus, reaches its maximum in this species, which is conspicuously distinct in pattern and absence of metallic ornament. Type in Coll. Turner.

Q.: Stanthorpe, in October.—Vic.: Castlemaine, in September and October.—Tasm.: Hobart. Five specimens.

GLYPHIPTERYX MARMAROPA, n.sp. [*μαρμαρωπος*, sparkling].

♂♀. 11-13 mm. Head and thorax fuscous. Palpi whitish; beneath shortly rough-scaled. Antennæ fuscous. Abdomen grey. Legs pale fuscous, with obscure whitish annulations. Forewings whitish, densely irrorated with bronzy-fuscous; seven short whitish costal streaks at $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, and subapical; fourth, sixth, and seventh streaks longer and violet-metallic in disc, the last prolonged along termen; a violet-metallic dot in disc opposite third streak; a broad elongate blackish streak from disc before middle to lower end of termen, crossed by five stout violet-metallic bars, of which two are terminal; in the four intervals are fine elongate golden dots, one each in the lateral spaces, two side by side in each of the two central spaces; cilia fuscous-whitish, with a fuscous line before middle. Hindwings and cilia grey-whitish.

Conspicuously distinct, belonging to the *G. cometophora* group, in which the cilia are not indented. Type in Coll. Turner.

Q.: Eumundi, near Nambour, in March; Brisbane, in November; two specimens.

Gen N A P E C E T E S, n.g. [*ναπηκουτης*, lurking in shady gullies].

Head smooth-scaled; frons rounded, somewhat projecting. Tongue obsolete. Palpi moderate, porrect, slender; second joint with loose scales towards apex, beneath forming a slight tuft; terminal joint short, rather obtuse. Maxillary palpi obsolete. An-

tennæ of ♂ shortly and evenly ciliated. Legs with outer spurs $\frac{1}{2}$ or less than $\frac{1}{2}$ inner spurs; posterior tibiæ smooth-scaled. Forewings with all veins present, 7 and 8 stalked, 7 to apex. Hindwings with all veins present, 3 and 4 tolerably remote at origin, 5, 6, 7 parallel.

Near *Glyphipteryx*, but differing in 3 and 4 of hindwings not being connate, in palpi, and in ciliation of ♂ antennæ.

ΝΑΡΕΚΕΤΕΣ CROSSOSPILA, n.sp. [κροσσοσπιλος, with marginal spot].

♂. 10 mm. Head and thorax dark fuscous. Palpi fuscous, towards base whitish. Antennæ fuscous; ciliations in ♂ 1. Abdomen dark fuscous, beneath whitish. Legs fuscous, with whitish annulations. Forewings dark fuscous; faint whitish marks on costa at $\frac{2}{5}$ and $\frac{4}{5}$; a minute white dot on tornus; a fairly large white spot on midtermen; a very faint whitish subapical dot; cilia dark fuscous, on marginal spot white. Hindwings fuscous; base of costa whitish; cilia fuscous. Type in Coll. Turner.

Q.: Montville (1500ft.), near Nambour, in October; one specimen.

Subfam. TINÆGERIANÆ.

I have followed Lord Walsingham (Trans. Ent. Soc., 1889) in including there the genus *Eretmocera*, though this course is open to some doubt. On this view, the absent vein in the forewing is 6 and not 8, 7 and 8 are stalked, but 7 runs to termen and not to costa, as in *Snellenia*.

ERETMOCERA CHRYSIAS.

N.Q.:Townsville in May, July, and August.—Q.: Duaringa and Maryborough, from February to April.

ERETMOCERA FLAVICINCTA, n.sp. [Flavicinctus, girt with yellow].

♂♀. 9-11 mm. Head, palpi, and antennæ fuscous. Thorax fuscous, with two yellow spots on posterior margin, more or less developed. Abdomen dark fuscous, with a deep purple sheen; dor-

sum of first segment sometimes yellow except at base; two or three penultimate segments deep yellow; tuft dark fuscous, at apex yellow; underside yellow. Legs fuscous. Forewings fuscous, with purplish lustre; a few whitish-ochreous scales; sometimes with three indistinct whitish-ochreous spots, first on dorsum before middle, second on tornus, third (seldom developed) on costa at $\frac{4}{5}$; cilia fuscous. Hindwings and cilia dark grey. Type in Coll. Turner.

Q.: Brisbane, in December; Toowoomba, in April; Warwick, in September; Killarney, in October; a good series.

ERETMOCERA CYANAUGES, n sp. [*κρυαυγης*, dark gleaming].

♂♀. 14-17 mm. Head bronzy-fuscous. Palpi dark fuscous; towards base whitish-ochreous. Antennæ thickened with dense scales on upper surface for $\frac{2}{3}$, then slender; dark fuscous. Thorax bronzy-fuscous, with a posterior pair of small yellow spots. Abdomen orange-yellow; terminal segment and tuft dark fuscous; centre tuft in ♀ orange-yellow; underside similar, but with a broad basal dark fuscous band. Legs dark fuscous; base of posterior tibiæ yellow. Forewings dark fuscous, with blue and purple sheen; four orange-yellow spots; first on dorsum at $\frac{1}{4}$, second in disc before middle, third on tornus, fourth on costa at $\frac{5}{6}$; cilia fuscous. Hindwings yellow; apex fuscous; cilia fuscous, towards tornus yellow.

Differs from *E. chrysiæ* in the more heavily scaled antennæ, the absence of the sub-basal dorsal band on abdomen, and the yellow hindwings. Type in Coll. Turner.

N.Q.: Townsville, in February and May; three specimens, received from Mr. F. P. Dodd.

SNELLENIA LINEATA.

I have one example (from Coolangatta) in which the apical third of forewing is wholly suffused with dark fuscous.

Q.: Eumundi, near Nambour, in November; Brisbane, in January; Coolangatta, in December.—N.S.W.: Tabulam, in December.—Vic.: Gisborne.

SNELLENIA HYLÆA, n sp. [ὕλαιος, of the woods].

♂♀. 15-17 mm. Head and antennæ blackish. Palpi blackish; at base yellow. Thorax blackish; patagia and a posterior spot reddish-orange, the latter containing a few blackish scales. Abdomen blackish. Legs blackish; tarsi with whitish annulations. Forewings elongate, costa straight to $\frac{4}{5}$, apex and termen rounded; reddish-orange; base of dorsum black; a black dorsal streak from beyond middle, continued on termen to apex; apical portion of disc with fuscous streaks between veins; cilia dark fuscous, on costa reddish-orange. Hindwings elongate; dark fuscous; a small orange-yellow area on basal part of costa; cilia dark fuscous.

Var. Posterior third of forewings suffused with fuscous; costal cilia dark fuscous.

Best distinguished from *S. lineata* by the wholly black abdomen. Type in Coll. Turner.

Q.: Mount Tambourine, a series in December and February. The typical form and variety (between which there seem to be no intermediates) mimick two different species of coleoptera, which occur at the same time and place. When on the wing, the resemblance is perfect.

SNELLENIA CAPNORA, n.sp. [καπνорος, smoky].

♀. 15 mm. Head black. Palpi black; extreme base yellow. Antennæ black. Thorax yellow. Abdomen black; dorsum of first two segments yellow. Legs black; anterior coxæ yellow. Forewings narrow-elongate, costa straight to $\frac{1}{2}$, then sinuate, apex and termen rounded; blackish-fuscous; slightly paler on veins; base narrowly yellow; cilia blackish-fuscous. Hindwings narrow; fuscous; basal third yellow; cilia fuscous. Type in Coll. Turner.

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

PSEUDÆGERIA POLYTITA, n.sp. [πολυτιτος, held in honour].

♂♀. 18-20 mm. Head blackish; in ♂ with some reddish-orange scales on crown. Palpi reddish-orange; terminal joint fuscous anteriorly. Antennæ blackish. Thorax reddish-

orange, more or less mixed with blackish in centre. Abdomen blackish, sometimes mixed with orange; dorsum of first two segments orange; apex of fifth segment narrowly whitish on dorsum in ♂. Legs blackish; anterior coxæ yellow; anterior tibiæ with an internal reddish-orange spot; middle tibiæ with spurs white, and with a broad median reddish-orange ring; first joint of anterior and middle tarsi with a broad white median ring. Forewings elongate, with costa straight to near apex, in ♂ slightly sinuate, apex rounded, termen slightly bowed, strongly oblique; bright reddish-orange; termen broadly blackish, with blackish streaks extending from it between veins; cilia dark fuscous. Hindwings elongate; orange; a broad dark fuscous apical area extending towards base on costa, and narrowly along termen to tornus; cilia dark fuscous, becoming whitish or white towards apex in ♂, on dorsum orange. Type in Coll. Turner.

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

PSEUDÆGERIA HYALINA, n.sp. [*ὕαλινος*, transparent].

♀. 21 mm. Head, palpi, and antennæ dark fuscous. Thorax dark fuscous; patagia reddish-orange. Abdomen dark fuscous; apex of fifth segment narrowly whitish on dorsum. Legs dark fuscous. Forewings elongate, costa sinuate, apex rounded, termen slightly bowed, strongly oblique; reddish-orange suffused with fuscous except towards costa, and with fuscous interneural streaks in terminal area; cilia fuscous, on costa reddish-orange. Hindwings elongate; fuscous; whole of basal and central areas hyaline, with very few scales; cilia fuscous. Type in Coll. Lyell.

Vic.: Birchip, in November; one specimen, received from Mr. D. Goudie.

Subfam. *PLUTELLINÆ*.

Gen. *HETEROCRITA* Meyr.

Head shortly rough-haired. Tongue well-developed. Labial palpi long, porrect; second joint very long, vertically thickened

throughout, smooth-scaled, upper edge densely clothed with long hairs; terminal joint much narrower, short, obtuse. Maxillary palpi short, filiform, concealed under labial palpi. Forewings with all veins present and separate, 2 from well before angle, 3 from angle, closely approximated to 4 at origin, 7 to termen. Hindwings with all veins present, 3 and 4 short-stalked, 5, 6, 7 parallel. Posterior tibiæ smooth-scaled. Antennæ of ♂ simple.

HETEROCRITA CHERSODES Meyr.

♂♀. 15-18 mm. Head, palpi, thorax, and abdomen ochreous-whitish, mixed with fuscous. Antennæ fuscous-whitish. Abdomen and legs fuscous-whitish. Forewings strongly dilated posteriorly, costa strongly arched, apex rounded, termen scarcely rounded, slightly oblique; ochreous-whitish irrorated and suffused with fuscous; a fuscous dot in mid-disc at $\frac{1}{4}$, and another beyond middle; a fine fuscous terminal line; cilia pale fuscous. Hindwings and cilia ochreous-whitish suffused with fuscous.

N.Q.: Kuranda, near Cairns, in October and February; five specimens, received from Mr. F. P. Dodd.

Gen. AMPHITHERA.

Amphithera Meyr., Proc. Linn. Soc. N.S.Wales, 1892, p. 597.

Zonops Turn., Trans. Roy. Soc. S. Aust., 1900, p. 17; Meyr., Gen. Insect., Adelidæ, p. 8.

The type, *A. heteromorpha* Meyr., has the eye clearly divided into two parts by an incision, which does not contain any ridge of scales, and the upper part is about twice as large as the lower.

AMPHITHERA HETEROLEUCA.

Zonops heteroleuca Turn., Trans. Roy. Soc. S. Aust., 1900, p. 17; Meyr., Gen. Insect., Adelidæ, p. 8.

Q.: Dulong, near Nambour, in December; Brisbane.

AMPHITHERA MONSTRUOSA. n.sp. [Monstruosus, strange, marvellous].

♂. 15-18 mm. Head bronzy-fuscous; face and palpi fuscous. Antennæ and thorax bronzy-fuscous. Abdomen fuscous; the two terminal segments white. Legs fuscous; tarsi with obscure whitish

annulations. Forewings narrow-elongate, costa moderately arched, apex acute, termen slightly rounded, strongly oblique; bronzy-fuscous; towards apex irrorated with shining bluish-white scales; a fuscous dot on extreme apex; cilia whitish, with some pale fuscous suffusion. Hindwings more than twice breadth of forewings; termen strongly sinuate; dark fuscous tinged with bronzy-purple; cilia fuscous, apices whitish.

The structure of the eye is exactly that of the ♂ of the type-species. Type in Coll. Turner.

N.Q.: Herberton, and Evelyn Scrub, in January; five specimens, received from Mr. F. P. Dodd.

PHALANGITIS VETERANA.

Q.: Stanthorpe, in October; Brisbane.

PHALANGITIS PELLOCHROA, n.sp. [*πελλοχροος*, dusky-grey].

♂. 15 mm. Head and thorax brownish-grey. Palpi ochreous-whitish. Antennæ grey. Abdomen grey; base of dorsum whitish; male genital tuft large, with extrusible pale yellow hairs. Legs grey-whitish. Forewings moderately elongate, costa strongly arched near base, thence nearly straight, apex obtusely pointed, termen oblique, scarcely rounded; brownish-grey mixed with whitish; markings indistinct and confused; an ill-defined broad whitish costal streak from base, lost posteriorly; a series of dark costal dots; two irregular spots in disc at $\frac{1}{3}$ and before $\frac{2}{3}$; a well marked dark line on apical half of termen; cilia brownish-grey. Hindwings grey-whitish; cilia whitish.

Differs from *P. veterana* in its browner colouring, less distinct whitish streak, and especially in the dark terminal line. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in October; one specimen, received from Mr. F. P. Dodd.

PLUTELLA MACULIPENNIS.

This species is ubiquitous, but I was surprised to find it on Mt. Kosciusko, at 6,500 feet; on March 1st, many miles from the nearest cabbage-plot.

Subfam. ADELINÆ.

I give a complete list of the known Australian species, with localities. Mr. Meyrick, however, having seen an example of *A. monstruosa*, which I referred to my genus *Zonops*, says that it is an Amphithera, and has no real connection with the *Adelineæ*.

Gen. NEMOTOIS.

Nemotois Hb., Verz., p. 416; Meyr., Gen. Insect., Adelidæ, p. 4.

The Australian species, though exceedingly brilliant insects, are very closely related, and their discrimination is difficult. The following tabulation may be of service:—

- | | |
|--|-----------------------|
| 1. Forewings with a longitudinally striated median fascia | 3. |
| Forewings without such fascia..... | 2. |
| 2. Forewings with a blackish postmedian fascia..... | <i>brachypetala</i> . |
| Forewings with a yellow bar from costa beyond middle | <i>polydedula</i> . |
| 3. Forewings with basal yellow markings..... | 4. |
| Forewings without basal yellow markings..... | 5. |
| 4. Forewings with an oval yellow spot in disc near base... | <i>topazias</i> . |
| Forewings with a yellow blotch on dorsum near base.. | <i>panæola</i> . |
| Forewings with a yellow median basal streak..... | <i>opalina</i> . |
| 5. Palpi moderately long. Median fascia narrowed to a point on dorsum..... | <i>selasphora</i> . |
| Palpi short. Median fascia broad on dorsum..... | <i>sparsella</i> . |

NEMOTOIS BRACHYPETALA.

Nemotois brachypetala Meyr., Gen. Insect., Adelidæ, p.6.

N.A.: Port Darwin, in January. I have a single ♀ specimen received from Mr. F. P. Dodd.

NEMOTOIS TOPAZIAS.

Nemotois topazias Meyr., Proc. Linn. Soc. N.S.Wales, 1892, p. 485.

N.S.W.: Blackheath, near Katoomba.—Tasm.: George's Bay.—S.A.: Wirrabara and Mt. Lofty.

NOMOTOIS SPARSELLA.

Nemotois sparsella Walk., Brit. Mus. Cat. xxviii., p.506; Meyr., Proc. Linn. Soc. N.S.Wales, 1892, p. 483.

Q.: Caloundra, in September; Southport, in December; Brisbane.—N.S.W.: Sydney.—Vic.: Melbourne; Macedon, near Gisborne, in December.

NEMOTOIS ORICHALCHIAS.

Nemotois orichalchias Meyr., Proc. Linn. Soc. N. S. Wales, 1892, p. 484.

I do not know this species. Mr. Meyrick says it is obviously broader-winged than *N. sparsella*, and certainly distinct.

N.S.W.: Sydney and Bowenfels.—Vic.: Melbourne.—Tasm.: Launceston, and Hobart.—S.A.: Mount Lofty.

NEMOTOIS POLYDÆDALA, n.sp. [πολυδαϊδαλος, richly dight].

♂. 13 mm. Head and palpi ochreous; frons brilliant bluish-metallic. Antennæ fuscous, paler towards apex; basal joint iridescent. Thorax bronzy-metallic. [Abdomen broken.] Legs fuscous, with metallic reflections; tarsi with whitish annulations. Forewings shining coppery-purple; a large triangular golden-yellow basal patch, containing a costal and a subdorsal short bluish-metallic longitudinal streaks, and between these two raised bronzy-metallic knobs; a fine blackish line edging basal patch; a golden-yellow transverse bar from $\frac{2}{3}$ costa, reaching mid-disc, edged posteriorly by a blackish bar, and anteriorly by a narrow blackish suffusion, which extends to $\frac{3}{4}$ dorsum, forming an incomplete fascia; cilia coppery-purple. Hindwings thinly scaled; fuscous, with slight purple reflections, cilia fuscous. Type in Coll. Turner.

Q.: Kuranda, near Cairns, in November; one specimen, received from Mr. F. P. Dodd.

NEMOTOIS PANÆOLA, n.sp. [παναιολος, all-glittering].

♂. 12-13 mm. Head shining fuscous-purple; frons brilliantly metallic bluish or greenish. Palpi fuscous. Antennæ fuscous, towards apex paler; basal joint coppery-purple. Thorax coppery-purple. Abdomen dark fuscous. Legs fuscous, with metallic reflections; tarsi with whitish annulations. Forewings brilliant purple intermixed with fiery gold and deep blue scales; a broad

triangular sub-basal dorsal yellow blotch reaching $\frac{2}{3}$ across wing; opposite its apex is a small yellow costal spot at $\frac{1}{5}$; a narrow median yellow transverse fascia with longitudinal fuscous striations; cilia fuscous-purple. Hindwings thinly scaled; fuscous; cilia fuscous. Type in Coll. Turner.

N.Q.: Kuranda, near Cairns, in December.—Q.: Killarney, in October. Two specimens.

NEMOTOIS OPALINA.

Nemotois opalina Meyr., Gen. Insect., Adelidæ, p. 6.

♂♀. 11 mm. Head and palpi ochreous; frons brilliantly bluish-metallic. Antennæ fuscous. Thorax bronzy-metallic. Abdomen dark fuscous. Legs fuscous, with metallic reflections; tarsi with whitish annulations. Forewings bright golden, in some lights purple; a short broad longitudinal yellow streak from base of dorsum; between it and dorsum a blackish streak; between it and costa first a bluish-metallic streak, then a blackish streak; a bluish-metallic streak on base of costa; a broad transverse yellow band with longitudinal blackish striations, extending on costa from $\frac{2}{7}$ to $\frac{4}{7}$, and on dorsum from $\frac{1}{4}$ to $\frac{3}{4}$; cilia fuscous, with golden reflections. Hindwings thinly scaled; fuscous, with slight purplish iridescence; cilia fuscous, towards tornus whitish.

N.Q.: Kuranda, near Cairns, in April (Dodd).—Q.: Montville, near Nambour, in October; four specimens.

NEMOTOIS SELASPHORA, n.sp. [*σελασφορος*, gleaming with light].

♂. 12-13 mm. Head fuscous; frons brilliant bluish-metallic. Palpi moderately long; fuscous. Antennæ fuscous; basal joint iridescent. Thorax bronzy-metallic. Abdomen dark fuscous. Legs fuscous, with metallic reflections; tarsi with whitish annulations. Forewings brilliant purple or golden according to incidence of light; a blackish subcostal streak from base to $\frac{1}{4}$; a pear-shaped transverse yellowish fascia with longitudinal striations, from costa beyond middle, broadening in costal portion of disc, then tapering to a point on dorsum before tornus; cilia gleaming with purple and

gold. Hindwings thinly scaled; fuscous, with purple iridescence; cilia fuscous. Type in Coll. Turner.

Q.: Mount Tambourine, in November; five specimens.

Gen. NEMOPHORA.

Nemophora Hb., Verz., p. 417; Meyr., Gen. Insect., Adeliidæ, p.2.

NEMOPHORA IOLAMPRA.

Nemophora iolamptra Turn., Trans. Roy. Soc. S. Aust., 1900, p.17.

Vic.: Gisborne.

NEMOPHORA LEPTOSTICTA.

Nemophora leptosticta Turn., Trans. Roy. Soc. S. Aust., 1900, p. 16.

Q.: Stanthorpe, in February.

PROCEEDINGS, 1913, PART 1.

CONTENTS.

	PAGES
Presidential Address delivered at the Thirty-eighth Annual General Meeting, March 26th, 1913, by W. W. FROGGATT, F.L.S....	1-42
Notes on Australian Marine <i>Algæ</i> , i. By A. H. S. LUCAS, M.A., B.Sc. (Plates i.-v.)	49-60
Revision of Australian Species of the Subfamilies <i>Cyphaleinæ</i> and <i>Cnodaloninæ</i> [COLEOPTERA: <i>Tenebrionidæ</i>]. By H. J. CARTER, B.A., F.E.S. (Plates vi.-vii.)...	61-105
Stratigraphical Geology of the Permo Carboniferous System in the Maitland-Branxton District: with some Notes on the Permo-Carboniferous Palæogeography in New South Wales. By A. B. WALKOM, B.Sc., Linnean Macleay Fellow of the Society in Geology. (Plates viii.-xiii.)..	114-145
The Geology of the Permo-Carboniferous System in the Glendonbrook District, near Singleton, N.S.W. By A. B. WALKOM, B.Sc., Linnean Macleay Fellow of the Society in Geology. (Plate xiv.)	146-159
Notes on some recently discovered Occurrences of the Pseudomorph, Glendonite. By A. B. WALKOM, B.Sc., Linnean Macleay Fellow of the Society in Geology	160-168
Studies in Australian <i>Microlepidoptera</i> . By A. JEFFERIS TURNER, M.D., F.E.S.	174-228
Hon. Treasurer's Financial Statement, Balance Sheet, etc.	42-47
Elections and Announcements	48, 106, 169
Notes and Exhibits	48, 106, 169