plentiful. At the mouth of the Endeavour River the coast was strewn with dead and broken tests of the species. Using a very small dredge at about ten fathoms one can obtain hundreds or thousands of specimens anywhere between Cape Grenville and Port Denison.

Maretia planulata, Leske, is also a very common species and is found on a sandy bottom at moderate depths from about five fathoms. We know very little about the *Spatangidæ*, but their habits might be easily studied in Sydney with even a small aquarium. The peculiar smooth actinal plastron points no doubt to some distinct habits and modes of getting its food, which would be very interesting to study. Though it is not at all rare on the east coast, yet because the test is very brittle it is never found on the beach. Any specimens that are washed up must be broken to pieces. This shows how nothing but the dredge will reveal what urchins we have in Australia.

Echinocardium australe, Gray. This species is abundant on sandy shores, from Port Jackson to East Tasmania. Like all the clypeastroid urchins it seems to feed on Foraminifera.

Breynia australasiæ, Gray, is extremely abundant in the sandy shallow bays about Port Denison.

Rhynobrissus apicalis, nobis. Small specimens of this urchin have lately been found in Port Jackson at sixteen fathoms. They were not one-fourth the size of the type specimen obtained by me from Moreton Bay.

Descriptions of Australian Micro-Lepidoptera.

By E. Meyrick, B.A.

IV. TINEINA, (Continued).

The present instalment treats of the families *Glyphipterygidæ* and *Erechthiadæ*, giving descriptions of fifty-three species, of which

number forty-two are new to science. One species appears to have been introduced, sixteen are confined to New Zealand, the remaining thirty-six are confined to Australia. Before giving the descriptions, I will offer some general remarks upon the classification of the families forming the subject of the paper.

Amogst the *Glyphipterygidæ* I have included the genera *Simaëthis* and *Choreutis*, usually separated by European entomologists as a distinct family, under the title of *Choreutidæ*. These insects have long been held to be of doubtful location, but our recent increased knowlege of the group has caused unprejudiced minds to have little hesitation in referring them at least to the neighbourhood of of the *Glyphipterygidæ;* so near do they come to this family in structure that no definite point of distinction can be alleged, except the abnormally broader wings, a variable and insufficient character. I am decidedly of opinion that there is no ground for separating the two families; were they regarded as distinct, it would certainly be necessary to form a third family for the Australian genera *Hypertropha*, *Eupselia*, and *Aeolocosma*, which are allied to but differ from both. Perhaps this might eventually be done, but at present I think it would be at least premature. It must be admitted, however, that it is hardly psssible to define the family as a whole so as to distinguish it from the *Oecophoridæ*, to which it comes nearest. The best points on which to rely consist in vein 1 of fore-wings not being furcate at base, veins 7 and 8 not being stalked, and the antennæ of ♂ not being conspicuously ciliated; but to all these points there are several exceptions, though I think one or more will always be found to hold. The characters of the *Oecophoridæ* proper (which family I hope shortly to take in hand) are remarkably uniform in themselves.

Of the *Glyphipterygidæ* three European genera occur here, but only two (*Simaëthis* and *Glyphipteryx*) are represented by native species, the single species of *Choreutis* being doubtless introduced and tolerably cosmopolitan. The development of the genus

Glyphipteryx is remarkable, the number of species found in these regions already exceeding all those known from the rest of the world, nor do I think that future discoveries will reverse this proportion. Besides these I have been obliged to form five new genera, two of these being nearly allied to *Glyphipteryx*, the other three forming a group together. The group of *Glyphipteryx* appears especially predominant in New Zealand, where their numbers are out of all proportion to those of other families of *Tineina*, compared with the standards of other regions; the *Glyphipterygidæ* collected by myself on my New Zealand journey formed about a twelfth part of the *Tineina* obtained, whilst in Europe they constitute about a hundred and eightieth.

The other family, the *Erechthiadæ*, is new, and contains five new genera, which I have been compelled to form for the reception of a peculiar group of species, which will not harmonise with any previously established family. It is in my opinion related to the *Glyphipterygidæ*, although in point of structural characters it certainly approaches nearer to the *Tineidæ*. The following will be a general summary of its characteristics:—

ERECHTHIADÆ, *nov. fam.*

Head rough, tufted between eyes (face smooth in one genus of rather uncertain position). Ocelli present. No tongue. Maxillary palpi well developed, folded. Labial palpi rather short or moderate, porrected or drooping, generally roughly scaled or haired. Antennæ shorter than fore-wings, in ♂ not ciliated. Legs moderate, posterior tibiæ usually clothed with long hairs. Fore-wings elongate-lanceolate, rarely with distinct hind-margin. Hind-wings rather narrower than fore-wings, lanceolate, with long cilia. Fore-wings with 11 (rarely 12) veins, subcostal vein obsolete towards base; secondary cell indicated; 1 simple or furcate at base; 6 and 7 separate, or more rarely stalked. Hind-wings with 8 (or rarely 7) veins, subcostal obsolete towards base;

5 and 6 stalked or separate. Larva sixteen-legged, feeding internally on seeds or bark.

The normal type of markings consists of a pale central longitudinal streak and oblique costal and dorsal streaks on a darker ground. Structurally, as mentioned above, the family approaches the *Tineidæ*, especially in the rough head and folded well-developed maxillary palpi; the head is however less rough behind, and especially tufted on the forehead, where the hairs commonly form a projecting ridge; all the wings, especially the hind-wings, are narrower and more lanceolate, though there are exceptions; vein 1 of fore-wings is often not furcate; the obliteration of the subcostal veins of both wings on their basal halves appears to be a constant character; the type of markings is quite different, and approximates in principle to that of the *Glyphipterygidæ*. I am aware that these points hardly afford sufficient justification for the creation of a new family; but the insects themselves assort so ill with the *Tineidæ*, that I prefer to regard them provisionally as a distinct group, believing that science will be better served by an attempted arrangement, even if it be proved hereafter faulty, than by throwing all together into a heterogeneous mass. The group as constituted is at least natural in itself.

The family is probably of some extent in the Australian region, though not at present known to me as occurring elsewhere. I have described ten Australian and six New Zealand species, and have every reason to believe that many more remain to be found, especially in New Zealand, where the typical genus *Erechthias* seems to be dominant.

I purpose reserving until I come to treat of the *Oecophoridæ* (where they will have an especial significance) some remarks on the meaning and value attached to the group called a family, with reference to the difficulty of limiting these groups when natural by any fixed definition of characters.

GLYPHIPTERYGIDÆ.

The eight genera hiterto found in Australia may be tabulated as follows :—

I. Hind-wings broader than fore-wings.
  A. veins 7 and 8 of fore-wings stalked ..Hypertropha
  B. veins 7 and 8 of fore-wings separate.
    1. second joint of palpi roughly scaled beneath .. ..Simaëthis
    2. second joint of palpi with long, erect bristles beneath .. .. ..Choreutis

II. Hind-wings narrower than, or hardly as broad as fore-wings.
  A. second joint of palpi beneath smooth, with appressed scales.
    1. fore-wings with 11 separate veins ..Eupselia
    2. fore-wings with 12 veins, 7 and 8 stalked Aeolocosma
  B. second joint of palpi beneath roughly scaled in somewhat projecting whorls .. .. Glyphipteryx
  C. second joint of palpi with long, loose, projecting hairs, tuft-like.
    1. veins 7 and 8 of fore-wings stalked ..Apistomorpha
    2. veins 7 and 8 of fore-wings separate..Phryganostola

Hypertropha, *n. g.*

Head smooth ; with ocelli ; tongue moderate. Antennæ half as long as fore-wings, fiiliform, simple. No maxillary palpi. Labial palpi short, recurved, second joint with appressed scales, terminal joint slender, hardly acute. Thorax with a bifid crest behind. Fore-wings very broadly triangular, less than twice as long as broad, costa rounded, apex somewhat produced, hind-margin waved, hardly oblique. Hind-wings rounded-triangular, slightly broader than fore-wings, cilia short. Abdomen short, rather stout. Legs short, stout, anterior and middle tibiæ

thickened with dense scales, posterior tibiæ clothed with dense long hairs. Fore-wings with 12 veins; no secondary cell; 1 strongly furcate at base; 7 and 8 long-stalked, going to either side of apex. Hind-wings with 8 veins; 2 and 4 from posterior angle of cell.

The genus may be recognised by the very unusually broad wings, the crested thorax, and amongst those nearest to it by the stalking of veins 7 and 8 of fore-wings. In shape of wing it resembles *Simaëthis*, but surpasses it in breadth; in the palpi, and black hind-marginal spots it has affinity with *Eupselia* and *Aeolocosma*. The only species at present known is brilliantly marked; it flies in the hot sunshine with rapidity, and is then difficult to see; in repose the wings form a broad nearly flat roof, and are not raised as in *Simaëthis*.

Hyp. thesaurella, *n. sp.*

♂ ♀. 7½″-8″. Head, palpi, and thorax dark fuscous, densely and irregularly mixed with ochreous and pale scales. Antennæ of ♂ ochreous-fuscous, of ♀ ochreous annulated with dark fuscous. Abdomen dark fuscous, lateral margins yellow. Legs dark fuscous, indistinctly ringed with ochreous; posterior tibiæ yellow. Fore-wings black, basal half almost entirely occupied by four transverse, rather outwardly curved, almost confluent faint ochreous-whitish bands, composed of numerous very fine transverse strigulæ, these bands being very obscurely separated by slender black lines, only distinct as black spots on costa, where also the pale bands are usually more distinct; a small ochreous-whitish spot on costa in middle, giving rise to an indistinct orange-ochreous transverse line marking off the basal half, and itself immediately followed by a metallic bluish-purple line of raised scales; immediately preceding the ochreous line are three small metallic bluish-purple raised spots, one on inner-margin, one above and one below middle; and at about ⅓ from base is a transverse metallic blue raised line from middle of disc perpendicularly to

inner-margin, interrupted on fold; an outwardly curved metallic blue-purple line from $\frac{3}{4}$ of costa to anal angle, lower half interrupted to form three spots near and parallel to hind-margin; lower $\frac{2}{3}$ of space between this and central line strewn with ochreous-whitish scales, especially towards inner-margin; beyond this line is a white outwardly oblique spot on costa, emitting a faint band of transverse whitish strigulæ along hind-margin to anal angle, leaving three elongate black spots on lower part of hind-margin; beyond this band is an outwardly oblique orange-ochreous subapical spot from costa; cilia at extreme apex black, beneath apex with an oblong transverse snow-white spot, thence metallic blue-purple. Hind-wings deep yellow, with a broad black margin; cilia yellow, with a black basal line.

This richly adorned insect cannot be confused with any other. Its habits are truly sun-loving; it sports in the hottest sun-shine over the tops of young trees of *Acacia decurrens*, to which it appears certainly attached. Taken occasionally in New South Wales at Parramatta, and at Waratah on the lower Hunter; also at Melbourne and Brisbane, from January to March.

Simaëthis, *Leach.*

Head smooth; with ocelli; tongue strong. Antennæ about half as long as fore-wings, filiform, in ♂ ciliated. No maxillary palpi. Labial palpi moderately long, recurved, second joint beneath with rough scales often forming a small apical projection; terminal joint compressed, rather shorter than second, blunt. Fore-wings broadly-triangular, apex somewhat produced, hind-margin slightly oblique. Hind-wings broader than fore-wings, triangular, cilia short. Abdomen short, stout. Legs short, broadly compressed, tibiæ densely scaled. Fore-wings with 12 veins; no secondary cell; 1 furcate at base. Hind-wings with 8 veins; 7 and 8 remote, 3 and 4 sometimes stalked or coincident.

Larva sixteen-legged, active, living in a web within a drawn-together leaf; pupa in a firm white cocoon.

This genus, though by no means large, is distributed throughout the world, but seemingly more commonly towards the tropics. In repose the imago rests with the fore-wings slightly raised and partially expanded, so as not to entirely conceal the hind-wings.

Sim. sycopola, *n. sp.*

♂ ♀. 5½″-6½″. Head and thorax deep ochreous-brown, irrorated with whitish scales. Palpi black, at base ochreous-whitish, second and terminal joints clothed each with three whorls of black white-tipped scales. Antennæ black, annulated with white, in ♂ with long ciliations. Abdomen dark fuscous, strewn with orange-ochreous scales. Legs dark fuscous, densely irrorated with ochreous-whitish; middle and posterior tibiæ suffused above with orange-ochreous, densely clothed with hair-scales expanded in whorls in middle and at apex; tarsi white with four black bands. Fore-wings strongly dilated, hind-margin slightly waved; dark fuscous, faintly suffused with orange-ochreous posteriorly, most distinctly at apex and along hind-margin; two cloudy transverse bands of finely-strewn purple-whitish scales; first from ⅓ of costa to ⅓ of inner-margin, slightly waved above middle, well-defined anteriorly only; second indistinctly double, from ⅔ of costa to just before anal angle, sharply angulated outwards above middle, below which the inner portion is thrice sharply and irregularly toothed; fine purple-whitish scales are strewn near base, on disc between first and second bands, and between the second band and orange-ochreous hind-margin except on costa; cilia dark fuscous, with paler reddish-ochreous-tinged spots above and below middle. Hind-wings orange, with costa irregularly black and a large black spot at apex, whence proceeds a straight narrower black band above hind-margin to anal angle, whence it is continued broadly along inner-margin to base, becoming mixed with orange towards margin; cilia fuscous with a paler line near base, orange beneath apex.

Immediately recognisable from its Australian allies by the orange hind-wings; it comes nearest to *S. taprobanes*, Z., from Ceylon, which has similar hind-wings, but distinct ferruginous-orange markings on the fore-wings. The imago appears in March and again (apparently a second brood) in May, flying in the sunshine for about half-an-hour at sunset round *Ficus stipulata*, a climbing fig grown commonly over garden walls in Sydney, and native in tropical Australia. Larva slender, cylindrical, greyish-ochreous marbled with rather darker; dorsal brownish-ochreous, irregular; head pale ochreous. Feeds in a web within partially folded leaves of *Ficus stipulata*, in February and April. Pupa pale olive-greenish, in an elongate spindle-shaped firm white cocoon, placed on upper surface of leaf beneath a flat white covering web.

Sim. melanopepla, *n. sp.*

♀. 6″-6½″. Head and thorax deep ochreous-brown, irrorated with whitish scales in irregular transverse lines. Palpi white at base, second and terminal joints clothed each with three whorls of black white-tipped scales. Antennæ black, annulated with white. Abdomen deep ochreous-brown, segmental margins with a few white scales. Legs dark fuscous, densely irrorated with white; middle and posterior tibiæ densely clothed with hair-scales expanded in whorls in middle and at apex; tarsi white with four black bands. Fore-wings strongly dilated, hind-margin slightly waved; dark fuscous, tinged with ochreous towards base, more blackish posteriorly, with cloudy whitish markings caused by the aggregation of black white-tipped scales; a few scales at base, and a slender transverse fascia near base; a broad nearly straight transverse band at ⅓, and a very broad rather outwardly curved band from ⅔ of costa to before anal angle, the two bands almost confluent on lower half, leaving a triangular blackish costal spot; an orange-ochreous streak on costa near apex, continued round apex along hind-margin to anal angle; cilia fuscous, black at base, with a paler line. Hind-wings blackish-fuscous, rather

lighter towards base; cilia blackish-fuscous, with a black line near base.

Very similar to the preceding in all respects except the blackish hind-wings; the fore-wings are also darker and the markings rather clearer.

Two females taken on garden fences in Sydney, in November.

It is very probable that the larva of this species also is attached to some one of the several cultivated species of *Ficus*.

Sim. combinatana, *Wkr.*, Brit. Mus. Cat., 456.

♂. 6½″. Head and thorax deep ochreous-brown, with a few white scales. Palpi white at base, second joint clothed with four whorls of black white-tipped scales, terminal joint black with three slender white rings. Antennæ black, annulated with white, in ♂ with long ciliations. Abdomen blackish, with a few whitish scales. Legs dark fuscous, thickly irrorated with whitish, tarsi with indistinct whitish rings, posterior tibiæ clothed with dense hair-scales. Fore-wings slightly dilated, hind-margin distinctly waved; blackish-fuscous, tinged with reddish-brown on costa beyond middle, and within each pair of transverse lines; some purple-whitish scales irregularly arranged transversely near base; four transverse cloudy lines of purple-whitish scales, arranged in pairs, and starting from small white costal spots; first pair from ⅓ of costa to ⅓ of inner-margin, rather curved outwards, irregularly toothed; second pair from ⅔ of costa to just before anal angle, angulated outwards beneath costa, but indistinct and irregular; a streak of purple-whitish scales from apex very near but not on hind-margin, reaching to middle; a second similar streak from middle of hind-margin, immediately beyond end of first, continued along hind-margin, not extending to anal angle; cilia dark fuscous containing a cloudy white basal spot above and another below middle of hind-margin. Hind-wings rather narrow, hind-margin strongly sinuate below middle, anal angle prominent; dark fuscous, broadly blackish along hind-margin, with two rather

short cloudy parallel streaks of blue-whitish scales, one nearly along hind-margin at anal angle, the other immediately above it; cilia white on the hind-marginal sinuation, becoming gradually smoky-fuscous towards apex and on anal angle, black at base throughout.

The narrower wings and more sinuate margins give this species a very different figure to the two preceding, with which it cannot therefore be confused. It is very nearly allied to the well-known European *S. oxyacanthella*, L., *(fabriciana*, Steph.), from which it would appear to be best distinguished by the deep sinuation between anal angle and middle of hind-margin, by the much less distinct double bluish-tinged streaks of the hind-wings, and the deeper tint of the fore-wings.

Two males taken amongst forest growth at Wellington, New Zealand, flying towards sunset; in January. Walker's specimens are merely stated to be from New Zealand.

Choreutis, *Hb.*

Head smooth; with ocelli; tongue strong. Antennæ about half as long as fore-wings, filiform, in ♂ ciliated. No maxillary palpi. Labial palpi moderately long, recurved, second joint beneath with long dense projecting bristles; terminal joint slender, pointed. Fore-wings broadly triangular, hind-margin straight. Hind-wings broader than fore-wings, triangular, cilia very short. Abdomen short, stout. Legs short, broadly compressed, posterior tibiæ densely scaled. Fore-wings with 12 veins; no secondary cell; 1 furcate at base. Hind-wings with 8 veins; 7 and 8 remote; 3 and 4 sometimes stalked or coincident.

This is a very small genus, of which the species described here is almost universally distributed, but has probably been transported through the medium of civilisation. In habits the species resemble *Simaëthis*, and the imago holds the fore-wings slightly raised in the same manner.

Larva sixteen-legged, living in a web between drawn-together leaves. Pupa in a firm cocoon.

Chor. bjerkandrella, *Thnb.*

♂ ♀. 4″-5″. Head grey, face tinged with yellow. Palpi white, second joint grey on side with two black rings before apex, beneath with long blackish and white diverging bristles, terminal joint blackish. Antennæ black, annulated with white, in ♂ with moderate ciliations. Thorax yellowish-ferruginous, with five longitudinal metallic grey-silvery lines. Abdomen black, with silvery-white rings. Legs white, tibiæ with central and apical black bands, tarsi with four black bands. Fore-wings moderately dilated, apex and hind-margin rounded; dark fuscous, basal third yellowish-ferruginous, except on margins and a central longitudinal streak; two short metallic-silvery streaks from base along the costal margin and central streak; two cloudy whitish transverse bands, first from $\frac{1}{3}$ of costa to $\frac{1}{3}$ of inner-margin, rather curved outwards, furcate on inner-margin; second from $\frac{2}{3}$ of costa to before anal angle, angulated outwards above middle; the space between these is irregularly sprinkled with whitish scales; two round black blotches immediately preceding second band, one on inner margin, the other below middle, each containing an elongate metallic purple-silvery mark, that in the upper one being three-pointed; several other metallic purple-silvery markings, consisting of an elongate mark on inner margin of second band above middle, a small costal spot between the two bands, an elongate mark on hind-margin below middle, preceded by an elongate black blotch, a spot on costa immediately beyond second band, and an elongate mark round apex: cilia dark grey, with a pale line in middle and another before tips, tips white round apex. Hind-wings dark fuscous, blackish towards apex, with a white elongate spot on disc beyond middle, parrallel to hind-margin, and sometimes another less distinct white spot above it on costa; cilia blackish, with two white lines.

I have thought it well to redescribe from Australian and New Zealand specimens this species, which is well-known in Europe, doubtless its home. The same species (subject to local variations) has been recorded also from South Africa and South America. In New South Wales it occurs round Sydney, at Shoalhaven, Murrurundi, Blackheath (3,600 feet), and Bowenfels, but rather sparingly; also at Melbourne, and in Queensland at Rosewood and Toowoomba; always more or less casually. In New Zealand however, I met with it on the swampy thistle-grown plains at Hamilton, on the Waikato, in immense profusion, swarming on the thistle-blossoms in the sunshine, in January. In Australia it occurs from September to January.

In Europe the larva feeds on *Inula;* probably in other parts of the world it is not restricted from other *Compositæ;* in New Zealand at least it must certainly feed on the thistle.

I do not see any tangible difference between Australian, New Zealand, and South European specimens.

EUPSELIA, *n. g.*

Head smooth; with ocelli; tongue moderate. Antennæ much shorter than fore-wings, filiform, simple. No maxillary palpi. Labial palpi short, recurved, not reaching vertex, second joint with appressed scales, terminal joint slender, acute. Fore-wings elongate, rather broad, costa gently arched, apex rounded, hind-margin oblique, rounded. Hind-wings elongate-ovate, as broad as, or slightly narrower than fore-wings, cilia moderate. Abdomen moderate. Legs moderate, posterior tibiæ clothed with long hairs, anterior tibiæ sometimes thickened with scales. Fore-wings with 11 veins; no secondary cell; 1 furcate at base. Hind-wings with 8 veins; 3 and 4 from posterior angle of cell.

The only larva as yet known is sixteen-legged, slender and active, and mines in galleries in leaves, with peculiar accessory habits; pupa naked, erect, attached by the tail.

The genus is the only one in the family, in which the fore-wings have only 11 veins. Its nearest ally is the succeeding genus *Aeolocosma*, from which it differs in the antennæ of ♂ being quite simple, and in the neuration. The round black metallic-edged hind-marginal spots are a remarkable secondary characteristic, (shared also to some extent by *Aeolocosma* and *Hypertropha*,) which is very constant and trustworthy. In repose the imagos rest with the wings forming a rather sloping roof; *E. aristonica* extends the furry anterior legs in front, but this habit is not shared by the rest. The species are all more or less retired and sluggish in habit, and hence appear not common.

The genus is peculiar to Australia, so far as known. Probably it contains a considerable number of species; the seven here described may be thus tabulated :—

I. Hind-wings yellow at base.

A. Fore-wings with a dark fuscous blotch on inner-margin .. ..4. beatella

B. Fore-wings without dark fuscous blotch on inner-margin.

1. with three black hind-marginal spots 3. carpocapsella

2. with five black hind-marginal spots..6. theorella

II. Hind-wings wholly fuscous-grey or blackish.

A. Fore-wings brownish-ochreous, irrorated with whitish .. ..7. melanostrepta

B. Fore-wings with basal half yellow, apical purple .. ..5. satrapella

C. Fore-wings blackish.

1. with white spots near base of inner-margin and on costa .. ..1. aristonica

2. without white spots .. .. ..2. percussana

MARINE BIOLOGICAL LIBRARY WOODS HOLE MASS.

Eups. aristonica, *n. sp.*

♂. 6″. Head dark fuscous, face rather lighter. Palpi dark fuscous, mixed with whitish towards base. Antennæ dark fuscous Thorax dark fuscous, with a small whitish indistinct spot on middle of lateral margin. Abdomen black with indistinct yellowish rings, anal tuft ochreous-yellow. Anterior and middle legs blackish-fuscous, beneath mixed with whitish, anterior tibiæ much dilated with hair scales; posterior legs pale ochreous-yellow, base of tibiæ and basal rings of all tarsal joints black. Fore-wings rather broad, hind-margin rather slightly oblique; very dark fuscous, almost black; a square white spot on inner-margin near base, anteriorly somewhat suffused, its upper anterior angle connected with two short suffused white streaks, one running to centre of base, the other to costa near base, followed by a few scattered whitish scales; a small rectangular white spot on middle of costa, divided into two by a transverse dark fuscous line, each half giving rise to a leaden-blue metallic line, proceeding parallel directly across wing; a leaden-blue metallic spot before them on inner-margin; a leaden-blue metallic line from middle of disc immediately beyond them to anal angle, interrupted beneath its apex; beyond this line are thickly strewn very fine longitudinal whitish hair-scales; a very small white spot on costa before apex, giving rise to a short outwardly oblique leaden-metallic line, and with a small leaden-metallic spot beneath it; extreme apex ochreous-orange; four circular black spots on lower half of hind-margin, surrounded by a few pale ochreous scales, the uppermost spot small; a violet-metallic line along hind-margin on base of cilia, rest of cilia dark fuscous. Hind-wings blackish-fuscous; cilia ochreous-yellow, with a darker line near base.

Not to be confused with any other species; in repose the fore-legs are extended. One specimen beaten from dry scrub near Parramatta in December.

Eups. percussana, *Wkr.*, Brit. Mus. Cat., 998.

"♂. 7″. Head, thorax, and abdomen cupreous-blackish. Fore-wings with hind-margin moderately oblique; cupreous-blackish, with transverse cinereous lines, some of which posteriorly are blue-metallic; disc near hind-margin with minute longitudinal cinereous hair-scales; hind-marginal dots deep black, partly bordered with metallic blue. Hind-wings cupreous-blackish; cilia pale cinereous. Tasmania."

The above is Walker's description, divested of superfluities and interpreted; brief and incomplete as it is, it is sufficient to clearly indicate a species of this genus distinct from any I have seen. I thought it best therefore to include the descriptions of this and the following species in the present paper, to direct attention towards them, and render the subject as complete as possible.

Eups. carpocapsella, *Wkr.*, Brit. Mus. Cat., 998.

"♀. 7″. Head, thorax, and abdomen slaty-cinereous. Fore-wings rounded, slaty-cinereous, posteriorly cupreous-tinged, with transverse brown streaks, interrupted towards the base, but complete posteriorly, and forming the ground-colour along hind-margin; three deep black cupreous-bordered spots on lower part of hind-margin; cilia slaty-cinereous, tinged with cupreous. Hind-wings yellow, with a very broad dark fuscous border, excavated interiorly; cilia partly yellow. Brisbane, Queensland."

The description is Walker's, similarly treated as the preceding; I have not seen the specimen, but it is certainly an *Eupselia*, nearly allied to *E. beatella*, but without the dark fuscous triangular patch on inner margin.

Eups. beatella, *Wkr.*, Brit. Mus. Cat., 999.

♀. 6½″. Head, palpi, and thorax pale ashy-grey, crown and upper portion of thorax suffused with dark fuscous. Antennæ pale grey. Abdomen yellowish-fuscous. Legs whitish, anterior and middle tibiæ thickened with scales; anterior tibiæ and tarsi

suffused above with dark fuscous; middle tibiæ with two suffused fuscous rings, tarsi with fuscous rings at base of joints; posterior tibiæ yellowish, tarsi pale yellowish with indistinct fuscous rings at base of joints. Fore-wings moderately broad, hind-margin rather oblique; very pale ashy-grey; six short cloudy grey streaks from costa before middle, the first two uniting with two similar streaks from inner-margin; a large rounded-triangular clearly-marked dark fuscous blotch on inner-margin slightly before middle, reaching half across wing; two parallel nearly straight grey lines crossing wing from slightly beyond middle of costa to just before anal angle; beyond the second line the apical portion of the wing is entirely dark fuscous, intersected by a straight leaden-metallic line from above midde of disc to anal angle, nearly parallel to the second line; and by a cloudy ashy-whitish line, strongly curved outwards, from $\frac{3}{4}$ of costa to anal angle, preceded by thickly strewn longitudinal whitish hair-scales on disc below middle; a similar cloudy slaty-whitish line from costa just before apex to hind-margin, continued along hind-margin, and coalescing with the first; four oval black spots on lower half of hind-margin, uppermost small, each surrounded with a whitish ring; a violet-metallic line along base of cilia, rest of cilia dark fuscous. Hind-wings pale yellow, with a broad blackish-fuscous border along hind-margin, broadest at apex; cilia dark fuscous, beneath apex and on inner-margin yellowish, with a blackish line near base.

Easily known by the dark fuscous dorsal blotch and hind-margin on a pale ground, and yellow hind-wings. One ♀ taken at rest on a Eucalyptus-trunk at Sydney, in December; Walker's specimen was a ♂ and is simply given as from 'Australia.'

Eups. satrapella, *n. sp.*

♂ ♀. $6\frac{1}{2}''$-$7\frac{1}{2}''$. Head and palpi deep yellow. Antennæ dark fuscous, indistinctly annulated with whitish. Thorax deep yellow, anterior margin and a square central spot connected with it dark purple-fuscous; in ♀ the whole anterior portion is suffused with

fuscous. Abdomen dark fuscous, tinged with yellowish on sides. Legs dark purple-fuscous, posterior tibiæ yellow, posterior tarsi yellowish with dark fuscous rings at base of joints. Fore-wings moderately broad, hind-margin considerably oblique; deep yellow apical portion beyond an inwardly curved line from three-fifths of costa to $\frac{3}{4}$ of inner-margin purple (light reddish-purple scales being thickly strewn on a black ground, towards anal angle in longitudinal lines); a suffused dark fuscous streak along costa from base to middle; a dark fuscous streak along lower half of division-line of the yellow and purple portions, immediately beyond which are two small deep blue spots one in middle, the other above inner-margin; a broader dark fuscous streak from costa at junction of yellow and purple portions to anal angle, slightly curved inwards, bordered posteriorly on its lower half with purple-blue; a very oblique, short, dark fuscous streak from costal extremity of this streak towards hind-margin a little below apex, above which is a deep purple-blue spot, and the extreme costa is yellow; four round black spots on lower part of hind-margin, surrounded by ochreous scales, and alternating with three smaller longitudinally elongate black spots; a metallic purple line along base of cilia, rest of cilia dark fuscous. Hind-wings dark fuscous; cilia dark fuscous, on costa yellowish.

This very handsome species is superficially very dissimilar to all its congeners from its yellow and purple colouring; in this it has at first sight an external resemblance to some of the *Oecophoridæ* but, apart from structural points, may be known from them by the black hind-marginal spots. It appears tolerably common, though retired in habit; occurring round Sydney and Parramatta, and in Queensland at Helidon, from September to November, and again in February and March.

The larval and pupal stages of this species are very singular. Larva very elongate, tolerably cylindrical but slightly flattened, smooth, head, second and anal segments with a few short blackish

bristles; whitish, slightly tinged with greenish-grey; a slender irregular reddish-ochreous line on each side of dorsal space; subdorsal rather broader, darker reddish-ochreous, anteriorly partially double, enclosing irregular spaces of ground-colour; spiracular slender, nearly straight, interrupted, reddish-ochreous; subspiracular similar, more interrupted; spots small, distinct, blackish-grey; head grey-whitish, with three longitudinal rather broad pale amber stripes, mouth blackish; second and anal segments with markings obsolete, anal segment obliquely flattened. When half-grown, all the markings are nearly obsolete, the head and part of second segment blackish. Feeds in a long rather sinuate swollen gallery within leaves of *Eucalyptus, sp.*, issuing by night through a hole and eating substance of leaf outside; by day remaining concealed in the gallery, but traversing it with great celerity if disturbed; found in August and September.

Pupa long, slender, dull brown, wingcases short, whitish, thorax almost angulated on shoulders; quite naked, affixed by the tail, stiffly and perpendicularly projected from the surface of its attachment, so as to be actually standing erect upon its tail. I had several of these pupæ, which were all similarly fastened to twigs and the sides of the glass containing them.

Eups. theorella, *n. sp.*

♀. 6″. Head, palpi, thorax, and abdomen light ochreous-brown. Antennæ ochreous-whitish, annulated with black. Legs light ochreous-brown, anterior tibiæ and tarsi suffused with dark fuscous, post tibiæ and tarsi pale ochreous-yellow. Fore-wings elongate, hind-margin extremely oblique; ochreous-brown, thickly irrorated with paler scales, becoming elongate hair-scales towards lower portion of hind-margin; about ten very obscure and faint transverse streaks from costa, caused by the disappearance of the pale scales, some of them faintly continued to inner-margin; two in middle of wing more distinct, rather divergent on disc, confluent on inner-margin and forming there a transversely

elongate metallic-ochreous spot, becoming ochreous-white on inner-margin itself; an oblique ochreous-brown streak from $\frac{3}{4}$ of costa to hind-margin beneath apex, and an oval ochreous-brown spot at apex; five round black spots very close together below middle of hind-margin; a violet-metallic line on base of cilia, broken into spots, especially towards apex; rest of cilia ochreous-fuscous, towards apex blackish, with two small whitish spots on tips beneath apex. Hind-wings with basal half yellow with a few scattered dark fuscous scales; apical half dark fuscous, sending a cloudy protuberance inwards above middle; cilia blackish-fuscous, on costa yellowish.

This and the following species differ from all the preceding by the much more oblique hind-margin of fore-wings; the two are nearly allied, but immediately separable from each other by the different hind-wings.

Two females taken amongst dry scrub at Parramatta in November.

Eups. melanostrepta, *n. sp.*

♂ ♀. 6″. Head, palpi, and thorax ochreous-whitish, mixed with ochreous-grey. Antennæ ochreous-whitish, annulated with dark fuscous. Abdomen ochreous-grey. Legs ochreous-whitish, anterior and middle pair irrorated with grey. Fore-wings elongate, hind-margin very oblique; brownish-ochreous, so densely irrorated with ochreous-whitish scales that the ground-colour is entirely obscured, except on a few faint transverse streaks; two more distinct transverse ochreous-brown streaks in middle from costa to inner-margin, divergent above middle, approximated on inner-margin, where they enclose a small white spot; before these the inner-margin is obscurely whitish nearly to base; an oblique ochreous-brown streak from $\frac{3}{4}$ of costa to hind-margin below apex, and an indistinct ochreous-brown oblique streak immediately before apex; surface of wing strewn with ochreous-whitish hair-scales towards lower part of hind-margin;

six round black spots very close together on hind-margin below middle; a violet-metallic line on base of cilia, broken into roundish spots, especially towards apex; rest of cilia smoky-fuscous. Hind-wings and cilia dark fuscous.

Quite of the same form as the preceding; the forewings more suffused with ochreous-whitish, and therefore paler, with an additional black spot, the hind-wings wholly dark fuscous. Several specimens taken by Mr. G. H. Raynor at Melbourne, and also at Brighton in Tasmania, in January.

Aeolocosma, *n. g.*

Head smooth; with ocelli; tongue moderate. Antennæ shorter than forewings, filiform, in ♂ ciliated. No maxillary palpi. Labial palpi rather short, recurved, second joint with appressed scales, terminal joint shorter, slender, acute. Fore-wings elongate, moderately broad, costa slightly arched, apex rounded, hind-margin very oblique, rounded. Hind-wings ovate-lanceolate, narrower than fore-wings, pointed, cilia as broad. Abdomen moderate. Legs moderate, posterior tibiæ clothed with long hairs. Fore-wings with 12 veins; 7 and 8 stalked, to either side of apex; no secondary cell; 1 simple at base. Hind-wings with 8 veins; 3 and 4 from posterior angle of cell.

Allied to the preceding genus, and agreeing with it in the palpi, and in the possession of the black hindmarginal spots (though these are obscured in one species), but differing in the strongly ciliated antennæ of ♂, the acute hind-wings, and the different neuration. In these points the genus approaches more nearly to the type of the *Oecophoridæ*, from all of which family it is at once distinguished by vein 1 of fore-wings not being furcate at base, as well as by the secondary character of the black hind-marginal spots. In markings and shape of fore-wings the genus approximates to *Eupselia*. I have as yet only two species, confined to Australia. The larvæ are unknown.

In repose the imagos rest with the wings forming a sloping roof; they fly slowly towards sunset in sheltered places.

Aeol. iridozona, *n. sp.*

♂ ♀. $4\frac{3}{4}''$-$5\frac{1}{2}''$. Head, palpi, and thorax, dark fuscous mixed with grey. Antennæ dark grey, in ♂ with moderately long dense ciliations. Abdomen dark fuscous. Legs dark fuscous, posterior tibiæ paler and with ochreous-whitish hairs, all tarsi with indistinct whitish rings at apex of joints. Fore-wings elongate, rather narrow, hind-margin extremely oblique, apex broadly rounded; ochreous-grey, strewn with ochreous-whitish scales; two slender straight golden-ochreous black-margined transverse fasciæ, one immediately on each side of middle of wing, perpendicular to costa, and enclosing a slender pale silvery-grey space; from the dorsal extremity of second fascia proceeds a third similar golden-ochreous black-margined fascia obliquely to $\frac{3}{4}$ of costa, its posterior edge bordered by a pale silvery-grey fascia of equal breadth; six nearly square black spots, separated by silvery-whitish scales, on lower portion of hind-margin, very near together and sometimes almost confused, uppermost and lowest smaller than the rest; cilia fuscous-grey, with an indistinct dark line round apex. Hind-wings narrow, ovate-lanceolate, fuscous-grey; cilia fuscous-grey.

This elegantly marked species has a very delicate and fragile appearance; it is very distinct from all others known, It occurs at Parramatta and Sydney in August and September amongst dry scrub, in very sheltered places only; it is tolerably common, but local, and only obtainable towards sunset, when it flies gently close to the ground.

Aeol. marmaraspis, *n. sp.*

♂ ♀. $5\frac{3}{4}''$-$7.''$ Head and thorax deep bronzy-fuscous, tinged with purple. Palpi golden-yellow, terminal joint with a black line beneath. Antennæ dark fuscous, in ♂ with rather long ciliations. Abdomen blackish-fuscous, segments above suffused

with ochreous except on margins. Legs dark fuscous, tarsi with slender whitish rings at apex of joints, posterior tibiæ clothed above with long whitish hairs. Fore-wings elongate, rather narrow, hind-margin oblique, apex rather acutely rounded; dark fuscous, coarsely strewn with pale golden-ochreous scales; a short deep golden-yellow longitudinal streak of hair-scales from base, posteriorly suffused into a cloudy spot of whitish scales on disc before $\frac{1}{3}$, which is faintly expanded to costa and inner margin, forming an obsolete band; a straight rather oblique obsolete band of whitish (in some lights bluish) scales from costa before middle to just before anal angle, where it forms a small distinct white spot; a rather large clear white rectangular spot on costa at $\frac{3}{4}$, from which proceeds a cloudy band of pale leaden-blue scales towards hind-margin above anal angle; a few leaden-blue scales on hind-margin beneath apex; some irregular black scales along lower $\frac{2}{3}$ of hind-margin, tending to form obscure broken spots; cilia dark metallic grey, with ochreous reflections. Hind-wings elongate-ovate, dark fuscous-grey; cilia dark fuscous-grey, with an obsolete darker line near base.

In shape of wing this species approaches many of the *Oecophoridæ*, and the black hind-marginal spots being ill-defined, it would be difficult of location if the neuration were not examined. Specifically it is very distinct; the golden-yellow palpi, and basal line of fore-wings are marked characters; though not brightly coloured, it is a handsome insect. I have only found it on the swampy grass-covered ledges which project from the face of the perpendicular precipice that overhangs the Grose Valley by the waterfall at Govett's Leap, near Blackheath, 3,500 feet above the sea. Here it is common in November, flying languidly in the sunshine over the tops of the long grass.

Glyphipteryx, *Hb.*

Head smooth; with ocelli; tongue moderate. Antennæ much shorter than forewings, slender, filiform, in ♂ pubescent or very shortly ciliated. No maxilliary palpi. Labial palpi rather short,

thick, arched; second joint laterally compressed, often roughly scaled beneath; terminal joint as long as second, pointed. Fore-wings elongate, variable in breadth, hind-margin often indented, oblique, apex rounded, often produced. Hind-wings varying from ovate to lanceolate, narrower than forewings, cilia rather narrower or broader. Abdomen rather elongate. Legs rather short, smoothly scaled. Forewings with 12 veins; secondary cell indicated; 7 and 8 separate; 1 simple or more or less furcate at base. Hind-wings with 8 veins; 3 and 4 from posterior angle of cell, sometimes short-stalked.

The genus may always be recognized by the short palpi clothed with whorls of scales, and metallic transverse markings; it is a very conspicuously natural one, and not very close to any but *Phryganostola* and *Apistomorpha*, which have a long tuft on second joint of palpi. All the species have the same habit of alternately raising and depressing their wings when at rest, as though fanning themselves; I have noticed this habit in all the Australian and New Zealand species. They are sun-loving insects, and fly especially in the afternoon towards sunset, in grassy places.

The genus is apparently of universal distribution, but hitherto not numerous in species, 17 having been described altogether from other parts of the Globe; 18 are here described from Australia and New Zealand, where doubtless many more remain to be discovered, so that these regions would appear to be especially favoured by them. The proportion appears to be largest in New Zealand.

The larvæ are 16-legged, rather stout, and feed principally on the seeds of grasses and allied plants, except one European species on *Sedum*. I have not yet succeeded in finding the larvæ of any Australia species, but from the habits of the imago, I have little doubt that all will be found to feed in the seed-heads of different species of grass and sedge.

The following is an analytical table of the 18 species:—

I. Fore-wings without sharp apical hook in cilia.

A. Hind-wings bright yellow with fuscous margin .. ..1 Chrysolithella

B. Hind-wings wholly fuscous-grey.

1. Fore-wings with a black patch towards anal angle.

a. A white complete transverse fascia close to base .. .. ..6 Asteriella

b. A white transverse spot on inner margin near base.

*. Black patch narrow, containing 4 metallic spots in a row ..5 Triselena

**. Black patch broad, containing 5 or 6 irregular spots.. ..4 Iometalla

c. No white spot or fascia close to base.

*. With a fan-shaped posterior patch of ochreous lines ..3 Cometophora

**. Without such patch .. ..2 Atristriella

2. Fore-wings without black patch ..7 Euastera

II. Fore-wings with a sharp black apical hook in cilia.

A. Fore-wings with two conspicuous pale spots on inner margin.

1. Spots yellow .. ..10 Chrysoplanetis

2. Spots white.

a. First spot extending to costa ..9 Meteora

b. Both reaching to middle of wing only.

*. Third costal streak meeting anal streak, forming a curved fascia .. .. ..12 Asteronota

**. Third costal streak not united with anal streak .. ..11 Leucocerastes

B. Fore-wings with a slender white streak from middle of inner margin ..13 Actinobola

C. Fore-wings with four indistinct silvery-white streaks from inner margin..8 Sabella

D. Fore-wings grey, with a black streak from middle of inner margin ..16 Acrothecta

E. Fore-wings without dorsal markings before anal angle.

1. Fore-wings dull dark bronze ..14 Palæomorpha
2. Fore-wings grey, slightly bronzy-tinged .. ..15 Iocheæra
3. Fore-wings bright coppery-bronze.
   a. With a complete curved fascia beyond middle .. ..17 Astrapæa
   b. With costal and anal streaks not united .. ..18 Transversella

Glyph. chrysolithella, *n. sp.*

♂ ♀. $4\frac{3}{4}$"-7".—Head dark fuscous, behind mixed with ochreous. Palpi ochreous-yellow, second joint with three flattened whorls of black yellowish-white tipped scales, terminal joint black at base and with a black longitudinal line beneath. Antennæ dark fuscous. Thorax dark fuscous, paler on sides. Abdomen dark fuscous, with indistinct yellowish rings, anal extremity yellow. Legs dark fuscous, posterior tibiæ with a central yellowish band, posterior tarsi with two apical joints and basal rings on the others yellowish. Forewings broad, hind-margin nearly straight, very slightly sinuate above middle; dark ochreous-bronze, with a few pale scales towards disc; an obscure whitish transverse spot on inner margin near base; a violet-golden metallic streak from costa at $\frac{1}{3}$, not oblique, reaching middle of wing; a rather shorter similar streak from inner margin immediately beyond it; two minute whitish spots on costa before and beyond middle, giving rise to indications of metallic

streaks; a white spot on costa at $\frac{2}{3}$, giving rise to a straight oblique violet-golden metallic streak, reaching middle of wing; a similar opposite streak from anal angle, almost meeting this; a rather broad black longitudinal streak on disc, extending from apex of first costal streak to apex of streak from anal angle, obtusely toothed above beyond middle, containing two rather large roundish violet-golden metallic spots on its lower margin, projecting beyond it, and a much smaller similar spot between and above them; an ochreous-white spot on costa at five-sixths, and another immediately before apex, both giving rise to oblique violet-golden metallic streaks reaching middle of hind-margin, one or other of which often unites with a violet-golden metallic streak nearly along lower part of hind-margin almost to anal angle; between $\frac{2}{3}$ and five-sixths is an oblique blackish streak from costa to middle of disc; cilia with a very strong black line almost at base, grey, at apex and anal angle black, with a large white spot on middle of hind-margin, and a small one just above anal angle. Hind-wings trapezoidal, moderately broad; golden-yellow, hind-margin very broadly blackish; cilia golden-yellow, on hind-margin black at base.

This splendid species is distinguished from all others in the genus by the yellow hind-wings. It is local, but occurs rather commonly on the ledges of the precipice at Govett's Leap, Blackheath, flying slowly in the sunshine in March; also at Campbelltown, Sydney, and Parramatta; and I have seen specimens from Tasmania.

Glyph. atristriella, Z. Hor. Ross., 1877, p. 398.

"♂. $6\frac{1}{2}$". Head and thorax brown. Palpi white at base, second joint black with white rings, terminal joint black with a white longitudinal line. Antennæ fuscous. Abdomen yellowish-fuscous with broad yellowish rings, anal extremity pale yellow. Anterior legs fuscous, tibiæ with two white spots, apex of three first tarsal joints whitish; (middle legs broken;) posterior legs

blackish-fuscous, tibiæ with whitish-yellow central and apical spots, tarsi with apex of first three joints whitish-yellow, two apical joints wholly whitish. Fore-wings rather parallel-sided golden-ochreous, duller towards base, lighter on disc, on inner margin irrorated with fuscous; a strong black longitudinal streak on middle of disc, posteriorly attenuated and bent upwards, with three silvery-metallic roundish spots, one at its origin, one in middle, the third before the extremity beneath; the first of these forms the apex of a rather oblique streak from costa before $\frac{1}{3}$, which is followed at equal intervals on costa by a silvery-metallic dot, a short transverse streak, and an outwardly curved transverse fascia, attenuated above middle, ending on inner margin beyond the black discal streak; two white costal spots before apex, each giving rise to a violet-silvery metallic line, half-way across wing uniting into a thick line ending at anal angle. Hind-wings fuscous, towards the base mixed with yellowish; cilia very pale yellowish, tips grey towards apex, and with a grey-fuscous line.

One ♂ from Tasmania."

I have not seen this species; I have translated Zeller's original description, which is written with his usual accuracy, and clearly points to an insect rather nearly allied to the preceding *G. chrysolithella*, but without the yellow hind-wings; the markings of the fore-wings are very similar.

Glyph. cometophora, *n. sp.*

♂ ♀. 7″-9″. Head bronzy-grey. Palpi whitish at base, second joint clothed with three whorls of black white-tipped scales, terminal joint loosely scaled, black, with an ochreous-whitish line on each side, and an ochreous whitish sub-apical spot above. Antennæ dark fuscous. Thorax brassy-bronze. Abdomen dark greyish-fuscous, with pale ochreous rings beneath, apex pale ochreous. Legs dark fuscous; posterior tibiæ with central and apical whitish bands, posterior tarsi with whitish rings at apex of joints. Fore-wings broad, hind-margin slightly

sinuate above middle; ochreous-bronze, with a brassy tinge, with six complete or interrupted violet-silvery metallic transverse fasciæ, second to sixth starting from small whitish spots on costa; first from $\frac{1}{3}$ of costa, rather oblique, reaching to fold or sometimes to inner margin; second entire, straight, slightly oblique, on inner margin whitish; third broken in middle, apex of dorsal portion rather beyond apex of costal; sixth from five-sixth of costa to hind-margin just above anal angle, slightly curved outwardly; between third and sixth is an expanded fan-like patch of dense diverging pale ochreous lines on a black ground, its base resting on third fascia a little above middle, and its apex covering the whole length of sixth; the triangular space between this patch and inner margin is jet-black, cut by an irregular longitudinal golden-ochreous line; the fourth and fifth fasciæ are visible only as two transverse violet-silvery bars on this black space, and the corresponding whitish costal spots; a white spot on costa just before apex, sending a violet-silvery line to above middle of hind-margin; cilia whitish, greyer towards anal angle, dark fuscous-grey at apex, basal half clothed with dense golden-bronze scales, except where a white indentation meets the sub-apical silvery line. Hind-wings and cilia dark fuscous.

This handsome species is the largest of the genus, and may be known from all others by its fan-shaped patch of ochreous lines on a black ground, spreading like the tail of a comet. Common at Melbourne, frequenting rushes; also taken at Blackheath, on the Blue Mountains (3,600 feet), in November.

Glyph. iometalla, *n. sp.*

♂ ♀. 3″-3¼″. Head and thorax deep bronzy-fuscous. Palpi whitish at base, second joint with two whorls of black white-tipped scales, terminal joint clothed except apex with a whorl of black white-tipped scales. Antennæ dark fuscous. Abdomen shining dark grey, beneath silvery. Legs dark fuscous-grey, all

tarsi with slender white rings at apex of joints; posterior tibiæ with white central and apical bands, posterior tarsi with two apical joints wholly white. Fore-wings short, posteriorly dilated, hind-margin sinuate beneath apex; dark golden-bronze, with transverse golden-ochreous strigulæ; a white transverse rather inwardly oblique oblong spot on inner margin near base, reaching to middle; a silvery-white violet-tinged perpendicular streak from costa at $\frac{1}{4}$, reaching to middle; a straight silvery-white violet-tinged fascia from just before middle of costa to inner margin at $\frac{2}{3}$, expanded and more snow-white on inner margin; a rather large black patch on anal angle and lower half of hind-margin, containing five or six golden-metallic spots, its base not touching fascia, its upper edge margined by a straight whitish-ochreous line, above the posterior part of which are three other whitish-ochreous longitudinal lines, separated by blackish spaces; a silvery-white violet-tinged streak from costa to upper anterior angle of the black patch; two parallel oblique silvery-white violet-tinged streaks from costa a little before apex to hind-margin above middle, becoming white on costal cilia: cilia white, becoming dark grey at apex and anal angle, basal half separated by a dark grey line and clothed with bronzy scales, except where a white indentation meets the anterior sub-apical streak. Hind-wings and cilia fuscous-grey.

This species has a strong superficial resemblance to *Apist. argyrosema*, but apart from structural differences it is smaller, and has only a costal streak corresponding to what in *A. argyrosema* is a second complete fascia. It is allied to the succeeding species *G. triselena*, but is smaller, broader-winged, darker, and the black patch is broader and contains usually six metallic spots instead of four. Tolerably common at Brisbane in September, flying towards sunset in dry grassy places amongst thin gum scrub; from its small size it is rather difficult to see.

Glyph. triselena, *n. sp.*

♂. 4½″. Head and thorax dark fuscous. Palpi white at base, second joint with two flattened whorls of black white-tipped scales, terminal joint black with two white rings. Antennæ dark fuscous. Abdomen very long, whitish-ochreous. Legs whitish-ochreous, anterior tarsi with obsolete fuscous bands at base of joints. Fore-wings elongate, narrowed posteriorly, hind-margin slightly indented below apex; pale golden-bronze; an obscure transverse whitish spot on inner margin near base; three silvery-white, obscurely dark-margined transverse fasciæ; first from ¼ of costa obliquely outwards, angulated in middle, to inner margin before middle; second and third straight, parallel, nearly perpendicular to costa, before and beyond middle; from third below middle proceeds a rather narrow longitudinal black band, bent downwards to anal angle, thence continued along lower half of hind-margin, containing four golden-metallic spots in a row; the space between this and costa is filled by six longitudinal ochreous-whitish lines, partially confluent or separated by narrow black interspaces; two oblique nearly parallel silvery-white sub-apical streaks from costa immediately before apex to hind-margin above middle, becoming white in the grey costal cilia; some dark, metallic-grey scales at apex, cilia whitish, basal third within a fuscous line clothed with pale golden-bronze scales, except where a white indentation meets anterior sub-apical line. Hind-wings pale grey, cilia whitish-grey.

Nearest to *G. iometalla* and *A. argyrosema*, but differing from both in the peculiarly narrowed fore-wings, the much paler colouring, three complete fasciæ, and narrow black patch containing four metallic spots in a straight line. Two males taken in January on the bare dry grassy volcanic hills near Christchurch, New Zealand.

Glyph. asteriella, *n. sp.*

♀. 6″. Head and thorax dark bronzy fuscous. Palpi whitish-ochreous at base, second joint with two flattened whorls of black whitish-ochreous-tipped scales, terminal joint black with two white rings. Antennæ dark fuscous. Abdomen blackish-fuscous, posteriorly with silvery-white rings, anal extremity ochreous. Legs dark fuscous, middle and posterior tibiæ with slender central and apical whitish rings, all tarsi with slender whitish rings at apex of joints. Fore-wings elongate, rather broad, hind-margin sinuate beneath apex; deep bronze, all markings obscurely dark-margined; a clear white irregularly margined transverse fascia close to base, hardly touching costa broadest in middle; an oblique silvery-metallic streak from costa at $\frac{1}{3}$, meeting a clear white rectangular spot on middle of inner margin; a silvery-metallic transverse spot on middle of costa, and a similar spot slightly beyond it on disc; a silvery-metallic costal streak at $\frac{2}{3}$, bent obliquely inwards, reaching middle, from the extremity of which proceeds a bent longitudinal rather slender black streak to hind-margin above anal angle; above this streak are four short black longitudinal streaks on disc, and below it are two roundish confluent black spots on anal angle; an outwardly oblique silvery-metallic streak from inner margin before anal angle, cutting the first two black streaks; two silvery-metallic parallel sub-apical streaks from costa, becoming white in costal cilia, the anterior nearly meeting a curved silvery-metallic streak from anal angle along lower half of hind-margin, the posterior going to hind-margin below apex; cilia whitish, dark fuscous on costa, apex, and anal angle, basal half separated by a dark fuscous line and clothed with deep bronze scales, except where a white indentation meets the posterior sub-apical streak. Hind-wings somewhat trapezoidal, dark fuscous; cilia dark fuscous.

A handsome species, conspicuously distinct from its nearest allies through the white fascia close to base. One female taken

amongst the dense luxuriant forest clothing the steep slopes of a mountain overlooking Kangaroo Valley, near Shoalhaven, 1,500 feet above the sea, in January.

Glyph. euastera, *n. sp.*

♂ ♀. $3\frac{1}{4}''$-$3\frac{1}{2}''$. Head, antennæ, and thorax dark fuscous. Palpi whitish at base, second joint with two whorls of dark fuscous white-tipped scales, terminal joint black with two white rings. Abdomen blackish-fuscous, beneath silvery-whitish. Legs dark fuscous, middle and posterior tibiæ with white central and apical rings, all tarsi with white rings at apex of joints. Fore-wings elongate, very slightly dilated, hind-margin indented beneath apex; basal and apical thirds dark fuscous, densely strewn with whitish scales, central third bronzy-ferruginous, more or less broadly suffused with dark fuscous on costa and inner margin; a white oblique costal streak at $\frac{1}{3}$, reaching middle, ending in a leaden-metallic spot; an indistinct white spot on inner margin near base; two outwardly curved steel-blue metallic fasciæ ending in white spots on both margins, first hardly before, second beyond middle; beyond these are three white spots on costa, the first two giving rise to obsolete metallic streaks, the last sub-apical, sending a steel-blue metallic streak to hind-margin below apex; a blackish spot on apex; cilia whitish, fuscous-grey at apex and anal angle, basal half separated by a strong dark fuscous line, and clothed towards base with ferruginous scales, except where a wedge-shaped dark-margined white indentation meets the sub-apical streak. Hind-wings and cilia dark fuscous-grey.

Distinct from all others in the Australian region through the absence of both the black discal streak and the apical hook, as well as by the contrast of the central ferruginous third with the rest of the fore-wings, and the steel-blue markings. Five specimens taken on the dry grassy volcanic hills, near Christchurch, New Zealand, in January.

Glyph. sabella, *Newm.*, Trans. Ent. Soc., Lond., N.S. III., 299.

" Fore-wings shining brassy-black, with yellowish scales towards apex; four narrow fasciæ from costa, reaching to centre of wing, silvery white; close to apex two triangular white costal spots; from inner margin rise less distinct fasciæ, almost meeting those from costa; a silvery mark in anal angle; cilia pale brown, a black hook at apex. Hind-wings smoky brown, cilia concolorous. Exp. al. $5\frac{1}{2}''$.

Allied to *G. thrasonella*, but costal fasciæ more perpendicular. Two specimens from Mount Alexander Range, Victoria."

The above description is Newman's original one as written; it is palpably insufficient and inaccurate, but appears to denote an insect very different from any Australian species known to me.

Glyph. meteora, *n. sp.*

♂ ♀. $4''$-$4\frac{3}{4}''$. Head and thorax dark bronzy-fuscous. Palpi whitish at base, second joint with two oblique whorls of black white-tipped scales, terminal joint clothed with two rough whorls of black white-tipped scales, apex black. Antennæ dark fuscous. Abdomen blackish fuscous, beneath with silvery-white rings, apex white. Legs fuscous, middle and posterior tibiæ black with white central and apical rings, all tarsi black with white rings at apex of joints, posterior tarsi with two apical joints wholly white. Fore-wings moderately dilated, hind-margin indented beneath apex; dark bronzy-fuscous; a broad conspicuous white transverse fascia near base, attenuated on costa; a rather large white transverse spot on inner margin rather beyond middle, dilated in middle, reaching half across wing, its apex silvery-metallic; a short oblique silvery-metallic streak from costa rather before middle, nearly meeting the dorsal spot; two other oblique silvery-metallic costal streaks at $\frac{5}{8}$ and $\frac{3}{4}$, reaching middle; an oblique silvery-metallic streak from inner margin just before anal angle, its apex resting between extremities of

these two costal streaks; a few irregular silvery-metallic scales on hind-margin above anal angle; two very short silvery-metallic streaks from costa immediately before apex, white in costal cilia, not produced to hind-margin, apex of posterior streak ending in the roundish black apical spot, immediately beneath which is a small golden-metallic spot on hind-margin; cilia white with a strong black apical hook, basal half separated by a blackish line and clothed with bronzy scales, except where a white blackish-margined indentation meets the golden-metallic hind-marginal spot. Hind-wings and cilia dark fuscous-grey.

Nearest to *G. chrysoplanetis*, but distinguished from it and all the other species with black apical hook by the broad white transverse fascia near base, preceding the central white dorsal spot. It appears to be a mountain species, occurring amongst the rich forest-growth on the ascent of the Bulli Pass, and also on the Liverpool Ranges near Murrurundi, in October.

Glyph. chrysoplanetis, *n. sp.*

♂ ♀. 4″-4½″. Head and antennæ dark fuscous. Palpi yellowish at base, second joint with two whorls of dark fuscous broadly yellowish-tipped scales, terminal joint dark fuscous with two yellowish bands. Thorax dark fuscous, with a small yellowish spot on posterior margin. Abdomen dark fuscous, beneath with yellowish bands, apex yellowish. Legs dark fuscous, all tibiæ with oblique yellowish basal, central, and apical bands, tarsi with apex of all joints yellowish. Fore-wings strongly dilated, hind-margin sinuate beneath apex; dark fuscous, almost blackish; two rather large yellow spots on inner margin, first near base, subquadrate, reaching ⅔ across wing, second beyond middle, rounded-triangular, reaching half-way across wing; seven short oblique streaks from costa; first at ¼, second before middle, both yellow; third and fourth steely-metallic, violet-tinged, starting from small yellowish costal spots, third reaching middle of wing, fourth very short; fifth very short, yellowish,

apex steely-metallic; sixth and seventh close before apex, short, yellow; eight small roundish steely-metallic violet-tinged spots, first just beyond middle of disc, second between first and anal angle, third and fourth beneath extremities of third and fourth costal streaks, fifth on anal angle (these last three are in a straight line), sixth, seventh, and eighth on hind-margin, eighth being just below apex of seventh costal streak; cilia yellowish, with a strong black apical hook, basal half separated by a blackish line and clothed with dark fuscous scales, except where a yellowish black-margined indentation meets the eighth spot on hind-margin. Hind-wings and cilia dark fuscous.

Instantly recognisable from all others by the two conspicuous yellow dorsal spots. A handsome and common species, appearing in October and again much more plentifully in March; it occurs freely on dry grassy banks round Sydney and Parramatta, and also at Melbourne; specimens from the latter place appear somewhat larger; it flies readily in the afternoon towards sunset.

Glyph. leucocerastes, *n. sp.*

♂. 4″. Head, thorax, and antennæ dark bronzy-fuscous. Palpi white at base, second joint with two oblique whorls of black ochreous-whitish-tipped scales, terminal joint black with two ochreous-whitish rings. Abdomen dark fuscous, apex white. Legs dark fuscous, anterior and middle tarsi with slender whitish rings at apex of joints, middle tibiæ with very oblique slender white central and apical rings; posterior tibiæ with slender white central and apical bands, posterior tarsi with first joint white at base, two apical joints wholly white. Fore-wings moderately dilated, hind-margin sinuate beneath apex; dark fuscous, almost blackish; two conspicuous clear white semilunate spots on inner margin, first near base, second hardly beyond middle, each reaching half across wing, their apices curved towards apex of wing, that of second attenuated; six slender oblique white streaks from costa; first at $\frac{1}{4}$; second before middle, very

oblique, becoming obsolete before reaching middle of wing; third reaching half across wing, its lower portion steely-metallic; fourth short; fifth and sixth acutely wedge-shaped, close before apex, very short; a short oblique steely-metallic streak from anal angle, forming a white spot in cilia; between its apex and that of third costal streak is a steely-metallic spot on disc; a steely-metallic line along lower half of hind-margin, and some scattered steely-metallic scales on disc towards apex; cilia grey, with a strong black, apical hook, basal half separated by a black line and clothed with dark fuscous scales, except on a wedge-shaped black-margined indentation beneath apex containing a small whitish spot. Hind-wings and cilia dark fuscous.

Closely allied to *G. asteronota*, but larger, and the third costal streak does not unite with the streak from anal angle. Two males taken on the dry grassy hill-slopes near Murrurundi, in November.

Glyph. asteronota, *n. sp.*

♂ ♀. 3¼″. Head, thorax, and antennæ dark fuscous. Palpi whitish, with obsolete darker rings. (?) Abdomen dark fuscous, apex whitish. Legs dark fuscous, middle and posterior tibiæ with whitish central and apical bands, all tarsi with broad whitish rings at apex of joints. Fore-wings somewhat dilated, hind-margin rather strongly sinuate beneath apex; dark fuscous; two conspicuous clear white semilunate spots on inner margin, reaching half across wing, first near base, second slightly beyond middle, both outwardly oblique, their apices curved towards apex of wing; six slender oblique white streaks from costa; first at ¼; second hardly before middle, not reaching half across wing; third uniting with a similar streak from anal angle to form an outwardly curved transverse fascia; fourth short; fifth and sixth small, wedge-shaped, close before apex; some irregular silvery-white scales above anal angle beyond the transverse fascia; cilia grey (?), basal half separated by a black line and

clothed with dark fuscous scales, except on a wedge-shaped black-margined indentation a little below apex, containing a whitish spot. (?) Hind-wings and cilia dark fuscous-grey.

Very similar to the preceding; best distinguished by the smaller size, and complete fascia formed by third costal and anal streaks. Two specimens, in rather imperfect condition, taken at Auckland, New Zealand, flying over damp grass on a shady bank, in January.

Glyph. actinobola, *n. sp.*

♂. 3½″. Head and thorax deep bronze. Palpi white, second joint with two oblique whorls of blackish broadly white-tipped scales, terminal joint black with two oblique white bands. Antennæ dark fuscous. Abdomen blackish-fuscous, beneath snow-white, apex white. Legs dark fuscous, middle and posterior tibiæ with white central and apical bands, all tarsi with slender white rings at apex of joints. Fore-wings narrow, somewhat dilated, hind-margin sinuate beneath apex; dark bronze, with one dorsal and six costal slender white dark-margined streaks; dorsal streak slightly beyond middle, obliquely curved towards apex of wing, hardly reaching ⅓ across wing, tending to be produced along inner margin towards base; first costal streak beyond ¼, very oblique; second in middle, rather less oblique, not reaching half across wing, apex silvery-metallic; third before ¾, less oblique, ending in a violet-silvery metallic spot on disc; between second and third is sometimes an additional small white spot on costa; fourth, fifth, and sixth acutely wedge-shaped, small, hardly oblique, close together before apex; a violet-silvery metallic outwardly oblique streak from anal angle, ending in a spot between extremities of second and third costal streaks; an obscure violet-silvery metallic spot on hind-margin below middle; cilia white on tips, with a black hook at apex, basal ¾ separated by a blackish line and dark fuscous-grey, except a white dark-margined wedge-shaped

indentation below apex, meeting a few silvery scales on hind-margin. Hind-wings and cilia dark fuscous-grey.

Belonging to the group of *G. fischeriella*, *G. schœnicolella*, and the allied species, but distinguished from them all by the presence of an additional costal streak, nearer to the base than the dorsal streak; its nearest allies in Australia are the two following, which however do not possess the dorsal streak from middle of inner margin at all. Three ♂'s, taken at Sydney and Parramatta in dry places amongst low-growing *Carex*, in October and November.

Glyph. palæomorpha, *n. sp.*

♂ ♀. $3\frac{1}{2}''$-$3\frac{3}{4}''$. Head and thorax deep bronze. Palpi bronzy at base, second joint with two whorls of black white-tipped scales, terminal joint black with two oblique white bands. Antennæ dark fuscous. Abdomen dark fuscous, in ♀ elongate, in ♂ whitish at apex. Legs obscure fuscous, tarsi with slender whitish rings at apex of joints. Fore-wings narrow, somewhat dilated, hind-margin sinuate beneath apex; rather dark bronze, with five costal silvery-white streaks, and one dorsal silvery-metallic; first costal in middle, oblique, reaching half across wing; second before $\frac{3}{4}$, equally oblique, becoming silvery-metallic at apex, uniting with the outwardly oblique silvery-metallic dorsal streak from just before anal angle to form an angulated transverse fascia; third, fourth, and fifth, short, close together before apex; an elongate silvery-metallic spot on hind-margin below middle; a round black apical spot, beneath which are some silvery-metallic scales; cilia whitish, dark fuscous at anal angle, and with a black apical hook, basal half separated by a black line and dark fuscous, except a wedge-shaped white indentation below apex, whence proceeds a strong black sub-apical hook. Hind-winds and cilia dark fuscous.

Distinguished from the group of *G. fischeriella*, to which it approximates, by the absence of the dorsal streak from middle

of inner margin, in which and other respects it is closely allied to *G. iocheæra*, but differs in the dark bronzy ground colour, and the clearer and more silvery streaks. Three specimens taken at Brisbane, and on damp goound on the forest-clad ascent of the Bulli Pass, at rest on the heads of a species of *Juncus*, in September and October.

Glyph. iocheæra, *n. sp.*

♂ ♀. 4″-4¾″. Head and thorax dark bronzy-grey. Palpi whitish at base, second joint with two appressed whorls of fuscous whitish-tipped scales, terminal joint dark fuscous with two white rings. Antennæ dark fuscous. Abdomen elongate, dark fuscous. Legs ochreous-grey, tarsal joints basally slightly suffused with darker. Fore-wings narrow, hardly dilated, hind-margin sinuate beneath apex; dull grey, slightly tinged with bronze; one dorsal and five costal slender rather obscure white streaks, anteriorly margined with dark fuscous-grey; first costal in middle, second from before ¾, both very oblique, not reaching half across wing; dorsal from just before anal angle, very oblique, apex almost reaching extremity of second costal; third, fourth, and fifth costal streaks acutely wedge-shaped, short, almost wholly on costal cilia; a silvery-white metallic spot on middle of hind-margin; a clear round black apical spot; cilia whitish, towards anal angle dark fuscous-grey, with a strong sharp black apical hook, and with basal half separated by a black line and dark fuscous-grey, except on a whitish wedge-shaped indentation below apex, whence proceeds a sharp black sub-apical hook. Hind-wings and cilia dark fuscous-grey.

Closely allied to the preceding species, but rather larger and narrower-winged, ground colour grey only slightly tinged with bronzy, costal and dorsal streaks not silvery. Four specimens taken on rushes (*Juncus*) in swampy places in January, at Dunedin and Christchurch, New Zealand.

Glyph. acrothecta, *n. sp.*

♂. 4½"-5". Head and thorax dark bronzy-grey. Palpi white at base, second joint with two short oblique whorls of black white-tipped scales, terminal joint black with two oblique white rings and white above towards apex. Antennæ dark fuscous. Abdomen elongate, blackish-grey with white rings, apex white. Legs dark fuscous, posterior and middle tibiæ with white central and apical bands, tarsi with obsolete whitish rings at apex of joints, posterior tarsi with a clear white ring at apex of basal joint, and two apical joints wholly white. Fore-wings narrow, elongate, not dilated, hind-margin sinuate beneath apex; dull pale grey, suffused with brownish on disc and inner margin; six rather obscure white, anteriorly blackish-margined, oblique costal streaks; first at ¼, reaching to middle, partially black-margined posteriorly as well; second in middle, not reaching half across wing; third to sixth short, mostly on costal cilia, each silvery-metallic at apex; a black oblique streak from middle of inner margin, leading to an obscure whitish anteriorly black-margined spot below apex of first costal streak; a faint whitish spot on anal angle, preceded by a short curved black streak; two silvery-metallic spots on disc, beneath extremities of second and third costal streaks, sometimes united with them; a rather large conical silvery-metallic black-margined spot on hind-margin below middle; a small silvery-metallic black-margined spot on hind-margin below apex; cilia whitish, with a sharp black apical hook, fuscous-grey towards anal angle, basal half separated by a black line and fuscous-grey, except where a whitish black-margined indentation meets the small silvery-metallic sub-apical spot. Hind-wings and cilia dark fuscous-grey.

Not nearly allied to any described species; the markings have a peculiar confused appearance; the black dorsal streak from centre of inner margin is caused by the suffusion and disappearance of the accompanying white streak. Six ♂'s

taken on the dry grassy volcanic hills near Christchurch, New Zealand, in January.

Glyph. astrapæa, *n. sp.*

♂. 5½″. Head and thorax brilliant metallic coppery bronze, face dark fuscus. Palpi with second joint clothed with three whorls of black very narrowly white-tipped scales, terminal joint black with an oblique white lateral line. Antennæ dark fuscous. Abdomen blackish-fuscous, apex ochreous-white. Legs dark bronzy-fuscous, middle and posterior tibiæ with obscure slender whitish central and apical rings, tarsi with obscure white rings at apex of joints, two apical joints of posterior tarsi wholly white. Fore-wings moderately broad, somewhat dilated, hind-margin sinuate below apex; brilliant metallic coppery-bronze, with violet-silvery metallic obscurely dark-margined markings; a short oblique streak from costa before middle; a rather irregular outwardly curved fascia from beyond middle of costa to anal angle; a rather short oblique streak from ¾ of costa, opposite extremity of which is a triangular spot on hind-margin below middle; two small spots on costa before apex, second produced as a curved streak to hind-margin below apex; cilia whitish towards apex, blackish-fuscous towards anal angle, with a black apical hook, and intersected by a strong black line, obliterated at anal angle and where a white black-margined indentation meets the sub-apical streak. Hind-wings and cilia blackish-fuscous.

This and the succeeding species are very handsome insects, not coming very near any others, but very closely allied together; *G. astrapæa* is distinguished by the total absence of the longitudinal streak from base, and by the complete fascia beyond middle; in other respects it is extremely similar. One ♂ taken flying in the sun in a grassy swamp near Cambridge, New Zealand, in January.

Glyph. transversella, *Wkr.*, Brit. Mus. Cat., 849 (Argyresthia).

♂ ♀. 5½"-6". Head and thorax brilliant metallic-bronze, face dark fuscous. Palpi yellowish at base, second joint with three whorls of black white-tipped scales, terminal joint black with a white lateral line. Antennæ dark fuscous. Abdomen in ♂ dark bronzy-fuscous, beneath silvery-white, in ♀ blackish, apex whitish. Legs dark bronzy-fuscous, tarsi with whitish rings at apex of joints, posterior tibiæ with white central and apical rings, posterior tarsi with two apical joints wholly white. Fore-wings moderately broad, somewhat dilated, hind-margin sinuate below apex; brilliant metallic coppery-bronze, with golden-silvery metallic obscurely dark-margined markings; an indistinct paler bronzy-yellowish central longitudinal streak from base to beyond middle, broadest posteriorly, attenuated at base; a short oblique streak from costa before middle; an oblique streak from costa beyond middle, and a rather oblique streak from anal angle, which are not united, apex of dorsal streak lying beyond apex of costal; a rather short oblique streak from ¾ of costa, opposite the extremity of which is a triangular spot on hind-margin below middle; two small spots on costa before apex, second produced as a curved streak to hind-margin below apex; cilia whitish towards apex, dark fuscous towards anal angle, with a black apical hook, basal half, except towards anal angle, separated by a black line and clothed with bronzy scales, except where a white black-margined indentation meets the sub-apical streak. Hind-wings and cilia blackish-fuscous.

Very nearly allied to *G. astrapæa*, but slightly less brilliant, and characterised by the paler central streak from base, and the costal and dorsal streaks beyond middle not being united into a fascia. Eight specimens taken flying gently in the shade over a damp grassy sheltered bank near Auckland, New Zealand, in January.

Apistomorpha, *n. g.*

Head smooth; with ocelli; tongue moderate. Antennæ much shorter than fore-wings, slender, filiform. No maxillary palpi. Labial palpi rather short, thick, arched; second joint beneath with a loose rather long tuft of projecting hairs, terminal joint loosely scaled, slender, pointed. Fore-wings elongate, hind-margin oblique, sinuate beneath apex, apex rounded, produced. Hind-wings ovate-lanceolate, rather pointed, narrower than fore-wings, cilia as broad as hind-wings. Abdomen rather elongate. Legs rather short, smoothly scaled. Fore-wings with 12 veins; secondary cell indicated; 7 and 8 stalked, one to each side of apex; 1 very shortly furcate at base. Hind-wings with 8 veins; 3 and 4 from posterior angle of cell.

Closely allied to *Glyphipteryx*, and in superficial appearance extremely similar, but characterised clearly by the stalking of veins 7 and 8 of forewings, and the tuft on second joint of palpi; in the latter character it resembles *Phryganostola*, but differs in the venation.

The habits of the imago are similar to those of *Glyphipteryx;* it has the same motion of fanning its wings when at rest. The larva is yet unknown.

Apist. argyrosema, *n. sp.*

♂ ♀. $3\frac{1}{2}''$-$4\frac{1}{2}''$. Head and thorax dark fuscous. Palpi white at base, second joint with two whorls of black white-tipped scales, produced beneath to form a rough tuft of black and white hairs; terminal joint black, clothed except extreme apex with two whorls of black white-tipped hairs. Antennæ dark fuscous. Abdomen dark fuscous, with silvery-whitish rings. Legs dark fuscous, all tarsi with slender white rings at apex of joints, posterior tibiæ with white central and apical bands, posterior tarsi with two apical joints wholly white. Fore-wings rather short, rather narrow, hind-margin distinctly sinuate; dark

golden-bronze, with transverse golden-ochreous strigulæ; a white transverse spot on inner margin near base; a straight silvery-metallic streak from costa before $\frac{1}{3}$, reaching to fold; two straight parallel silvery-metallic transverse fasciæ, first from middle of costa, second from $\frac{2}{3}$ to anal angle, sometimes shortly interrupted below middle; two small silvery-metallic spots on costa at $\frac{3}{4}$, and a little before apex, becoming white in costal cilia; beneath the anterior one is a small discal silvery spot; a sub-apical silvery-metallic streak from costa to hind-margin a little below apex; a triangular black patch on hind-margin above anal angle; its base resting on lower part of second fascia, its apex on middle of hind-margin, containing five or six irregular golden-metallic spots; above this patch are sometimes one or two longitudinal black lines on disc; cilia whitish, grey at apex and anal angle, basal half separated by a dark fuscous line and clothed with golden-ochreous scales, except where a white indentation meets the sub-apical silvery streak. Hind-wings and cilia dark fuscous.

A handsome species, bearing considerable resemblance in markings to *Glyph. iometalla* and *Glyph. triselena;* being distinguished from the former by its larger size and the second complete fascia, from the latter by its darker colouring and broader irregularly-spotted anal patch. Rather common, occurring round Sydney and Parramatta, and at Bowenfels and Tarana on the Blue Mountains, about 2,500 feet above the sea; it flies in the sunshine towards sunset over dry grassy banks, in September, November, and from January to March, so that there is probably a succession of broods.

Phryganostola, *n. g.*

Head smooth; with ocelli; tongue moderate. Antennæ about half as long as fore-wings, filiform, in ♂ very shortly ciliated. No maxillary palpi. Labial palpi rather short, thick, arched; second joint clothed with long loose projecting hairs beneath,

forming a broad tuft; terminal joint short, acute. Fore-wings elongate, variable in breadth, apex produced, hind-margin indented, very oblique. Hind-wings lanceolate or ovate-lanceolate, narrower than fore-wings, pointed, cilia about as broad. Abdomen elongate, slender. Legs moderate, smoothly scaled. Fore-wings with 12 separate veins; secondary cell indicated; 1 simple or furcate at base. Hind-wings with 8 veins; 3 and 4 from posterior angle of cell.

Nearly allied to *Glyphipteryx*, but differing in the long tuft on second joint of palpi; from *Apistomorpha* it is distinguished by veins 7 and 8 of fore-wings not being stalked. The fore-wings and abdomen are mostly more elongate than in either of these genera. The imagos have the same habit of fanning themselves when at rest, but frequent the shade rather than the sunshine, and are less brilliantly marked. The larvæ are at present unknown. The four species described here may be known from one another by the following characteristics:—

1. Fore-wings with scattered silvery-metallic spots .. .. drosophaës
2. Fore-wings with central longitudinal white streak from base.. .. .. euthybelemna
3. Fore-wings with white streak from base along inner margin .. .. oxymachæra
4. Fore-wings unicolorous pale grey .. achlyoëssa

Phryg. drosophaës, *n. sp.*

♂. 6″. Head and thorax dull bronzy-grey. Palpi ochreous-white at base, second joint with a long rough tuft of mixed black and white hairs, terminal joint slender, black, with two white rings. Antennæ dark fuscous. Abdomen dark fuscous, apex whitish. Legs dark fuscous, tarsi with white rings at apex of joints, posterior tibiæ dull grey, apex white. Fore-wings rather broad, dilated, dull fuscous-grey, with fine

transverse ochreous strigulæ, and silvery-metallic coarsely black-margined markings; five short rather oblique costal streaks, first before, second beyond middle; a spot on inner margin beyond middle, and a short rather oblique streak from anal angle; three spots on hind-margin, respectively below middle, in middle, and below apex; five spots on disc, first two forming a curve with second costal and first dorsal streak, second two forming a parallel curve with third costal and streak from anal angle, fifth beneath apex of fourth costal streak; a small silvery-metallic spot in apex; cilia whitish, with a black apical hook, basal half separated by a black line, and dark purple-fuscous, except where a white black-margined indentation meets the sub-apical silvery spot. Hind-wings and cilia dark fuscous-grey.

This is the broadest winged species of the genus. It appears to be a shade-loving insect; two ♂'s taken in a deep gully beneath damp overhanging rocks near Parramatta, in October.

Phryg. euthybelemna, *n. sp.*

♂. 5½″. Head and thorax light bronzy grey. Palpi pale ochreous, second joint beneath with a rather long rough projecting fringe of white hairs. Antennæ dark fuscous. Abdomen ochreous-grey, apex whitish-ochreous. Legs fuscous-grey, tarsi with whitish rings at apex of joints, posterior tibiæ with whitish central and apical rings. Fore-wings moderate, slightly dilated, pale ochreous-bronze, with pure white fuscous-margined markings; a rather broad central longitudinal streak from base to ⅔; a small spot on costa about ¼, slenderly produced along costa towards base; a short oblique streak from costa before middle, followed by a small obscure costal spot; a longer oblique streak from middle of costa, and a rather oblique streak from anal angle, their extremities meeting in a silvery-metallic spot on apex of basal streak; the apical half of costa filled with seven short rather oblique white streaks, separated only by their dark fuscous margins; an irregular silvery-metallic streak along

lower part of hind-margin, black-margined anteriorly; apex blackish, with some silvery-white scales; cilia white, with a blackish apical hook, towards anal angle fuscous-grey, basal half separated by a black line and fuscous-grey, except where a white black-margined indentation meets hind-margin below apex. Hind-wings fuscous-grey, cilia rather paler.

An elegantly-marked species, conspicuous through the central basal streak. Several ♂'s taken by Mr. G. H. Raynor at Melbourne, and also at Brighton in Tasmania, in January.

Phryg. oxymachæra, *n. sp.*

♂ ♀. $4\frac{3}{4}''$-$5\frac{3}{4}''$. Head whitish. Thorax whitish, sometimes suffused with fuscous. Palpi white, second joint with two fuscous-grey rings, beneath with a long loose projecting tuft of white hairs, mixed with a few fuscous-grey. Antennæ dark fuscous. Abdomen very elongate, especially in ♀, varying from pale ochreous to dark fuscous-grey; with whitish rings. Legs fuscous-grey or ochreous-grey, posterior tibiæ white at apex, all tarsi fuscous or dark fuscous with white rings at apex of joints. Fore-wings elongate, narrow, hardly dilated, dull fuscous, sometimes suffused with whitish along costa, with white dark-margined markings; a broad streak along inner margin from base to beyond middle, thence attenuated and directed obliquely upwards, ending on middle of disc at $\frac{2}{3}$ from base; eight rather short oblique costal streaks, none reaching half across wing, first at $\frac{1}{4}$, produced along costa towards base, all sometimes rendered obsolete by a general white suffusion of the costa; a rather short oblique streak from anal angle, ending in a bright silvery-metallic spot on disc; a small silvery-metallic spot on hind-margin below middle; cilia white, with a black apical hook, and intersected by a strong black line, except where a white black-margined indentation meets hind-margin beneath apex. Hind-wings fuscous-grey, cilia whitish.

Remarkable from its lanceolate wings and very elongate abdomen; it varies rather considerably in depth of colouring. Six specimens taken on the dry grassy volcanic hills near Christchurch, New Zealand, in January.

Phryg. achlyoëssa, *n. sp.*

♂. 5½″. Head and thorax whitish-grey. Palpi whitish-grey, mixed with dark fuscous, second joint beneath with a long loose prejecting fringe of hairs. Antennæ dark fuscous. Abdomen elongate, dark fuscous. Legs pale ochreous-grey. Fore-wings elongate, narrow, hind-margin strongly sinuate below apex; pale whitish-grey, faintly strigulated transversely with darker; a few solitary black scales, tending to be arranged longitudinally on fold and lower median vein; cilia whitish, with an obscure dark fuscous apical hook, basal ⅔ separated by a blackish line and dark smoky-grey. Hind-wings and cilia fuscous-grey.

An inconspicuous narrow-winged almost unicolorous species. One ♂ taken flying at dusk on a bare grassy hill near Wellington, New Zealand, in January.

ERECHTHIADÆ.

I have at present five genera of this family, which may be thus tabulated:—

A. Face smooth .. .. Hippiochætes

B. Face rough-haired.

I. Fore-wings with 12 veins .. .. Eschatotypa

II. Fore-wings with 11 veins.

a. Veins 6 and 7 of fore-wings stalked Ereunetis

b. Veins 6 and 7 of fore-wings separate.

1. Veins 5 & 6 of hind-wings stalked Erechthias

2. Veins 5 & 6 of hind-wings separate Comodica

HIPPIOCHÆTES, *n. g.*

Head roughly tufted above, face smooth; ocelli (?); no tongue. Antennæ shorter than forewings, in ♂ thickened, finely ciliated. Maxillary palpi rather short, folded. Labial palpi short, slender, drooping. Fore-wings elongate, rather narrow, hind-margin very obliquely rounded. Hind-wings lanceolate, narrower than fore-wings, cilia nearly twice as broad. Abdomen moderate. Legs rather short, slender, posterior tibiæ and first joint of tarsi clothed beneath with rather long dense hairs. Fore-wings with (apparently) 11 separate veins. Hind-wings with 8 veins; 5 and 6 stalked; one to each side of apex.

This genus, containing at present only a single species, is very remarkable, affording a clear connecting link between the *Glyphipterygidæ* and *Erechthiadæ*. It differs from the rest of the *Erechthiadæ* in the smooth face, and in superficial marking, and I have not been able to properly examine the neuration of the single specimen; but the roughly-tufted crown prevents its association with the *Glyphipterygidæ*, and its reference to the *Erechthiadæ* is clearly determined by the absence of a tongue, the development of the maxillary palpi, and the short drooping labial palpi, as well as by what can be made out of the neuration. Its habits are at present unknown.

Hipp. chrysaspis, *n. sp.*

♂. $3\frac{3}{4}''$. Head dark ochreous mixed with fuscous on crown, face dark fuscous mixed with ferruginous. Palpi pale whitish-grey. Antennæ dark fuscous. Thorax and abdomen blackish-fuscous. Legs black above, shining ochreous-white beneath. Fore-wings blackish-fuscous; a large acute-triangular yellow oblique spot on inner margin at base, its base extending from middle of base of wing to $\frac{1}{4}$ of inner margin and including a roundish black spot, its apex resting on disc just before middle; a rather smaller oblique triangular yellow spot on inner margin before anal angle, bisected by a blackish line from its apex to

its base, its base broad, its apex reaching half across wing beyond middle of disc, its anterior side parallel to the posterior side of first spot; a very oblique white streak from middle of costa to above apex of second dorsal spot; a second much less oblique white streak from costa before $\frac{3}{4}$, reaching $\frac{2}{3}$ across wing; between its apex and that of second dorsal spot is a silvery-metallic spot near hind-margin; an oblique white sub-apical streak from costa; a silvery-metallic line along lower part of hind-margin; cilia white at tips, basal $\frac{2}{3}$ dark fuscous-grey, round apex (apparently) silvery-white with a black intersecting line. Hind-wings and cilia dark fuscous.

This is a beautiful and singular insect, not closely resembling any other known. I have but one specimen, of which the apical cilia are a little injured, but otherwise very perfect; taken at rest on a fence in Sydney, in November.

Comodica, *n. g.*

Head rough all over, tufted between eyes; with ocelli; no tongue. Antennæ shorter than fore-wings, in ♂ thickened, basal joint large, broadly compressed. Maxillary palpi moderate, folded. Labial palpi moderate, porrected, rather slender, with appressed scales; terminal joint much shorter than second, bluntly pointed. Fore-wings elongate, rather narrow, tolerably evenly pointed. Hind-wings lanceolate, hardly narrower than fore-wings, apex rather produced, very acute, cilia rather broader. Abdomen elongate. Legs moderate, posterior tibiæ clothed with long hairs. Fore-wings with 11 separate veins, sub-costal obsolete towards base; secondary cell indicated; 1 simple. Hind-wings with 8 separate veins, sub-costal obsolete before middle, 6 running to apex.

The genus is readily recognised by the neuration, especially by the separation of veins 5 and 6 of hindwings, the sharp rather produced apex of hind-wings, and the double apical hook of fore-wings. In repose the imago sits closely appressed to

the surface, the double apical hook on the fore-wings being turned up, so as to present the semblance of four short erect tails round the posterior extremity of the insect. I have only one species, of which the larva is unknown.

Com. tetracercella, *n. sp.*

♂ ♀. 4″ 5″. Head whitish-ochreous, with a blackish-fuscous spot between antennæ. Palpi whitish-ochreous. Antennæ in ♂ dark fuscous above, whitish-ochreous towards base, in ♀ wholly whitish-ochreous. Thorax pale ochreous, with an irregular blackish central spot. Abdomen dark ochreous-grey, apex pale ochreous. Legs ochreous-whitish, anterior tibiæ suffused with dark fuscous, middle tibiæ with slender oblique dark fuscous central and apical bands, all tarsi suffused with dark fuscous at base of joints. Fore-wings ochreous-white or cream colour, sometimes partially suffused with ochreous; five oblique streaks from costa and five from inner margin blackish, suffused with ochreous, of variable intensity; a minute blackish spot on costa at base, sometimes obsolete, and a rather larger one on inner margin at base; first costal streak near base, generally very short, sometimes suffusedly produced very obliquely to apex of second; second at ⅓, sometimes broad, very oblique, reaching half across wing; third from middle of costa, broadest of all, very oblique, not reaching half across wing; fourth a little beyond it, slender, bent at apex to meet extremity of third; fifth close before apex, very oblique, consisting of a few black scales preceded by a rather broad ochreous streak; first dorsal streak oblique, close to base, reaching middle; second at ¼, equally oblique, apex produced to meet extremity of second costal; third broad, in middle, fourth just beyond it, both often confluent and blotch-like, reaching half across wing, where their apices are often produced as slender longitudinal lines; fifth irregular, spot-like, on anal angle; a strong black apical streak, extending obliquely downwards from apex to disc below

extremities of third and fourth costal streaks; cilia ochreous-white, becoming grey at anal angle, containing a clear black spot directly above apex, and another more obscure directly below it, and with two straight thick black lines projecting from apex, the one rather obliquely upwards, the other rather obliquely downwards, beneath the lower of which the cilia are excavated to base by a curved wedge-shaped indentation. Hind-wings and cilia fuscous-grey.

The sharp erected apical hooks give this insect a singular appearance in repose. It has a peculiar streaked and variegated ornamentation, and does not nearly resemble any other. Common at Sydney on fences from November to January; also taken at Brisbane in the open bush in September.

ESCHATOTYPA, *n. g.*

Head rough all over, tufted between eyes; with ocelli; no tongue. Antennæ shorter than fore-wings, in ♂ somewhat thickened, basal joint slightly broader. Maxillary palpi long, folded. Labial palpi moderately long, porrected; second joint with a few bristles above, and clothed beneath with short projecting hairs, especially at apex; terminal joint much shorter than second, bluntly pointed, loosely scaled. Fore-wings elongate, somewhat dilated, hind-margin very obliquely rounded. Hind-wings ovate-lanceolate, rather narrower than fore-wings, cilia narrower. Abdomen rather elongate. Legs moderate, posterior tibiæ smoothly scaled, beneath fringed with long hairs. Fore-wings with 12 separate veins; 5 branches to hind-margin; sub-costal obsolete towards base; secondary cell indicated; 1 furcate at base. Hind-wings with 8 veins, sub-costal obsolete before middle; 5 and 6 stalked, 6 running to hind-margin.

This genus differs from all the rest of the family in possessing 12 veins (all separate) in the fore-wings, and is proportionately somewhat broader winged. In repose the apex of the fore-wings is somewhat turned up, but not very conspicuously.

Esch. melichrysa, *n. sp.*

♂ ♀. 4″-6″. Head snow-white. Palpi white, fringe of second joint mixed with dark fuscous-grey. Antennæ whitish-ochreous, basal joint white. Thorax white, irregularly suffused on margins with greyish-ochreous. Abdomen dark ochreous-grey. Legs pale greyish-ochreous, tarsi suffused with darker grey at base of joints. Fore-wings white, with irregular and partially suffused greyish-ochreous or yellow-ochreous markings; an oblique rather narrow dark-margined band from $\frac{1}{3}$ of costa, meeting an obsolete similar band from $\frac{1}{3}$ of inner margin on disc, to form an angulated fascia of which the lower half is indistinct; before this are several irregular strigulæ on costa and inner margin; a similar dark-margined angulated rather broader fascia from $\frac{2}{3}$ of costa to about $\frac{2}{3}$ of inner margin, often furcate on costa (in one specimen obsoletely double throughout), most indistinct on disc; between the two fasciæ are faint greyish-ochreous clouds on disc, and sometimes indistinct fuscous-grey strigulæ on costa; apical portion of wing greyish-ochreous or ochreous, separated from second fascia by a narrow white fascia, and connected with it by an oblique greyish-ochreous dark-margined irregular band below middle; in the apical portion are two small white irregular spots on costa close before apex, a small blackish apical dot, white-margined above and below, a small white black-margined spot on hind-margin beneath apex, and some irregular confused white black-margined spots on lower part of hind-margin and on disc; all the markings are variable in shape and intensity of colouring; cilia yellowish-ochreous, with a dark grey dividing line, and a white spot below apex. Hind-wings and cilia pale slaty-grey.

A rather elegantly marked insect, but variable in size and colouring; my southern specimens are the largest and brightest. Rather common at Wellington and Dunedin, New Zealand, in December and January, beaten from forest growth; its habits are sluggish.

Ereunetis, *n. g.*

Head rough all over, tufted between eyes; with ocelli; no tongue. Antennæ shorter than forewings, in ♂ somewhat thickened, basal joint broadly compressed. Maxillary palpi moderate, folded. Labial palpi moderately long, porrected, second joint beneath with a more or less long and dense fringe of hairs; terminal joint shorter, bluntly pointed, sometimes concealed in hairs of second joint. Fore-wings elongate, rather narrow, tolerably evenly pointed. Hind-wings lanceolate, rather narrower than fore-wings, cilia rather broader. Abdomen elongate. Legs moderate, posterior tibiæ beneath or entirely clothed with long hairs. Fore-wings with 11 veins; sub-costal obsolete towards base; secondary cell indicated; 6 and 7 stalked, both to costa; 1 simple. Hind-wings with 8 or 7 veins (vein 7 being sometimes obsolete); sub-costal obsolete before middle; 5 and 6 stalked, one to either side of apex.

Distinguished from all the other genera by the stalking of veins 6 and 7 of fore-wings; from *Erechthias*, to which it comes nearest, also by vein 1 of fore-wings not being furcate at base. In one species the hind-wings (? in ♂ only) possess a peculiar thickened patch of scales on disc near base, and in another a transparent hyaline spot in the same place. The species are rather retired and sluggish in habit; the only larva known appears to feed in the bark of trees. There are three species known to me, distinguished as follows:—

A. Hind-wings with a transparent patch at base .. .. 3. iuloptera

B. Hind-wings without a transparent patch at base.

1. Fore-wings with faint ochreous-yellow bands .. .. 1. selenophanes
2. Fore-wings with dark fuscous and ochreous markings .. .. 2. brontoctypa

Ereun. selenophanes, *n. sp.*

♂. $3\frac{3}{4}''$-$4''$. Head snow-white. Antennæ white, slenderly annulated with dark fuscous, and with a broader blackish band in middle, and four other black rings towards apex. Palpi snow-white, second joint of labial palpi with a short fringe. Thorax white, suffused with pale yellowish on sides. Abdomen ochreous-grey, beneath whitish-ochreous. Legs ochreous-whitish, tarsi suffused with darker grey at base of joints. Fore-wings whitish, faintly suffused with ochreous-yellowish, and with three rather darker faint ochreous-yellow transverse bands; first band near base, rather curved, margined on costa with two blackish spots; second at $\frac{1}{3}$; irregular, angulated outwards above middle, margined on costa with two very short blackish streaks; third much broader, from about $\frac{2}{3}$ of costa very obliquely outwards nearly to hind-margin, thence angulated very sharply and continued more obscurely, and parallel to hind-margin, to inner margin before anal angle, margined on costa with two very short blackish streaks; a longitudinal linear black apical spot; a faint grey line on hind-margin, becoming blackish round apex; cilia pale ochreous-yellow, with a cloudy whitish spot beneath apex. Hind-wings and cilia rather pale fuscous-grey.

A faintly-marked species, most nearly resembling *Ereum. iuloptera*, but smaller, without the transparent spot of hind-wings, and the markings differently arranged. Four ♂'s taken in the dry barren scrub above the Bulli Pass, and also at Brisbane, in September and October.

Ereun. brontoctypa, *n. sp.*

♂. $3\frac{1}{4}''$-$3\frac{3}{4}''$. Head and palpi white, second joint of labial palpi dark fuscous beneath, with a short fringe. Antennæ swollen above basal joint, white, slenderly annulated with dark fuscous, with three broader blackish bands towards apex, and sometimes one above base. Thorax ochreous-whitish, anterior margin dark fuscous. Abdomen dark grey. Legs ochreous-

grey, tibiæ darker grey. Fore-wings dull whitish, with ochreous and dark fuscous markings; a small oblique cloudy dark fuscous blotch on costa before $\frac{1}{4}$, and a rather larger oblique dark fuscous blotch from costa slightly before middle, reaching $\frac{1}{3}$ across wing; between second blotch and base the costa is slenderly dark fuscous; a much broader oblique dark blotch on costa above $\frac{3}{4}$, suffusedly truncate and reaching only $\frac{1}{3}$ across wing; two or three small irregular blackish-fuscous spots on inner margin near base; a cloudy dull ochreous streak along fold, extending to anal angle where it is expanded into a cloudy ochreous blotch, partially uniting with third costal blotch; hind-margin irregularly dark fuscous; a small linear blackish apical spot; cilia whitish-ochreous, towards anal angle grey-whitish, with a darker dividing line. Hind-wings and cilia rather pale fuscous-grey, with a roundish black thickened spot of dense scales (in ♂ only?) in disc close to base, visible on both surfaces, on lower surface forming a raised hooked projection.

Distinguished from both its congeners by the cloudy dark fuscous markings; it has somewhat the superficial appearance of a *Bucculatrix*. Three ♂'s taken amongst dry scrub at Sydney and Brisbane, in September, October, and April.

Ereun. iuloptera, *n. sp.*

♂ ♀. 4″-5″. Head and palpi white, labial palpi entirely clothed with dense rough hairs, on sides mixed with ochreous-fuscous. Antennæ ochreous-whitish, slenderly annulated with black. Thorax white, anteriorly suffused with ochreous. Abdomen elongate, whitish-ochreous. Legs whitish-ochreous, anterior tibiæ dark fuscous, middle tibiæ with dark fuscous central and apical rings, all tarsi with dark fuscous rings at base of joints. Fore-wings whitish, irrorated and irregularly suffused with pale ochreous, with indistinct cloudy ochreous markings; a roundish spot at base of costa; an oblique fascia-like spot from $\frac{1}{3}$ of inner margin, reaching more than half across wing, mixed

with blackish near inner margin; an oblique fascia-like spot from costa just before middle, reaching half across wing; an irregular spot on anal angle; a rather larger irregular suffused spot on costa about $\frac{3}{4}$; a roundish dark fuscous apical spot; costa throughout tending to be irregularly strigulated with short blackish marks, sometimes obsolete; cilia white, round apex ochreous, with tips and an irregular dividing-line dark fuscous. Hind-wings grey, with an elongate-ovate transparent patch on disc at base, beneath lower median vein; cilia whitish.

Larger than either of the two preceding, remarkable from its densely haired palpi, and the hyaline patch on hind-wings. When at rest the tips of the fore-wings are bent up very strongly, more so than in the allied species. Common at Sydney at rest on fences, from November to January, and again in May.

I have bred this species from a pupa found in the bark of a fibrous-barked species of Eucalyptus, between the layers; although I have not observed the larva, I have little doubt that it had fed in that situation. Pupa elongate, slender, pale amber, antennal sheaths separate; enclosed in a cocoon of firm silk covered with refuse; found in November.

Erechthias, *n. g.*

Head rough all over, tufted between eyes; with ocelli; no tongue. Antennæ shorter than fore-wings, in ♂ somewhat thickened, basal joint rather broader. Maxillary palpi rather short, folded. Labial palpi moderately long, porrected, second joint with from a few bristles to a dense fringe of hairs beneath; terminal joint shorter, bluntly pointed, sometimes also fringed beneath with hairs. Fore-wings elongate, rather narrow, tolerably evenly pointed. Hind-wings lanceolate, about as broad as fore-wings, cilia about as broad. Abdomen elongate. Legs moderate, posterior tibiæ clothed with long fine hairs. Fore-wings with 11 veins, sub-costal obsolete towards base; secondary cell indicated; 4 and 5 sometimes approximated on

hind-margin; 1 furcate at base, but lower sometimes partially obsolete. Hind-wings with 8 veins, sub-costal obsolete before middle; 5 and 6 stalked, one to either side of apex.

This genus appears to be of some extent; it is subject to variation with regard to the scaling of the labial palpi, which are sometimes densely rough-haired, but the gradations do not admit of further division. The neuration throughout the genus is uniform; vein 1 of fore-wings is always furcate at some distance from base, but the lower branch is sometimes only distinct at its origin. The width of the fore-wings also varies. The habits of the imago are retired and sluggish; in repose they sit flatly appressed to the surface, with the apex of the fore-wings bent upwards. Though not brightly coloured, they are elegantly marked.

The larva of one species only is known to me; it is 16-legged, without peculiarity, and feeds in the seed-heads of one of the *Liliaceæ;* the pupa is placed in a slight cocoon amongst refuse in the seed-head.

I have ten species of this genus, which may be thus tabularly arranged:—

A. Fore-wings ochreous.
  1. Fore-wings with dark fuscous streaks along margins .. .. ..6 charadrota
  2. Fore-wings without dark fuscous streaks along margins.
    a. Face white.. .. .. ..4 acontistes
    b. Face orange-ochreous .. ..5 elæorrhoa

B. Fore-wings white, with dark fuscous markings.
  1. Labial palpi beneath with long dense fringe .. ..1 mystacinella
  2. Labial palpi loosely haired, hardly rough.

a. With a central longitudinal streak from base to apex .. .. 3 stilbella

b. With a streak along inner margin from base to middle .. .. 2 chasmatias

c. With a band along inner margin from base to apex .. .. 7 chionodira

C. Fore-wings grey, with white markings ..10 aëllophora

D. Fore-wings dark fuscous with white markings.

1. Central streak from base broad, extending to hind-margin .. 8 subpavonella

2. Central streak from base narrow, not reaching middle .. .. .. 9 niphadopla

Erech. mystacinella, *Wkr.*, Brit. Mus. Cat. 1006 *(Tinea.)*

♂ ♀. 5″-7″. Head and palpi white, second joint of labial palpi with a dense long fringe beneath, more or less concealing terminal joint. Antennæ dark greyish-ochreous, slenderly annulated with whitish, with a slender black ring above white basal joint. Thorax white, anterior margin and two spots on back connected with it blackish. Abdomen whitish-ochreous. Legs white; anterior tibiæ and tarsi black above, middle tarsi with dark fuscous rings at base of joints. Fore-wings white, with a black white-sprinkled streak along inner margin from base almost to anal angle, narrow at first and partially interrupted near base, emitting two oblique teeth (the first fuscous) before and after $\frac{1}{4}$, which reach half across wing, and beyond middle dilated into a broad semi-ovate spot, reaching half across wing, containing a linear white indentation on its posterior edge; a small black spot on costa at base; a small blackish spot on disc above and between teeth of dorsal streak; four slender dark fuscous streaks from costa; first before, second beyond middle, short, very oblique; third at $\frac{3}{4}$, longer, very oblique, uniting at

apex with fourth, which is almost apical and much less oblique, extending through costal cilia, and followed by a white line, beyond which is a round ochreous posteriorly black margined spot in apical cilia, containing a crescent-shaped black mark; hind-margin faintly clouded with grey; cilia white except on the apical ochreous spot, beyond which are two distinct blackish lines round apex only, and a strong short black hook projecting directly from apical spot, being a prolongation of the black crescent shaped mark. Hind-wings fuscous-grey, cilia whitish.

A handsome species, variable in size, southern specimens being the largest. It resembles the two following species in shape of wing, and general appearance, but is immediately known by the broad toothed inner-marginal streak, as well as by the long dense hairs of the labial palpi. A common and widely distributed species, generally taken at rest on fences, without any clue to its habits; it occurs at Sydney and Parramatta, at Springwood on the Blue Mountains (1,200 feet), also at Brisbane, Melbourne, and at Brighton in Tasmania, from October to March.

Erech. chasmatias, *n. sp.*

♂. 6½.″ Head white. Palpi white, second joint of labial palpi dark fuscous above, beneath with loose scales, terminal joint loosely haired. Antennæ whitish, obsoletely annulated with darker. Thorax white, lateral and anterior margins dark fuscous. Abdomen ochreous-whitish. Legs whitish, anterior tibiæ and tarsi blackish above, middle tarsi with dark fuscous rings at base of joints. Fore-wings white, with dark fuscous markings; a broad streak along inner margin from base to beyond middle, where it is attenuated and bent upwards, ending on disc beyond middle; a slender straight line from base of costa through disc to apex, interrupted at ¾, beyond which it becomes much broader, containing a black longitudinal streak and ending in a round black apical spot; a short very oblique

blotch on costa beyond middle; a black streak along costa from about $\frac{3}{4}$ to apex; an elongate streak on hind-margin about anal angle, attenuated at both ends; cilia white, with two blackish dividing lines throughout, and indications of a projecting hook at apex. Hind-wings whitish-grey, cilia whitish, with two dark fuscous cloudy lines round apex.

At first sight very like the following species, but the markings are very differently arranged; probably other nearly allied species will be found. Two males taken at Wellington, New Zealand, amongst forest growth, in January.

Erech. stilbella, *Wkr.*, Brit. Mus. Cat. 849 *(Argyresthia)*.

♂ ♀. 6″-7″. Head white, narrowly dark fuscous on sides and behind. Palpi white, labial palpi with second joint and base of terminal joint dark fuscous externally, second joint with loose scales beneath, terminal joint with loose rather long hairs. Antennæ dark fuscous. Thorax white, lateral margins broadly dark fuscous. Abdomen ochreous-whitish. Legs whitish, anterior tibiæ and tarsi dark fuscous above, middle tarsi with dark fuscous spots at base of joints. Fore-wings white, with dark fuscous markings; a rather broad straight central streak from base to apex; extreme costal edge blackish towards base; a slender partially indistinct straight line from base of costa through disc, coalescing with the central streak at $\frac{3}{4}$ of wing; a slender very oblique streak from costa beyond middle, also coalescing with central streak before apex; a slender streak along costa from $\frac{3}{4}$ to apex; a slender streak along hind-margin throughout; a round blackish apical spot in cilia; cilia white, with two dark fuscous dividing lines throughout towards tips. innermost indistinct. Hind-wings pale fuscous-grey, cilia whitish, with a blackish dividing line round apex.

Characterised by the strong central streak from base to apex. Three specimens taken amongst forest at Auckland and Wellington, New Zealand, in January.

Erech. acontistes, *n. sp.*

♂ ♀. 5½″-7¼″. Head white, sides of crown ochreous-fuscous. Palpi white, labial palpi with second joint and base of terminal joint externally ochreous-fuscous, both clothed with rather loosely appressed hairs, apex of second joint with two or three projecting bristles above. Antennæ dark ochreous-fuscous. Thorax dark ochreous-brown, with a central longitudinal white stripe. Abdomen greyish-ochreous. Legs whitish, anterior tibiæ and tarsi dark fuscous above, middle tarsi suffused with fuscous, posterior tarsi with dark fuscous rings at base of joints. Fore-wings brownish-ochreous, darkest towards costa; a white central longitudinal streak from base to ⅔ of disc, somewhat attenuated at both ends, lower edge straight and sharply margined by a cloudy streak of blackish scales which is continued to apex of wing; two very oblique white streaks from costa, first from middle, second from ¾, extending almost to hind-margin; between them is a small cloudy white spot on disc, often confluent with the second; a slender white streak along hind-margin from beneath apex to anal angle; a blackish suffused apical spot, above which is a white spot, and sometimes anteriorly white-margined; cilia white, with a blackish dividing-line before middle, the intercepted basal portion brownish-ochreous, and with another entire blackish dividing-line beyond middle, and two others beyond it only visible on middle of hind-margin; beyond the second dividing-line at apex is a sub-quadrate blackish spot, forming a short blunt hook, being margined beneath by a short wedge-shaped indentation in the cilia. Hind-wings pale fuscous grey, cilia whitish, with two indistinct blackish lines round apex.

Nearly allied to the following species, but easily known by the white head, and pale grey hind-wings; the markings are very similar, but clearer. Common at Blackheath on the Blue Mountains (3,600 feet), and also occurring on the Bulli Pass, and at Parramatta, in September and October, and again in

March; it is a very sluggish insect, and habitually remains at rest on or near its food plant.

Larva moderately elongate, cylindrical, slightly flattened; dirty greyish-white, dorsal vessel darker, slate-coloured; head brown; second segment dark brown. Feeds in the tall spear-like seed-heads of *Xanthorrhœa Australis (Liliaceæ)*, the so-called "grass-tree;" it burrows amongst the seeds, manifesting its presence by loosening them at their base and ejecting refuse; feeds in February and March, and in August. Pupa pale amber, in a slight cocoon amongst refuse in the head.

Erech. elæorrhoa, *n. sp.*

♂. 5½″. Head bright orange-ochreous, with a narrow white longitudinal stripe on crown. Labial palpi bright orange-ochreous, beneath whitish, with loosely appressed hairs. Antennæ dark fuscous, annulated with whitish. Thorax orange-ochreous, obsoletely whitish in centre. Abdomen dark fuscous Legs ochreous-whitish, anterior and middle tibiæ and anterior tarsi suffused with dark fuscous above, middle and posterior tarsi suffused with dark fuscous at base of joints. Fore-wings bright orange-ochreous, suffused with white towards inner margin, and mixed with blackish along costa and hind-margin; a white central longitudinal streak from base to beyond ⅔, but posteriorly suffused, rather indistinct and not sharply marked; two very oblique indistinct white streaks from costa, first from middle, second from ¾, extending almost to hind-margin; some white scales on hind-margin mixed with the black; cilia dark fuscous, with a white apical spot, and indistinct blacker lines round apex. Hind-wings and cilia blackish-fuscous.

Bears a close general resemblance to *E. acontistes*, but rather smaller, brighter and more suffused, with orange-ochreous head and palpi, and blackish-fuscous hind-wings. One male only, taken at Parramatta in September, amongst dry scrub.

Erech. charadrota, *n. sp.*

♂ ♀. 5″-6½″. Head and palpi pale ochreous, face darker ochreous; labial palpi externally dark fuscous, second joint roughly scaled beneath, with two or three projecting bristles above at apex. Antennæ pale ochreous, with obsolete darker fuscous annulations. Thorax pale ochreous. Abdomen greyish-ochreous. Anterior and middle legs blackish, tarsi with slender pale ochreous rings at apex of joints; posterior legs whitish-ochreous, tarsi suffused at base of joints with dark fuscous. Fore-wings narrow, pale ochreous; a broad sharply marked ochreous-fuscous streak, suffused with blackish, along costa from base to apex, narrowest at base and dilated beyond middle; a similar more evenly broad streak along inner-margin from base to anal angle; in the costal streak are a very slender pale ochreous oblique streak from middle of costa, and an irregular streak-like pale ochreous spot before apex; cilia whitish-ochreous, with two blackish dividing-lines, and a small apical hook-like spot beyond them. Hind-wings pale fuscous-grey, cilia whitish-grey, with two blackish lines round apex.

Not nearly resembling any of its congeners; it is the narrowest-winged species of the genus. Three specimens taken amongst dry forest-scrub near Wellington and Port Lyttelton, New Zealand, in January.

Erech. chionodira, *n. sp.*

♂ ♀. 4½″-5½″. Head white, sides of crown narrowly brownish-ochreous. Palpi white, second joint of labial palpi dark fuscous externally except at apex, both joints loosely haired. Antennæ whitish, with obsolete dark fuscous annulations. Thorax ochreous browh, with a narrow white longitudinal central stripe. Abdomen whitish-ochreous. Legs white, anterior tibiæ and tarsi obscurely suffused with dark fuscous above, middle tarsi with dark fuscous rings at base of joints. Fore-wings glossy snow-white; a broad

ochreous-brown streak along inner-margin from base to anal angle, posteriorly attenuated, containing some blackish scales on inner margin; this streak is margined above by a blackish streak, commencing at base as a slender line and dilating gradually to anal angle, where it is as broad as the inner-marginal streak in middle, thence continued along hind-margin to apex, its upper edge obtusely dilated about middle of hind-margin, produced into apical cilia as a short straight projecting bar; base of costa slenderly blackish; a small cloudy subcostal blackish spot before middle; two slender blackish oblique streaks from costa, first beyond middle, very short, nearly obsolete, second midway between first and apex, longer, its apex confluent with the hind-marginal streak; cilia whitish, with three broad cloudy blackish-fuscous lines. Hind-wings and cilia white, extreme apex and two obscure lines round it fuscous.

A very distinct and elegant species. Two specimens at Auckland New Zealand, amongst forest growth on a shady bank in January.

Erech. subpavonella, *Wkr.*, Brit. Mus. Cat. 898, *(Elachista)*.

♂. 5½″. Head and palpi white, second joint of labial palpi fuscous externally, roughly scaled beneath. Antennæ ochreous-whitish, obsoletely annulated with darker. Thorax white, anterior margin sharply dark fuscous. Abdomen whitish-ochreous. Anterior legs blackish; middle and posterior legs whitish-ochreous, middle tibiæ suffused with fuscous above, middle tarsi with dark fuscous rings at base of joints. Fore-wings blackish-fuscous; a straight central longitudinal creamy-white streak from base to hind-margin below apex, becoming rather broader posteriorly, lower margin rather irregular; two oblique white streaks from costa, first from rather before middle, becoming confluent with central streak before its apex; second midway between first and apex, shorter and more suffused; cilia white, containing a blackish ovate apical spot, and with two black

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dividing-lines beyond it. Hind-wings pale fuscous-grey, cilia whitish.

This appears to be the species intended by Walker's description. From *E. niphadopla,* the only other species with dark fuscous ground-colour, it is distinguished by the white basal streak being extended to hind-margin, as well as by the considerably larger size. One male from forest at Auckland, New Zealand, in January.

Erech. niphadopla, *n. sp.*

♀. 3⅓″. Head white, sides of crown rather broadly blackish. Labial palpi blackish, terminal joint white at apex, second joint rather roughly scaled. Antennæ blackish, with indistinct whitish annulations. Thorax blackish-fuscous, with a narrow white central longitudinal stripe. Abdomen grey. Anterior legs blackish, middle and posterior legs glossy grey, apex of tarsal joints paler. Fore-wings blackish-fuscous; a rather narrow white central longitudinal streak from base to before middle; a slender white streak along inner-margin from base to anal angle, thence along hind-margin nearly to apex; two oblique moderately broad white costal streaks, first from about middle, second from ¾, each reaching about half across wing; cilia white, containing a roundish black apical spot, and three broad cloudy blackish-fuscous dividing-lines beyond it. Hind-wings rather pale fuscous-grey, darker posteriorly; cilia whitish-grey.

This is the smallest species of the genus, known by its black and white markings, and short basal streak. One female taken amongst dry scrub on the North Shore, Sydney, in December.

Erech. aëllophora, *n. sp.*

♂ ♀. 4″-4½″. Head white, slightly mixed with grey. Labial palpi with appressed scales, blackish-fuscous, internally silvery-white, apex of second joint with two or three projecting bristles

above and below. Antennæ whitish, with obsolete dark fuscous annulations. Thorax white, anterior margin narrowly blackish-fuscous. Abdomen ochreous-grey. Legs whitish, anterior pair suffused with dark fuscous above, middle and posterior tarsi with faint dark fuscous rings at base of joints. Fore-wings dull grey along costa broadly suffused with blackish; a white very oblique streak from costa near base, and a white oblique streak from $\frac{1}{4}$ of inner-margin, uniting in a white spot on disc before middle, whence proceeds a rather cloudy straight central longitudinal white streak towards apex of wing, becoming obsolete a little before it; below this streak and towards apex the ground-colour is suffusedly mixed with white; three other slender very oblique white streaks from costa, first rather beyond middle, indistinctly meeting central streak; second and third close together about $\frac{3}{4}$, running out nearly to apex; an ovate blackish apical spot, with a white blotch above and another below it, mostly in cilia; cilia white, towards anal angle fuscous-grey, with a blackish line round outer edge of apical spot, a blackish dividing-line beyond it, and a short hook-like blackish spot at extreme apex. Hind-wings and cilia fuscous-grey.

Allied to *E. niphadopla*, but not capable of being confused with it or any other species; the larger number of costal streaks, and the longitudinal central streak not extended to base are reliable points. Eight specimens taken at rest on the trunk of a fibrous-barked species of *Eucalyptus* near Parramatta at the end of January; I have little doubt that the larva had fed in the bark of the tree.

NOTES AND EXHIBITS.

Dr. Cox exhibited eight Stone Axe Heads, turned up by the plough at Castlereagh on the Nepean Flats. He was of opinion, from the position in which they were found, that they had been

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Meyrick, Edward. 1880. "Description of Australian Micro-Lepidoptera." *Proceedings of the Linnean Society of New South Wales* 5, 204–271. https://doi.org/10.5962/bhl.part.15879.

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