

AUSTRALIAN MUSEUM SCIENTIFIC PUBLICATIONS

Muir, F., 1931. Descriptions and records of Fulgoroidea from Australia and the South Pacific islands. No. I.. *Records of the Australian Museum* 18(2): 63–84. [15 January 1931].

doi:10.3853/j.0067-1975.18.1931.717

ISSN 0067-1975

Published by the Australian Museum, Sydney

nature culture **discover**

Australian Museum science is freely accessible online at
www.australianmuseum.net.au/publications/
6 College Street, Sydney NSW 2010, Australia



DESCRIPTIONS AND RECORDS OF FULGOROIDEA
FROM AUSTRALIA AND THE SOUTH
PACIFIC ISLANDS. No. I.

By

F. MUIR,

Warnham, Sussex, England.

The material dealt with in the following paper forms part of three lots of material submitted to me for identification; first, a collection belonging to the Australian Museum, Sydney; second, material belonging to the British Museum (Natural History) and, third, a small collection made by Dr. P. A. Buxton.

The Polynesian area presents some interesting problems in distribution. An expedition from Honolulu is at present at work in the eastern portion of this area. The line of migration has been largely from west to east, as the insect fauna gets poorer as we proceed east. Our knowledge of the insect fauna of the richer western islands is very meagre and records from that area will be of interest for comparison with Samoa and further east. The proximity of these islands to Australia and the comparatively easy access to them should make the problem of their insect fauna of particular interest to Australian entomologists. To build up a collection from these islands should be the ambition of at least one Australian museum.

CIXIIDÆ.

Aka tasmani sp. n.

(Fig. 1.)

♂. Length, 3.8 mm.; tegmen, 3.3 mm.

No spines on the hind tibiæ; the two median frontal carinæ near together, distinct till near the apex. The width of vertex at base a little greater than the length in the middle; the median longitudinal Y carina distinct only on the base, the fork missing. The five carinæ on mesothorax distinct. The *Sc* + *R* forking near base, the *Cu* fork about middle, all veins unbranched, except the tip of *Cu*_{1a}. The texture of head, nota and tegmina between veins finely rugose.

Dark brown; lighter over carinæ and in middle of pronotum. Tegmina light brown, veins darker; basal half of costa light, three or four lighter marks on apical half of costal margin. Legs light banded with slightly darker marks.

The anal segment truncate at apex and produced into a short, triangular spine at each apical corner. The three spines at apex of perianthium differ from those

of *A. finitima* (Walker), and the genital styles are distinct, but the affinity of these two species is evident.

♀. Length, 4 mm.; tegmen, 3.3 mm.

Pygofer wider than long, ovipositor complete, reaching beyond the anal segment. In build and colour similar to male, but inclined to be darker.



FIGURE 1.—*Aka tasmani*, lateral view of male genitalia; a, apex of anal segment.

Locality.—Described from four ♂ and two ♀ from Hobart, Tasmania (G. H. Hardy, May, July, 1913). There is one large ♀ (length 5.2, tegmen 4 mm.) from the same locality, which appears to be the same species.

Type.—Type in Australian Museum, paratype in British Museum (Natural History).

Aka hardyi sp. n.

♂. Length, 3.8 mm.; tegmen, 3.3 mm.

Vertex shorter than in *A. tasmani*; the areolet reaching nearly to the base; the medio-lateral carinae of mesonotum very indistinct. The rugose surface of head, nota and tegmina similar to *A. tasmani*. The apex of the anal segment is round, not produced, without any spines; the genital styles are more rounded at the apex.

Dark brown, the carinae slightly lighter. Tegmina light brown, veins slightly darker, *Sc* and *R* more so; a few darker marks on costa, over the apical veins and in the middle of corium; a dark mark on margin beyond clavus. Legs, thoracic pleura, the pygofer and genital styles light.

Locality.—One ♂ from Mount Wellington, Tasmania (G. H. Hardy, 30th September, 1917).

This genus has hitherto been represented by one species from New Zealand. It is interesting to get these two distinct species from Tasmania which are quite typical of the genus.

Type.—Type in Australian Museum, Sydney.

Oliarus doddi sp. n.

(Fig. 2.)

♀. Length, 4 mm.; tegmen, 5 mm.

Width of vertex at base about equal to length in middle, apex narrower than base, narrowing more rapidly from middle, areolet reaching back to middle,

narrowly triangular, base angularly emarginate, apex slightly rounded. Median frontal carina with a minute fork at base. First claval vein joining second one-third from its base (measuring the second from where it leaves the scutellar margin), *Cu* forking slightly distad of middle of corium, *Sc + R* very slightly more distad, *M* at nodal line.



FIGURE 2.

Oliarus doddi, dorsal view of head.

Frons light brown with dark marks on each side of carina at apex; vertex dark brown. Pronotum light brown or yellow, darker brown in middle and on lateral margins. Mesonotum reddish-brown, dark brown between the middle and medio-lateral carinae and anteriorly, also on the anterior and middle portion of lateral areas. Tegulae yellow. Coxae and femora dark brown, tibiae and tarsi yellow. Abdomen brown with the basal tergites light. Tegmina hyaline, slightly opaquely white, a dark brown mark across base, a dark mark on commissure at apex, which extends as a faint fuscous mark partly across tegmen, a dark mark over nodal line, stigma yellow on outer margin, otherwise dark brown, apical cross veins dark brown, extending slightly into cells; apices of apical veins brown, other veins same colour as cells. Wings hyaline with dark veins.

Locality.—One ♀ specimen from Townsville, Queensland (F. P. Dodd, 24th October, 1903).

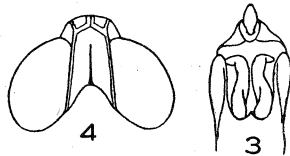
Type.—Type in the British Museum (Natural History).

Oliarus hackeri sp. n.

(Figs. 3 and 4.)

♂. Length, 5.4 mm.; tegmen, 5.8 mm.

Length of vertex in middle very slightly greater than width at base, apex slightly rounded, base deeply, roundly emarginate; areolets small, nearly square, about one-sixth the length of sides of vertex, in normal dorsal view not all visible (figure drawn with apex turned up to show areolets). First claval vein joining second one-third from its base; *Cu* forking near middle of corium, *Sc + R* near to nodal line, *M* at nodal line.

FIGURE 3.—*Oliarus hackeri*, ventral view of male genitalia.FIGURE 4.—*Oliarus hackeri*, dorsal view of head

Full view of pygofer figured; the lateral margins of pygofer entire, curved.

Head dark brown, carinae and genae light, white over fenestra, the median longitudinal carina of vertex dark. Pronotum light brown or yellow, dark brown

behind eyes and on lateral margins. Mesonotum reddish-brown, dark brown between the middle and medio-lateral carinæ and along the outer side of the lateral carinæ. Tegulæ yellow. Coxæ and femora dark brown, tibiæ and tarsi yellow. Abdominal sternites dark brown, with a fine light posterior margin; tergites light brown, a dark brown mark down the middle of anal segment. Tegmina clear hyaline, veins light brown, with minute granules bearing fine black hairs. Stigma yellow on outer portion, brown on inner; commissure dark brown to the apex of claval vein, then white or light to apex, which is dark brown. Wings hyaline with light brown veins, costal margin white.

There are five ♀ I place with this; one is similar in colour to the ♂, but the veins of tegmina are darker; the other four have an irregular and broken brown mark from near base of clavus, over *Cu* fork across to node.

Locality.—One ♂ from Brisbane (H. Hacker, 5th August, 1913, No. 24), five ♀ from Townsville (F. P. Dodd, September-November, 1902).

Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

Iolania vittipennis sp. n.

(Fig. 5.)

♂. Length, 3 mm.; tegmen, 4.3 mm.

This genus is very close to *Cixius*, but there are no spines on the hind tibiæ except at the apex. Up till now it has been found only in the Hawaiian Islands.

Width of vertex at base subequal to length in middle, the base shallowly and roundly emarginate, the apex broadly angular, base broader than apex; the transverse carina near apex, angular; the medio-longitudinal carina distinct; frons slightly longer than broad, narrowest at base, broadest on apical half, median carina distinct, no median ocellus; clypeus tricarinate, the laterals continued from frons, flat, the base roundly produced into frons. Tegmina long, narrow, *Sc + R* forking two-thirds from base of corium, *Cu* about the same level, *M* beyond nodal line; the *M* stem lies near to *Cu* and in one specimen touches *Cu*.



FIGURE 5.

Iolania vittipennis, lateral view of male genitalia.

Head and pronotum light green or yellowish, slightly red in middle of frons and clypeus. Mesothorax dark brown. Tegulæ and legs light stramineous, abdomen dark. Tegmina hyaline, a dark brown mark from base of clavus to apical margin between *Cu* and *M*, this extends to the hind margin in clavus, veins the same colour as cells, apical margin brown, costal margin light. Wings hyaline with brown veins, fuscous over the posterior half and along the apical margin.

The genitalia figured. They show very little affinity to the Hawaiian species.

Locality.—Two ♀ and a damaged ♂ from Queensland (Dodd, 1904).

Type.—Type in the British Museum (Natural History); paratype in Australian Museum.

Iolania clypealis sp. n.

♂. Length, 2.3 mm.; tegmen, 3 mm.

Width of vertex slightly greater than length, apex slightly angular, base slightly emarginate; transverse carina slightly curved near apex, longitudinal median carina fine. Width of frons at apex greater than length in middle, widest at apex, median carina distinct, continued on to clypeus, no median ocellus; clypeus swollen, roundly produced into apex of frons (fronto-clypeal suture strongly curved), lateral carinae fine, median carina distinct; on middle line clypeus longer than frons. Claval veins forked in middle of clavus, *Sc + R* fork and *Cu* fork about the same level, *M* fork beyond nodal line.

Frons, clypeus and genæ dark brown or black, the lateral carinae of frons, the vertex, pronotum and tegulae yellow; mesonotum dark brown, legs light brown, abdomen dark brown, genitalia lighter. Tegmina hyaline, slightly stramineous, veins light, apical veins light brown, veins with fine granules bearing dark hairs. Wings hyaline with darkish veins.

The absence of spines on the hind tibiae brings this species into *Iolania* along with *vittipennis*, but they have little affinity with one another.

Locality.—Three ♂ from Brisbane, Queensland (H. Hacker, 18th November, 1911, No. 131).

Type.—Type in the British Museum (Natural History).

Tarberus jacobii sp. n.

(Figs. 6 and 7.)

♂. Length, 2.6 mm.; tegmen, 3.4 mm.

The claval veins forking a little before the middle of clavus, *Sc + R* and *Cu* forking about the same level, *M* forking at nodal line; *Sc + R*, *M* and *Cu* arising separately from basal cell; *M* with five apical veins, 1, 1a, 2, 3 and 4. Fairly slender form, tegmina tectiform. Length of vertex in middle less than width across base; apex much narrower than base, truncate; base deeply roundly emarginate; lateral carinae straight, deep, the vertex excavate; in lateral view vertex straight, ascending, meeting frons at an angle less than 90°. Frons long, the base narrow, the apex wide, sides straight, no median carina, the laterals deep; the base of the clypeus extending roundly into the apex of frons. Clypeus long, slightly swollen, median carina distinct, extending from base to apex; laterals not so distinct, shorter. No median ocellus. Antennae short, second segment about as long as broad. Pronotum very short in the middle, hind margin deeply and angularly emarginate; no median carina, the laterals following the hind margin of eyes, not reaching hind margin. Mesonotum tricarinate, the laterals diverging posteriorly, the disk between the laterals flat; the sides steep. No spines on hind tibiae; hind basitarsus fairly long, second tarsus short, both with a row of small spines at apex.

This genus is very near to *Gelastocephalus* Kirk, but that genus has no lateral carinæ on clypeus and the lateral carinæ of frons curve round beneath the antennæ dividing the genæ from the lateral portions of the clypeus.

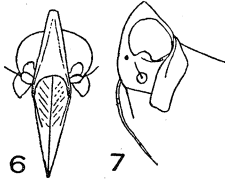


FIGURE 6.—*Tarberus jacobii*, front view of head.

FIGURE 7.—*Tarberus jacobii*, lateral view of head.

Dark reddish-brown; the carinæ of head and thorax lighter. Tegmina light brown, slightly fuscous over nodal line and irregularly in apical cells, a darker mark at apex of each apical vein, the stigma and surrounding area white with brown specks; the outer claval cell opaquely white; veins with minute hair bearing granules, those in apical portion dark. Wings dark fuscous brown with dark veins.

Anal segment fairly large, rounded at apex; medio-ventral margin of pygofer produced into a small angular process; the genital styles spatulate, the apex broad and round.

This species differs somewhat from the type, *T. semicarinatus* Jacobi, so I have given the generic characters.

Locality.—One ♂ specimen, New Caledonia, Tontonta (P. A. Buxton, 4th June, 1925).

Type.—Type in British Museum (Natural History).

Nesocharis v-nigra sp. n.

♀. Length, 2.9 mm.; tegmen, 3.4 mm.

Apex of vertex narrow, a V-shape carina dividing vertex from frons. The medio-frontal carina continued on to the clypeus without a break, no median ocellus, the laterals also continued on to the clypeus. *Sc + R* forking about middle of clavus, *Cu* a little more distad, *M* at nodal line. *M* with five apical veins, 1, 1a, 2, 3, 4. Claval vein forking about a third from apex. Pygofer longer than broad; the ovipositor complete, extending beyond pygofer.

Light brown; the carinæ of head with a fine dark line; the lateral areas of mesonotum darker. Abdomen and genitalia dark brown, the posterior margins of sternites lighter. Tegmina brown, a large, irregular V black mark extending from apex of costa to apex of clavus and then to apical margin at *R*; the rest of the apical cells lighter brown with the apical margin white; the area within the V white. Two dark marks across costal cell and another in middle of clavus. Veins same colour as cells. Wings fuscous, light along the costal area, veins dark.

Locality.—One ♀ specimen, New Hebrides, Santo Island, Hog Harbour (P. A. Buxton, July, 1925).

Type.—Type in British Museum (Natural History).

DELPHACIDÆ.

Ugyops.

The distinctions between this genus and *Canyra* and *Livatis* are difficult to appreciate. The great variety in the shape of the head and condition of the carinæ appears to prevent such characters being used for generic purposes; the length and proportion of the two segments of the antennæ also are variable.

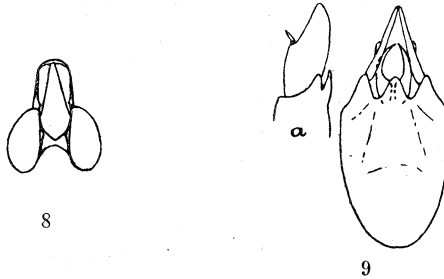
Ugyops longiceps sp. n.

(Figs. 8, 9, a.)

♂. Brachypterous; length, 5·8; tegmen, 3·8.

Length of vertex about twice the width, sides subparallel, apex slightly rounded and tumid, base angularly produced; two obscure carinæ, one on each side reaching from the middle of apex to the sides near base; the base about middle of eyes; more than half projecting in front of eyes. Frons long and narrow, length more than three times the width, widest on apical half; two median carinæ, subparallel, obscure at base and apex. No transverse carina on gena. Antennæ as long as frons and clypeus together, second segment 2·5 times the length of first. Carinæ on pro- and meso-nota obscure. Front tibiæ slightly longer than front femora. Tegmina and wings reaching to anal segment; claval veins forking near apex of clavus; *Sc + R* forking near base, *Cu* level with claval fork; *M* not forking; four obscure cross-veins, apical veins simple. Wings short but ample.

Genitalia figured.

FIGURE 8.—*Ugyops longiceps*, dorsal view of head.FIGURE 9.—*Ugyops longiceps*, ventral view of male genitalia; a, lateral view of same.

Yellow or light brown; the tumid area at apex of vertex black and shiny, a fuscous mark on gena in front of eyes; red between the frontal carinæ. Basal segment of antennæ with a longitudinal dark mark, the second segment dark brown. Pygofer and anal segment dark on ventral half, light on dorsal. Tegmina light stramineous, veins dark with a few lighter spots. Wings light fuscous, veins dark.

♀. Length, 6·4 mm.; tegmen, 4·4 mm.

In build and colour similar to the ♂. Ovipositor reaching considerably beyond the anal segment.

Locality.—One ♂ and one ♀ from Queensland (Dodd, 1904).

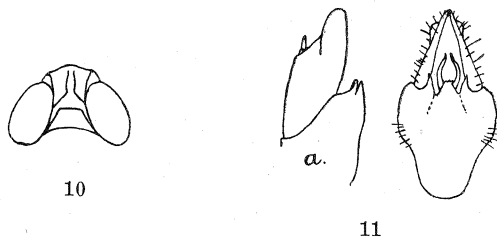
Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

Ugyops musgravei sp. n.

(Figs. 10, 11, a.)

♂. Length, 6 mm.; tegmen, 4.4 mm.

Vertex about as broad as long, widest at apex which is slightly rounded, base straight; carinæ obscure especially at apex of vertex and base of frons. Length of frons less than twice the width, widest on apical half; two median carinæ obscure at apex and base. Antennæ not quite so long as frons and clypeus together, second segment nearly twice the length of first.

FIGURE 10.—*Ugyops musgravei*, dorsal view of head.FIGURE 11.—*Ugyops musgravei*, ventral view of male genitalia; a, lateral view of same.

Vertex and frons dark brown with a row of small light dots along the margins of the lateral carinæ and the outer margins of the median carinæ, apical portion of frons light; clypeus brown, lighter over carinæ. Antennæ brown, darker on apical portion of each segment. Pronotum and mesonotum light brown, darker on pronotum behind eyes. Legs light, front and middle tibiæ with darker bands. Hind coxæ and abdomen darker brown; the ventral half of anal segment and pygofer darker than the dorsal.

Tegmina reaching to middle of anal segment; *Sc + R* forking near base, *M* near apex and *Cu* a little distad of middle of clavus, claval veins forking level with *Cu* fork, about one-fourth from apex of clavus. Light stramineous, veins with a few dark marks; wings hyaline, very slightly fuscous, with dark veins.

The genitalia figured.

There is a female 6.4 mm. long which may be this species. It is lighter in colour with a black mark at base of corium and another just basad of nodal line. The ovipositor projects considerably beyond the anal segment. There are also two other females much smaller without the dark marks.

Locality.—Four ♂ and three ♀ from Lord Howe Island (Musgrave and Whitley, December, 1923).

Type.—Type in the Australian Museum, Sydney; paratype in the British Museum (Natural History).

Ugyops sulcata sp. n.

(Figs. 12, 13 and 14.)

♂. Length, 4.1 mm.; tegmen, 3.4 mm.

Vertex wider at apex than at base, length in middle considerably greater than width at apex (1.3 to 1), V-shape carina reaching about middle, apically carinæ forming a raised median area which continues down the frons with a sulcus down the middle. Length of frons twice the width, base slightly wider than apex,

widest on apical half; the longitudinal middle portion swollen with a sulcus down the middle. Antennæ nearly as long as frons and clypeus together, second segment longer than first (1.7 to 1), second segment slightly thickened. Tegmina extending slightly beyond anal segment; *Sc + R* forking a third from base of corium, *Cu* forking about a third from the nodal line, *M* at nodal line, first claval vein joining second about the middle of the latter.

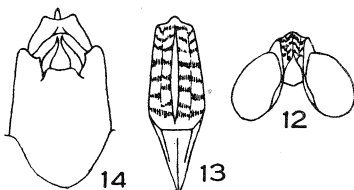


FIGURE 12.—*Ugyops sulcata*, dorsal view of head.

FIGURE 13.—*Ugyops sulcata*, front view of head.

FIGURE 14.—*Ugyops sulcata*, ventral view of male genitalia.

The genitalia figured full view; the anal segment fairly short.

Stramineous or very light brown; the vertex from the V cross-vein to near the apex of frons a series of black and light patches, the sulcus in middle being plain. Apical portion of the second antennal segment fuscous; lateral portion of pronotum with some dark marks. Tegmina hyaline, slightly stramineous, a dark mark at apex of clavus, a smaller one at node, a few small fuscous marks on veins in corium and membrane. Granules very minute with fine black hairs.

♀. Similar in build and markings to ♂, the dark marks on veins in tegmina more definite, the front and middle femora with two dark bands. The ovipositor extending beyond the anal segment.

Localities.—New Hebrides; two ♂ and three ♀, Malekula Island, 15th July, 1925, Tanna Island, September, 1925, Santo Island, Big Bay, August, 1925 (P. A. Buxton); four ♀, Malekula Island, South-west Bay (J. J. Walker, 7th June, 1900).

Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

Ugyops buxtoni sp. n.

(Figs. 15 and 16.)

♂. Length, 6 mm.; tegmen, 9.5 mm.

Vertex considerably longer than broad, apex and base subequal in width, base straight, apex produced in middle by the projecting median carinæ; the V carina reaching near to base, join together before apex and pass over to the frons together where they very shortly form a single fine median carina. Frons long, narrow, length 2.5 times the width, lateral margins slightly curved; the median carina at first formed of two contiguous carinæ and then amalgamated in one fine carina reaching to the apex. Antennæ slightly longer than frons, second segment very slightly longer than first. First claval vein joining second about the middle of latter; *Sc + R* and *Cu* forking about middle of corium, the latter slightly distad of former; the fork of *M* forming part of nodal line, M_{1+2} touching *R* and *M*, touching *Cu* for a short distance.

Full view of pygofer figured.

Light brown; carinæ of head finely lined with dark brown; pronotum dark behind eyes and the lateral portion of mesonotum dark brown; abdominal tergites dark, sternites light. Tegmina hyaline slightly yellowish, a dark brown mark at fork of M_3 and M_4 extending along M_3 , another at apex of M_3 and M_4 , another on apical margin between R and M , veins dark and light in fairly long portions, granules numerous and small bearing brown hairs. Wings hyaline, slightly fuscous, more so along apical margin, veins dark brown.

Localities.—Two ♂ from New Hebrides, Efate Island and Santo Island (P. A. Buxton, July, 1925).

Type.—Type in British Museum (Natural History); paratype in Australian Museum.

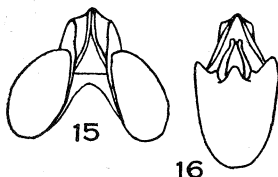


FIGURE 15.—*Ugyops buxtoni*, dorsal view of head.

FIGURE 16.—*Ugyops buxtoni*, ventral view of male genitalia.

Phyllodinus kœbelei (Kirkaldy).

Fourteen specimens, all macropterous, from Efate Island, New Hebrides. This species is widely distributed in the South Pacific. It was first placed in *Phacalastor* Kirk., then in *Dicranotropis* and then in *Phyllodinus*. Ball has erected *Phyllodictus* for some of the species contained in *Phyllodinus*. The chief distinction between *Dicranotropis* and *Phyllodinus* is the flattened, expanded front and middle legs and as there appears to be a gradation in this respect it is hard to divide the two genera. The extra vein in the tegmina of some brachypterous forms is also variable. The name *kœbelei* is preoccupied in *Phyllodinus*, but until I am sure of the position of the present species I decline to give a new name.

Megamelus proserpina Kirkaldy.

Two specimens from New Hebrides, Santo Island, Big Bay, August, 1925 (P. A. Buxton).

Kelisia Kirkaldyi Muir.

One ♂ specimen from New Hebrides, Espiritu Santo Island, Hog Harbour, July, 1925 (P. A. Buxton).

DERBIDÆ.

Lamenia epiensis sp. n.

(Figs. 17, a and 18.)

♂. Length, 3 mm.; tegmen, 4.4 mm.

Head and pronotum yellow, the clypeus, apex of frons, the carinæ of frons and vertex and the middle of pronotum brown; mesonotum, tegulæ, abdomen and genitalia dark brown; the legs and posterior margins of abdominal sternites

light. Tegmina dark brown or nearly black, a large yellow mark at node with a brown spot in the middle. Wings fuscous brown with dark veins.

The genitalia figured. The shape of the apex of anal segment, the angular production of the lateral margin of pygofer and the shape of the genital styles distinguish it from *L. caliginea* Stål.

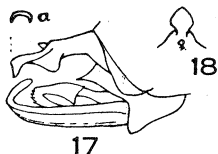


FIGURE 17.—*Lamenia epiensis*, lateral view of male genitalia; *a*, apex of anal segment. FIGURE 18.—*Lamenia epiensis*, ventral view of apex of seventh abdominal sternite.

The ♀ similar to ♂ in build and colour. The posterior edge of pregenital segment (seventh abdominal sternite) figured.

Localities.—One ♂, three ♀ and one specimen without an abdomen. New Hebrides: Epi Island, 12th June, 1925; Pentecost Island, 21st June, 1925; Malekula Island, 15th June, 1925; Espiritu Santo, Hog Harbour, August, 1925 (P. A. Buxton).

Type.—Type in British Museum (Natural History), paratype in Australian Museum.

TROPIDUCHIDÆ.

Rhinodictya granulata sp. n.

♂. Length, 5.7 mm.; tegmen, 5.5 mm.

Vertex slightly longer than pronotum and mesonotum together, broadest at anterior corner of eyes, then narrowing slightly to base, median carina strong. Costal area narrower than in type.

Pale stramineous which in life may be green. The tegmina with distinct granules between the veins on clavus, corium and membrane. The carinæ of the head, laterals and medians distinct from apex to base.

The genital styles are joined together and there is a curved process on the left side.

Locality.—Fiji Islands (H. W. Simmonds, 12th June, 1921, No. 477). One ♂.

This genus is allied to *Vanua* with similar genitalia.

Type.—Type in British Museum (Natural History).

Peggioga nigrifinis (Walker).

One ♂ and one ♀ from Solomon Islands, Guadalcanar Island, Lavoro Plantation (C. E. Hart, 1925, No. K 53971, K 53972). This genus also has the genital styles joined together.

Rhinodictya buxtoni sp. n.

♀. Length, 9.2 mm.; tegmen, 7.5 mm.

Length of vertex nearly twice the length of pronotum and mesonotum together (1 to 1.8); the head anteriorly laterally flattened slightly, the lateral carinæ of vertex and frons joining together half way between the eye and apex

of head, which in profile is truncate. Distinct granules all over the tegmina between the veins. Costal area narrower than in type of genus.

Pale green. Tegmina and wings hyaline, clear, veins light green.

Ovipositor similar to that in *Vanua*. Anal segment reaching slightly beyond the bases of the dorsal valvula, apex subangular. The apices of the dorsal valvulae set with strong curved spines.

This differs from the type, *R. quæsitrrix* Kirk., by the narrower costal area, the longer head, which is laterally flattened apically, and the granulation of the tegmina. From *R. granulata* it differs in its greater size, length of head, the flattening of the apex of head and the meeting together of the lateral carinae of vertex and frons before the apex.

Locality.—New Hebrides, Malekula Island (P. A. Buxton, 5th July, 1925); one ♀.

Type.—Type in British Museum (Natural History).

Thaumantia insularis sp. n.

This species appears to differ from the genotype, *T. celebensis*, by the median pronotal carina being faint and not divided on the hind margin, and the apical and subapical cells being of equal length. The genus *Pelto dictya* is closely allied, but has the forking of the *Sc* nearer the nodal line, otherwise the present species might be placed therein.

♀. Length, 7.7 mm.; tegmen, 10 mm.

Pale green. Tegmina and wings hyaline, clear, veins pale green.

Anal segment short, wide, apex with a small angular emargination in the middle, each half being rounded. In lateral view the dorsal valvulae semi-crescent shape, at the apex thickened and turned outward, but without spines.

Locality.—Solomon Islands, Guadalcanar Island, Tenaru (R. W. Paine, 28th August, 1928), "in bush"; one ♀.

Type.—Type in British Museum (Natural History).

Kallitambinia g. n.

This genus combines the characters of *Kallitaxila* (Kirkaldy 1901 = *Taxilana* Melichar 1914) and *Tambinia*. The corium and clavus are thicker than the membrane and the cells are granulated. Length of vertex 1.3 the width, subconical in outline; median carina distinct. Frons much longer than wide, gradually increasing in width till antennae, then decreasing, sides slightly sinuous. Clypeus without carinae. Pro- and meso-nota as in *Tambinia*, the former deeply angularly emarginate and the latter about as long as wide.

Type.—*K. australis*.

Kallitambinia australis sp. n.

♀. Length, 5.2 mm.; tegmen, 6.1 mm.

Pale green. The clavus and corium darker green, the veins green. Wings hyaline with green veins.

Locality.—Queensland, Brisbane (H. Hacker, May, 1925, No. 198), five ♀.

Type.—Type in British Museum (Natural History); paratype in Australian Museum.

Pseudoparicana sanguinifrons sp. n.

♂. Length, 4 mm.; tegmen, 6 mm.

Head, pronotum and mesonotum yellow, the middle swollen portion of frons red, sides of clypeus black, the lateral margins of pronotum and the posterior half of mesonotum black or dark brown; the rest of thorax and abdomen black or dark brown, a yellow triangular mark on pleura of thorax, legs dark brown. Tegmina clear hyaline, veins brown, those in corium lighter; back of clavus black extending to costa and together with the posterior half of mesonotum forming a dark band; a dark band over nodal line extending from node round the apical margin nearly to apex of clavus. Wings hyaline with dark brown veins.

The genitalia are asymmetrical, the genital styles joined together to form a comparatively long process, the apical angles produced into flat angular processes curved upward and overlapping, thus forming a ring; the ædeagus is asymmetrical.

♀. In build and colour similar to ♂, but slightly darker in colour.

Locality.—New Guinea, Fly River (Geographical Society's Expedition, K 55378); one ♂ and two ♀.

This species is closely related to *P. curvifera* (Distant), the type of the genus. *P. tepida* Melichar is not typical. In the type the vertex (dorsal surface as seen from above) is sunken on the basal half, the frons swollen and shiny with a slight depression down each side; no carina down middle of vertex.

Lavora g. n.

Fairly narrow form; tegmina strongly tectiform. Vertex short and broad, length in middle about one-fourth of width, apical margin broadly rounded, base slightly more roundly emarginate, no median carina. The base of frons rounded and swollen and can be seen in dorsal view. Frons longer than broad (about 1 to 1.5); gradually increasing in width from base to beyond antennæ, then narrowing; base swollen and smooth, the swelling continuing on to the lateral margins; a large median carina continued on to the clypeus; on each side of the median carina, near the apex, are two very short, obscure carina continuing very faintly diagonally towards the eyes. Sides of clypeus rounded, without carinæ. Antennæ very short, second segment about as broad as long. Pronotum deeply angularly emarginate on hind margin, no median carina, lateral carinæ distinct; no distinct shoulder keels behind eyes; lateral margins of pronotum short, not extended posteriorly. Mesonotum about as long as broad, tricarinate. The tegmen figured; *Sc* + *R* forking near nodal line, *M* at nodal line, *Cu* distad of middle of corium; subapical line subgradate, from apex to clavus to the apical forks of *R*. The apical *M* and *C* veins forked. Claval veins forked about middle of clavus. Costal area distinct with about eight cross-veins.

This genus comes near *Vanua* Kirkaldy. It has similar genitalia, the genital styles amalgamated into a long narrow organ with a curved spine on the side. The four genera, *Vanua*, *Leptovanua*, *Peggioga* and *Rhinodictya*, all have this type and are undoubtedly allied. *Oligæthus* Jacobi I have not seen, but feel

sure it has a similar genital style. Their centre appears to be Australia and the South Pacific, extending westward to Amboina.

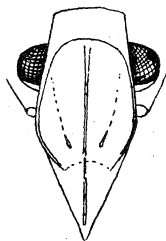
Type.—*L. ricanoides*.

Lavora ricanoides sp. n.

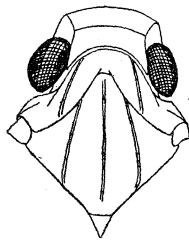
(Figs. 20, 21, 22, 23.)

♂. Length, 7 mm.; tegmen, 8 mm.

Stramineous, shiny; carinæ of head black, a bilobed black mark across the swollen portion of the base of frons, fuscous over the two small diagonal carinæ. The middle of the anterior margin, the middle of the posterior margin, the lateral margins and a mark behind the edge of pronotum black; the outer carinæ of mesonotum black. The middle and sides of abdominal tergites and the sternites fuscous. Tegmina clear hyaline, veins dark, the claval and *Cu* veins lighter; slightly fuscous over nodal line and at node; a small fuscous mark at apex of first *M* apical veins. Wings clear hyaline, veins dark brown, lighter in corium.



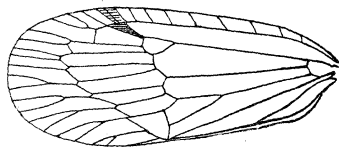
20



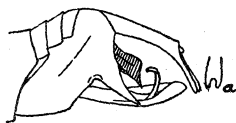
21

FIGURE 20.—*Lavora ricanoides*, front view of head.

FIGURE 21.—*Lavora ricanoides*, dorsal view of head and thorax



22



23

FIGURE 22.—*Lavora ricanoides*, left tegmen.

FIGURE 23.—*Lavora ricanoides*, lateral view of male genitalia; *a*, apex of anal segment.

Left view of pygofer figured, the lateral right margin entire, not produced. Genital styles forming a single organ; anal segment cylindrical to anus, then slightly expanded with the apex emarginate.

Locality.—Solomon Archipelago, Guadalcanar Island, Lavoro Plantation (C. E. Hart, 1925); two ♂.

Type.—Type in Australian Museum, paratype in British Museum (Natural History).

MEENOPLIDÆ.

Nisia buxtoni sp. n.

(Fig. 19.)

♀. Length, 2 mm.; tegmen, 3.2 mm.

The two triangles at the base of vertex very minute. No medio-frontal or latero-clypeal carinæ. Antennæ fairly large. First claval vein strongly curved, granulated.

Stramineous; mesothorax darker. Tegmina hyaline, veins light, slightly fuscous on each side of the apical veins on apical margin and at the apex of clavus. Wings hyaline with light veins. Tegmina and wings opaque, with white, waxy secretion and the body also covered with the same. The wax secretions from the wax pad long.

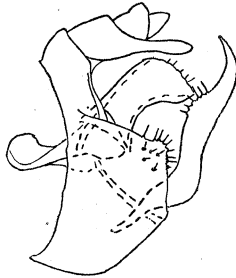


FIGURE 19.

Nisia buxtoni, lateral view of male genitalia.

The ♂ is similar to ♀ in build and colour. The genitalia are figured and show it distinct from any other species I am acquainted with.

Localities.—Three ♀ and one damaged ♂ from New Hebrides, Espiritu Santo, Hog Harbour (P. A. Buxton, July, 1925).

Type.—Type in the British Museum (Natural History), paratype in the Australian Museum, Sydney.

There is a second species which appears to be undescribed, but as it is represented by a ♀ only I do not feel disposed to describe it.

LOPHOPIDÆ.

Painella g. n.

Head slightly narrower than thorax. Vertex narrower at base than at apex, longer than broad at apex (1.3 to 1), margins not laminate, laterally very slightly raised; an obscure transverse angular carina about one-third from apex; a median longitudinal carina obscure on apical portion; base of vertex slightly roundly emarginate. The base and apex of frons subequal in width, gradually widening for two-thirds of its length and then narrowing, the lateral margin thus strongly angular, the width at the widest part greater than the length; a distinct median carina not reaching the base or apex; an obscure curved carina on each side. The

apex of vertex and the base of frons slightly tumid. A transverse ridge across gena starting from lateral angulation of the frons. The median carina on clypeus strong, the laterals not so distinct. Basal segment of antennæ very short, wider than long, second segment about twice as long as broad. Pronotum considerably shorter than vertex; tricarinate, the laterals slightly diverging posteriorly, not quite reaching the hind margin, the median not quite reaching the fore or hind margins; posterior margin straight. Mesonotum longer than pronotum or vertex, nearly as long as both together, tricarinate, the carinæ being in line with the pronotal carinæ. Front tibia expanded, thin, width slightly more than half the length; front femur as long as tibia, expanded less than tibia, width less than half the length (1 to 2.4). Second tibia and femur flat and thin, but not so wide as front, the length about four times the width. Hind tibia with three strong spines, one in the middle, one near apex and one between, the apical spines not confined to apical margin, apex forming a pad. Hind basitarsus fairly long, slightly thickened, more so apically, the small spines not confined to the apical margin, but extending somewhat basally, forming a small triangular pad; second segment very small without any spines.

The genitalia are of the usual Lophopid type; in the male the ædeagus consists of an inner penis and an outer periandrium; in the female the dorsal valvulæ are produced into round, thin plates with wax glands on both sides, and the apex of the anal segment is expanded and bears wax glands.

Tegmina macropterous, costal margin nearly straight, apical margin nearly straight, oblique; the costal area narrow with a few cross-veins in apical area. The costa reaching to the apex, no stigma; *Sc* and *R* forking near base, *M* forking about level with apex of clavus, *Cu* forking about level with claval fork, claval fork about one-fourth from apex of clavus; no nodal line and only a few irregular and obscure cross-veins in membrane not making an apical line; about 15 to 16 long, narrow apical cells.

Type.—*P. harti*.

In 1927 the writer described *Buxtoniella* from Samoa, and remarked that its position and origin was an enigma. The present genus stands between it and *Virgilia* Stål. *Buxtoniella* was described from brachypterous specimens, and if no macropterous form exists then the peculiar tegmina will distinguish it from all other Lophopidæ; its short mesonotum is no doubt connected with its wing reduction. From *Virgilia* the genus *Painella* is separated by its broader frons, the reduction of the medio-lateral carinæ on frons, the simple, single median carina on mesonotum, the great expanse of the front tibia and femora, the margins of vertex not being elevated and the absence of anything like an apical line in the tegmina.

Painella harti sp. n.

(Figs. 24 and 25.)

♂. Length, 4 mm.; tegmen, 5.4 mm.

Vertex greenish, a black mark across the base and another at the transverse carina; frons black, shiny, a broken, narrow green mark across the base, another very narrow one slightly basad of the widest portion and another, a little wider, slightly more apical, the base of clypeus greenish, apical portion fuscous; genæ greenish, black round ocelli. In the second specimen the green on frons is wider

and the two apical bands are joined in the middle. Pronotum dark brown on anterior half, greenish on posterior half; mesonotum dark brown; tegulæ brown with a light mark. Pleura greenish with light brown marks. Front legs brown with a few lighter marks; middle legs lighter; hind legs with femora dark brown with a longitudinal greenish line, tibiæ and all tarsi light brown. Abdomen dark brown. Tegmina dark brown or black with hyaline marks, one forming a large triangle, the base occupying the middle third of costa and the apex nearly reaching the apex of clavus, a dark spot in the middle of the base; a quadrate light spot on the costa nearer the apex, a small one on apical margin at the middle and a small, angular one at the posterior angle; a couple of small light marks on costa at base. Wings dark fuscous, light over basal portion. In the type specimen the black spot in the hyaline triangle spreads out and cuts the light spot into two small spots.

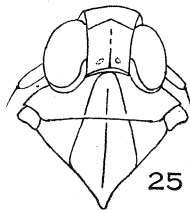
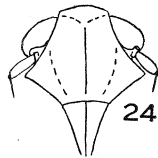


FIGURE 24.—*Painella harti*, front view of head.

FIGURE 25.—*Painella harti*, dorsal view of head and thorax.

The eighth abdominal segment reduced to a very slender tergal sclerite with a spiracle situate at either end. Pygofer very short dorsally, wide ventrally. Genital styles straight on inner margins where they meet together, outer margins nearly straight, with a small spine near the middle, apex subtruncate. Anal segment in dorsal view subcordate in outline, the lateral margins being angularly produced and curved downward, the apex with a slight angular emargination.

♀. Length, 6.7 mm.; tegmen, 6.9 mm.

In general build and colour similar to the ♂, but the middle legs are decidedly narrower.

Locality.—Solomon Islands, Guadalcanar Island. Two ♂ specimens from Tenaru (R. W. Paine, 27th August, 1928), "in bush" and one ♀ from Lavoro Plantation (C. E. Hart, 1925).

At present there is no good character separating the Lophopidæ from the Eurybrachidæ, the width of the face being of no importance in this connection. Both groups want a re-examination and better morphological characters used for their classification.

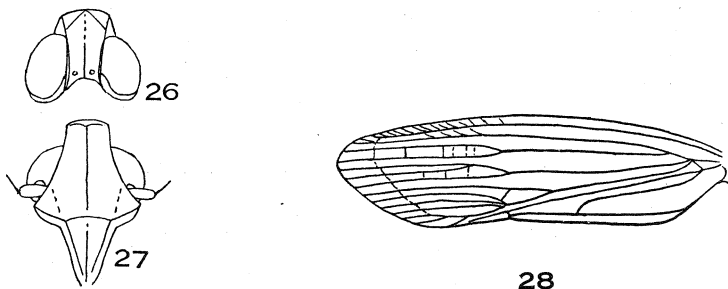
Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

Painella simmondsi sp. n.

(Figs. 26, 27 and 28.)

♂. Length, 4.6 mm.; tegmen, 5.3 mm.

This differs from the type species in having the front and middle femora and tibiae much narrower and parallel sided and the transverse V carina reaching the apex, but it is so closely related that it would be illogical to erect another genus for it, although the expanded legs have generally been considered as of generic value. The tegmina is slightly longer and narrower, the costal area slightly wider, the apical margin slightly more rounded and the membrane longer, the apical cross-veins are also more regular and make a distinct but faint apical line. It approaches *Virgilia* more than *P. harti* does.

FIGURE 26.—*Painella simmondsi*, dorsal view of head.FIGURE 27.—*Painella simmondsi*, front view of head.FIGURE 28.—*Painella simmondsi*, left tegmen.

Vertex light brown with a darker mark across the base and another across the apical half. Frons light brown or yellow, in one specimen bright green, with two curved blood-red bands, one at the base and one across the middle, a small black mark at apex and another in the middle of clypeus. Pronotum light brown, dark in the middle. Mesonotum dark brown, carinae slightly lighter, two lighter spots in the middle, the posterior angle lighter. Tegulae lighter. Legs light, two longitudinal fine black lines on front femora; hind femora mostly dark.

Costal area and cell and the major portion of subcostal and radial cells light, rest of corium dark brown, clavus dark brown, the marginal cell light; membrane mostly dark brown, the dark portion occupying the middle, extending to the apex of costal margin and inner angle, a dark mark across the tip and several small marks across the costal area. Wings fuscous with a light area along costa.

♀. Length, 5.8 mm.; tegmen, 7.0 mm.

In build similar to ♂, the tegmina lighter with the apex rounder. The dorsal valvulae forming large, rounded plates, the apex of anal segment also expanded, both bearing wax glands.

Locality.—Solomon Islands, New Georgia, one ♂; Gaudalcanar, two ♂ (R. W. Paine, July, 1928), one ♀ (H. W. Simmonds).

Type.—Type in British Museum (Natural History).

RICANIIDÆ.

Plestia.

This genus is at present only known from some of the south Pacific islands and Australia. Three species are known from New Hebrides, two from Samoa, one from New Caledonia and three from Fiji, one of which is also reported from Australia. This shows a high endemism and further work in other islands is sure to reveal further species. When describing *P. anomala* from Samoa I mentioned the fact that it had a row of marginal cross-veins, a character which in other groups of the same family is considered of generic value. This is so closely related to *P. kellersi* from the same locality that it is impossible to place them in separate genera. In fact I have hesitated to place them as different species. Anyone living in Samoa could very easily breed these and ascertain their relationship and the stability of the apical cross-veins.

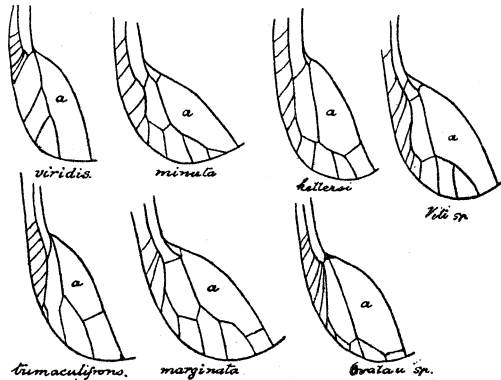
There is considerable variation in the stigma and apical subcostal cells in the different species, the value of which can only be ascertained by long series, but the point is of interest and worth ascertaining by resident entomologists.

Plestia viridis sp. n.

(Fig. 29.)

♀. Length, 3.9 mm.; tegmen, 6.2 mm.

In build typical; the *Sc* and *R* amalgamated to node, without the least sign of a subcostal cell. Light green, the abdomen and middle of mesonotum stramineous. Tegmina clear hyaline without marks, stigma light yellow, the costal and *Sc* + *R* veins light, other veins dark brown. Wings clear hyaline with dark brown veins.

FIGURE 29.—*Plestia* species, apices of tegmina.

Locality.—New Hebrides, Efate Island, Vila (P. A. Buxton, July, 1925), two ♀.

Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

Plestia minuta sp. n.

(Figs. 29, 30, a.)

♂. Length, 3 mm.; tegmen, 4.6 mm.

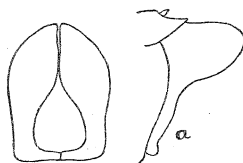
The *Sc* and *R* quite distinct with a very narrow cell between them. Basal two-thirds of frons light brown, the apical third white, a tendency for the base to be light; clypeus dark brown; anterior part of pronotum brownish, also the lateral areas, posterior part light with a slight greenish tinge; mesonotum darker brown with an irregular, mottled lighter mark across; tegulae light. Front legs light, second and hind femora darker. Abdominal tergites yellow, brown in the middle, sternites brown. Anal segment and sides of pygofer light, styles dark brown. Tegmina and wings hyaline with brown veins; costal area and cell and the *Sc* cell dark brown extending slightly at the base of *Rs* and the *Sc* apical cells, a white spot at apices of veins entering costal and apical margin, those on costal extending across costal area, a series of white spots (about 10) in basal two-thirds of costal cell; some dark brown marks in basal cell and in clavus; fuscous over inner hind margin of wings.



30

FIGURE 30.

Plestia minuta,
front view of
genital styles;
a, lateral view
of same.



31

FIGURE 31.

Plestia marginata, front
view of genital styles;
a, lateral view of same.

The inner margins of genital styles sinuous, only meeting together at the apex.

Locality.—New Hebrides, Efate Island, Vila, August, 1925, and Santo Island, Hog Harbour, August, 1925 (P. A. Buxton); four ♂.

This species comes very near to *P. marginata*, but it is much smaller, the marks in costal area are more linear, those in costal cell more distinct, the clypeus dark and the genitalia different (Fig. 31, a.)

Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

Plestia trimaculifrons sp. n.

(Fig. 29.)

♂. Length, 4.6 mm.; tegmen 7 mm.

The *Sc* and *R* distinct, but contiguous to near apex, so there is only a small *Sc* cell at the apex. The frons longer than in the genotype and the base narrower, width about 1.5 times the length. Light brown or stramineous; frons white over the greater portion of middle with three black marks at base, the middle one quadrate, the laterals subtriangular, a little darker marking on vertex, pronotum and mesonotum, the hind margin of pronotum dark; the eyes banded light and

dark. Hind femora darker brown. Abdomen greenish with the hind margins of tergites brown. Tegmina clear hyaline; costal cell light yellow, stigmal area brown, the *C*, *Sc* and *R* light, other veins dark, cross-veins in costal area distinct, dark brown; brown at apex of *Sc* cell. Wings clear hyaline, veins brown, fuscous along hind margin.

♀. Similar to ♂, but slightly larger in size.

Locality.—New Hebrides, Efate Island, Vila, July, 1925; Epi Island, 12th June, 1925); Malekula Island, Bushman's Bay, 28th August, 1925 (P. A. Buxton). Four ♂ and two ♀.

Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.

There is one specimen from Ovalau, Fiji, and several from "Viti" which apparently represent two other species, but as the specimens are old and in bad condition, I refrain from describing them. Figures of the stigma and apical subcostal cells are given for comparison.

Aprivesa varipennis sp. n.

♂. Length, 6.5 mm.; tegmen 9.0 mm.

There is no transverse carina across the base of frons as in *A. exuta* (Melichar), the medio-laterals are short and obscure and join the base of the frons, otherwise it is quite typical. The stalk of *Sc* + *R* is very short, the fork of *R* is more distad and *Cu* still more distad, about level with claval fork; the apical and subapical cell about equal in length. Frons dark brown on base, yellow on apex, slightly mottled between; clypeus brown, lighter down middle. Vertex and pronotum dark brown, the lateral portions of pronotum with lighter marks; mesonotum dark brown, nearly black. Thoracic pleura dark; legs light brown. Abdominal sterna yellow, the fourth, fifth and sixth bearing circular depressions which are darker in colour; the terga dark brown. Tegmina fuscous brown mottled with hyaline, most numerous over costal area and membrane; veins brown. Wings hyaline with brown veins, lighter in corium.

The frons is darker in one specimen and the legs brown.

♀. Similar to ♂.

Locality.—One ♂ and three ♀ from Western Australia, Carnarvon (E. L. Grant-Watson).

Type.—Type in British Museum (Natural History); paratype in Australian Museum, Sydney.
