

ART. X.—Lepidoptera from the Kermadec Islands.

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IN the following complete list of *Lepidoptera* taken, those species marked with an asterisk were identified by Mr. Hudson and not seen by me; of the rest, examples were forwarded to me for identification. I will begin by summarising the geographical relations of this portion of the fauna, and then give a systematic list of the species.

The total number of species is 46. Of this number, 24 are common insects of wide general distribution, which, owing to their numerical abundance, powers of flight, and adaptation to food-plants of common occurrence, have found their way to suitable stations throughout a more or less large area of the warmer regions of the globe, though one or two of them may be sometimes transported by man: these 24 may be disregarded. It may be noticed that 14 of these have not yet occurred in New Zealand; probably some will still be found there as stragglers, but in general the New Zealand climate is too temperate for them or their food-plants.

Of the remaining 22 species, 4 occur also in New Zealand and Australia (one of these, *Monopis ethelella*, being semi-domestic, and recently found also in South Africa), 6 occur in New Zealand only, 1 in Australia only, 3 in other Pacific islands, and 8 are at present only known as endemic. Since, however, the *Lepidoptera* of the Pacific islands are very little known, it is highly likely that some at least of these species will be found hereafter amongst other groups of these islands. Of the 8 endemic species, 2 are probably to be regarded as of New Zealand type, 3 of Pacific, and 3 of Australian, but it is quite possible that the 3 last may prove also to have Pacific representatives. In the present state of our knowledge I should think that the above facts indicated that the islands have always been considerably isolated, and have received their lepidopterous fauna by the accidental immigration, across a wide stretch of sea, of specimens carried by strong winds.

In the following list of species the number of specimens taken is mentioned in each case; the full geographical distribution of each species is given; and the food-plant of the larva is mentioned whenever known, as it must always be taken into account as a factor in distribution:—

ARCTIADÆ.

* *Nyctemera annulata*, Boisd.12 specimens. New Zealand. Larva on *Senecio*.* *Utetheisa pulchella*, L.

10 specimens. Europe, Asia, Africa, Australia, Pacific islands, New Zealand. Larva on grasses, &c.

CARADRINIDÆ.

Leucania loreyi, Dup.

3 specimens. Southern Europe, southern Asia, Africa, Australia, Fiji.

* *Leucania unipuncta*, Hw.

7 specimens. North and South America, Europe, Asia, Australia, New Zealand. Larva on grasses.

Tiracola plagiata, Walk.

5 specimens. Central America, India, Malay Islands, Australia, Pacific islands. Larva on *Emilia*.

* *Heliothis armigera*, Hb.

5 specimens. North and South America, Europe, Asia, Africa, Australia, Pacific islands, New Zealand. Larva on many vegetables and other plants.

* *Agrotis ypsilon*, Rott.

2 specimens. North and South America, Europe, Asia, Africa, Australia, New Zealand. Larva on many plants.

Caradrina reclusa, Walk.

11 specimens. India, Malay Islands, New Guinea, Fiji.

Spodoptera littoralis, Boisid.

18 specimens. Southern Europe, Asia, Africa, Australia, Pacific islands. Larva on *Lantana*.

Eriopus Maillardi, Gn.

8 specimens. Africa, southern Asia, New Guinea, Pacific islands.

Perigea capensis, Gn.

14 specimens. Africa, Asia, Australia, Pacific islands. Larva on *Acanthaceæ*.

PLUSIADÆ.

Hydrillodes surata, n. sp.

♂ ♀. 33-34 mm. Head, palpi, and thorax in ♂ dark fuscous, in ♀ ochreous-fuscous; palpi in ♂ rectangularly bent at both joints, very densely clothed with rather rough scales throughout except tip of terminal joint, especially largely towards apex of second joint, which much exceeds crown, terminal joint as long as second, in ♀ recurved, sickle-shaped; first two joints densely scaled, terminal joint $\frac{4}{5}$ of second, with appressed scales, posteriorly with loosely projecting hairs throughout, apex pointed. Anterior legs in ♂ with hairs of coxæ forming a strong apical brush, femora short, unevenly swollen, beneath with dense rough projecting hairs longest at apex, tibiæ swollen, beneath with dense rough projecting hairs throughout, middle and posterior femora in ♂ beneath with rough projecting hairs diminishing to apex. Forewings elongate-triangular, apex rounded, rounded, slightly waved, somewhat oblique; dark fuscous, in ♀ suffused with light brownish-ochreous from base to second line; first and second lines in ♂ hardly paler, in ♀ pale ochreous, edged with dark fuscous, slightly waved, first almost straight, second little beyond middle, curved on upper $\frac{2}{3}$; a dark-fuscous transverse-linear discal mark between them; sub-terminal line represented by an irregular series of whitish-ochreous dots connected by dark suffusion; cilia rather dark fuscous. Hindwings light fuscous, with faint darker postmedian shade; cilia whitish-fuscous.

2 specimens; 9 others taken. There are three examples of the same species in the British Museum from the Solomon Islands; it will probably be found widely distributed in the Pacific islands. The species is nearly allied to the common Indian and Australian *H. lentalis*, Gn., but larger, and certainly distinct by the structural characters of palpi and legs.

Hypenodes costæstrigalis, Stph. (*exsularis*, Meyr.).

2 specimens. Europe, Australia, New Zealand. A closely allied form occurs in the Hawaiian Islands.

Hypena gonospilalis, Walk.

13 specimens. Java, Pacific islands.

Thermesia rubricans, Boisd.

2 specimens. Africa, southern Asia, Pacific islands.

* *Plusia chalcites*, Esp.

4 specimens. North and South America, southern Europe, Africa, southern Asia, Australia, Pacific islands. Larva on various plants.

* *Achæa melicerte*, Drury.

1 specimen. Africa, Asia, Australia, Pacific islands, New Zealand.

HYDRIOMENIDÆ.

Phrissogonus laticostatus, Walk.

1 ♂, 1 ♀. Australia.

Phrissogonus denotatus, Walk.

3 specimens. Australia, New Zealand. Larva on *Brachyglottis repanda*.

* *Chloroclystis indicataria*, Walk.

1 specimen. New Zealand.

Hydriomena officiosa, n. sp.

♀. 25 mm. Head and thorax brownish mixed with pale ochreous, face with moderate tuft, thorax with two dark-grey bars. Palpi moderate, dark fuscous, base of second and third joints whitish. Forewings triangular, termen almost straight, slightly waved, rather oblique; brownish, irrorated with blackish and whitish, with almost straight, somewhat waved, dark-fuscous striæ; edge of basal patch slightly whitish-margined, angulated near costa; edges of median band somewhat black-marked, whitish-margined, posterior above middle with a slight distinctly black-marked sinuation, followed by a small patch of undefined pale-ochreous suffusion; discal dot linear, blackish; subterminal line waved, slender, whitish. Hindwings with termen rounded, waved; grey, towards dorsum with dark-fuscous and whitish striæ.

1 specimen; 5 others taken. Nearest to the New Zealand *H. deltoidata*, but easily distinguished by the smaller size and grey hindwings.

* *Euchæca rubropunctaria*, Dbld.

1 specimen, in very poor condition. Australia, New Zealand. Larva on *Haloragis alata*.

STERRHIDÆ.

* *Leptomeres rubraria*, Dbl.

17 specimens. Australia, New Zealand.

NYMPHALIDÆ.

* *Anosia bolina*, L.

1 ♂ specimen. India, Malay Islands, Australia, Pacific islands, New Zealand.

* *Vanessa itea*, F.

3 specimens. Australia, Norfolk Island, New Zealand.

SATYRIDÆ.

* *Melanitis leda*, L.

1 specimen. Africa, southern Asia, Australia, Pacific islands.

PHYCITIDÆ.

Homœosoma anaspila, Meyr.

8 specimens. New Zealand.

PYRAUSTIDÆ.

Eranistis, n. g.

Face rather oblique; ocelli present; tongue developed. Antennæ $\frac{3}{4}$. Labial palpi moderate, ascending, second joint dilated with rough projecting scales, tufted towards apex beneath, terminal joint very short, loosely scaled. Maxillary palpi moderate, porrected, loosely scaled. Forewings with 3 almost from angle, 4 and 5 stalked, 7 out of 8 near base, 9 and 10 out of 8 beyond 7, 11 almost connate with 8. Hindwings 1; frenulum in ♀ simple; 4 and 5 stalked, 7 out of 6 near origin, anastomosing with 8 to middle.

This curious genus differs from all others in the *Pyraustidæ* by the origin of vein 7 of the forewings from 8; it does, notwithstanding, belong here, and not to the *Pyralididæ*, and is an instance of the independent and exceptional acquisition of a character which is normally characteristic of another family. It is undoubtedly allied to the group of *Nymphula* and *Perisyntrocha*; the simple frenulum of ♀ is an interesting and unusual character, but found in some species of that group.

Eranistis pandora, n. sp.

♀. 22 mm. Head and thorax light brownish-ochreous. Labial palpi light brownish-ochreous sprinkled with dark fuscous, white towards base beneath, tip white. Maxillary palpi pale ochreous banded with blackish. Abdomen ochreous-whitish. Forewings elongate-triangular, costa moderately arched towards apex, apex obtuse, termen obliquely bowed; brownish-ochreous, thinly sprinkled with dark fuscous; costa suffused with dark-fuscous irroration towards base; lines represented by very undefined thick shades of dark-fuscous irroration, first about $\frac{1}{4}$, slightly curved, second about $\frac{3}{4}$, nearly parallel to termen, space beyond this more irrorated with dark fuscous. Hindwings ochreous-white. Undersurface of forewings and hindwings suffusedly whitish, with a bent dark-grey post-median line becoming obsolete dorsally.

1 specimen; another taken. The example described is in indifferent condition, but is so distinct as to be easy of recognition.

Dracænura ægialitis, n. sp.

♂. 26 mm. Head and thorax pale whitish-ochreous, face fuscous, shoulders suffused with fuscous. Palpi dark fuscous, white towards base beneath. Antennæ whitish-ochreous. Abdomen whitish-ochreous, segmental margins whitish. Forewings elongate-triangular, costa posteriorly moderately arched, apex obtuse, termen gently rounded, oblique; pale greyish-ochreous, slightly tinged with fuscous; costa suffused with fuscous towards base; lines thick, suffused, fuscous, first from $\frac{1}{5}$ of costa to $\frac{1}{3}$ of dorsum, slightly curved, second just before $\frac{2}{3}$, nearly parallel to termen, slightly indented beneath costa and on fold; roundish orbicular and transverse discal spots fuscous; cilia pale greyish-ochreous. Hindwings with termen rounded; whitish; a thick grey nearly straight slightly waved post-medial line; a moderate suffused greyish-ochreous terminal fascia, towards termen fuscous-tinged; cilia pale greyish-ochreous, tips whitish.

1 specimen; 5 others taken. A true *Dracænura* in all respects, with the peculiar neuration of hindwings in ♂; perhaps nearest *pelechra*, but quite different in colour. The genus *Dracænura* is characteristic of the South Pacific islands, where it is probably rather extensive.

Diasemia ramburialis, Dup.

9 specimens. North and South America, Europe, Asia, Africa, Australia, Pacific islands.

Hymenia fascialis, Cr. (*recurvalis*, F.).

13 specimens. Central and South America, Africa, southern Asia, Australia, Pacific islands.

Scoparia fragosa, n. sp.

♀. 13 mm. Head and thorax whitish-ochreous, mixed with white, patagia mixed with dark fuscous. Palpi $2\frac{1}{2}$, fuscous, upper margin white. Abdomen pale ochreous. Forewings elongate, rather narrow, posteriorly dilated, costa slightly arched, apex obtuse, termen slightly rounded, oblique; fuscous suffusedly mixed with whitish, with scattered black scales; a blackish streak from base of costa to disc beyond $\frac{1}{2}$, interrupted beneath costa; lines cloudy, white, confused with the general whitish suffusion, first irregularly dentate, edged with blackish towards costa posteriorly, second unusually approximated to termen, acutely angulated, indented above angle; orbicular and claviform elongate, blackish, resting on first line, claviform edged beneath with whitish-ochreous suffusion; discal mark elongate-X-shaped, blackish, edged beneath with whitish-ochreous; a blackish costal spot above this; subterminal line obsolete; cilia whitish, basal half barred with fuscous (imperfect). Hindwings grey-whitish; cilia whitish.

1 specimen. Denham Bay, Sunday Island. Not very near to any New Zealand or Australian species; on a careful comparison it is perhaps nearest to the Hawaiian *S. catactis*, Meyr., and is decidedly of general Hawaiian type.

PYRALIDIDÆ.

Endotricha mesenterialis, Walk.

12 specimens. Southern Asia, Australia, Pacific islands.

PTEROPHORIDÆ.

Sphenarches caffer, Z.

2 specimens. Africa, southern Asia, Australia, Pacific islands.

TORTRICIDÆ.

Capua semiferana, Walk.

3 specimens. New Zealand.

EUCOSMIDÆ.

Spilonota melanotreta, n. sp.

♀. 22 mm. Head, palpi, and thorax rather dark fuscous mixed with whitish, patagia tinged with brownish. Abdomen dark grey. Forewings elongate, rather narrow, posteriorly slightly dilated, costa gently arched, apex obtuse, termen gently rounded, oblique; brownish, suffusedly mixed with grey-whitish, and sprinkled with dark fuscous; costa with oblique alternate long and short dark strigulæ; an irregular streak of blackish suffusion along basal third of dorsum; an irregular streak of dark-brown suffusion mixed with blackish along submedian fold from base to middle, and a similar longitudinal streak in disc from $\frac{1}{3}$ to $\frac{2}{3}$, connected posteriorly with an elongate blackish spot above middle nearly reaching termen; a very small irregular black apical spot; three or four minute black dots towards termen on lower half, and three or four others on central third of termen; cilia fuscous, with rows of whitish points edged anteriorly with blackish. Hindwings with 3 and 4 long-stalked; grey, on veins and towards termen suffused with dark fuscous; cilia grey-whitish, with fuscous sub-basal shade.

1 specimen; 8 others taken.

* *Bactra noteraula*, Wals. (*straminea*, Meyr.).

1 specimen. New Zealand.

Polychrosis meliscia, n. sp.

♀. 18 mm. Head, palpi, and thorax whitish-ochreous, second joint of palpi finely sprinkled with dark fuscous towards middle. Forewings elongate, posteriorly dilated, costa gently arched, apex obtuse, termen gently rounded, oblique; 2 from $\frac{3}{4}$ of cell; whitish-ochreous finely speckled with dark fuscous, and irregularly strewn with small ferruginous-ochreous strigulæ; markings faint, indefinite, formed by greater development of dark speckling and strigulation; a moderate basal patch, outer edge nearly straight, rather oblique; central fascia indicated by a broad costal blotch reaching half across wing and a patch before tornus; cilia whitish-ochreous, obscurely barred with ferruginous-ochreous. Hindwings grey-whitish, posteriorly faintly strigulated with grey; cilia whitish.

1 specimen; 1 other taken.

COSMOPTERYGIDÆ.

Stigmatophora ællotricha, Meyr.

2 specimens. New Zealand.

* *Pachyrhabda antinoma*, n. sp.

♂. 9 mm. Head, palpi, antennæ, thorax, and legs silvery-white, terminal joint of palpi with anterior edge dark fuscous; antennæ greyish

beneath; anterior legs suffused with dark fuscous, posterior tibiæ with a small blackish apical spot above. Abdomen light yellowish, on sides and beneath silvery-white. Forewings narrowly elongate-lanceolate; silvery-whitish, faintly ochreous-tinged; extreme costal edge dark grey on basal half; cilia ochreous-whitish. Hindwings grey-whitish; cilia whitish. Undersurface of forewings suffused with dark grey.

1 specimen, taken in July.

GRACILARIADÆ.

Gracilaria octopunctata, Turn.

6 specimens. India, Australia.

PLUTELLIDÆ.

Glyphipteryx scolias, n. sp.

♀. 8 mm. Head and thorax light greyish-bronze. Palpi with four whorls of blackish white-tipped scales, without tuft. Antennæ bronzy-fuscous. (Abdomen broken.) Forewings elongate, costa gently arched, apex acute, termen extremely obliquely rounded; 7 and 8 stalked; greyish-bronze; six whitish costal streaks edged anteriorly with dark-fuscous suffusion, first from middle, oblique, reaching half across wing, second at $\frac{3}{4}$, equally long, less oblique, third short, cloudy, and less defined, remaining three short, direct, close together before apex; an irregularly sinuate slender silvery-whitish oblique streak from dorsum before tornus, nearly reaching apex of second costal; a silvery-whitish dot on middle of termen; a round black apical dot; cilia bronzy-whitish, with a black subbasal shade, interrupted with whitish below apex, with a fine black line projecting from interruption, above apex with a black hook, and with four fine black bars in costal cilia between streaks. (Hindwings missing.)

1 specimen. Denham Bay. Very nearly allied to *G. jocheæra* from New Zealand, but that species is larger, and has the præternal streak straight, and the terminal silvery-whitish dot replaced by a short streak. I have a good series of it, and these characters are constant.

Plutella maculipennis, Curt.

6 specimens. Quite cosmopolitan. Larva on cabbage, turnip, and other *Cruciferae*.

TINEIDÆ.

Opogona aurisquamosa, Butl.

2 specimens; 21 others taken. Hawaiian and South Pacific isles. Larva on sugar-cane and banana.

Decadarchis flavistriata, Wals.

1 specimen; 2 others taken. Hawaiian Isles. The example examined differs from the description and figure of the single original type in having a black dot representing plical stigma, and the streak at base of costal cilia towards apex blackish. I do not think, however, that it can be separated specifically. Hindwings with 5 and 6 stalked, 6 to costa.

* *Monopis ethelella*, Newm.

3 specimens. Australia, New Zealand, South Africa. A semi-domestic species, of which the larva probably feeds on refuse.