

Lepidoptera (Heterocera)

By the late H. M. PENDLEBURY

The collection of moths from Christmas Island on which this report is based was made by Dr. C. A. Gibson-Hill on the north coast shore terrace between November 1939 and June 1940.

It contains about seventeen hundred and forty specimens, representing approximately one hundred and seventy-four species. In the *Monograph of Christmas Island* (1900, pp. 63-80) only seventy-four species are recorded, about ten of which are not included in the present collection, but this is undoubtedly the most representative that has yet been made on the island.

This report covers only seventy-six species. It is regrettable that the study of the collection cannot be completed now, but the limitations imposed as a result of the war render this impossible. Many of the additional species are in the small and often obscure microlepidoptera, and demand the services of a specialist. In view of the present circumstances, however, it seems better to list those which can be identified, and to hold over the undeterminable ones for a supplementary report at some future date.

Family SPHINGIDAE

Seven species are represented in the present collection as against five given in the *Monograph of Christmas Island*, 1900, the two new records being the widely-spread *Herse convolvuli* (L.), and *Deilephila placida* (Wlk.) already known from many localities between the Andamans and Queensland.

Herse convolvuli (L.).

8 ex., January, March and April. Fairly common all through the year.

Psilogamma menephron menephron (Cr.).

In the *Monograph* as *Pseudosphinx discistriga* Wlk. (p. 70).
1 ex., December.

Cephonodes picus (Cr.).

In the *Monograph* as *C. hylas*. In *picus* the foretibia ends in a curved spine, whereas in *hylas* this spine is absent.

1 ex., May (additional specimens unfortunately lost).
Common in open spaces through the dry weather.

Chromis erotus erotus (Cr.).

On the average this is considerably darker and more olivaceous than examples from the mainland.

4 ex., December, March and May. Occurs throughout the year.

Deilephila placida placida (Wlk.).

2 ex., January, March.

Hippotion velox (F.).

As *Chaerocampa vigil* Guér., in the Monograph. 3 ex., February, March, April.

Theretra latreillei (MacL.).

This is a pale specimen with the lines on the forewing weak, and therefore, referable to the typical *latreillei* rather than to *lucasi* Wlk. 1 ex., May.

Family SYNTOMIDAE

Euchromia horsfieldi (Mre.).

1 ex., end of November. Seems to appear only at the end of the dry season. Not common.

This specimen as well as others I have seen from the same locality are distinctive in having the basal yellow streak below cell on the forewing completely divided. The typical form was described from Java.

Family AGARISTIDAE

Mimeusemia econia Hmps.

17 ex., January. This species is abundant at the beginning of the rainy season. The larvae, which have a slight resemblance to those of *Brana calopasa* Wlk., are most plentiful at the same time.

Family LYMANTRIIDAE

The present collection includes two species, of which *Dasychira inclusa* is new to the fauna. *Orgyia postica* Wlk., recorded in the Monograph, was not found.

Dasychira inclusa Wlk.

1 ex., November. An addition to the island fauna.

Porthesia pulvereana Hmps.

24 ex., January, February, March and May. The larvae of these moths, which are very plentiful during the greater part of the rainy season, are preyed upon by a Tachinid dipteran.

Family ARCTHIDAE

Additions to the fauna include two species in *Celama* and one in *Utetheisa*. *Argina cribraria*, recorded in the Monograph was not taken. The total number of species of this family therefore is six.

Celama spp.

6 ex., January, March, April and May.

3 ex., end of March, April and May.

There are two species of *Celama* that I am not able to identify with certainty. They require careful comparison with determined material which is not yet available here.

Nola distributa (Wlk.).

8 ex., March, April and May. Middle to end of the rainy season.

Utetheisa pulchelloides Hmps. ssp.

21 ex., March to May. Probably this and the following were included under *Deiopeia pulchella* L. in the Monograph (p. 64).

Utetheisa lotrix lotrix (Cr.).

4 ex., March to May.

When reporting upon Tweedie's collection (Bull. Raffles Mus., 8, 1933, p. 100), I had followed Rothschild in regarding *pulchelloides* as a synonym of *lotrix* (Seitz Macrolepid., x, 1914, p. 260). I have since examined a good series of specimens and it is clear that the two species mentioned above are distinct on structural grounds. In short, the main differences so far as the Christmas Island insects are concerned, are as follows:

♂, *pulchelloides*: Antennae dentate—serrate; a fold containing a tuft of yellowish hair near the inner margin hindwing upperside.

♂, *lotrix*: Antennae simple and ciliated; no hair tuft on hindwing upperside.

The following characters apply to both sexes:

pulchelloides: forewing upperside with a blackish stripe in *la* at extreme base below cell; the third reddish costal spot confined to the costal margin:

lotrix: no basal black stripe below cell on the forewing upperside; the third reddish costal spot (and often the second as well) spreads into the cell below the costal margin.

CHRISTMAS ISLAND—HETEROCERA

The spurs on the hind tibiae of *lotrix* are rather shorter than those of *pulchelloides*, and the genitalia, as will be seen from the figures (b) and (c), are quite different.

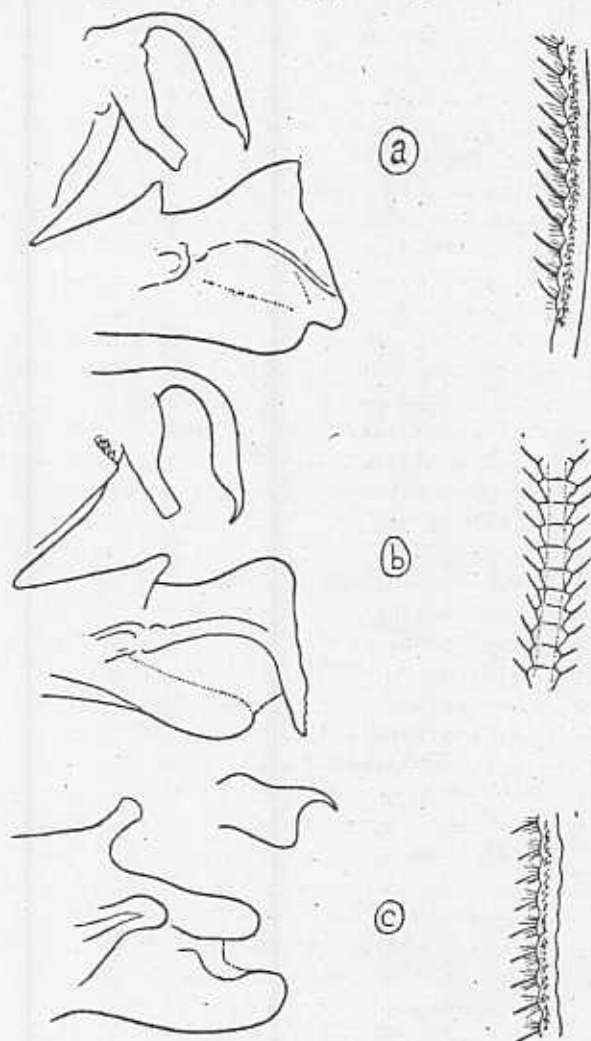


Fig. 1. Antennae and male genitalia of *Utetheisa* spp.
Hampson (Ann. Mag. Nat. Hist. (7), xix, 1907, p. 239)
included Christmas Island specimens in his description of
pulchelloides, and Dr. K. Jordan in a recent survey of *Utetheisa*

(Novit. Zool., xli, 1939, pp. 251-291) has described a race, *vaga* (p. 284), from several Malaysian localities although Christmas Island is not specially mentioned. Although the Christmas Island *pulchelloides* agrees in several particulars with *vaga* from, say, the Malay Peninsula, the ♂ antennae are considerably more dentate and the ♀ antennae are comparatively thicker than in the corresponding sexes of Malayan origin, and I believe therefore that the Christmas Island race is referable rather to *pectinata* Hmps. (1907, l.c. p. 240) than to *vaga* Jord. The text figures given below (kindly drawn by Mr. N. C. E. Miller of the Dept. of Agriculture from preparations I had made before receiving Dr. Jordan's paper) shew:

- (a) Antenna and ♂ genitalia of *U. pulchelloides vaga* Jord. (Malaya).
- (b) Antenna and ♂ genitalia of *U. pulchelloides* ssp. (Christmas Island).
- (c) Antenna and ♂ genitalia of *U. lotrix lotrix* (Cr.) (Christmas Island).

Dr. Gibson-Hill's notes on these species are as follows: These were taken in March, April and May; abundant on the edge of the sea cliff in the vicinity of cabbage-trees on which the larvae feed. Apparently not seasonal.

Family NOCTUIDAE

The present collection of Noctuidae (*sens. lat.*) contains forty-four species of which sixteen do not appear to have been collected previously on the island.

In the "Monograph of Christmas Island" (1900), twenty-seven species are listed, of which seven, viz:—*Dipterygia vagivitta* Wlk., *ab. obscurior* Warr. (in Seitz, Macrolepid., xi, 1913, p. 122), *Nyetipao macrops* L., *Ophiusa serva* F., *Acantholipes similis* Mre., *Thermesia rubricans* Bsdv., *Hydrillodes vexillifera* Hmps., and *Tavache olivacea* Hmps., were not rediscovered by Dr. Gibson-Hill. The possibility of one or two misidentifications should not be overlooked, but this would only affect the total number of species recorded from the island. For instance, *Ophiusa serva* F., listed in the Monograph does not seem to have been found since, although *janata*, not included in the Monograph, is common and rather variable there.

Mr. Tweedie's collection reported upon in "Bull. Raffles Mus.," 8, 1933, p. 100, contained twenty-three species, of which thirteen were not in the Monograph, viz:—*Amyra crocosticta* Hmps. (1910), *Perigea capensis* Guen., *Eriopus* sp., *Ophiusa janata* L. (see previous paragraph), *Oxyodes scrobiculata* F., *Gesonina* sp. nr. *obeditalis* Wlk., *Mocis frugalis* F., *Plusiopalpa*

chalcytes Esp., *P. orichalcea* F., *Hypena indicatalis* Wlk., *H. strigatus* F., *Simplicia butesalis* Wlk., and one undetermined Hypenine species. Of these, six are not represented in the present collection, so it will be seen that the total number of Noctuidae so far collected on the island is approximately fifty-six species.

Subfamily ACRONYCTINAE

Thalatha ? sp.

2 ex., April and May. Not determinable at present; no species in this genus has been recorded from the island so far, and the specimens mentioned are not like any I have seen from the Malayan region.

Calogramma festiva (Donov.).

12 ex., March and April. This species occurs all through the rainy season. The larvae which feed on the leaves of a wild lily are abundant during the first few months of the year, and may easily eat a plant to the ground.

Prodenia litura (F.).

23 ex., February, March, April. As *P. littoralis* Bsdv. in the Monograph.

Spodoptera mauritia (Bsdv.).

3 ex., February, March and April.

Perigea capensis (Guen.).

7 ex., February, March and April.

There seems some doubt whether the Oriental specimens which stand under *Perigea capensis* (Guen.): (*Prospalta capensis* in Seitz, Macrolepid., xi, 1937, p. 346) are the same as the South African species. Judging from Dr. A. T. Janse's figure of the genitalia of *capensis* (Moths of South Africa, iii, 1937-9; p. 79), I believe that the representatives from Malaya and Christmas Island at least, although very similar, are not quite identical with the South African *capensis*. The differences in the genitalia of Malaysian specimens I have seen are as follows: uncus thinner and less curved at base, the tip shorter; the valve is broader with a distinct "elbow" at about half-way on the ventral margin.

I am retaining the name *capensis* for the present, however, until it can be decided whether a name should be rescued from the synonymy, and if so, which it should be.

Iambia transversa (Mre.).

3 ex., middle of the rainy season: February, March and April. These specimens are rather darker than usual. The species is a new record for the island.

Clinophlebia sericea Hmps.

7 ex., December, February, March and May. Seems to occur throughout the year. Recorded in the Monograph as *Leocyma tibialis* F., which though rather similar in general appearance is very distinct. The following characters will distinguish the two species: *sericea*, palpi yellowish with a yellow apical segment; the dark band between the eyes bordered in front with orange; fore tibiae are yellow with two small black spots. In *tibialis*, the palpi are white with a black apical segment and some black on the upper surface of the basal segment; the band between the eyes is darker brown without an orange border, and the fore tibiae are white with two large black spots in front.

For structural differences see Dr. Janse's "Moths of South Africa" vol. iii, 1939, pp. 388-392, figs. 96, 97.

Subfamily ERASTRIANAE

Autoba sp.

12 ex., April to June. Fairly common at the end of the rainy season.

This is a puzzling species and one of the smallest in the genus, with a wing expanse of 14-15 mm. only, and I am unable at present to ascribe it to any particular species, but it resembles somewhat a small *versicolor* although the ground colour in both sexes is pale buff. The oblique reddish medial line is well marked and has a thin, wavy postmedial line beyond it on both wings. The terminal line is dark and the cilia purplish, but brownish at base. No cell spot on the forewing above, but a small dark spot marks the cell end on forewing beneath, usually with a smaller spot, or a few dark scales, preceding it about the middle of the cell.

Porphyrinia roseana (Mre.).

4 ex., March, April and May. Provisionally determined as such pending comparison with named material; this applies also to the two next species.

Porphyrinia rivula (Mre.).

5 ex., February, March and May.

Porphyrinia cochylioides (Guen.).

7 ex., January, March, April and May.

Amyna punctua (F.).

4 ex., February, March and April; middle of the rainy season. As *A. selenampha* in the Monograph.

Amyna octo (Guen.).

34 ex., February, March and April; middle of the rainy season. Half this series has the lower half of the reniform filled in with white (f. *axis* Guen.).

Ilattia crocosticta (Hmps.).

5 ex., middle of the rainy season: February March and April. The genitalia of this species is very distinct from that of *octo*.

Beressa natalis Wlk.

12 ex., March, April and May. Not previously recorded from the island although it is widely distributed.

Lithacodia signifera (Wlk.).

35 ex., very common during the latter part of the rainy season: February to May. As *Maliattha* in the Monograph.

Lithacodia griseomixta (Hmps.).

9 ex., middle to end of the rainy season: March to June. This was described from a ♀ by Hampson in the "Monograph" as *Erastria griseomixta* (p. 68, pl. ix, fig. 5). The ♂ appears to have been described as *Bryophilopsis orientalis* Hmps. in Cat. Lep. Phal. Brit. Mus., xi, 1912, p. 311 (Sarrothripinae). If this supposition is correct, then the species should be removed to the subfamily Sarrothripinae as *Bryophilopsis griseomixta* (Hmps.). The species shews some variation.

Subfamily ACONTRINAE

Earias luteolana Hmps.

15 ex., March to June. Common during latter half of the rainy season. Somewhat variable. Not previously recorded from the island.

These specimens vary from faintly marked ones, through Hampson's "ab. 2" (with the terminal area suffused with pink except towards apex), to heavily marked examples with the lines clearly defined.

Earias latimargo Hmps.

9 ex., March to May; common towards the end of the rainy season. This was recorded as *chromataria* in the Monograph, but described later by Hampson Cat. Lep. Phal., xi, 1912, p. 505).

Armactica andrewsi Hmps.

18 ex., very common during the greater part of the rainy season: February, March, April and a few in May. Recorded in the Monograph as *columbina*, but described later by Hampson (l.c. supra, p. 664).

Subfamily MELICIEPTRIINAE

Chloridea assulta (Guen.).

49 ex., very common round the middle of the rainy season: February to May. Rather variable.

This wide spread species does not appear to have been recorded previously from the island; it may have been introduced.

Subfamily EUTELIANAE

Phlegetonia delatrix (Guen.).

3 ex., December and January.

Subfamily STICTOPTERINAE

Stictoptera describens (Wlk.).

5 ex., February to April. Of these, three have the forewings dark brown of which two have a black-brown fascia from base of median vein to termen below apex; two have the forewings pale brown one of which has the black-brown fascia.

Subfamily SARROTHRIPINAE

There are three specimens of a small species, 13-14 mm. in expanse for which I am unable to provide a determination at present. It may belong to *Characoma*.

Subfamily GONOPTERINAE

Anomis erosa (Hbn.).

2 ex., December and January.

Anomis esocampta Hmps.

7 ex., Intermittently fairly common, January, February, April and May. Recorded in the Monograph (p. 67) as *Cosmophila vitiensis* Btlr., but described in 1926 by Hampson (Descr. of new genera and species of Lep. Phal., Brit. Mus., 1926, p. 345).

Subfamily HYBIAEINAE

Hybiaea puera (Cr.).

23 ex., February, March, April, and two specimens in May. Common during the middle and greater part of the rainy season. This wide-spread species seems to be a recent introduction as it does not appear in previous lists.

Subfamily QUADRIFINAE

Dasypodia selenophora (Guen.).

1 ex., February. I believe this identification is correct; the only reference I have is Walker's Catalogue, xiv, 1858, p. 1299. This very striking looking species seems to have found its way from the Australia Region where the larva is said to feed on wattles.

Polydesma metaspila (Wlk.).

1 ex., March. This is another surprising find not hitherto recorded from the island.

Lyncestis ? sp.

1 ex., April. In this specimen, the forewing is mainly dark brown, with the costal margin, a patch on the termen between veins 4 and 7, and a patch at the tornus light grey, on the underside there is a broad black submarginal band on both wings not reaching the costa or inner margin. It may be a form of *amphix* Cr., or new.

Lacera alope (Cr.).

4 ex., February, March and April. Another new record for the island.

Brana calopasa Wlk.

11 ex., April and May. This species is common all through the rainy season. At the approach of rough weather the moths collect together in large swarms on the trunks of trees, or on the leaves of the coconut palm; more rarely they may assemble on hanging twigs or flower-heads. These groups usually contain several hundred specimens, and on a flat surface often cover an area a foot wide and over thirty inches long. A swarm breaks up readily if the support on which it has formed vibrates, and even footsteps may be sufficient to dislodge a number of specimens.

Under normal circumstances a swarm lasts for several days, and may continue to form and break up, at intervals, on the same tree for five or six weeks. In the Monograph, Mr. Andrews

suggested that this swarming might be due to a single female attracting a large number of males.

The larvae, which are deep slate-blue with black markings, are abundant at the beginning of the rainy season. This species has a curious distribution: Ceylon, Christmas Island, and New Guinea.

Lagoptera honesta (Hbn.).

2 ex., August and February. Referable to the subspecies *subhonesta* Strd.

Anua coronata (F.).

6 ex., December to April. Variable; two specimens have the reniform black, two have the reniform broken up into blackish spots, and two have no black.

Achaea janata (L.).

28 ex., middle of February to the end of March; abundant round the middle of the rainy season. This is probably what was recorded in the Monograph as *serva*. The locality is not repeated under *serva* in the Cat. Lep. Phal., Brit. Mus., xii, 1913, but appears under *melicerta* Drury (= *janata* L., which has priority).

Mocis frugalis (F.).

20 ex., March to June. Common, especially in grassy open spaces, during the latter half of the rainy season and beginning of the dry season.

Chalciope hyppasia (Cr.).

2 ex., February and April. Widely distributed, but not hitherto reported from the island.

Maenas ancilla (Cr.).

3 ex., February, March and April.

Othreis fullonica (L.).

1 ex., early May.

Argadesa materna (L.).

1 ex., April.

Subfamily PHYTOMETRINAE

Plusiopalpa chalcytes (Esp.).

5 ex., arch, April and May. This and the two following species were first recorded in Tweedie's collection.

Subfamily HYPENINAE

Hypena indicatalis Wlk.

8 ex., January, March and April.

Hypena strigatus (F.).

2 ex., November.

Bocula limbata (Btlr.).

3 ex., March and April. Apparently endemic.

Family EPIPLEMIDAE

Epiplima inhians Warr.

5 ex., February, March and early April.

Dirades sp.

2 ex., February, April. Both rather worn specimens and indeterminable without comparative named material, possibly *adjutaria* Wlk.

Family THYRIDIDAE

Rhodoneura sp. (139).

1 ex., February. A small specimen, 14 mm. in expanse, difficult to determine from short descriptions only. The colour of the wings is pale yellowish-white mottled with brown; in a side-light the mottling tends to disappear and the wings become silky. There is a dark mark at the cell end of the forewing and a clearly marked subapical line from costa to vein 4 with two dark spots on the lighter background near the apex. No representative of this family has been recorded from the island hitherto.

Family GEOMETRIDAE

In the Bulletin of the Raffles Museum, No. 8, 1933, pp. 88-94, Miss L. B. Prout revised the list of Geometridae from Christmas Island, basing her report on the collection made by Mr. M. W. F. Tweedie during August and September of the previous year. Five new species were described bringing the total number to thirteen. The present collection, which includes neither *Ecliptopera phaula* Prt. (1933) nor *Sauris remodesaria* Wlk., contains sixteen species, so the total for the island may be regarded as eighteen, an addition of a further five species.

The Hemitheine species mentioned, as well as *Scopula* and *Gymnosceli* species cannot be determined satisfactorily without

access to a much wider named material than is available here. The species no doubt have relationship to certain extra-Malayan species not represented in the Selangor Museum, and therefore are left unnamed for the present.

Subfamily HEMITHEINAE

Thalassodes subviridis Warr.

5 ex., November to April. As *T. veraria* Guen., in the Monograph.

Hemithea (Chlorissa) hyperymna Prt.

5 ex., January, March, April. Described from a ♀. There is a ♂ in the present collection, very similar in appearance to the ♀, but the forewing apex is rather acute, and the "tooth" at vein 4 on the hindwing is less prominent. It shows the following characters: antenna bipectinate, the branches which are nearly half a mm. long at the centre decrease gradually in size from the apical fourth; the branches ciliated and terminating in a few stronger bristles. Palpi with the apical segment deflexed, as in the ♀, and not quite so long. Hind tibia long and moderately stout with a fold and white hair-pencil, the dorsal apical part of the tibia prolonged and overlapping the basal tarsal segment. Proximal spurs absent (in the four ♀♀ in this series the proximal spurs are developed although in Miss Prout's type they are said to be obsolete, but as she suggests this may not be a constant character); hind tarsi shorter than in ♀. (Forewing with veins 3 and 4 from cell end, not shortly stalked as in ♀. Expanse 22 mm.

Comostolopsis regina Th.-Mg.

3 ex., December to March. This little-known species was described from an incomplete ♀ lacking the head. The three examples in the present collection are ♀♀ also, and though not perfect shew certain characters unrecorded hitherto. Tongue present, palpi long, the second segment reaching the vertex, the third as long as the second. Antenna simple, the shaft silvery whitish above, yellowish beneath. Scaling on the head and collar reddish-orange with a silvery sheen when held at an angle to the light; forewing with the costal border reddish-orange flecked with black scales. Underside silky-white, the darker costal and terminal border faintly indicated. Hind tibia with two pairs of spurs of moderate length. Expanse 17 mm.

There is a fourth species in this subfamily for which I am unable at present to supply a determination. The three specimens (all ♀♀) were included with the *T. subviridis* series but have no other connection therewith except in so far as the data is concerned.

At first glance they might be presumed as either an *Oenospila* or *Comibaena*, but I do not believe they belong to either genus, and without considerably more comparative material I cannot venture further than giving a brief description.

♀. Antenna simple; palpus with the second segment not reaching the vertex, the third quite as long as the second. Wings with the termen evenly rounded, the apex of the forewing subacute; rather thinly scaled and of a green colour rather similar to that of *Oenospila*. Forewing with the costal border whitish but with some dark scaling at base and apex; a dark mark at the cell end of the wings. Three rather obscure, small, white, subterminal spots on veins 2, 3, and 4 of the forewing as well as a small white spot on vein 1 at the tornus, and at the termen of veins 2 and 4. Hindwing with a small white terminal spot at each vein ending. Abdomen above yellowish with a white dorsal mark surrounded by orange scales at base, and a larger mark distally. Hind tibia slightly curved in the middle; two pairs of spurs set rather close to each other; hind tarsi with the basal joint nearly as long as the apical from joints combined. Expanse 22-24 mm.

Subfamily STERRHINAE

Anisodes hypomion Prt.

14 ex., common all through the rainy season: December to Junè. Described by L. B. Prout (1933, loc. cit., p. 89) from a single ♀. In the present collection there is a ♂ which though very similar in coloration and markings to the ♀, shows the following additional characters: antenna bipectinate to two-thirds, pectinations long and darkened towards the tips. Palpi long and reaching above the vertex, outcurved near apex and with a brush of rather long silky yellowish hair on the inner margin apical half. Apical segment short, scarcely half the length of that of the ♀. Hind tibia long, no indication of proximal spurs. Exp. 19 mm.

This differs from Warren's characterisation of his genus *Stibarostoma* (1896, Nov. Zool., iii, p. 380), in the comparatively shorter second segment of the palpi, and by the absence of proximal spurs on the hind tibia, although in the ♀ this pair of spurs is present.

Scopula tumiditibia Prt.

16 ex., December to June. As *Craspedia optivata* Wlk. in the Monograph, but corrected by Prout (1920) in Nov. Zool., xxvii, p. 298.

Scopula actuaria (Wlk.).

57 ex., common all through the rainy season, though most forms are very worn. December to June.

I believe this identification is correct, although the species has not previously been recorded from the island.

Scopula sp.

1 ex., April. This single specimen is a ♀ for which I cannot provide a determination with the limited material at my disposal. The wings are greyish sprinkled with black atoms; a clearly marked black cell spot on each wing. Forewing with indications of a subbasal, antemedial and postmedial irregular yellowish line overlaid with blackish scales. The postmedial line is double: the inner starts at midcosta and curves round the end of the cell where it meets the outer zigzag line that starts in the subapical area. The antemedial line with black marks above and below the cell. A black spot on costa at three-quarters and a series of irregularly-placed black spots which follow approximately the course of the yellowish postmedial line to the inner margin. A terminal series of black subtriangular spots on both wings. Fringes grey speckled with dark atoms. The hind wings show marked antemedial and postmedial dark lines as well as nebulous yellow shades. Underside pale grey, with the cell spots, costal spots and terminal series of spots indicated. Expanse, 17 mm.

Subfamily LARENTIINAE

Sauris pelagitis Prt.

9 ex., middle of the rainy season, February to April, and one in May. Recorded as *S. hirudinata* Guen. (♀) by Hampson in the Monograph and corrected by Prout in 1933 (Bull. Raffles Mus., 8, p. 92).

Gymnoscelis sp. ?

23 ex., common through the middle of the rainy season, February to April. This small species, which expands 13-14 mm. only, must be left unnamed for the present.

Gymnoscelis sp. ?

1 ex., May. This specimen represents a second species of this genus not hitherto recorded from the island. It is rather worn and has a wing expanse of 15 mm.

Gymnoscelis sp. ?

1 ex., representing a third species from the island. The wings are rather denuded, but a black subbasal mark on the forewings and clearly indicated postmedial lines on both wings and larger size, 17 mm., show that it is distinct from either of the two previous species.

Subfamily GEOMETRINAE

Cleora alienaria fumipennis Prt.

10 ex., fairly common through the greater part of the rainy season, January to May. Recorded as "*Boarmia acaciaria*" in the Monograph, and correctly indicated by Prout (1929) in Nov. Zool., xxxv, p. 70. Examination of the genitalia has clearly shown that this is an *alienaria* race although the smaller size and dark colour do not suggest affinity.

Ectropis (Ruttelerona) scotozonea (Hmps.).

23 ex., fairly common through the greater part of the rainy season, December to May. Originally described from the island.

Orsonoba clelia (Cr.).

5 ex., February to April. Already recorded by Prout (1933).

Syrrhodia vindex Prt.

14 ex., common through the earlier part of the rainy season, January to April. As *Hyperythra lutea* Cram. in the Monograph, but corrected by Prout in 1933.