

HETEROCERA

BY

W. H. T. TAMS (London)

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ARCTIIDAE

SYNTOMINAE.

1. *Syntomis leopoldi* sp. nov.

Pl. I, fig. 1 ♂.

♂. Antenna with very short setae, and even shorter (less than half as long) cilia; fuscous. Palpus fuscous. Head with frons ochraceous orange, vertex fuscous. Thorax with patagium ochraceous orange, tegula ochraceous orange and fuscous mixed, metathorax with a fuscous longitudinal stripe. Pectus ochraceous orange and fuscous. Legs fuscous. Forewing with retinaculum apparently aborted; fuscous, the markings in orange buff to ochraceous orange; a streak between costa and cell from wing-base to end of cell; a large spot filling distal half of cell; an oval spot beyond cell between bases of veins R_5 and M_1 , a smaller one between veins M_2 and M_3 , a larger one between veins M_3 and Cu_1 , and a smaller one between veins Cu_1 and Cu_2 ; a long streak between cell, Cu_2 and anal vein, proximal half broad, distal half narrow; a narrow streak between anal vein and inner margin extending from base to middle of inner margin. Hindwing with frenulum delicate; fuscous, proximal two-thirds almost filled by a large orange buff to ochraceous orange spot, the distal half of which is divided by a tongue of fuscous directed basad. Underside similar to upper side. Expanse : 40 mm.

Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 24.II.1929 (Van Braekel).

LITHOSIINAE.

2. *Nishada marginalis* FELDER.

Cyrthochila? marginalis FELDER, Reise Novara, Zool. II (2), Lep. Het., pl. 139, fig. 14 (1875).

2 ♀ ♀, Celebes, Menado, Tondano-Menado, Tonsea Lama, 22.II.1929 (Van Braekel).

3. *Eilema vanbraekeli* sp. nov.

Pl. I, fig. 2 ♀.

♀. Antenna fuscous. Palpus light orange yellow, distal half outwardly shaded with fuscous. Head orange buff, frons laterally drab. Thorax, pectus and venter orange buff, tergum light orange yellow mixed with orange buff. Legs with femora orange buff shaded distally with fuscous, tibiae and tarsi fuscous, the fuscous always with a brilliant blue violet sheen in oblique sunlight. Forewing above and beneath light orange yellow tinged with orange buff, immaculate. Hindwing pale orange yellow. Expanse : 44 mm.

Holotype ♀. Celebes, Menado, Tondano-Menado, Tonsea Lama, 24.II.1929 (Van Braekel).

4. *Eilema tonseana* sp. nov.

Pl. I, fig. 3 ♀.

♀. Antenna orange buff. Palpus orange buff, lightly shaded with fuscous outwardly. Head, thorax and abdomen orange buff. Legs with femora orange buff, tibiae and tarsi fuscous with slight blackish green blue sheen in oblique sunlight. Forewing orange buff. Hindwing pale orange yellow. Underside of both wings similar to hindwing upperside. Expanse : 34 mm.

Holotype ♀. Celebes, Menado, Tondano-Menado, Tonsea Lama, 22.II.1929 (Van Braekel).

The wings of this species are broader in proportion to their length than are those of *E. vanbraekeli*; vein M_1 in the forewing of *E. tonseana* arises from the discocellulars, whereas in *E. vanbraekeli* it arises with the radials from the upper angle of the cell. In the hindwing of *E. vanbraekeli* the stalk of $Rs + M_1$ is longer than is the case in *E. tonseana*.

5. *Eilema leopoldi* sp. nov.

Pl. I, fig. 4 ♂.

♂. Antenna bone brown, shaft clothed with tulle buff scales. Palpus orange buff, shaded dorsally with fuscous. Head with frons fuscous to clove

brown, vertex warm buff. Thorax tilleul buff to pale pinkish buff, patagium and tegula both shaded centrally with clove brown. Abdomen (tergally and ventrally) orange buff; pectus orange buff. Legs tilleul buff to pale pinkish buff, dorsally shaded with fuscous. Forewing tilleul buff to pale pinkish buff, with an irregular postmedial patch of clove brown between the junction of veins M_3 and Cu_1 and the inner margin. Hindwing cartridge buff suffused with tilleul buff.—Underside of both wings similar to upper side, but the forewing suffused with avellaneous, immaculate. Expanse : 38 mm.

Holotype ♂. Java, Pendjaloe, 20.XII.1928 (H. R. H. Prince Leopold).

6. *Eilema prabana celebesa* subsp. nov.

Pl. I, fig. 5 ♂.

♂. Differs from the typical subspecies, *E. prabana prabana* Moore (Cat. Lep. E. I. House II, p. 304, 1859, *Lithosia*), in the form of the valve in the ♂ genitalia; the ventral rod-like process does not extend beyond the flat, broad part of the valve, as it does in the genitalia of *E. p. prabana*. Expanse : 23 mm.

Males of *E. prabana prabana* from Java, Sumatra and Singapore are uniformly smaller (20 mm. in expanse).

Holotypè ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 24.II.1929 (Van Braekel).

Paratypè ♂. Tonsea Lama, 23.II.1929 (Van Braekel).

7. *Philagria entella entella* CRAMER.

Phalaena Tinea entella CRAMER, Uitl. Kapellen III (18), p. 27 and index, pl. 208, fig. D (1779).

2 ♀ ♀, Celebes, Menado, Tondano-Menado, Tonsea Lama, 25.II.1929 (Van Braekel).

8. *Padenia duplicana* WALKER.

Tospitis duplicana WALKER, List Lep. Ins. B. M. XXVIII, p. 429 (1863).

1 ♀, Sumatra, IV-V.1929 (Van Braekel).

9. *Scaptosyle bicolor* WALKER.

Scaptosyle bicolor WALKER, List Lep. Ins. B. M. XXXI, p. 182 (1864).

2 ♀ ♀, Ceylon, Kandy.

10. *Chionaema rubrifasciata* DRUCE.

Chionaema rubrifasciata DRUCE, Ent. Monthly Mag. XX, p. 156 (1883).

2 ♂ ♂, Celebes, Menado, Tondano-Menado, Tonsea Lama, 24, 25.II.1929 (Van Braekel).

11. *Chionaema amelaena* HAMPSON.

Chionaema amelaena HAMPSON, Ann. Mag. Nat. Hist. (7) XI, p. 346 (1903).

1 ♀, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

12. *Asura frigida* WALKER.

Doliche frigida WALKER, List Lep. Ins. B. M. II, p. 530 (1854).

1 ♀, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

13. *Asura lutara* MOORE.

Lyclene lutara MOORE, Cat. Lep. E. I. House II, p. 300 (1859).

Setina dividata Snellen in Veth, Midden-Sumatra, p. 57 (1880).

1 ♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

14. *Asura platyrhabda* sp. nov.

Pl. I, fig. 6 ♀.

♀. General colour warm buff to antimony yellow. Palpus fuscous. Head. a fuscous spot in middle of vertex. Thorax: patagium centrally shaded with fuscous, tegula similar. Foreleg with coxa distally, femur distally, tibia wholly and tarsus distally, shaded with fuscous dorsally; midleg with femur distally, tibia (proximal fifth and distal half) similarly shaded with fuscous. Forewing with longitudinal sub-basal fuscous streaks; an almost straight fuscous postmedial fascia across middle of wing; a prominent fuscous discocellular spot; a subterminal series of 2 mm. long fuscous streaks on veins R_2 , $R_3 + R_4$, R_5 , M_1 , M_2 , M_3 , Cu_1 and Cu_2 , the two on the stalked radials forming a V on the fork of veins ($R_3 + R_4$) + R_5 , those on veins R_2 , M_2 , Cu_1 and Cu_2 lying nearer the cell than the others; a fuscous terminal fascia with its inner edge crenulate (concavities basad). Underside of both wings similar to upperside. Expanse: 26 mm.

Holotype ♀. Celebes, Menado, Tondano-Menado, Tonsealama, 22.II.1929 (Van Braekel).

This species is related to *A. sinica* Moore (Shanghai), *A. discitriga* Moore (N. India), *A. terminata* Moore (Khasia Hills), and *A. circumdata* Walker (Borneo), all of which Hampson has sunk to *A. strigipennis* Herrich-Schäffer (New Holland).

15. *Mitochrista exclusa* BUTLER.

Barsine exclusa BUTLER, Trans. Ent. Soc. Lond., 1877, p. 340.

1 ♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

16. *Miltochrista scripta* WALKER.

Barsine scripta WALKER, List Lep. Ins. B. M. XXXI, p. 254 (1864).

2 ♂♂, 3 ♀♀, Celebes, Menado, Tondano-Menado, Tonsea Lama, 22, 24, 28.II.1929 (Van Braekel).

17. *Miltochrista celebesa* sp. nov.

Pl. I, fig. 7 ♂.

♂. Antenna flame scarlet. Palpus peach red to scarlet red. Head and thorax (notum) flame scarlet mixed with orange; pectus light ochraceous buff. Abdomen: tergum light ochraceous buff tinged with peach red, venter fuscous. Legs peach red to scarlet red, the mid and hind legs light ochraceous buff ventrally. Forewing flame scarlet, with markings fuscous (cf. Pl. I, fig. 7). Hindwing light ochraceous buff, faintly tinged with peach red, the termen and fringe fuscous from apex to vein Cu_2 . Underside: forewing peach red tinged with flame scarlet above cell; proximal fourth of costa fuscous, distal half fuscous, with the wing-apex broadly fuscous, enclosing two large peach red spots; termen and fringe as on upperside; hindwing light ochraceous buff, tinged with flame scarlet along costa; a small, ill-defined fuscous patch on vein Sc near its junction with the cell; an apical patch of fuscous, less extensive than that on forewing. Expanse: 34-36 mm.

Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 27.II.1929 (Van Braekel).

Paratype ♂. From the same source, dated 22.II.1929.

ARCTINAE.**18. *Maenas maculifascia* WALKER.**

Spilosoma maculifascia WALKER, List Lep. Ins. B. M. III, p. 676 (1855).

1 ♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

19. *Diacrisia dohertyi* ROTHSCHILD.

Diacrisia dohertyi ROTHSCHILD, Nov. Zool. XVII, p. 151 (1910).

1 ♂, Celebes, Menado, Tondano-Menado, Tonsea Lama, 23.II.1929 (Van Braekel).

20. *Diacrisia leopoldi* sp. nov.

Pl. I, figs. 8, 9 ♂♂.

♂. Antenna bone brown, clothed dorsally with light buff to light ochraceous buff scales. Palpus peach red, the third segment tipped with light ochra-

ceous buff. Head and thorax light ochraceous buff. Tergum peach red with a dorsal series of fuscous spots on segments 3-7. Pectus light ochraceous buff, in places tinged with peach red. Venter light ochraceous buff with fuscous lateral spots on segments 4-6. Foreleg with femur peach red, tibia fuscous dorsally, light ochraceous buff ventrally; tarsus fuscous; midleg with femur peach red dorsally, light ochraceous buff ventrally, tibia fuscous dorsally, ventrally light ochraceous buff tinged with peach red, tarsus fuscous; hindleg like midleg. Forewing light ochraceous buff; a fuscous black spot at wing-base between costa and cell; a narrow fuscous black postmedial fascia, almost straight (slightly concave basad), interrupted at veins, oblique from directly above upper angle of cell to middle of inner margin, sometimes reduced to a prominent spot on upper half of discocellulars and traces above inner margin.—Hindwing light ochraceous buff, faintly but broadly suffused along costa, inner margin and on veins, with peach red; a prominent fuscous black spot on upper half of discocellulars. Expanse : 48 mm.

Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 28.II.1929 (Van Braekel). (Pl. I, fig. 8.)

Paratypes. 2 ♂♂ from the same source, dated 23 and 25.II.1929 respectively. The paratype shown (Pl. I, fig. 9) is discoloured through having become greasy.

21. *Diacrisia strigatula* WALKER.

Arctia strigatula WALKER, List Lep. Ins. B. M. III, p. 613 (1855).

1 ♂, Sumatra, environs de Medan (Van der Meer Mohr).

22. *Amsacta lactinea* CRAMER.

Phalaena Bombyx lactinea CRAMER, Utitl. Kapellen II (12), p. 58 and index, pl. 133, fig. D (1777).

1 ♀, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

23. *Cretonotus gangis* LINNAEUS.

Phalaena gangis LINNAEUS, Amoen. Acad. VI, p. 410 (1763).

1 ♂, N. W. Sumatra, Poelo Weh, 12.XII.1928 (H. R. H. Prince Leopold).

1 ♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

24. *Cretonotus transiens* WALKER.

Spilosoma transiens WALKER, List Lep. Ins. B. M. III, p. 675 (1855).

2 ♂♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

25. *Utetheisa pulchelloides* HAMPSON.

Utetheisa pulchelloides HAMPSON, Ann. Mag. Hist. (7) XIX, p. 239 (1907).

2 ♂♂, Sumatra, environs de Medan (Van der Meer Mohr).

HYPSINAE.

26. *Nyctemera selecta* WALKER.

Pl. I, fig. 10 ♂.

Nyctemera selecta WALKER, List Lep. Ins. B. M. II, p. 399 (1854).

2 ♂♂, 2 ♀♀, Malacca Strait, Pisang Island, Tartaroega, 17.III.1929 (H. R. H. Prince Leopold).

27. *Nyctemera coleta* STOLL.*Phalaena Geometra coleta* STOLL in CRAMER, Uitl. Kapellen IV (31), p. 153 and Proeve Donsvleug. Ins., Lep., p. 25 (1781).

1 ♀, Sumatra, Kepahiang, 17.IV.1929 (H. R. H. Prince Leopold).

1 ♀, Java, Pendjaloe, 31.XII.1929 (H. R. H. Prince Leopold).

28. *Nyctemera obtusa* WALKER.

Pl. I, fig. 11 ♀.

Nyctemera obtusa WALKER, List Lep. Inst. B. M. VII, p. 1667 (1856).

1 ♀, Celebes, Menado, Tanggarie-Menado, 15.V.1925.

29. *Nyctemera leopoldi* sp. nov.

Pl. I, fig. 12 ♂.

♂. Antenna fuscous black. Palpus fuscous black, the first and second segments broadly light buff dorsally and ventrally. Head: frons light to warm buff with a prominent fuscous black spot above the centre; vertex light buff with a prominent fuscous black spot behind the centre. Thorax: patagium fuscous black, narrowly edged with light buff, orange buff posteriorly; tegula fuscous black narrowly edged with light buff; mesonotum and metanotum similarly coloured; pectus light buff with some orange buff medially, fuscous black in front. Abdomen: tergum drab to hair brown, each segment narrowly edged distally with light buff, the terminal tuft orange buff; venter light buff, each segment narrowly drab to hair brown proximally. Legs drab to hair brown, the femora ventrally with light buff longitudinal streaks. Forewing hair brown irrorated with drab scales; a broad, oval, oblique white fascia from costa above end of cell to tornus, interrupted by the dark veins; a longitudinal cartridge buff streak between costa and cell extending from wing-base to the broad white fascia, another through the cell, and one between the cell and vein A_2 , the veins in this proximal half of the wing cartridge buff. Hindwing hair brown irrorated with drab, with a central white oval patch from middle of cell to an equal distance beyond it. Underside similar. Expanse: 44 mm.

Holotype ♂. New Guinea, Sakoemi, 11.III.1929 (H. R. H. Prince Leopold).

How long will it be before we have some really sound principles on which to base our nomenclature? I have just published a paper in the Insects of Samoa series, in which I have used the name *Deilemera* Hübner, on the grounds put forward by Dr. Karl Jordan (Nov. Zool., XXXI, p. 220, 1924). The tendency now turns in the direction of taking the first citation of a generic type, without the provision that such type species should come within the compass of the generic definition. In this particular case Hübner's definition clearly applies most fittingly to the species now grouped under the generic name *Otroeda* Walker, and the application of the name *Nyctemera* to the species placed in that genus by Hübner but falling more naturally into his next genus *Deilemera*, appears to require a stretch of imagination. However, it may be that we are gradually drifting in the direction of accepting the citation of a type as taking precedence over all other considerations. In this connection, no definite rule indicating exactly what is to be considered actual restriction of a genus seems to have been generally recognised, though in my opinion Article 29 of the International Code covers restriction in cases in which a type is not cited.

30. *Asota heliconia heliconia* f. *lanceolata* WALKER.

Pl. I, fig. 13 ♂.

Hypsa lanceolata WALKER, List Lep. Ins. B. M. VII, p. 1675 (1856).

2 ♂♂, 1 ♀, Celebes, Menado, Tondano-Menado, Tonsea Lama, 24, 28, 29.II.1929 (Van Braekel).

31. *Asota albivena* WALKER.

Pl. I, fig. 14 ♀.

Hypsa albivena WALKER, List Lep. Ins. B. M. XXXI, p. 213 (1864).

Aganais vitessoides SNELLEN, Tijds. v. Ent. XII, p. 78, pl. 7, fig. 1 (1879).

1 ♀, Celebes, Menado, Tondano-Menado, Tonsea Lama, 23.II.1929 (Van Braekel).

32. *Asota celebensis* sp. nov.

Pl. I, fig. 15 ♀.

♀. Antenna fuscous black. Palpus: first segment deep chrome, on outer side at apex a fuscous black spot; second segment deep chrome, a larger fuscous black spot on outer side at apex; third segment fuscous black irrorated dorsally with light buff. Head, thorax and abdomen deep chrome: tegula with a fuscous black spot at one-third; tergum with a medial fuscous black streak on each segment proximally, almost covered by the overlapping previous segment; venter with a lateral series of fuscous black spots. Legs light buff, shaded and irrorated with fuscous. Forewing deep chrome to orange, with several longitudinal amber brown fasciae (cf. figure for position); a velvety fuscous black spot at base near costa; a velvety fuscous black spot in cell at one-third; two velvety fuscous black spots below cell near wing-base. Hindwing deep chrome, with proximal

two-thirds of upper half light buff. Underside orange buff; forewing with a large oval fuscous black spot at middle of cell, a larger pear-shaped spot (apex tornad) at end of cell; hindwing with an ill-defined fuscous streak from base to one-fourth between costa and vein Sc, a large longitudinal fuscous black spot postmedially on costa, a smaller spot below vein Sc, and a third spot postmedially just above vein M₂. Expanse : 72 mm.

Holotype ♀. Celebes, Menado, Tondano-Menado, Tonsea Lama, 25.II.1929 (Van Braekel).

33. *Asota orbona aequalis* WALKER.

Pl. I, fig. 16 ♀.

Hypsa aequalis WALKER, List Lep. Ins. B. M. XXXI, p. 214 (1864).

1 ♀, Aru Islands, Dobo, 26.III.1929 (H. R. H. Prince Leopold).

34. *Asota australis anadota* nom. nov.

Pl. I, fig. 17 ♂.

Asota australis aequalis Walker JORDAN, Nov. Zool. IV, p. 331 (1897), non WALKER.

The true *aequalis* Walker is the moth figured on plate I, fig. 16, and this was treated by Dr. Jordan in the same paper, p. 327, as *A. orbona significans* Walker. This partly arose through some confusion as to the location of the types of *aequalis* and *significans*, Butler claiming them for the British Museum, Swinhoe stating that they were in the Oxford Museum. There is no doubt, in my opinion, that the British Museum specimens are the types. The Oxford University Museum specimens, however, belong to the same subspecies. The type of *A. australis anadota* (Pl. I, fig. 17) is a ♂ labelled Waigeou, 1904 (J. Waterstradt), in the British Museum.

35. *Asota caricae* FABRICIUS.

Noctua caricae FABRICIUS, Syst. Ent., p. 596 (1775).

2 ♂♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

2 ♂♂, Sumatra, environs de Medan (Van der Meer Mohr).

AGROTIDAE

HADENINAE.

36. *Cirphis roseilinea celebensis* subsp. nov.

Pl. II, fig. 3, 8th segment, tergite (right), ventrite (left); fig. 5, valve of ♂ genitalia.

Differs from *C. roseilinea roseilinea* Walker (Journ. Linn. Soc., Zool., VI, p. 179, 1862) in the following features :

In the valve of the ♂ genitalia the harpe is expanded distally into a broad

rounded plate, whereas in *C. r. roseilinea* the distal half of the harpe, though somewhat expanded, is not so broad, nor is it rounded; the curious process surmounted by three bristles and arising from the dorsal margin of the valve is short and broad in *C. r. celebensis*, whereas in the typical subspecies it is twice the length and very slender. (Cf. Pl. II, fig. 5.)

Plate II, fig. 3 shows the 8th abdominal segment, the tergite on the right, the ventrite on the left; it will be seen that the tergite is more heavily chitinised than that of the typical subspecies (Pl. II, fig. 2, 8th tergite); the preparations were made from a ♂ in the British Museum, labelled Singapore (H. N. Ridley). Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 22.II.1929 (Van Braekel).

Plate II, fig. 1 shows a ♂ of *C. r. roseilinea* from Borneo, Sandakan (W. B. Pryer).

SARROTHRIPINAE.

37. *Eligma narcissus celebensis* subsp. nov.

Pl. II, fig. 13 ♂.

♂. Similar to *E. n. javanica* and *E. n. philippinensis* Roths., but apparently differing in the following features :

In the longitudinal white fascia of the forewing the projection costad at the end of the cell is broader and more pronounced; the dark margin of the hindwing almost entirely lacks the bluish sheen, and its inner edge cuts vein M_3 at least 3 mm. beyond the end of the cell. Expanse : 64 mm.

Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 25.II.1929 (Van Braekel).

Plate II, fig. 14 shows *E. narcissus narcissus* Cramer, for comparison.

NOTODONTIDAE

38. *Ichthyura leucorhetha* sp. nov.

Pl. II, figs. 9-12 ♂.

♂ and ♀. General colour walnut brown to burnt umber, minutely speckled with vinaceous buff; frons cartridge buff, almost white; hindwing sepia; underside of both wings light buff, irrorated with walnut brown, with burnt umber discocellular spots and indistinct postmedial fasciae. Forewing with an oblique very wavy sub-basal fascia, vinaceous buff edged distally and proximally with burnt umber; a similarly coloured antemedial fascia, sharply oblique from costa at one-third to inner margin at two-thirds, with a branch from its middle to the middle of vein A_2 at right angles, then parallel with the main line to the inner

margin, the whole appearing like an inverted letter Y; a fuscous black spot on upper half of discocellulars; an indistinct slightly waved burnt umber medial shade; an irregular postmedial fascia, coloured like the antemedial fascia, from costa at three-fourths to just before tornus; a crenulate, irregularly wavy subterminal fascia of burnt umber faintly edged proximad with vinaceous buff. Expanse : ♂ 37 mm., ♀ 40 mm.

Holotype ♂ and allotype ♀. Singapore (H. N. Ridley), in the British Museum (Natural History).

These two specimens constitute the types of the subspecies *Ichthyura leucorhetha leucorhetha* subsp. nov. (Pl. II, fig. 11, valve of ♂ genitalia).

39. *Ichthyura leucorhetha celebesa* subsp. nov.

Pl. II, figs. 9, 10, 12 ♂.

♂. Slightly larger than the typical subspecies; the male genitalia with the terminal ventral process of the valve longer than in *I. l. leucorhetha* and the small projection near it broad, flat and rounded at the end, whereas in the typical subspecies it is pointed. In the dried genitalia (fig. 9) of the Celebes specimen I cannot see anything comparable with the long dentate process shown in the figure (fig. 11) of the valve of *I. l. leucorhetha*, though in all probability a corresponding structure exists.

Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 25.II.1929 (Van Braekel).

The two Singapore examples stood in the British Museum collection under *Ichthyura restituta* Walker, List Lep. Ins. B. M. XXXII, p. 433 (1865), Ceylon, similarly coloured but having the frons burnt umber and not *whitish*. The ♂ genitalia are shown on plate II, fig. 8.

GEOMETRIDAE

The following specimens of *Geometridae* were evidently overlooked when the moths of this family were sent to Mr. L. B. Prout for determination, and Mr. Prout has kindly determined them.

GEOMETRINAE.

40. *Ctimene maculifera* FELDER.

Bursada maculifera FELDER, Reise Novara, Zool., II, (2), pl. 130, fig. 12 (1874).

1 ♂, 2 ♀ ♀, Celebes, Menado, Tondano-Menado, Tonsea Lama, 24, 27, 28.II.1929 (Van Braekel).

41. Ctimene tricinctaria LINNAEUS.

Phalaena Geometra tricinctaria LINNAEUS, Syst. Nat. ed. 10, p. 523 (1758).

1 ♂, Ambon, 21.II.1929 (H. R. H. Prince Leopold).

42. Cypra delicatula BOISDUVAL.

Cypra delicatula BOISDUVAL, in d'Urville, Voy. « Astrolabe », Ent. (1), p. 201 (1832).

1 ♀, Nouvelle-Guinée, Moemi, 5.III.1929 (H. R. H. Prince Leopold).

43. Craspedosis aurigutta longigutta PROUT.

Craspedosis aurigutta longigutta PROUT, Nov. Zool. XXIII, p. 71 (1916).

1 ♂, Nouvelle-Guinée, 11.III.1929 (H. R. H. Prince Leopold).

BOMBYCIDAE**44. Trilocha polia sp. nov.**

Pl. II, fig. 7 ♀.

♀. Palpus, antenna and head walnut brown. Thorax : notum cartridge buff to cream colour, degraded by a slight intermixture of walnut brown scales; pectus walnut brown and cartridge buff mixed. Abdomen : tergum cartridge buff streaked with walnut brown; venter drab to walnut brown. Legs walnut brown mixed with cartridge buff. Forewing : costa walnut brown, rest of the wing covered with fine straw yellow to cream coloured scales, with the exception of a spot divided by the discocellulars, the fine crenate bowed (concavity basad) postmedial fascia and an almost semicircular patch before the termen between veins R_5 and Cu_1 , all of which are warm sepia; fringe warm sepia except between vein Cu_1 and tornus, where it is mixed with straw yellow. Hindwing also lightly scaled, tinged with warm sepia especially towards anal angle, with three warm sepia to chocolate dashes along inner margin. Underside of both fore and hind wings walnut; fringes with proximal scales straw yellow, distal scales warm sepia. Expanse : 38 mm.

Holotype ♀. Celebes, Menado, Tondano-Menado, Tonsea Lama, 22.II.1929 (Van Braekel).

LASIOCAMPIDAE**45. Trabala irrorata MOORE.**

Pl. IV, fig. 1 ♂, fig. 2 ♀.

Trabala irrorata MOORE, Trans. Ent. Soc. Lond., 1844, p. 375.

1 ♂, 1 ♀, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

1 ♀, Sumatra, lac de Toba, 29.IV.1929 (H. R. H. Prince Leopold).

1 ♀, Sumatra, environs de Medan (Van der Meer Mohr).

46. *Trabala leopoldi* sp. nov.

Pl. IV, fig. 3 ♀.

♀. Antenna, palpus, head, thorax, pectus, venter and legs apricot yellow. Tergum cartridge buff suffused with apricot yellow, the terminal abdominal tuft excepted. Forewing apricot yellow, irregularly tinged with lettuce green; an indistinct, bowed (concavity basad) wavy fuscous antemedial fascia; a large circular white discocellular spot, narrowly edged with fuscous; below it a large patch of fuscous and white scales extending from cell to inner margin, and from the antemedial to the postmedial fascia; postmedial fascia oblique from just beyond middle of costa to middle of vein R_2 , there curved and running almost straight to inner margin parallel with termen; a subterminal series of fuscous-edged white spots, that between veins M_3 and Cu_1 set terminad; fringe edged with fuscous interneurally. Hindwing similarly coloured; a slightly bowed (concavity basad), crenate (concavities terminad) postmedial fascia running through end of cell; subterminal series of spots similar to that on forewing, the spot between veins M_3 and Cu_1 set terminad. Underside apricot yellow; forewing with traces of a fuscous spot on discocellulars; hindwing with a deeply bowed (concavity basad), deeply crenate (concavities terminad) postmedial fascia, set much nearer the subterminal fascia than the corresponding fascia on the upper-side. Expanse : 84 mm.

Holotype ♀. Celebes, Makassar, 22.IV.1932 (H. R. H. Prince Leopold).

Nadiasa WALKER.

Nadiasa WALKER, List Lep. Ins. B. M. V, p. 1014 (1855).

In May, 1928 (Ann. Mag. Nat. Hist. [10] I, p. 628) I published some remarks on the name to be used for this genus. I have since reconsidered this name in the light of the possibility of a number of Hübner's names in the Sammlung exotischer Schmetterlinge being considered valid. In 1878 Carlos Berg (Ann. Soc. Cient. Argent. V, p. 177) drew attention to the confusion existing in the use of the name *Streblota* Hübner, redefined the genus and used the name for *Streblota nesea* Cramer (Limacodidae), one of the species for which Hübner used it in the Sammlung exotischer Schmetterlinge. I see no reason for not regarding Berg's action as a valid restriction of the genus *Streblota*, and in consequence I propose to fall back on Walker's name *Nadiasa*.

47. *Nadiasa callipaida* sp. nov.

Pl. IV, fig. 4 ♀

♀. Palpus light buff, shaded on outer side with ochraceous orange to tawny. Antenna honey yellow, the shaft clothed dorsally with light buff scales. Head

light buff. Thorax light buff, the tegula tawny; pectus light buff mixed with russet. Abdomen : tergum light buff tinged with warm buff medio-dorsally and terminally; venter light buff to warm buff mixed with buffy brown, with a medial longitudinal series of chocolate to liver brown spots, each at the proximal edge of a segment. Legs chestnut brown streaked with warm buff, the tarsi liver brown, each segment edged distally with warm buff. Forewing tawny proximally, warm buff distally, shaded with sepia towards the apex; costa warm buff; a tuft of light buff scales at wing-base; antemedial fascia commencing as a prominent more or less triangular light buff patch above the discocellulars, bowed round the end of the cell, running along lower margin of cell to vein Cu_1 , thence slightly oblique and wavy to inner margin at one-third; postmedial fascia broad, light buff, wavy, its direction roughly parallel with termen, with a prominent triangular projection basad at vein R_4 ; subterminal fascia hardly noticeable, consisting of the series of oblique interneural dashes commonly found in moths belonging to this genus; fringe light buff. Hindwing light buff, proximal third and distal fourth suffused with tawny to vinaceous brown; fringe light buff. Underside : forewing warm buff to end of cell, along two-thirds of costa and on veins; postmedial fascia light buff, bowed, without the projection at vein R_4 noticeable on the upperside; inner margin broadly light buff; area from end of cell to postmedial between costa and vein Cu_1 vinaceous brown, pronounced between veins M_1 and M_2 ; area from postmedial fascia to termen vinaceous brown inclined to warm sepia; fringe proximally buffy brown, distally light buff; hindwing light buff, the distal fourth tinged with vinaceous brown. Expanse: 74 mm.

Holotype ♀. Bali, Den Pasar, 1932 (H. R. H. Prince Leopold).

48. *Suana concolor* WALKER.

Suana concolor WALKER, List Lep. Ins. B. M. VI, p. 1463 (1855).

1 ♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

Syrastrena MOORE.

Syrastrena MOORE, Trans. Ent. Soc. Lond., 1884, p. 373.

The ♂ genitalia in moths belonging to this genus are lightly chitinised, with a curious ventral modification apparently developed to assist the ♂ in clasping the ♀. I am not certain whether this is the 9th ventrite or the 8th, but for the purposes of this paper I shall treat it as the 9th, as this seems more compatible with the type of modification usual in the genitalia of moths of the family Lasiocampidae.

In the typical subspecies, *Syrastrena minor minor* (*Metanastria minor* Moore, Descr. Ind. Lep. Coll. Atkinson, p. 78, 1879) the ♂ genital armature is some-

what larger than is the case in the other subspecies here described, and has the two lobes of the margin of the 9th ventrite moderately bowed, lightly chitinised and armed with long fine teeth (cf. Pl. IV, figs, 9, 10).

49. *Syrastrena minor malaccana* subsp. nov.

Pl. IV, fig. 5 ♂, fig. 6 ♂ genitalia.

♂. Differs from the typical subspecies in being slightly more lightly clothed with scales; in the ♂ genital armature the 9th ventrite has the two lobes of the posterior margin more deeply bowed and armed with fine, very short teeth, the lateral extremities of the hind margin more heavily chitinised and armed with stouter teeth.

Holotype ♂. Malacca, Fraser's Hill, 9.II.1932 (H. R. H. Prince Leopold).

50. *Syrastrena minor sumatrana* subsp. nov.

Pl. IV, fig. 7 ♂ genitalia.

♂. Even more lightly clothed with scales than *S. m. malaccana*; in the ♂ genital armature the 9th ventrite has the lobes of the posterior margin narrow and deeply bowed, strongly chitinised and armed with strong teeth, with a strong smooth tooth at outer extremity of each lobe.

Holotype ♂. S. W. Sumatra, N. Korintji Valley, 5,000 feet, IX-X.1921 (C., F. and J. Pratt), in the British Museum.

51. *Syrastrena minor borneensis* subsp. nov.

Pl. IV, fig. 8 ♂ genitalia.

♂. Similar in appearance to the other lightly clothed subspecies, but having the outer oblique fascia (postmedial) apparently curving slightly more into the apex of the wing; in the ♂ genital armature the 9th ventrite has the posterior margin armed with strong teeth in the outer fourth on each side, the smallest teeth being at the outer extremities.

Holotype ♂. Sarawak, Bidi, 1907-1908 (C. J. Brooks), in the British Museum.

52. *Syrastrena minor lanaoensis* subsp. nov.

Pl. IV, fig. 11 ♂ genitalia.

♂. Similar in appearance to the other lightly scaled subspecies; in the ♂ genital armature the posterior margin of the 9th ventrite has each lobe sharply marked, very strongly chitinised, with a broad band covered with short stout

teeth, the inner extremity of each lobe rounded and covered with minute teeth.

Holotype ♂. Philippine Islands, Mindanao, subprov. Lanao, sea level, 16.V.1914 (A. E. Wileman), in the British Museum.

53. *Lebeda nobilis sumatrana* subsp. nov.

Pl. V, fig. 3, underside; fig. 4, ♂ genitalia with one lobe of 9th ventrite removed.

♂. With narrower wings and more oblique termen than *Lebeda nobilis nobilis* Walker, List Lep. Ins. B. M. VI, p. 1456 (1855), the colouring similar but richer, occasionally almost entirely lacking the light buff irroration which produces a hoary effect, the colour then approaching a rich chestnut. Lobe of the modified 9th ventrite narrower and having the armature of fine teeth on the inner surface distally much reduced. Expanse: 92-96 mm.

Holotype ♂ and 12 paratype ♀♀. S. W. Sumatra, N. Korintji Valley, 5,000 feet, IX-X.1921 (C., F. and J. Pratt), in the British Museum.

54. *Lebeda nobilis malaccana* subsp. nov.

Pl. V, fig. 6, upperside; fig. 5, underside; fig. 7, ♂ genitalia with one lobe of the 9th ventrite removed.

♂. Wings less ample than in the typical subspecies, but more ample than in the Sumatran subspecies, the colouring also intermediate. Expanse: 104 mm.

♂ genitalia with valve expanded at two-thirds, the lobes of the 9th ventrite more ample than those of *L. n. sumatrana*, but less so than those of *L. n. nobilis*.

Holotype ♂ and paratype ♀. Malacca, Fraser's Hill, 9.II.1932 (H. R. H. Prince Leopold).

The underside and ♂ genital armature of *Lebeda nobilis nobilis* Walker are shown on Plate V, figs. 1 and 2 respectively.

Gastropacha OCHSENHEIMER.

Gastropacha OCHSENHEIMER, Schmett. Europa II, p. 239 (1810).

Estigena MOORE, Cat. Lep. E. I. House II, p. 426 (1859).

Stenophylloides HAMPSON, Fauna Brit. Ind., Moths I, p. 429 (1892).

Tauscheria BRYK, Arch. Naturg. LXXXI, Abt. A, Heft 1, p. 4 (1915).

In many cases in the family LASIOCAMPIDAE generic relationship is very satisfactorily indicated by the structure of the male genital armature, including frequently modifications of the 8th ventrite. The genera *Gastropacha* Ochsenheimer (type: *G. quercifolia* Linnaeus), and *Odonestis* Germar (type: *O. pruni* Linnaeus), both here reviewed, exemplify this in a remarkable degree, the first mentioned genus including species in which no modification of the 8th ventrite is exhibited, and the second including species of moths with

a very marked modification in this segment. I find no sound reason for treating the genera *Estigena* Moore, *Stenophylloides* Hampson, and *Tauscheria* Bryk as separate groups, as the species which I list here under *Gastropacha* appear to me to form a homogeneous group, and the figures which are given of the male genital armature will serve to guide authors in placing any further species which may be discovered, as I do not propose here to enter into a general re-definition of the genus. This will require considerable further study.

The already well known species belonging to this genus are as follow :

- Gastropacha quercifolia* LINNAEUS, Syst. Nat. ed. 10, p. 497 (1758).
Gastropacha populifolia SCHIFFERMÜLLER & DENIS, Schmett. Wien, p. 310 (1775).
Gastropacha angustipennis WALKER, List Lep. Ins. B. M. VI, p. 1394 (1855).
Gastropacha undulifera WALKER, List Lep. Ins. B. M. VI, p. 1395 (1855).
Gastropacha sinuata MOORE, Descr. Ind. Lep. Coll. Atkinson, p. 76 (1879).
Gastropacha khasiana SWINHOE, Ann. Mag. Nat. Hist. (7) XV, p. 499 (1905).
Gastropacha taiwana WILEMAN, Entomologist XLVIII, p. 16 (1915).
Gastropacha sikkima MOORE, Descr. Ind. Lep. Coll. Atkinson, p. 75 (1879).
Gastropacha encausta HAMPSON, Journ. Bomb. Nat. Hist. Soc. XIII, p. 233 (1900).
Gastropacha africana HOLLAND, Psyche VI, p. 490, pl. 18, fig. 17 (1893).
 (*muscovit* BRYK, Arch. Naturg. LXXXI, Abt. A, Heft 1, p. 4, 1915).
Gastropacha weberi TAMS, Ann. Mag. Nat. Hist. (10) III, p. 145 (1929).
Gastropacha sylvestris STRAND, Lep. Niepelt., Nachtr., p. 1, fig. (1918).
Gastropacha pardale pardale WALKER, List Lep. Ins. B. M. VI, p. 1453 (1855).
Gastropacha pardale nandina MOORE, Cat. Lep. E. I. House II, p. 426 (1859).
 (*abstracta* WALKER, List Lep. Ins. B. M. XXXII, p. 551, 1865).
 (*scriptiplaga* WALKER, List Lep. Ins. B. M. XXXII, p. 569, 1865).

In order to determine satisfactorily the specimen collected in Borneo by H. R. H. Prince Leopold, it has been necessary to investigate the various related related specimens in the British Museum collection.

55. *Gastropacha pardale pardale* WALKER.

Pl. III, fig. 1 holotype ♂, figs. 2, 7; *Textfig. 1*, valve of ♂ genitalia.

♂ genital armature : valve (*textfig. 1*) with the ventral process almost at right angles to the main portion, slender, its length half or more than half that



of the whole valve, its distal half armed with short cone-like spines; vesica armed with about 8-12 terminal cornuti.

In the holotype ♂ the length of the forewing is 16 mm., but ♂ specimens are sometimes larger, occasionally with a forewing length of 23 mm. Java.

56. *Gastropacha pardale nandina* MOORE.

Textfig. 2, valve of ♂ genitalia.

Estigena nandina MOORE, Cat. Lep. E. I. House II, p. 426 (1859).

♂ genital armature : valve with ventral process similar to that in the typical subspecies, but short and broad, its length less than half that of the whole valve; vesica armed with fewer, somewhat stouter terminal cornuti.

Length of forewing : 20-24 mm. India, Ceylon.



57. *Gastropacha pardale andamana* subsp. nov.

♂ genital armature : less heavily chitinised than that of the India-Ceylon subspecies, the ventral process of the valve with finer conical spines, the vesica with more numerous and more delicate terminal cornuti.

The general colour of the wings is warm sepia, the hindwing exhibiting the characteristic ochraceous buff marking extending from the middle of the costa round the end of the cell. Length of forewing : 20 mm.

Holotype ♂. Andaman Islands, in the British Museum collection.

58. *Gastropacha pardale sinensis* subsp. nov.

♂ genital armature : valve with the ventral process similar to that in the typical subspecies, but with the spines more prominent; terminal cornuti of vesica somewhat more numerous. Length of forewing : 22 mm.

Holotype ♂. South China (R. Mell), in the British Museum collection.

59. *Gastropacha pardale formosana* subsp. nov.

♂ genital armature : ventral process similar to that of *G. p. pardale*, but broader proximally, slightly more curved; vesica with the terminal cornuti similar to those of *G. p. sinensis*, but fewer. Length of forewing: 22.5 mm. Colouring richer, owing to the greater amount of fuscous irroration.

Holotype ♂. Formosa (H. J. Elwes), in the British Museum collection.

60. *Gastropacha pardale koniensis* subsp. nov.

♂ genital armature : similar to that of the typical subspecies, but narrower in proportion to its length; the whole structure more delicate, the ventral process of the valve slender, the vesica armed with delicate cornuti. Length of forewing: 16 mm.

Holotype ♂ and paratype ♀. Koni (Manders), in British Museum collection, formerly in coll. Swinhoe.

61. *Gastropacha pardale leopoldi* subsp. nov.

Pl. III, fig. 5 ♂; fig. 6 ♂ genitalia.

♂ genital armature : ventral process of valve very different from that of the other subspecies, its distal margin partly concave and finely serrate; the vesica armed with an extensive group of spine-like terminal cornuti.

Hindwing with the inner marginal half cartridge buff.

Length of forewing : 22 mm.

Holotype ♂. Borneo, Balikpapan, 7.II.1929 (H. R. H. Prince Leopold).

62. *Gastropacha pardale philippinensis* subsp. nov.

Pl. III, fig. 9 ♂ genitalia.

♂ genital armature . similar to that of *G. p. leopoldi*, but the ventral process of the valve with its distal margin convex and distinctly serrate. General colour ochraceous tawny, inner marginal half of hindwing light buff. Length of forewing : 21-23 mm.

Holotype ♂. Philippines, Luzon, subprov. Benguet, Palali, 2,000 feet, 23.XII.1929 (A. E. Wileman).

Paratypes. 1 ♂, with the fasciae and irroration more markedly fuscous, from the same source as the type, dated 26.XII.1912.

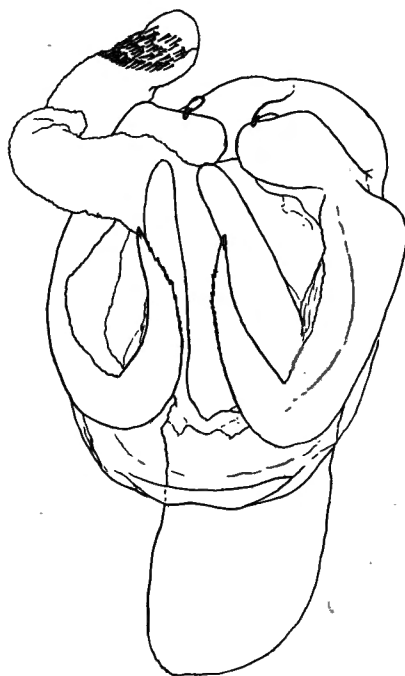
1 ♂, Philippines, Luzon, subprov. Benguet, Klondyke, 800 feet, 20.III.1912 (A. E. Wileman).

1 ♂, from the same source, dated 9.IV.1912.

63. *Gastropacha pardale swanni* subsp. nov.*Textfig. 3* ♂ genitalia.

♂ genital armature : ventral process of the valve similar to that of *G. p. philippinensis*; terminal cornuti of the vesica similar to those of *G. p. leopoldi*, the cluster somewhat less extensive. General colour vinaceous brown, inner margin of hindwing not markedly lighter. Length of forewing : 26.5 mm.

Holotype ♂. Upper Burma, Htawgaw, 6,000 feet (A. E. Swann), in the British Museum collection.

*Gastropacha xenapates* sp. nov.

Pl. III, fig. 3 ♂, fig. 4 ♂ genitalia; *Textfig. 4*, ♂ genitalia with one valve removed; *Textfig. 5*, removed valve.

♂. General colour tawny to vinaceous russet, sometimes with some vinaceous brown and fuscous scaling on the palpus, at tornus of forewing and over anterior half of hindwing, with some irregularly distributed fuscous to fuscous black irroration; antemedial and postmedial fasciae fuscous, sometimes accentuated (antemedial basad, postmedial terminad) with ochraceous buff; the fuscous black dots of the interrupted subterminal fascia standing out prominently between veins R_3 and R_4 , R_4 and R_5 , and R_5 and M_1 ; hindwing with a patch of buff yellow

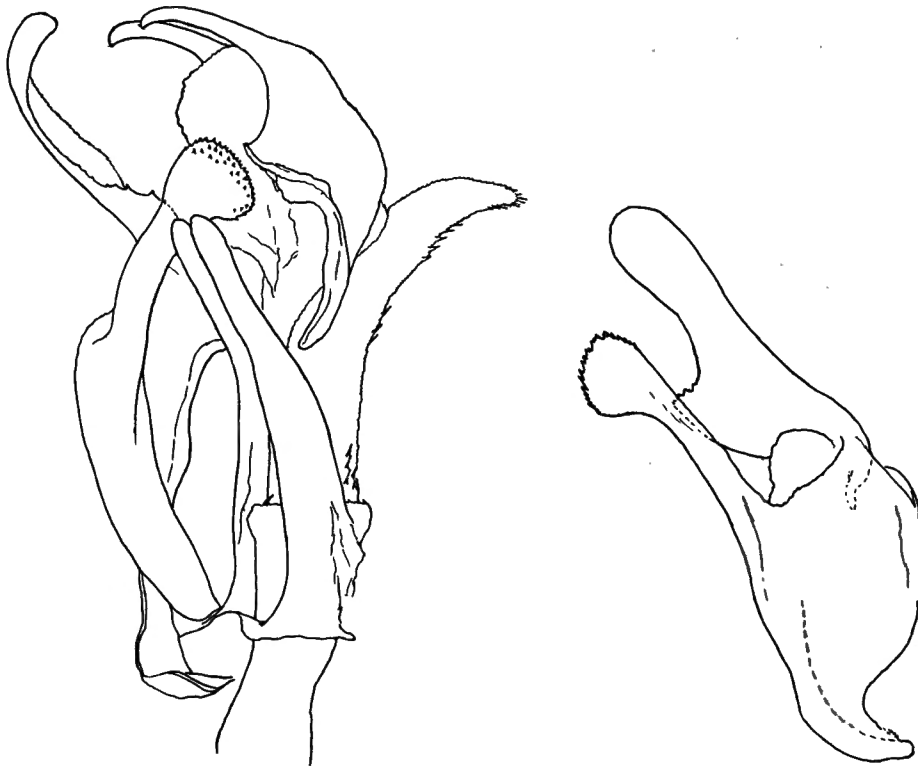
to ochraceous buff from costa round end of cell, with through it a fuscous black crenulate postmedial fascia preceded by fuscous black dots; inner margin narrowly light buff.

♂ genital armature with the two hooks of the tegumen generally much prolonged, the ventral process of the valve always long.

64. *Gastropacha xenapates xenapates* subsp. nov.

Pl. III, figs. 3, 4; *Textfigs.* 4, 5.

♂ genitalia with the hooks of the tegumen and both the dorsal and ventral processes of the valve very long; the vesica with four clusters of cornuti, inclu-



ding the proximal cluster near the distal extremity of the aedeagus, and the terminal cluster. Length of forewing : 21-24 mm.

Holotype ♂. North India, Darjiling.

Paratype ♂. North India, Darjiling (Grote).

Other paratypes. 3 ♂♂, origin unknown (Archbald coll.).

These 5 ♂♂ are in the British Museum collection.

65. *Gastropacha xenapates prionophora* subsp. nov.

Pl. III, fig. 8 ♂ genitalia.

♂ genital armature with the ventral process of the valve long, becoming narrow distally and terminating in a point, its inner edge serrate; hooks of the tegumen similar to those in *G. p. pardale*, but longer and more slender; vesica with a cluster of numerous conical cornuti. Length of forewing : 21-24 mm.

Holotype ♂ and paratype ♂. North Celebes, in the British Museum.

66. *Gastropacha xenapates wilemani* subsp. nov.

Textfig. 6 valve of ♂ genitalia.

♂ genital armature with ventral process of the valve long, weakly S-curved, dorsal process more delicate than in *G. x. prionophora*, the hooks of the tegumen adpressed and hardly curved; vesica with very few conical cornuti. Inner margin of hindwing not markedly paler than rest of wing. Length of forewing : 25 mm.

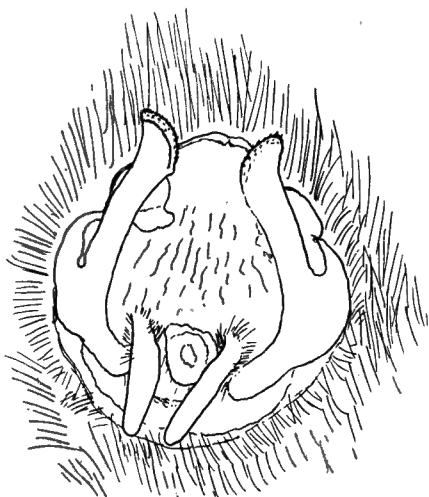
Holotype ♂. Formosa, Rantaizan, 7,500 feet, 9.V.1909 (A. E. Wileman).

67. *Gastropacha xenapates marptis* subsp. nov.

Textfig. 7 ♂ genitalia.

♂ genital armature with the ventral process of the valve long, flat, expanded distally, where it is minutely dentate; the dorsal process delicate; the hooks of the tegumen similar to those of *G. p. pardale*. Markings well contrasted, the buff yellow markings pronounced; hindwing with inner marginal half light buff; abdomen light buff. Length of forewing : 24 mm.

Holotype ♂. Philippines, Luzon, subprov. Benguet, Palali, 2,000 feet, 26.XII.1912 (A. E. Wileman).



Odonestis GERMAR.

Odonestis GERMAR, Syst. Gloss. Prod., p. 49 (1811).

The name *Odonestis* has been wrongly used by several authors, but in my opinion it can only be employed in one sense. Germar included two species in his genus, *O. pruni* Linnaeus and *O. ? potatoria* Linnaeus, and suggested that as the latter differs from his genus *Odonestis* in having no proboscis, it may possibly be referable to the genus *Gastropacha*. *Odonestis*, therefore, from its inception, was for all practical purposes a monotypical genus, and as such I propose to treat it.

A number of species belonging to *Odonestis* have become associated with the generic name *Arguda* Moore (Descr. Ind. Lep. Coll. Atkinson, p. 79, 1879, type : *A. decurtata* Moore), and in view of this I have given on Plate XI, fig. 7, a photograph of the ♂ genitalia of *A. decurtata* for comparison with the figures of the genitalia of the species of *Odonestis*.

The genus *Odonestis* is a homogeneous one, the remarkable modification of the 8th ventrite serving to show generic relationship, and equally well for distinguishing the various species and subspecies.

The already well known species are as follow :

Odonestis pruni LINNAEUS, Syst. Nat. ed. 10, p. 498 (1758).

Odonestis pruni rufescens KARDAKOFF, Ent. Mitt., Dahlem, XVII, p. 417 (1928).

Odonestis vita MOORE, Cat. Lep. E. I. House II, p. 424, pl. 12^a, fig. 4 (1859).

Odonestis bheroba MOORE, Cat. Lep. E. I. House II, p. 424, pl. 12^a, fig. 5 (1859).

Odonestis formosae WILEMAN, Entomologist XLIII, p. 136 (1910).

Odonestis erectilinea SWINHOE, Trans. Ent. Soc. Lond., 1904, p. 152.

In describing the 8th ventrite of the ♂ the terms right and left are used of the ventral aspect of the insect, as shown in the figures, the abdomen being directed away from the observer.

68. *Odonestis pruni pruni* LINNAEUS.

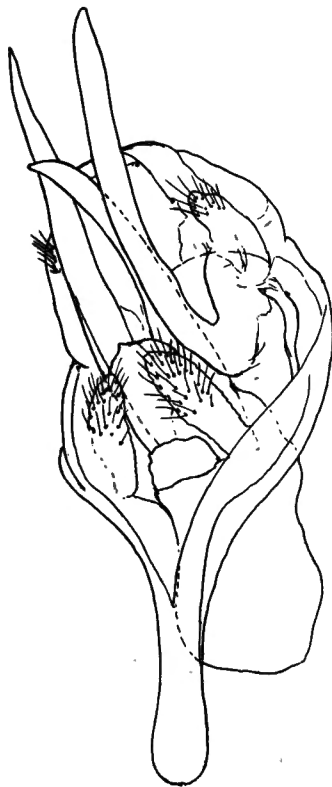
Pl. VI, figs. 1-3, pl. VIII, figs. 1, 2; *Textfig. 8*.

Phalaena Bombyx pruni LINNAEUS, Syst. Nat. ed. 10, p. 498 (1758).

General colour orange, suffused with dark vinaceous; underside suffused with flesh colour.

The medial process of the 8th ventrite with concavity of the slight bow on the right, the right spur pointed.

Textfig. 8 shows the 9th segment, carrying the ♂ genitalia. Europe.



69. *Odonestis pruni japonensis* subsp. nov.

Pl. VI, figs. 4, 5, pl. VIII, fig. 3.

Paler than the typical subspecies, capucine yellow with vinaceous suffusion; underside capucine buff.

The medial process of the 8th ventrite with concavity on the left, the right spur blunt. Japan.

Holotype ♂. Sapporo, 16 VII.1918, in the British Museum.

70. *Odonestis pruni rufescens* KARDAKOFF.

Pl. VI, figs. 6, 7, pl. VIII, fig. 4.

Odonestis pruni rufescens KARDAKOFF, Ent. Mitt., Dahlem, XVII, p. 417 (1928).

Intermediate in colour between the typical subspecies and *O. p. japonensis*, both above and beneath.

The medial process of the 8th ventrite stouter than in the two subspecies treated above, the left spur longer, the right spur broader and bilobed.

Manchuria, Korea.

Specimen figured: Manchuria, Askold Island, 1878 (Jankowski), ♂, in the British Museum.

71. *Odonestis pruni oberthueri* subsp. nov.

Pl. VI, figs. 8, 9, pl. VIII, fig. 5.

Orange, richly suffused with vinaceous; underside of both wings richly suffused with flesh colour; hindwing irrorated with deep vinaceous.

The medial process of the 8th ventrite similar to that of *O. p. rufescens*, but with the right spur obsolescent.

Holotype ♂. Thibet, frontière orientale, 1906. (Chasseurs indigènes du P. Dejean), in the British Museum.

72. *Odonestis pruni assamensis* subsp. nov.

Pl. VI, figs. 10, 11, pl. VIII, fig. 6.

Orange, richly suffused with deep vinaceous, the underside with some scattered long, narrow, cartridge buff scales over the distal half. Forewing with tornus more sharply angled than in the other subspecies.

The medial process of the 8th ventrite similar to that of *O. p. oberthueri*, but with the distance from the obsolescent right spur to the tip of the left spur shorter.

Holotype ♂. Assam, Khasia Hills, in the British Museum.

73. *Odonestis bheroba* MOORE.

Pl. VI, fig. 12 holotype ♀.

Odonestis bheroba MOORE, Cat. Lep. E. I. House II, p. 424, pl. 12^a, fig. 5 (1859).

I have seen no male which I can satisfactorily associate with this female; the

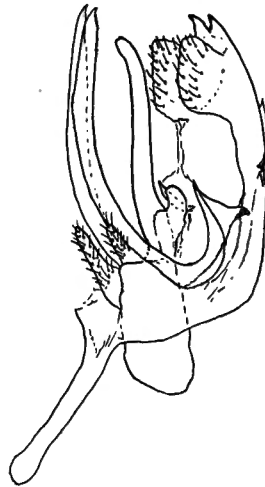
locality given by Moore is Darjiling (collected by Messrs. Schlagintweit). From the appearance of the postmedial fascia I should expect the male to be similar to those of *O. vita leopoldi* (Pl. VI, figs. 21-28).

74. *Odonestis vita vita* MOORE.

Pl. VI, figs. 13, 14, pl. IX, fig. 1 holotype ♂; *Textfig.* 9.

Odonestis vita MOORE, Cat. Lap. E. I. House II, p. 424, pl. 12a, fig. 4 (1859).

The typical subspecies is the smallest known to me, with narrow forewings. The colour is cinnamon rufous, the forewing tinged distally with vinaceous; hindwing terra cotta to vinaceous tawny.



In this species the forked process formed by the modification of the 8th ventrite does not arise from the middle of the ventrite, but at the right side. It is bifurcate, the left fork being deeply bowed; neither of the forks is pointed, though in the photograph this appears so, but the distal extremities are rounded and flattened. *Textfig.* 9 shows the 9th segment bearing the ♂ genitalia. Java.

75. *Odonestis vita indica* subsp. nov.

Pl. IX, fig. 2.

♂. More richly coloured than the typical subspecies, vinaceous tawny tinged with vinaceous rufous.

The furcate process of the 8th ventrite with the right fork shorter than in the typical subspecies, the left fork appearing longer in comparison, and less bowed; the distal extremities are flattened as in *O. vita vita*.

Holotype ♂. India, N. E. Bengal.

76. *Odonestis vita ceylonica* subsp. nov.

Pl. VI, figs. 15, 16, pl. IX, fig. 3.

♂. Smaller than *O. v. indica*, vinaceous rufous. The furcate process of the 8th ventrite with the length of the right fork five-sixths the length of the left fork, both almost straight, and pointed.

Holotype ♂. Ceylon, Colombo, V.1905 (Mackwood), in the British Museum.

77. *Odonestis vita belli* subsp. nov.

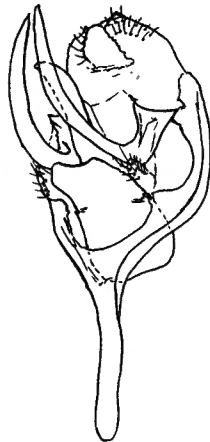
Pl. VI, figs. 17, 18, pl. IX, fig. 4.

♂. Larger than *O. v. ceylonica*, vinaceous rufous. The furcate process of the 8th ventrite with the main stem almost straight, the right fork half the length of the left, both parallelsided almost to the tip, which in each case is pointed.

Holotype ♂. S. India, Canara, Karwar, 29.IX.1900 (T. R. Bell), in the British Museum.
There is a long series in Mr. Bell's collection.

78. *Odonestis vita brachyschalida* subsp. nov.Pl. VI, figs. 19, 20, pl. IX, figs. 5, 6; *Textfig. 10*.

♂. Larger than the typical subspecies, similarly coloured, and with the post-medial fascia similar. 8th ventrite with the furcate process similar to that of



O. v. ceylonica, but with the lateral lobe of the ventrite broader. *Textfig. 10* shows the 9th segment bearing the ♂ genitalia.

Holotype ♂. Philippines, Mindanao, subprov. Lanao, Kolumbugan, sea level, 24.V.1914 (A. E. Wileman), in the British Museum.

79. *Odonestis vita leopoldi* subsp. nov.Pl. VI, figs. 21-28, pl. IX, fig. 7, pl. X, figs. 1-3; *Textfig. 11*.

♂. Colouring similar to that of *O. vita vita*, but with the postmedial fascia similar to that of *O. bheroba*, of which it may prove to be a subspecies. 8th ventrite



trite with the two forks of the furcate process short, somewhat irregular, and more variable than is the case in most of the other moths belonging to this genus.

Holotype ♂. Philippines, Mauo-Samar, 1932 (H. R. H. Prince Leopold).

Paratypes in the British Museum :

- 1 ♂, Philippines, Montalban, 14.IV.1914 (A. E. Wileman).
- 1 ♂, Philippines, Luzon, prov. Rizal, Manila, sea level, 5.XI.1913 (A. E. Wileman).
- 1 ♂, Philippines, Klondyke, 6.IV.1912 (A. E. Wileman).

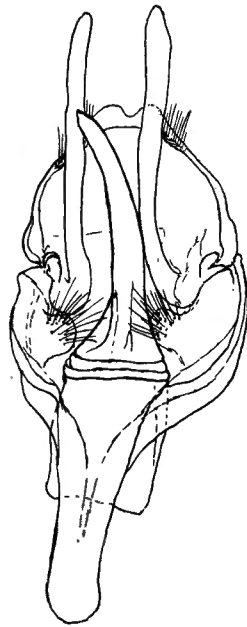
Textfig. 11 shows the 9th segment bearing the ♂ genitalia.

80. *Odonestis erectilinea erectilinea* SWINHOE.Pl. VII, figs. 1-6, pl. XI, figs. 1, 2; *Textfig. 12*.

Arguda erectilinea SWINHOE, Trans. Ent. Soc. Lond., 1904, p. 152.

♂. General forewing colour cinnamon rufous irrorated with light buff; hindwing deep vinaceous, light buff basally and along inner margin. 8th ventrite with the medial process long, bowed, and distally rounded and flattened.

Textfig. 12 shows the 9th segment bearing the ♂ genitalia. Singapore, Borneo.



81. *Odonestis erectilinea barisana* subsp. nov.

Pl. VII, figs. 7, 8, pl. XI, fig. 3.

♂. Similar to the typical subspecies, but larger, the hindwing more richly coloured, especially at base; postmedial fascia of forewing evenly bowed (concavity terminad). 8th ventrite with the medial process more deeply bowed than in the typical subspecies.

Holotype ♂. S. W. Sumatra, Barisan Range, western slopes, 2,500 feet, X-XII.1921 (C., F. and J. Pratt), in the British Museum.

82. *Odonestis erectilinea lipara* subsp. nov.

Pl. VII, figs. 9, 10, pl. XI, figs. 4, 5.

♂. General colour dark vinaceous to dark Indian red; forewing with an almost straight postmedial fascia, oblique from costa at about two-thirds to inner margin at two-thirds, converging towards termen as it approaches tornus, fuscous edged distad with white. 8th ventrite similar to that of the typical subspecies, but differing in terminating in a sharp point.

Holotype ♂. Borneo, Mt. Murud, 6,000-6,500 feet, 22.X (Mjöberg).

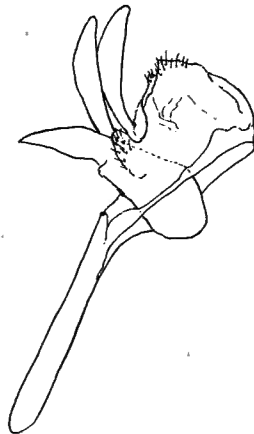
83. *Odonestis formosae* WILEMAN.Pl. VII, figs. 11, 12, pl. XI, fig. 6; *Textfig. 13*.*Arguda formosae* WILEMAN, Entomologist XLIII, p. 136 (1910).

This is rather a puzzling species. In superficial appearance it seems like a mixture of *O. pruni*, *O. vita* and *O. erectilinea*. The 8th ventrite is similar to that of *O. erectilinea lipara*, while the 9th segment bearing the genitalia resembles more that of *O. vita leopoldi* (cf. *textfig. 13*).

Formosa (Pl. VII, fig. 11, shows the holotype ♂).

84. *Odonestis ophioglossa* sp. nov.Pl. VII, figs. 13-17, pl. X, figs. 5-7; *Textfig. 14*.

♂. Vinaceous rufous to brick red; forewings sparsely streaked with white over proximal half, both wings distally irrorated with white; hindwing subter-



minally suffused with dark Indian red; a curved (concavity basad) antemedial fascia from costa at one-sixth to inner margin at one third, white proximad, fuscous distad; a prominent white spot at end of cell; postmedial fascia almost

straight, from costa at two-thirds to inner margin at two-thirds, fuscous proximad, white distad. Underside : forewing less brightly coloured, distally dark Indian red irrorated with white; no spot at end of cell; postmedial fascia fuscous; hindwing densely irrorated with white, except for a prominent wavy postmedial fascia and an interrupted subterminal fascia, both dark Indian red. Antenna honey yellow. 8th ventrite with the lateral lobes short, the furcate process medial, short and with both arms of equal length. The 9th segment bearing the ♂ genitalia is shown in *textfig. 14*.

Holotype ♂ and 28 paratype ♀♀. S. W. Sumatra, slopes of Mt. Korintji, 7,300 feet, VIII-IX.1921 (C., F. and J. Pratt), in the British Museum.

85. *Odonestis schalicteta* sp. nov.

Pl. VII, figs. 18-22, pl. X, figs. 4, 8.

♂. Brick red to chocolate, irrorated with cartridge buff to light buff, sparsely on thorax and proximal two-thirds of forewing, remainder (except tergum) densely; hindwing subterminally shaded with dark Indian red; forewing antemedial and postmedial fasciae fuscous, the latter almost straight; a minute fuscous-outlined cartridge buff dot at end of cell. Underside : forewing colour slightly lighter than that of upperside; hindwing with dark Indian red postmedial (broad) and subterminal (interrupted) fasciae. 8th ventrite with short lateral lobes, the medial process shortly and evenly furcate distally only.

Holotype ♂. S. W. Sumatra, Barisan Range, western slopes, 2,500 feet, X-XI.1921 (C., F. and J. Pratt).

Paratypes. 1 ♂, Sumatra, Benkoelen, Lebong Sandai, VI.1923 (C. J. Brooks).

1 ♂, Negri Sembilan, Gunong Angsi, 2,000-2,700 feet, IV.1918.

LIMACODIDAE

86. *Setora nitens* WALKER.

Setora nitens WALKER, List Lep. Ins. B. M. V, p. 1069 (1855).

1 ♂, Sumatra, IV-V.1929 (H. R. H. Prince Leopold).

1 ♂, Celebes, Menado, Tondano-Menado, Tonsea Lama, 27.II.1929 (Van Braekel).

87. *Phocoderma velutina* KOLLAR.

Gastropacha velutina KOLLAR in H \ddot{u} gel, Kaschmir IV, p. 473 (1844).

1 ♂, Borneo, Toembang Maroewai, 13.V.1932 (H. R. H. Prince Leopold).

88. *Birthamoides junctura* WALKER.

Hyblaea junctura WALKER, List Lep. Ins. B. M. XXXIII, p. 857 (1865).

1 ♂, Bali, W., Tjandikoesoma, 25-27.IV.1932 (H. R. H. Prince Leopold).

ZYGAENIDAE**CHALCOSIINAE.**89. *Chalcosia venosa* WALKER.

Chalcosia venosa WALKER, List Lep. Ins. B. M. II, p. 422 (1854)
1 ♀, Ceylon, Kandy.

MICROLEPIDOPTERA**HYPONOMEUTIDAE**90. *Atteva tonseana* sp. nov.

Pl. II, fig. 6 ♂.

♂. Antenna fuscous black. Palpus fuscous black, third segment streaked with white. Head : frons white, vertex fuscous black, occiput white. Thorax : notum orange, glossy; pectus fuscous black, the prosternum with a white spot, the mesosternum with two white spots. Abdomen : tergum orange, glossy; venter with each segment fuscous black broadly edged distally with white. Legs fuscous to fuscous black, hind tibia white-tipped, with white spurs. Forewing orange, glossy, with an increasingly strong suffusion of aniline black through the cell and over the distal fourth of the wing, showing a brilliant anthracene violet sheen; a small white spot near the base, with three large oval spots in the cell, equidistant; a small white spot just within the cell between the two outer larger spots, and a small white spot just below the cell margin, slightly distad; a small white spot between end of cell and termen. Hindwing orange, glossy, the distal fourth and the termen (except towards the anal angle) suffused with sepia to fuscous. Underside similar, without the white spots. Expanse : 32-34 mm.

Holotype ♂. Celebes, Menado, Tondano-Menado, Tonsea Lama, 22.II.1929 (Van Braekel).
Paratype ♂. From the same source, dated 27.II.1929.

