

530. *Soritia obliquaria*, *Fabr. Mant. Ins.* ii, p. 194.

Eterusia transversa, *Wlk. Cat.* xxxi, p. 118.

Erasmia eusemoides, *Feld. Reis. Nov.* pl. 83, fig. 10.

Head and thorax brown, the former and antennæ suffused with metallic blue; abdomen ringed brown and white. Fore wing brown; a metallic blue speck at base; an oblique postmedial yellowish-white band from costa to vein 1 b. Hind wing brown at base and outer margin, the medial half orange; costa brown, expanding into a spot at middle. Underside: fore wing with a series of bluish-white marks before the band; blue streaks on the marginal veins; hind wing with some blue at base, on costal spot, and marginal nervules.

Hab. Mergui; Malacca; Borneo. *Exp.*, ♂ 62-76, ♀ 80 millim.

Genus PIDORUS.

Pidorus, *Wlk. Cat.* ii, p. 424 (1854).

Laurion, *Wlk. Cat.* ii, p. 426 (1854).

Type, *P. glaucopis*, Drury.

Range. Japan; China; E. Himalayas; Assam; Burma; Malacca; Borneo; Java.

The wings broader than in *Soritia*; veins 4 and 5 of the fore wing not stalked.

SECT. I. The branches of antennæ of female very minute.

531. *Pidorus circumdatus*, *Wlk. Cat.* xxxi, p. 121; *C. & S.* no. 371.

Head, thorax, and abdomen greenish black. Fore wing greenish black, with a golden-yellow band from near the base to the middle, its outer edge waved. Hind wing golden yellow; a marginal greenish-black band narrowing to anal angle. Underside with the outer margins shot with greenish blue.

Hab. Sikhim; Assam. *Exp.* 38 millim.

SECT. II. The branches of antennæ in female longer.

532. *Pidorus geminus*, *Wlk. Cat.* ii, p. 427; *C. & S.* no. 433.

Head and collar crimson; antennæ, thorax, abdomen, and fore wing very dark green, the last with a wide oblique ochreous band from the costa beyond the middle to the outer angle. Hind wing deep dark brown. Underside with the costa and outer margins of both wings shot with blue.

In some specimens the head is brown, and the band on fore wing white.

Hab. Hongkong; Sikhim; Sylhet; Moulmein; Cambodia; Borneo. *Exp.* 32-40 millim.

533. *Pidorus circe*, *Boisd., Herr.-Schäffer, Samml. ausser eur. Schmett.* fig. 2; *C. & S.* no. 432.
Laurion metallica, *Wlk. Cat.* ii, p. 426.

Differs from *geminus* in the head and collar being green. Fore wing bronzy green; hind wing purplish brown, with an ochreous spot on the costa below the apex and greenish-blue border.

Hab. Khásis; Nágas; Cachar. *Exp.* 48 millim.

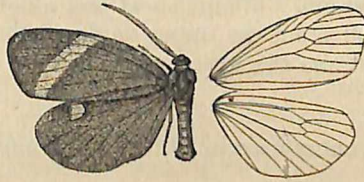


Fig. 169.—*Pidorus circe*, ♂. $\frac{1}{2}$.

534. *Pidorus albifascia*, *Moore, Lep. Atl.* p. 19; *C. & S.* no. 435.

♂. Uniform black. Fore wing with the veins greenish; a yellow spot on the costa, with an oblique white band from it to the outer angle. Hind wing with a yellow spot on the costa before the apex. Underside with the veins and margins suffused with blue.

Hab. Nágas, 3000 feet; Sylhet; Momeit, Burma, 2000 feet. *Exp.* 48 millim.

535. *Pidorus glaucopis*, *Drury, Ill. Exot. Ins.* ii, p. 11, pl. 6, fig. 4; *C. & S.* no. 441.
Pidorus atratus, *Butl. A. M. N. H.* (4) xx, 1877, p. 401.

Antennæ metallic blue or green; head crimson; thorax, abdomen, and legs black-brown; abdomen shot with blue. Fore wing black-brown, with an oblique white band rather variable in width from the costa beyond the middle to outer angle. Underside suffused with blue.

Hab. Japan; Sikhim; Bhutan; Nágas; Cachar; Sylhet. *Exp.*, ♂ 50–54, ♀ 50–60 millim.

536. *Pidorus miles*, *Butl. Ill. Het.* v, p. 25, pl. 84, fig. 3; *C. & S.* no. 434.

♂. Dark brown; a yellow band across the collar and tegulæ. Fore wing with a yellow fascia from the base, running below the costa to near the end of the cell, then bent down to near middle of outer margin; a yellow apical spot. Hind wing with a broad red fascia along the costa expanding into the end of the cell.

Hab. Sikhim; Bhutan. *Exp.* 32 millim.

Genus **HETEROPAN.**

Heteropan, *Wlk. Cat.* ii, p. 440 (1854).

Birtina, *Wlk. Cat.* xxxi, p. 125 (1864).

Type, *H. scintillans*, Wlk.

Range. Nágas; Ceylon; Burma; New Guinea; Fiji.

Palpi rather longer than in the preceding genera. Mid and hind tibiæ with no spurs. Wings short and quadrate. Fore wing with vein 6 given off from the upper angle of the cell; hind wing with veins 6 and 7 from the upper angle of cell.

SECT. I. The outer margin of fore wing much rounded.

537. ***Heteropan scintillans***, *Wlk. Cat.* ii, p. 441; *C. & S.* no. 437; *Moore, Lep. Ceyl.* ii, pl. 96, fig. 3.

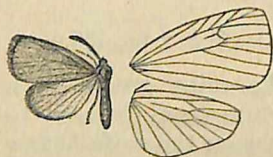


Fig. 170.—*Heteropan scintillans*, ♂. ¼.

♂. Antennæ and frons deep metallic blue. Head, thorax, abdomen, and wings lavender-blue. Fore wing with bluish silvery raised scales on a cupreous band along the outer margin.

Hab. Ceylon. *Exp.* 22 millim.

538. ***Heteropan cupreatus***, *Hmps.* *Ill. Het.* ix, ined., pl. 157, fig. 10.

Differs from *scintillans* in the antennæ, head, thorax, and fore wings being uniform cupreous brown; the abdomen and hind wings deeper blue.

Hab. Pundaloya, Ceylon. *Exp.* 22 millim.

SECT. II. The outer margin of fore wing squarer.

539. ***Heteropan flavimacula***, n. sp.

Uniform dark brown, with a large bright yellow patch on the fore wing from the costa before the apex to vein 4.

Hab. Momeit, Burma, 2000 feet, June (*Doherty*). *Exp.*, ♂ 22, ♀ 26 millim. Type in coll. Elwes.

540. ***Heteropan ochreus***, *Elw. P. Z. S.* 1890, p. 385, pl. xxxiii, fig. 4.

Antennæ purplish black, the tips fulvous. Head black. Fore wings fulvous; the cilia black. Hind wings brighter fulvous, except the inner area. Underside bright fulvous.

Hab. Nágá Hills, 6000 feet. *Exp.* 27 millim.

Genus **ARBUDAS**.

Arbudas, Moore, *Lep. Atk.* p. 19 (1879).

Type, *A. bicolor*, Moore.

Range. Sikhim.

Shape as in *Heteropan*; the palpi shorter. Fore wing with vein 6 given off below the angle of cell; vein 11 anastomosing with 12.

541. *Arbudas bicolor*, Moore, *Lep. Atk.* p. 20, pl. ii, fig. 19; *C. & S.* no. 477.

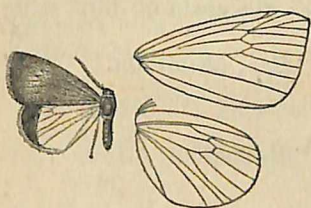


Fig. 171.

Arbudas bicolor, ♀. †.

Hab. Sikhim. *Exp.*, ♂ 22, ♀ 32 millim.

♂. Antennæ, head, thorax, abdomen, and wings uniform fuscous, with a slight purple tinge; collar crimson. Underside paler; a whitish patch on disk of fore wing.

♀. The collar sometimes dark. Fore wing rather paler than in male, the patch on underside pure white and extending to the costa. Hind wing pure white, with a broad dark outer margin; cilia white.

Genus **HERPA**.

Herpa, *Wlk. Cat.* ii, p. 441 (1854).

Type, *H. venosa*, Wlk.

Range. Sikhim; Khâsi and Nâga Hills.

The branches of antennæ very long in the male. Mid and hind tibiæ with minute terminal pairs of spurs. The wings longer; fore wing with vein 7 given off further from the cell than 9; 11 not anastomosing with 12.

SECT. I. Fore wing with veins 4 and 5 not stalked.

542. *Herpa venosa*, *Wlk. Cat.* ii, p. 442; *C. & S.* no. 439.

Head and antennæ black; thorax ochreous, marked with black; abdomen ochreous, with segmental black bands. Wings primrose-yellow, with the veins and margins black.

Hab. Khâsis. *Exp.* 46 millim.

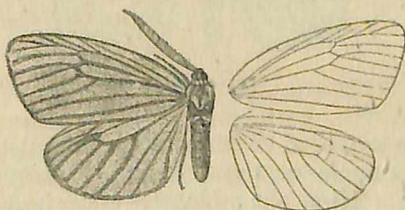


Fig. 172.—*Herpa venosa*, ♂. †.

- *543. *Herpa subhyalina*, Moore, *Lep. Atl.* p. 18 ; C. & S. no. 438.

Differs from *venosa* in the abdomen being greyish ; the wings subhyaline ochreous ; both wings with the costal border blackish hind wings with the veins and margins not black.

Hab. Sikkim. *Exp.* 60 millim.

SECT. II. Veins 4 and 5 of the fore wing stalked.

544. *Herpa primulina*, Elwes.

Herpa subhyalina, var. *primulina*, *Elw. P. Z. S.* 1890, p. 382.

Much brighter yellow than *subhyalina* ; the costa of hind wing not blackish.

Hab. Nāga Hills, 5000 feet, August. *Exp.* 58 millim.

Genus PINTIA.

Pintia, *Wlk. Cat.* ii. p. 280 (1854).

Type, *P. metachloros*, Wlk., from Java.

Range. Hongkong ; N.E. and S. India ; Burma ; Andamans ; Nicobars ; Sumatra ; Java.

Branches of antennæ of male not so long as in *Herpa*. Frons much produced ; palpi short. Legs without spurs. Fore wing with the apex pointed, vein 11 anastomosing with 12. Hind wing with vein 6 from below the upper angle of cell.

SECT. I. Veins 6, 7, 8, and 9 of the fore wing stalked together.

545. *Pintia ferrea*, *Wlk. Cat.* ii. p. 431 ; C. & S. no. 392 ; *Butl. Ill. Het.* v, pl. 83, fig. 7.

Antennæ metallic blue ; head with copper and green tints ; thorax copper-red with green markings ; abdomen dark green. Fore wing dark coppery red ; the median and submedian nervures

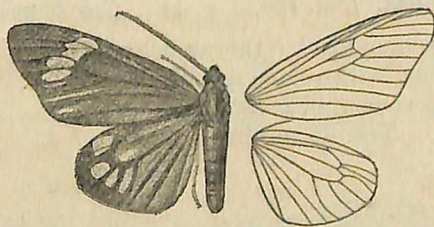


Fig. 173.—*Pintia ferrea*, ♂. 1.

streaked with green ; a short whitish maculate oblique band beyond the upper angle of the cell, and two white spots between veins 3, 4, and 5. Hind wing blackish ; the inner area below the cell suffused with green ; four whitish spots very variable in size,



and sometimes obsolescent, in the interspaces beyond the cell; cilia white. Underside with the costa of fore wing streaked with green; a white streak in the interno-median interspace: hind wing with a white streak in the cell and three below it; a submarginal series of blue spots on both wings.

Hab. Hongkong; Sikkim; Sylhet; Cachar; Burma; Nicobars; Andamans. *Exp.* 46–56 millim.

546. *Pintia cyanea*, *Butl. A. M. N. H.* (5) xii, p. 160.

Differs from *ferrea* in the wings being without the whitish spots above; hind wing shot with brilliant metallic blue, abdomen with greenish blue.

Hab. Mergui; Sumatra. *Exp.* 46 millim.

SECT. II. Fore wing with vein 6 not stalked with 7.

547. *Pintia latipennis*, *Hmps. Ill. Het.* viii, p. 45, pl. cxxxix, fig. 22.

♂. Differs from *ferrea* in the antennæ being darker blue; thorax and fore wing uniform vinous red, the latter with the oblique band and two spots beyond the cell obsolescent; abdomen and hind wing uniform brown, the latter with one white spot beyond the cell, the lower spots being obsolete; cilia brown. Underside without the costal green streak to fore wing or blue submarginal spots. The wings broader.

Hab. Nilgiris, W. slopes, 3000 feet, Aug. *Exp.* 56 millim.

Genus **HETERUSIA**.

Eterusia, *Hope, Trans. Linn. Soc.* xviii, p. 445 (1841).

Devanica, *Moore, Trans. Ent. Soc.* 1884, p. 355.

Sephisa, *Moore, Lep. Ceyl.* ii, p. 41 (1883).

Type, *E. tricolor*, *Hope*.

Range. China; Himalayas; Assam; Sylhet; Burma; S. India; Ceylon; Cambodia; Java.

Fore wing with veins 6, 7, 8, and 9 stalked together; 11 not anastomosing with 12.

SECT. I. The outer margin of the fore wing nearly straight.

A. The abdomen blue-green above.

548. *Heterusia raja*, *Moore, Lep. E. I. Co.* p. 320, pl. viii, a, fig. 2; *C. & S.* no. 381.

♀. Head and thorax green; collar narrowly crimson; antennæ and abdomen metallic blue, the latter with a green tinge and yellow below. Fore wing bright green, with an outwardly-oblique yellow maculate band from the costa beyond the middle to near outer angle; the spots outwardly edged with black; the veins between them blue. Hind wing yellow; the veins bordered with black; a curved black band from the lower angle of cell to the

outer margin at vein 1 *b*; the outer margin black; the whole inner area from vein 1 *b* to the margin blue-green.

Hab. Sikkim. *Exp.* 65 millim.

B. *The abdomen black, shot with blue.*

549. **Heterusia alompra**, Moore, *Lep. Atk.* p. 16; *C. & S.* no. 368.

Eterusia urania, Schaus, *Ent. Amer.* 1890, p. 39.

Devanica submarginalis, Swinh. *Cat. Het. Mus. Oxon.*, ined.

Antennæ metallic blue-green; head and thorax green; abdomen shot with blue. Fore wing dark green, with an oblique yellow band from the costa beyond the middle to the inner margin near outer angle, some ovate black spots on each side of it, and the nervures between it and the black spots metallic blue. Hind wing black; the inner area below the median nervure shot with metallic blue; an apical band of metallic-blue spots decreasing from the apex to vein 2.

In typical *alompra* there is an oblique series of small yellow spots from the end of the cell of the hind wing to the outer margin at vein 1 *b*; this in *submarginalis* forms a complete broad band, but in the form *urania* is totally absent on the upperside.

Hab. Sikkim; Bhutan; Assam; Nágas; Burma; Cambodia. *Exp.*, ♂ 72, ♀ 62–86 millim.

C. *Abdomen yellow; the first segment black, shot with blue; males with segmental black bands above.*

550. **Heterusia lativitta**, Moore, *Lep. Atk.* p. 15; *C. & S.* no. 377.

Eterusia fasciata, Mösch. (*nec Walk.*), *Stettin. Ent. Zeit.* 1872, p. 340;

C. & S. no. 375 (part.).

♂. Abdomen banded with black above; the basal yellow patch of fore wing wanting.

♀. Head, thorax, and first segment of abdomen black. Fore wing very dark green, with a basal pale yellow patch; a broad maculate band consisting of two irregularly superposed spots just before the middle; a small spot in the end of the cell, and five small sub-apical white spots. Hind wing rich blackish brown, with a yellow spot at the end of the cell, and two or three metallic blue spots in the interspaces between veins 2 to 5, which are streaked with blue. Underside with the veins streaked with blue in places on both wings. Abdomen with ventral black bands.

Hab. Sikkim; Khásis; Assam; Nágas; Sylhet. *Exp.* 70 millim.

551. **Heterusia tricolor**, Hope, *Trans. Linn. Soc.* xviii. 1841, p. 445, pl. 31, fig. 4; *C. & S.* no. 386.

Eterusia sublutea, Wlk. *Cat.* ii, p. 430; *C. & S.* no. 385.

Eterusia scintillans, Herr.-Schäffer, *Samml. aussereur. Schmett.* fig. 154.

Heterusia trimacula, Mösch. *Stettin. Ent. Zeit.* 1872, p. 342; *C. & S.* no. 388.

Differs from *lativitta* in the spots of the medial bands being small and well separated; the spot at the end of the cell and the submarginal series larger, the latter complete. Hind wing black

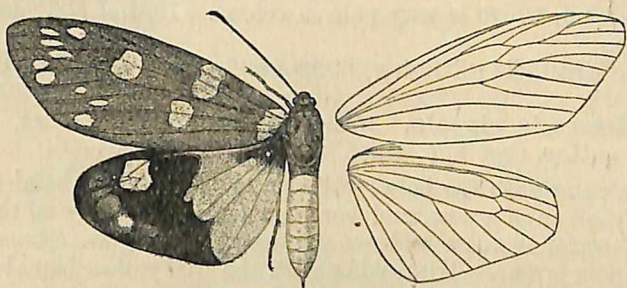


Fig. 174.—*Heterusia tricolor*, ♀. †.

at base; followed by a yellow band, wide on inner margin, where it reaches the anal angle; apical area black, with a large yellow spot at the end of the cell, and two to four blue submarginal spots, the two lower with yellow lunules inside them. Underside with the black areas largely shot with blue.

Hab. Sikhim; Sylhet; Nepal; Nágas; E. Pegu. *Exp.*, ♂ 60, ♀ 75 millim.

D. *The first two segments of abdomen black, no dorsal bands in male.*

552. *Heterusia edocla*, *Doubl. Zoologist*, ii, p. 468; *C. & S.* no. 374. *Heterusia dulcis*, *Butl. Ill. Het.* v, p. 21, pl. 83, fig. 4; *C. & S.* no. 373. *Heterusia signata*, *Mösch. Stettin. Ent. Zeit.* 1872, p. 341; *C. & S.* no. 384.

Differs from *lativitta* in the fore wing having the medial band broken up into 5 spots; the submarginal series complete, or sometimes almost entirely absent.

In the form *dulcis* there is a yellow band from the costa of the hind wing across the end of the cell, this being only represented in typical *edocla* by a small spot on the underside of costa.

Hab. Nepal; Sikhim; Assam; Nágas; Cachar. *Exp.* 75 millim.

553. *Heterusia magnifica*, *Butl. Trans. Ent. Soc.* 1879, p. 5; *id. Ill. Het.* v, pl. 83, fig. 2; *C. & S.* no. 378.

Differs from *edocla* in the fore wing being purple-brown, with a slight green tinge, the markings white; the medial band with blue on the veins where they cross it. Hind wing as in *tricolor*, except that the basal black patch is larger; the apical area largely shot with blue; the upper spots on it triple; the yellow of hind wing may be pale or bright.

Hab. Sikhim; Assam; Nágas; Sylhet; Cachar. *Exp.*, ♂ 66, ♀ 80 millim.



554. *Heterusia virescens*, *Butl. Ill. Het.* v, p. 21, pl. 83, fig. 3; *C. & S.* no. 389.

Differs from *magnifica* in the fore wing being dark green; the basal black area of the hind wing larger, reducing the width of the yellow band, which is very pale in colour. End of abdomen black in male.

Hab. Khandāla; Nilgiris, 3000–6000 feet. *Exp.* 76 millim.

555. *Heterusia cingala*, *Moore, A. M. N. H.* (4) xx, p. 343; *id. Lep. Ceyl.* ii, p. 41, pl. 96, fig. 1; *C. & S.* no. 391.

Fore wing with the basal white patch and medial band actually larger than in *virescens*, and comparatively much larger, the latter placed nearer the base and not broken up into spots; the submarginal spots larger. Hind wing with the pale yellow band broader; the subapical spots absent in males.

Larva brown, with three lateral and two dorsal series of warts; from the former long, from the latter short hairs arise.

Hab. Ceylon. *Exp.* 55 millim.

556. *Heterusia ædea*, *Linn. Syst. Nat.* i, p. 757; *C. & S.* no. 367.

Differs from *virescens* in the spots of the medial band of the fore wing being longer; the cell spot and submarginal spots of both wings much larger. Hind wing with the pale yellow band much broader.

Hab. China; Sylhet. *Exp.* 65 millim.

SECT. II. The outer margin of the fore wing more excised.

557. *Heterusia drataraja*, *Moore, Lep. E. I. Co.* ii, p. 321, pl. viii a, fig. 3.

♂. Frons white. Head, thorax, and abdomen black; thorax, with the collar, tegulae, and two longitudinal streaks, fulvous; abdomen with fulvous segmental bands. Fore wing fulvous, with the following black streaks, two below the costa, one at the beginning and two at the end of the cell, two in the median and two in the interno-median interspace, one along the inner margin, and one in each interspace beyond the cell; a marginal black band crossed by the fulvous veins and widest at the apex. Hind wing fulvous, with the veins broadly edged with black; a broad black band along outer margin.

Hab. Java; Mergui. *Exp.* 40 millim.

Genus MILLERIA.

Milleria, *Herr.-Schäffer, Samml. aussereur. Schmett.* p. 78 (1858).

Type, *M. virginalis*, H.-S.

Range. N.E. India; Burma; Malacca; Singapore; Borneo.

Frons produced. Mid and hind tibiae with minute terminal pairs of spurs. Fore wing with the outer margin not excised; vein 3 from before the end of the cell, 4 and 5 on a long stalk, 7, 8, and 9 stalked. Hind wing broad and rounded.

558. *Milleria virginalis*, Herr.-Schäffer, *Samml. ausserer. Schmett.* fig. 4; *C. & S.* no. 425.

Cyclosia fuliginosa, *Wlk. Cat.* ii, p. 418; *C. & S.* no. 436; *Butl. Ill. Het.* v, pl. 83, fig. 6.

Cyclosia subcyanescens, *Wlk. Cat.* ii, p. 417.

♂. Head and thorax blackish; collar crimson; abdomen pale with fuscous bands. Fore wing cupreous brown, with white

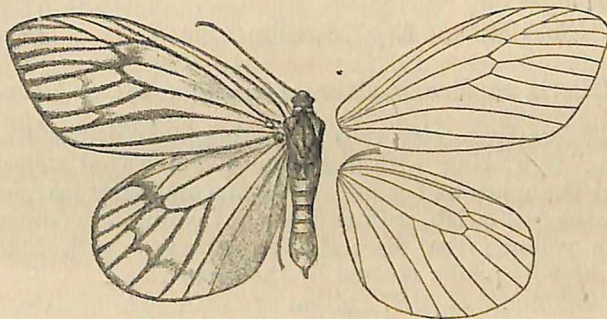


Fig. 175.—*Milleria virginalis*, ♀. †.

streaks in the interspaces, suffused with fuscous and consisting of a series of long streaks towards the base, and short streaks towards the outer margin. Hind wing white, with a broad black band from the apex to vein 2, enclosing a white spot in each interspace; the median nervure and nervules blue; the inner area yellow. Underside with the veins of both wings blue; hind wing more suffused with yellow.

♀. Whiter, the fuscous on fore wing reduced to streaks along the veins and on the hind wing to a line on the outer margin, and a band across the end of the cell, which then bends outwards and becomes submarginal.

The variety *fuliginosa* has the abdomen and both wings entirely suffused with purplish black, so that only faint traces of the spots and streaks appear.

Hab. Sikkim; Sylhet; Burma. *Exp.*, ♂ 62, ♀ 76 millim.

559. *Milleria cyanivena*, n. sp.

♂. Differs from *virginalis* form *fuliginosa* in the veins of both wings being shot with greenish blue, the fore wing slightly, the hind wing and underside prominently; the discal spots of both wings absent on upper and under sides; the submarginal series pure white, large, and prominent.

Hab. Bernardmyo, Burma (*Doherty*). *Exp.* 70 millim. Type in coll. Elwes.

560. *Milleria hamiltoni*, Swinh. *Trans. Ent. Soc.* 1891, p. 475.

♀. Differs from *virginalis* in the collar being blue, and only the neck crimson; abdomen blue above. Fore wing green; pale yellow streaks on inner margin, veins 1 *b* and *c*, two in middle of cell, two above and two below, two in end of cell, a series between the nervules beyond, and a submarginal series. Hind wing pale yellow, the inner area bright yellow, the veins beyond the cell and apical margin blue. Underside similar, the metallic blue more brilliant.

Hab. Khâsi Hills. *Exp.* 75 millim.

561. *Milleria cardinalis*, Moore, *Lep. Atk.* p. 18; *C. & S.* no. 421.

♂. Differs from *virginalis* form *fuliginosa* in the frons being crimson; fore wing with the base and a waved subbasal band fuscous; the apical half white; the veins and outer margin fuscous. Hind wing yellowish, suffused with fuscous, the inner margin brighter yellow; the discocellulars streaked with blue; outer margin broadly white, crossed by the black veins.

Hab. Sikhim. *Exp.* 37 millim.

Genus **CHALCOSIA**.

Chalcosia, Hübn. *Verz.* p. 173 (1818).

Type, *C. thallo*, Linn.

Range. China; throughout India; Ceylon; Burma; Malacca; Sumatra; Java; Borneo.

Fore wing with veins 4 and 5 from cell or on a short stalk. Legs without spurs.

SECT. I. Veins 4 and 5 of the fore wing not stalked; the veinlet in the cell not forked.

562. *Chalcosia griseifusa*, n. sp.

♀. Head, thorax, abdomen, and fore wing uniform dark blue-grey. Hind wing with the basal half yellowish white, suffused with blue-grey towards the costa—the Malacca and Singapore specimens being more suffused than the one from Pegu; outer area fuscous, widest at apex, narrow at anal angle. Underside with a whitish patch on the inner margin of the fore wing below the cell; a submarginal series of whitish spots to both wings. Hind wing with the area below the cell bright yellow, more restricted in the Singapore specimen than in those from Malacca and Pegu.

Allied to *ficta*, Wlk., from Borneo.

Hab. E. Pegu; Malacca; Singapore. *Exp.* 52 millim. Type in B. M.



563. *Chalcosia idæoides*, Herr.-Schäffer, *Samml. aussereur. Schmett.* p. 78, pl. i, fig. 6.
Chalcosia albata, Moore, *P. Z. S.* 1879, p. 390; *C. & S.* no. 408.
Chalcosia pectinicornis, Wlk. *Cat.* ii, p. 420 (*nec Linn.*); *C. & S.* no. 411 (part.).

Antennæ metallic blue; frons blue; vertex of head black; head and collar crimson, the latter with two blue spots; thorax and abdomen blue-green. Fore wing with the basal half blue-green, sometimes white, leaving two medial spots, the median vein, and veins 1 *b* and *c* where they cross it whitish; this blue-green area terminates in three black spots, one in the cell and two below it, and is followed by a broad white band from the centre of the costa to near the outer angle; apical and marginal areas black, the veins metallic green; a subapical band of white spots in the interspaces. Hind wing pure white, with a black apical marginal band crossed by the metallic blue veins.

Hab. N.W. Himalayas; Nepal; Assam. *Exp.*, ♂ 60-68, ♀ 68 millim.

564. *Chalcosia argentata*, Moore, *Lep. Atk.* p. 17; *C. & S.* no. 409.
Chalcosia diana, Butl. *P. Z. S.* 1877, p. 815.

Differs from *idæoides* in the hind wing being pale yellow; the marginal band sometimes entirely shot with blue; the fore wing sometimes has the basal area blue-green, sometimes white as in *idæoides*.

Hab. Formosa; N.W. and E. Himalayas; Khâsis. *Exp.*, ♂ 60, ♀ 72 millim.

565. *Chalcosia adalifa*, Doubl. *A. M. N. H.* xix. 1847, p. 76; *C. & S.* no. 406; Butl. *Ill. Het.* v, pl. 83. fig. 5.

♀. Differs from *argentata* in the blue-green patch below the cell of the fore wing being absent and replaced by three blue spots nearer the outer margin, two in the interno-median interspace, and one between veins 2 and 3. Underside of hind wing bright yellow, except the costa, apex, and apical part of margin.

Hab. Khâsi Hills. *Exp.* 64 millim.

566. *Chalcosia myrrhina*, Hmps. *Ill. Het.* ix, ined., pl. 157, fig. 14.

♂. Differs from *argentata* in the white of the fore wing not being silvery; the streak from the base being along the costa; the patches in and below the cell being joined and shot with copper; the apical area purplish coppery, with the spots of the subapical band small. Hind wing uniform pale yellow, with two black sub-apical spots.

Hab. Pundaloya, Ceylon. *Exp.* 40 millim.

SECT. II. The fore wing longer ; veins 4 and 5 stalked ; and the veinlet in the cell generally forked.

567. *Chalcosia affinis*, *Guér. Voy. Deless. Hist. Nat.* p. 86, pl. 24, fig. 2 ; *C. & S.* no. 407 ; *Moore, Lep. Ceyl.* ii, pl. 98, fig. 2.

Differs from *myrrhina* in the whole basal half of the fore wing being metallic green, sometimes with a bronzy tint, and with black marks before the pale band ; black streaks in the interspaces of the apical area. Hind wing with the apex black shot with blue.

Hab. Western Ghâts ; Nilgiris ; Ceylon. *Exp.* 50 millim.

568. *Chalcosia corusca*, *Boisd. Herr.-Schäffer, Samml. aussereur. Schmett.* pl. i, fig. 1 ; *C. & S.* no. 410.

Chalcosia zuleika, *Wlk. Cat.* ii, p. 423 ; *C. & S.* no. 416.

Differs from *affinis* in the basal area of the fore wing being golden green, traversed by an orange band bordered by blue-black on each side, this basal area terminating in a blue-black edge ; the subapical spots obsolete. Hind wing with a larger apical blue-black patch.

The hind wing is sometimes pure white.

Hab. Sikhim ; Khâsis ; Assam. *Exp.*, ♂ 50, ♀ 60 millim.

569. *Chalcosia thallo*, *Linn. Syst. Nat.* i, p. 756.

Chalcosia pectinicornis, *Linn. Syst. Nat.* i, p. 807 ; *C. & S.* no. 411.

Chalcosia tiberina, *Cram. Pap. Exot.* i, p. 52, pl. 32 c, d.

Chalcosia quadrifasciata, *Moore, Lep. Ceyl.* ii, p. 45, pl. 96, fig. 5 ; *C. & S.* no. 413.

Chalcosia venosa, *Wlk. Cat.* ii, p. 422 ; *Moore, Lep. Ceyl.* ii, pl. 97, figs. 2, 2 a ; *C. & S.* no. 405.

Chalcosia similata, *Moore, Lep. Ceyl.* ii, p. 45, pl. 97, figs. 3, 3 a ; *C. & S.* no. 414.

Milleria zehma, *Boisd. Herr.-Schäffer, Samml. aussereur. Schmett.* p. 78, pl. i, fig. 3 ; *C. & S.* no. 415.

Differs from *affinis* in being bluer. The fore wing may have the basal area entirely blue-green with black spots, or there may be a large white or pale yellow patch below the cell and along the inner margin ; the median band is white or pale yellow, and broad and irregular, or reduced to a series of irregularly placed spots ; the veins of the apical area are more narrowly green than in *affinis* ; the subapical spots are sometimes prominent, sometimes completely obsolete. Hind wing white or pale yellow, with a black irregular marginal border shot with blue, which colour sometimes extends up below the cell to the base, reducing the white area to a patch beyond the cell ; sometimes the blue-black colour is entirely wanting, except for a small subapical spot, and all the intermediate stages seem to occur irrespective of locality.

Pectinicornis is the darkest form, with the base of fore wing

and most of hind wing dark, in *thallo* the hind wing is white with a black marginal band, in *tiberina* the marginal band of the hind wing is narrower—these being the Chinese and N. Indian forms; in the Ceylon form *quadrifasciata*, from sea-level, the

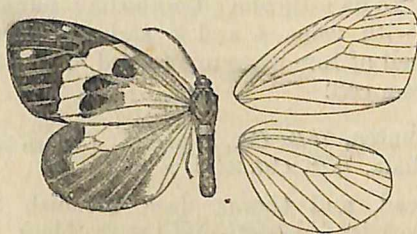


Fig. 176.—*Chalcosia thallo*, ♂. †.

white basal patch to the fore wing appears in combination with a dark hind wing; in *venosa*, from the hills, the hind wing also is mostly pale; in *similata* the pale band of the fore wing is wider, and the dark area of the hind wing further reduced.

Hab. China; N. India; Ceylon. *Exp.* 50–60 millim.

570. *Chalcosia pretiosa*, *Wlk. Cat.* xxxi, p. 116; *C. & S.* no. 412; *Moore, Lep. Ceyl.* ii, pl. 96, fig. 4.

Chalcosia pretiosa, var. *albina*, *Hmps. Ill. Het.* ix, ined., pl. 157, fig. 5.

♂. Fore wing as in *affinis*, except that the white band is usually narrower and the subapical spots smaller; the abdomen and hind wing brilliant metallic blue.

In the form *albina* there is sometimes a white basal patch to the fore wing, and the hind wing is white, with the base and outer margin only metallic blue.

Hab. Ceylon. *Exp.* 42 millim.

571. *Chalcosia distincta*, *Guér. Voy. Deless. Hist. Nat.* p. 85, pl. 24, fig. 3; *C. & S.* no. 372.

Antennæ blue; head and abdomen orange; thorax grey, striped with blue. Fore wing grey, with the following series of blue-black spots in the interspaces—one series antemedial, three of the spots running back as streaks to the base; the others postmedial and submarginal, which join below the cell and are continued as one series; a marginal series. Hind wing white, with a black marginal band which occupies half the wing at the costa, and narrows to a point at the anal angle.

Hab. ? Assam; Mergui; Perak; Borneo; Sumatra; Java. *Exp.* 42–50 millim.

Genus **CORMA**.

Corma, *Wlk. Cat.* xxxi, p. 124 (1864).

Codane, *Moore, Lep. Atk.* p. 17 (1879).

Type, *C. obscurata*, Wlk., from Cambodia.

Range. N.E. India; Burma; Cambodia; Sumatra.

Hind wing with veins 4 and 5 stalked; fore wing with the veinlet in the cell of fore wing not forked, 4 and 5, and 7, 8, and 9 stalked, or 9 from cell.

572. *Corma zenotea*, *Wlk. Cat.* ii. p. 425; *C. & S.* no. 444.

Corma spoliata, *Wlk. Cat.* xxxi, p. 125.

Antennæ, head, and thorax dark greenish black; abdomen yellow, with black lateral spots and the tip black. Fore wing with

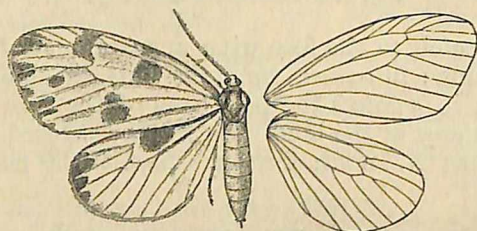


Fig. 177.—*Corma zenotea*, ♀. †.

a fuscous band along the basal half of the costa; a spot at middle of cell and one on vein 1 c; postmedial and marginal maculate bands which join towards outer angle. Hind wing white, with a fuscous spot on the costa at end of cell, and a maculate apical band.

Hab. Khásis; Karen Hills; Moulmein; Siam. *Exp.*, ♂ 40, ♀ 46 millim.

573. *Corma maculata*, n. sp.

♀. Differs from *zenotea* in the collar being yellow. Fore wing with the basal area fuscous, except at inner margin; the spot in the cell much larger; the spots below the cell four in number and much larger, as are the apical and marginal markings. Hind wing with the fuscous spot in the cell obsolescent, but large on under-side, on which side also a streak from the costa near the end of cell is present; a large patch below vein 2; spots between veins 2 and 3, and 3 and 4; marginal markings large.

Hab. Chin Hills, W. Burma (*Watson*). *Exp.* 56 millim. Type in B. M.

574. *Corma zelica*, *Doubl. A. M. N. H.* (1) xix, p. 76, pl. 7, fig. 3; *C. & S.* no. 443.

Codane neoterica, *Swinh. Trans. Ent. Soc.* 1890, p. 177.

Codane leucomelas, *Moore, J. A. S. B.* lv. pt. 2, p. 97; *C. & S.* no. 442.

♂. Differs from *zenotea* in the abdomen having segmental blue bands above. Fore wing with an oblique broad medial bluish-

black band followed by a white one; the apical and marginal areas bluish black, with a series of white subapical spots and, in some specimens, the apex white. Hind wing white, with the base suffused with fuscous and a broad marginal fuscous band narrowing to anal angle.

♀ with the base of the hind wing not suffused with fuscous; the abdomen whitish yellow, with the lateral spots, but no bands. In one specimen from E. Pegu the median dark band of the fore wing is reduced to a series of spots.

The spots forming the medial black band vary much in size.

Hab. Sylhet; E. Pegu; Moulmein. *Exp.*, ♂ 48, ♀ 54 millim.

Genus **CYCLOSIA**.

Cyclosia, *Hübner*. *Verz.* p. 177 (1818).

Klaboana, *Moore*, *P. Z. S.* 1879, p. 393.

Type, *C. panthona*, Cram.

Range. China; N.E. and S. India; Burma; Andamans; Nicobars; Java.

Fore wings with veins 4 and 5 from the angle of the cell, 6 from angle of cell or stalked with 7, 8, and 9; 11 anastomosing with 12; the veinlet in the cell forked.

A. *The abdomen banded blue and white.*

575. *Cyclosia nigrescens*, *Moore*, *P. Z. S.* 1877, p. 600; *C. & S.* no. 422.

Antennæ, head, and thorax metallic blue, the last two marked with white. Fore wing black, with the costa blue; a pale yellow streak below the costa, two in the cell, three below it, and four beyond the cell, the upper one trifid. Hind wing yellow, with a broad black marginal band; the median nervure and nervules streaked with black. Underside with a submarginal series of blue spots to both wings.

Hab. Andamans; Burma. *Exp.* 74 millim.

576. *Cyclosia parvula*, *Batl.* *A. M. N. H.* (5) xii, p. 160; *C. & S.* no. 420.

Differs from *nigrescens* in having a submarginal series of small yellow spots to both wings.

Hab. Burma; Andamans; Nicobars. *Exp.* 52 millim.

577. *Cyclosia papilionaris*, *Drury*, *Ill. Exot. Ins.* ii, p. 4, pl. 2, fig. 4; *C. & S.* no. 419.

Phalaena venaria, *Fabr. Ent. Syst.* iii, 2, p. 156.

Differs from *parvula* in the black markings of the fore wing being more extensive, so that the streaks and spots are reduced in

size. Hind wing with the marginal black border wider, and in some specimens of the same width at anal angle as at apex; in a Javan specimen all the veins are bordered with black. In some specimens the colour of the markings is almost white.

Hab. China; Sikhim; Khâsis; Burma; Mergui; Java. *Exp.* 70 millim.

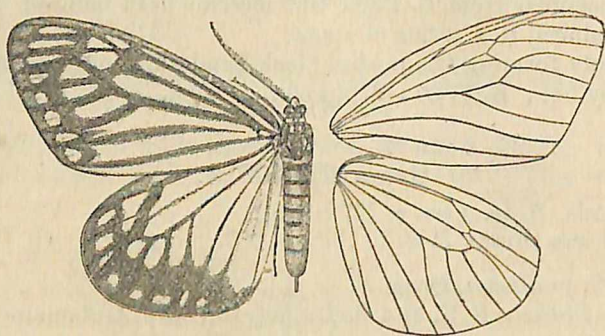


Fig. 178.—*Cyclosia papilionaris*, ♀. †.

B. *The abdomen blue above.*

578. *Cyclosia australinda*, *Hmps. Ill. Het.* viii, p. 45, pl. cxxxix, fig. 23.

♀. Differs from *papilionaris* in the veins crossing the black band of the hind wing being streaked with metallic blue.

Hab. Nilgiris; Travancore. *Exp.* 70 millim.

C. *The abdomen entirely blue-green.*

579. *Cyclosia panthona*, *Cram. Pap. Exot.* iv, p. 68, pl. 322 c; *C. & S.* no. 423; *Moore, Lep. Ceyl.* ii, p. 44, pl. 97, figs. 1, 1 a, 1 b.

Head, thorax, and abdomen without any white markings. Fore wing dull brown, with a greenish tinge. Hind wing purplish brown; both wings with a submarginal series of large white spots in the interspaces, which are furthest from the margin at the apex of the fore wing; in some Burmese specimens those towards the anal angle of the hind wing are wanting.

Larva pale greenish yellow, the first two and last two somites reddish; three lateral and three dorsal series of warts, which are black centred with white; from the former arise long hairs, from the latter short.

Pupa in a pale reddish cocoon.

Hab. Hong Kong; Sikhim; Assam; Cachar; Khâsis; Burma; Mergui; Malacca; Siam; Ceylon. *Exp.* ♂ 40–60, ♀ 60 millim.

Genus **POMPELON.**

Pompelon, *Wlk. Cat. ii*, p. 413 (1854).

Type, *P. marginata*, H.-S., from Java.

Range. Burma; Penang; Java; Celebes.

Mid and hind tibiae with minute terminal pairs of spurs. Wings broad, with the apex of the fore wing very much rounded. Vein 6 from below angle of cell, 7, 8, and 9 stalked; vein 11 of the fore wing anastomosing with 12.

This genus mimics the blue *Euplaeas*.

580. **Pompelon valentula**, *Swinh. P. Z. S.* 1889, p. 401.

♀. Head, thorax, and abdomen black-brown; pectus and abdomen below crimson, the latter with a pair of lateral segmental spots. Wings black-brown; fore wing with the costa and apex narrowly metallic blue; hind wing with a large metallic-blue apical patch; the outer margin greyish, which last is the only character in which it differs from *marginata*, Guér., from Penang. Underside of fore wing with a large yellow spot in the upper end of the cell, and the veins enclosing the cell streaked with metallic blue.

Hab. Burma. *Exp.* 78 millim.

581. **Pompelon subcyanea**, *Swinh. Cat. Het. Mus. Oxon.* p. 72.

Differs from *valentula* in the collar being blue, the apical blue patch to the fore wing being much larger, and extending down the

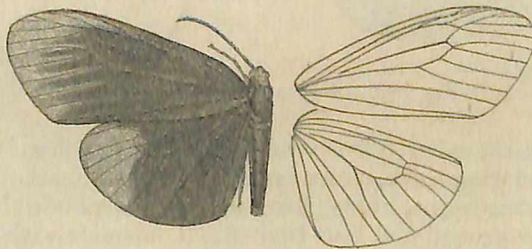


Fig. 179.—*Pompelon subcyanea*, ♂. ½.

outer margin nearly to the outer angle, and inwards along all the nervules and median nervure; the costal blue streak wider. Hind wing without the grey margin. Underside with the veins and apices of both wings more or less suffused with blue.

Hab. Eastern Pegu, 1000 feet, April; Singapore; Borneo. *Exp.* ♂ 66, ♀ 84 millim.

Genus **AMESIA**.

Amesia, *Duncan*, *Nat. Libr., Ent.* vii. p. 93 (1841).

Type, *A. sanguiflua*, *Drury*.

Range. N.E. India; Burma; Malacca; Borneo; Java.

Claspers in male very much enlarged; branches of antennæ short; frons very much produced. Fore wing with the apex and outer margin rather square; veins 7, 8, and 9 stalked.

- ✓ 582. *Amesia sanguiflua*, *Drury*, *Ill. Exot. Ins.* ii, p. 35, pl. 20, figs. 1, 2; *C. & S.* no. 402.

Antennæ blue; head, thorax, and abdomen black, marked with metallic blue or green. Fore wing black, with some bluish subbasal marks; five irregularly placed yellow spots near the base; the veins broadly edged with vinous red from just before the middle of the wing to near outer margin; four small white spots below the

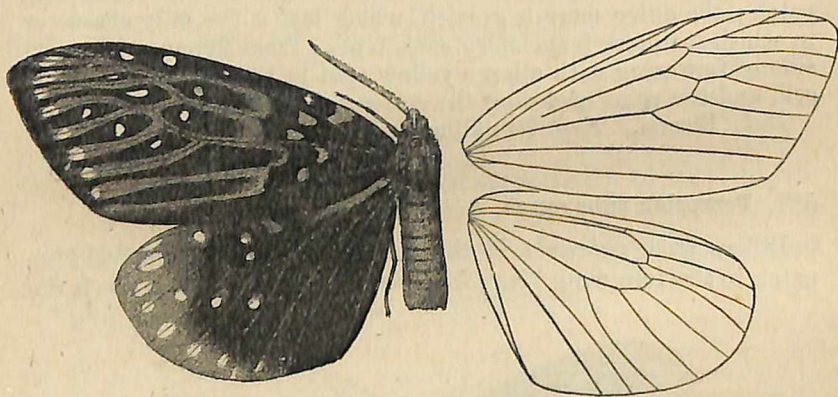


Fig. 180.—*Amesia sanguiflua*, ♂. $\frac{1}{2}$.

costa, two in the cell and five beyond; a submarginal series of white spots. Hind wing black, with a broad brilliant blue apical marginal band narrowing to anal angle; two small white spots in the cell on a brilliant blue ground and four beyond. Underside with the white spots larger, more numerous, and all on blue grounds; a yellow spot in cell of hind wing in addition to those on fore wing.

Hab. Sikkim; Khâsis; Sylhet; Shillong; Burma. *Exp.* 100–110 millim.

583. *Amesia aliris*, *Doubl. A. M. N. H.* (1) xix. p. 74; *C. & S.* no. 400.

Differs from *sanguiflua* in the fore wing being without the vinous edges to the veins, and the spots being reddish orange instead of yellow.

A female from the Karen Hills has the anal area of hind wing white.

Hab. Sikkim; Assam; Nágas; Sylhet; Karen Hills. *Exp.*, ♂ ♀, 86–92 millim.

584. *Amesia hyala*, Druce, *P. Z. S.* 1885, p. 518; *Waterh. Aid*, ii, pl. 172, fig. 3.

Differs from *aliris* in the thorax having four white instead of blue dots; wings uniform brown, with the veins towards outer margin more or less outlined with white. Fore wing with a white dot at base; eight white dots beyond the cell between the nervules arranged in three series. Hind wing with two blue spots in the cell, one below it; four dots beyond the cell, the two upper ones white. Underside with the blue and white spots larger; additional blue spots below the costa and in and below the cell of the fore wing.

Hab. Sikkim; Borneo. *Exp.* 102 millim.

Genus ERASMIA.

Erasmia, Hope, *Trans. Linn. Soc.* xviii, p. 446 (1841).

Type, *E. pulchella*, Hope.

Range. China; Formosa; N.E. India.

Fore wing with veins 4 and 5 stalked and much curved; 7, 8, and 9 stalked.

585. *Erasmia pulchella*, Hope, *Trans. Linn. Soc.* xviii, p. 446, pl. xxxi, fig. 5; *C. & S.* no. 454.

Antennæ, head, and thorax metallic blue-green; abdomen whitish, more or less suffused with green. Fore wing black; the base suffused with metallic blue-green; an orange-red irregular oblique antemedial band; a similar metallic blue-green medial band;

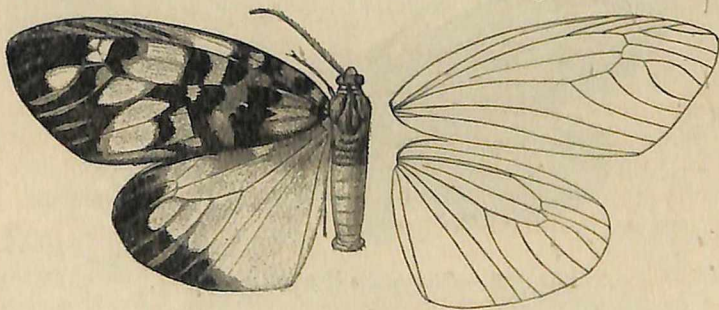


Fig. 181.—*Erasmia pulchella*, ♂. †.

a postmedial maculate band of irregularly placed white spots, edged with green; two subapical white spots; veins of the outer area blue-green. Hind wing pale yellow; the base and a patch on the costa blue-green; an apical marginal black band crossed by the blue-green veins.

The Tibet race has less blue on the fore wing, and the marginal band of hind wing wider.

Hab. Sikkim; Assam; Nágas; Sylhet. *Exp.*, ♂ 80, ♀ 90 millim.

Genus **CAMPYLOTES.**

Campylotes, *Westw. Royle's Ill. Himal.* p. liii (1839).

Type, *C. histrionicus*, *Westw.*

Range. Tibet; Himalayas; Assam Hills.

Legs with the spurs extremely minute. Frons hardly produced. Fore wing with veins 3, 4, and 5 stalked together; 10 stalked with 7, 8, and 9; veins 2 to 10 all much curved. Hind wing with veins 4 and 5 stalked; veins 2 to 5 much curved.

586. ***Campylotes histrionicus***, *Westw. Royle's Ill. Himal.* p. liii, pl. 10, fig. 1; *C. & S.* no. 456.

Campylotes histrionicus, *var. altissima*, *Elw. P. Z. S.* 1890, p. 384, pl. xxxiii, fig. 1.

Campylotes sikkimensis, *Elw. P. Z. S.* 1890, p. 384, pl. xxxiii, fig. 2.

Head, thorax, and abdomen blue-black; tegulæ yellow; pectus spotted with yellow; abdomen banded with yellow below. Fore wing blue-black, with two long red streaks below the costa; two in the cell, the upper red, the lower red and yellow; three yellow streaks below the cell; a red spot between veins 2 and 3; a white spot in the end of the cell; a series of six beyond and two sub-apical spots. Hind wing blue-black, with a red streak below the

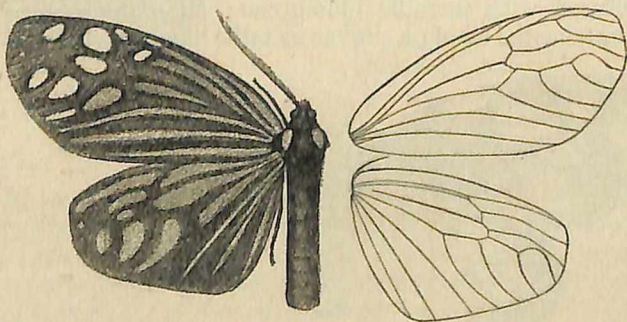


Fig. 182.—*Campylotes histrionicus*, ♂. 1.

costa; two in the cell, and four below, of which the upper one is red, the next red and yellow, and the other two yellow; a series of five red and yellow streaks beyond the cell, and a red and yellow spot between veins 4 and 5.

In the form *altissima* the spot in the cell of the fore wing and the one on the costa above are yellow, also the spots between veins 3 and 4, and 4 and 5. *Exp.*, 51–56 millim.



In the form *sikkimensis* (*exp.*, ♂ 44, ♀ 62 millim.) all the spots towards the apex of the fore wing are yellow, and the collar is yellow in the female. These differences are perfectly constant in a large number of specimens.

In a var. of *histrionicus* from the Khásis the whole of the red markings are turned to orange.

Hab. Throughout the Himalayas; Khásis. *Exp.* 80 millim.

587. *Campylotes desgodinsi*, *Oberth. Et. Ent. livr. ix*, p. 18, pl. ii, fig. 10.

Campylotes desgodinsi, var. *splendida*, *Elw. P. Z. S.* 1890, p. 384, pl. xxxiii, fig. 3.

♀. Differs from the form *sikkimensis* of *histrionicus* in having the tegulæ and collar black.

In the form *splendida*, from the Nága Hills, besides the size being greater, the coloration is much brighter and the ground-colour blue-black not greenish.

Hab. Tibet. *Exp.* 61 millim.—Var. *splendida*. *Hab.* Nágas. *Exp.* 78 millim.

588. *Campylotes atkinsoni*, *Moore, Lep. Atk.* p. 17; *C. & S.* no. 455; *Waterh. Aid.* ii, pl. 92.

With no yellow on thorax or abdomen. Wings shot with green. Fore wing with two red streaks below the costa; two in the cell and three obsolescent streaks below; a red streak between veins 2 and 3; a series of four white spots beyond the cell and two subapical white spots. Hind wing shot with green; all the red markings obsolescent except the spots in the interspaces between veins 2 to 5.

Underside with the red streaks of the hind wing well developed on the costal half of the wing; the inner area of both wings rather bare and shining.

Hab. Sikkim. *Exp.* 72 millim.

Genus CADPHISES.

Cadphises, *Moore, P. Z. S.* 1865, p. 800.

Type, *C. maculata*, *Moore*.

Range. Sikkim; Khásis; Nágas.

Wings broad. Mid and hind tibiæ with short terminal pairs of spurs. Fore wing with veins 4 and 5 stalked and curved, vein 10 stalked with 7, 8, and 9, which are all curved.

589. *Cadphises maculata*, *Moore, P. Z. S.* 1865, p. 801, pl. 42, fig. 7; *C. & S.* no. 361.

Antennæ, head, thorax, and abdomen purplish black, spotted with

white. Wings purplish black, with numerous small white spots. Hind wing bright yellow from the inner margin to vein 1 b.

Hab. Sikkim; Khásis. *Exp.* 70-90 millim.

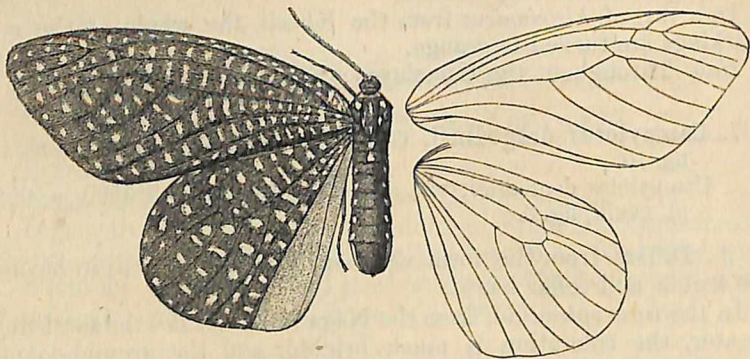


Fig. 183.—*Cadphises maculata*, ♀. †.

590. *Cadphises moorei*, *Butl. P. Z. S.* 1875, p. 392; *C. & S.* no. 362.

♀. Differs from *maculata* in the inner margin of the hind wing being purplish black, spotted with white, similar to the rest of the wing.

This may prove to be a variety of *maculata*, as some specimens have a tendency to be intermediate.

Hab. Sikkim; Khásis; Nágas. *Exp.* 70-88 millim.

Genus ISBARTA.

Isbarta, *Wlk. Cat.* vii, p. 1672 (1856).

Type, *I. glauca*, *Wlk.*, from Sumatra.

Range. Bhutan; Assam Hills; Burma; Borneo; Sumatra; Celebes.

Fore wing with vein 6 stalked with 7, 8, and 9, all being much curved; 10 bent upwards and touching 12; 11 anastomosing with 12; numerous veinlets from 12 to the costa.

591. *Isbarta binghami*, *Butl. A. M. N. H.* (5) x, 1882, p. 374; *C. & S.* no. 417.

♀. Antennæ metallic blue; head, thorax, and abdomen black and white. Fore wing white; the costa, subcostals, and median nervures blue; all the nervures bordered with black; black spots in the middle and upper angle of cell; a submarginal series of black spots from vein 4 to the inner margin. Hind wing white; the whole disk bright yellow; the outer margin and veins near it black; cilia of both wings white.

This species is probably a mimic of *Danaïs crocea*.

In Coll. B. M. is a specimen of *I. pieridoides*, H.-S., labelled Darjiling, but as it is a Bornean species and an excellent mimic of *Idiopsis daos*, which does not occur in Sikhim, and as the specimen was bought at an auction, the locality is almost certainly wrong.

Hab. Tenasserim. *Exp.* 74 millim.

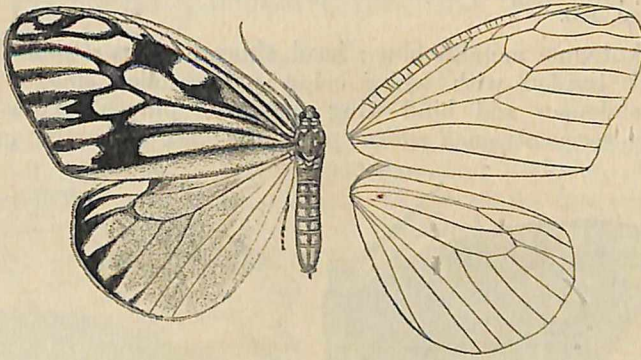


Fig. 184.—*Isbarta binghami*, ♀. 1.

592. *Isbarta imitans*, *Butl. Ill. Het.* v, p. 24, pl. 84, fig. 1; *C. & S.* no. 418.

♂. Antennæ, head, thorax, and abdomen metallic blue or green, with white markings. Wings cupreous brown, with yellowish-white spots and streaks in the interspaces; fore wing with one streak below the cell, two in the cell, and three longer streaks below it, six spots beyond the cell and a submarginal series of six spots. Hind wing with the inner area shot with green; two streaks in the cell and three below it, and a series of five streaks beyond the cell.

♀ with the inner area of hind wing not shot with green.

An excellent 'mimic' of *Danaïs aglea*.

Hab. Bhutan; Karen Hills. *Exp.*, ♂ 72, ♀ 84 millim.

593. *Isbarta cuprea*, *Swinh. Trans. Ent. Soc.* 1891, p. 475.

♀. Fore wing brown, shot with purplish cupreous; a small basal white spot; a submarginal obsolescent series of spots. Hind wing brown; two pale streaks in the cell; a series of streaks between the nervules beyond the cell. Cilia of both wings white. Under-side with the costa of both wings blue.

Hab. Khâsis; E. Pegu. *Exp.* 80 millim.

Genus CALLAMESIA.

Callamesia, *Butl. A. M. N. H.* (5) xvi, p. 345 (1853).

Type, *C. midama*, H.-S.

Range. N.E. India; Burma; Malacca; Nias.

Fore wing with vein 1 c bent and sending a bar to 1 b; veins 6, 7, 8, and 9 stalked, vein 10 not quite touching 12, 11 anastomosing with 12; numerous veinlets between 12 and the costa.

594. *Callamesia midama*, Herr.-Schäffer, *Samml. aussereur. Schmett.* pl. 2, fig. 7 (♂); *C. & S.* no. 401.
Cyclosia venusta, *Wlk. Cat. ii.* p. 416; *C. & S.* no. 424.
Epyrgis hormenia, Herr.-Schäffer, *Samml. aussereur. Schmett.* pl. 2, fig. 8 (♀); *C. & S.* no. 404.
Amesia stelligera, *Butl. Ill. Het. v.* p. 23, pl. 83, figs. 8, 9; *C. & S.* no. 403.

♂. Antennæ metallic blue; head, thorax, and abdomen black, the last banded with white below; the collar spotted with blue; abdomen and hind wing shot with purple. Fore wing with two series of small white spots; the apex and outer margin

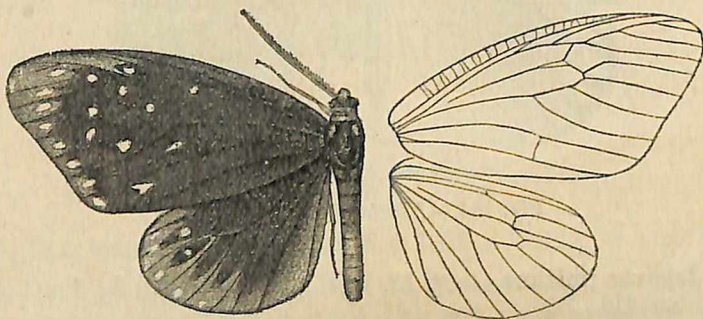


Fig. 185.—*Callamesia midama*, ♂. 4.

brilliant blue. Hind wing with the apex brilliant blue; the two series of spots sometimes more or less reproduced. Underside with two white spots in the cell of the fore wing and two beyond; the two series of submarginal spots larger and present on both wings; the costa and outer margin of both wings brilliant blue; the inner area purplish.

♀ with the fore wing less shot with blue; two spots in the cell, two beyond, and two below the cell in addition to those of the male. Hind wing with two series of spots well represented, and also with two spots in the cell.

In the form *stelligera* the inner submarginal series of spots on the hind wing is small; in *midama* those towards the inner margin become streaks; whilst in *hormenia* these streaks occupy the greater part of the cell and the interspaces below it. One Sikhim female is browner, with scarcely any blue shot on upperside. These variations occur irrespective of locality and only in the female. The species is a beautiful 'mimic' of the blue *Euploeas*.

Hab. Sikhim; Bhutan; Assam; Nágas; Sylhet; Burma; Siam.
Exp., ♂ 74, ♀ 86 millim.

Genus GYNAUTCERA.

Gynautocera, *Guér. Mag. Zool. 1831, Ins.* pl. 12.

Type, *G. papilionaria*, *Guér.*

Range. Himalayas; N.E. India: Calcutta; Burma.

The fore wing very much produced at apex, so that the outer margin becomes very oblique; veins 7, 8, and 9 stalked; numerous veinlets between vein 12 and the costa. Hind wing rounded; mid and hind tibiae with minute terminal pairs of spurs.

595. *Gynautocera papilionaria*, Guér. *Mag. Zool.* 1831, pl. 12; *C. & S.* no. 399.

Chalcusia selene, Koll. *Hügel's Kaschmir*, iv. p. 463.

Histia fraterna, Moore, *P. Z. S.* 1883, p. 15; *C. & S.* no. 397.

Gynautocera rara, Swinh. *Trans. Ent. Soc.* 1891, p. 476.

Antennæ metallic blue; head, thorax, and abdomen black; vertex of head crimson; pectus and segmental bands on abdomen below and end of abdomen crimson. Wings black; fore wing with a greenish tinge, and the veins of the outer half bordered with greenish fuscous; hind wing shot with deep blue; a large white

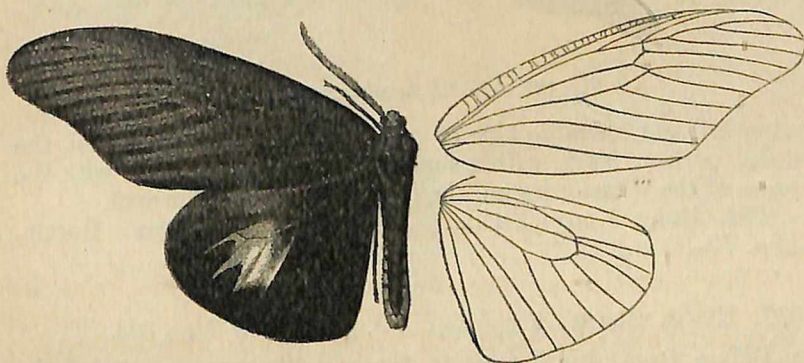


Fig. 186.—*Gynautocera papilionaria*, ♂. 1.

patch between veins 2 and 5, extending slightly into the cell and with its edges and the veins crossing it metallic blue. Base of wings below crimson.

In the form *fraterna* the white patch of the hind wing extends to the costa and nearly to anal angle, whilst in *rara* it is small and suffused with blue and there is a little crimson on the metathorax.

Hab. The Himalayas; Calcutta; Assam; Nágas; Sylhet; Bassein (Pegu); Tenasserim. *Exp.* 84–96 millim.

Genus HISTIA.

Histia, Hübn. *Verz.* p. 198 (1818).

Type, *H. flabellicornis*, Fabr.

Range. N.E. & S. India; China; Burma; Java.

Fore wing with shape and venation as in *Gynautocera*, except that vein 11 anastomoses with 12. Hind wing with the outer margin produced into a long tail, and the cell lengthened and narrowed.

596. **Histia flabellicornis**, *Fabr. Sp. Ins.* ii, p. 163; *C. & S.* no. 396.
Papilio rhodope, *Cram. Pap. Exot.* i. pl. 30 E.

Head, thorax, abdomen, and fore wing coloured as in *Gynautocera papilionaris*, except that the abdomen is marked with blue. Hind

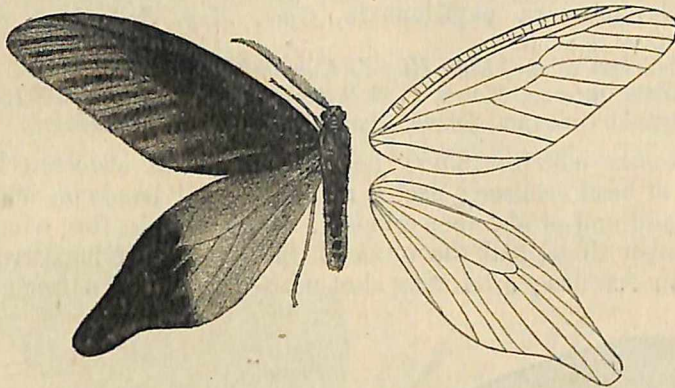


Fig. 187.—*Histia flabellicornis*, ♂. 1.

wing brilliant metallic blue or green to near the end of cell, the distal portion black, with a slight blue shot. Underside with the bases of the wings crimson, the basal half with a blue spot.

Hab. Hong Kong; Sikkim; Assam; Khâsis; Nâgas; Burma.
Exp. 70–80 millim.

597. **Histia nilgira**, *Moore, Lep. Atk.* p. 18; *C. & S.* no. 398.

Differs from *flabellicornis* in the metallic-green colour of the hind wing extending to beyond the cell in the male; female with a broad whitish band across the hind wing beyond the cell including the extremity of the cell and widest on the disk.

Hab. Slopes of Nilgiris, 3000 feet. *Exp.* ♂ 68, ♀ 78 millim.

598. **Histia albimacula**, n. sp.

Histia selene, *Wlk.* (nec *Koll.*) *Cat.* ii, p. 413.

♂ from Burma differs from that sex of *flabellicornis* and *nilgira* in having a white patch below the end of the cell of the hind wing between veins 2 to 4. The ♀ from Java has the white band as in *nilgira*.

Hab. Momeit, Burma, 2000 feet (*Doherty*), and Java. *Exp.* 68 millim. Type in coll. Elwes.

599. **Histia cometaris**, *Butl. A. M. N. H.* (5) x, 1882, p. 374; *C. & S.* no. 395.

♂. The basal half of the hind wing black, with a very slight blue suffusion towards the inner margin; the white band extends from the inner margin to the cell, but does not reach the costa.

Hab. Tenasserim; E. Pegu, 3000 feet. *Exp.* 76 millim.

Genus **CANERCES**.

Canerkes, *Moore*, *P. Z. S.* 1865, p. 802.

Type, *C. euschemoides*, *Moore*.

Range. Eastern Pegu; Sylhet; Sikkim.

Palpi very minute. Legs without spurs. Fore wing with the outer margin excised; vein 3 from the end of the cell; 4 and 5 stalked; 6, 7, 8, and 9 stalked together, and not curved. Hind wing broad and square; vein 6 absent.

600. *Canerces euschemoides*, *Moore*, *P. Z. S.* 1865, p. 802, pl. 42, fig. 8; *C. & S.* no. 349.

♂. Antennæ blue-black; head and thorax yellow, with black markings; abdomen yellow, with black segmental bands. Fore wing with the basal half yellow; two blue-black spots near the

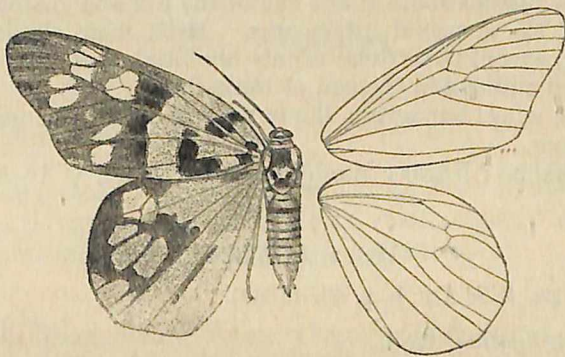


Fig. 188.—*Canerces euschemoides*, ♂. 1.

base, one in the cell, and a larger blue-black spot on inner margin; distal half of wings deep blue-black, with black streaks in the interspaces; a white spot in the end of the cell, five beyond, and two in the interno-median interspace. Hind wing yellow, with an irregular black patch on the apex and outer margin, extending round below the cell and enclosing three yellow spots between veins 2 to 5; vein 1b streaked with black. Underside with the apical half of fore wing brilliant blue.

A beautiful 'mimic' of the *Euschemas* of the *bellona* group.

Hab. Sikkim; Sylhet; E. Pegu, 1000 feet. *Exp.* 62 millim.

Genus **PHILOPATOR**.

Philopator, *Moore*, *P. Z. S.* 1865, p. 800.

Type, *P. basimaculata*, *Moore*.

Range. Sikkim to Manipur.

Wings rounded. Fore wing with veins 4 and 5 stalked, 7, 8, and 9 stalked; 11 anastomosing with 12. Hind wing with vein 6 present.

601. *Philopator basimaculata*, Moore, P. Z. S. 1865, p. 800, pl. 42, fig. 6; C. & S. no. 360.

♀. Head, thorax, and abdomen yellow. Fore wing with the base yellow, edged with black and with two series of black spots on

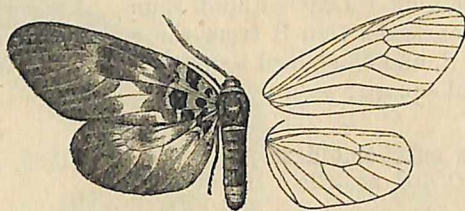


Fig. 189.—*Philopator basimaculata*, ♂. 1.

it; the rest of the wing milky white, the veins and margins fuscous; two fuscous spots at the end of the cell and fuscous streaks in each of the marginal interspaces. Hind wing similar to the fore wing, except that there is only one black spot on the yellow basal patch and one in the end of the cell.

♂. The wings narrower; the outer half of both wings suffused with fuscous.

Hab. Sikkim; Nágas; Manipur. *Exp.*, ♂ 50, ♀ 44–58 millim.

Genus AGALOPE.

Agalope, Wlk. *Cat.* ii, p. 437 (1854).

Type, *A. hyalina*, Koll.

Range. Himalayas; Burma.

Wings shorter than in *Philopator*; the outer margin of fore wing more erect; vein 11 not anastomosing with 12; veins 4 and 5 rarely from the cell.

602. *Agalope hyalina*, Koll. *Hügel's Kaschmir*, iv, p. 462.

Agalope basalis, Wlk. *Cat.* ii, p. 438; *Butl. Ill. Het.* v, pl. 84, fig. 5; C. & S. no. 429.

Agalope primularis, *Butl. P. Z. S.* 1875, p. 392; *id. Ill. Het.* v, pl. 84, fig. 7; C. & S. no. 431.

Agalope glacialis, *Butl. Ill. Het.* v, p. 26, pl. 84, fig. 6; C. & S. no. 430.

Antennæ, head, thorax, and abdomen black. Wings yellowish hyaline; fore wing with the base orange; a fuscous band across the cell, which is sometimes continued as a waved line to near the outer angle; the apical marginal area fuscous; the veins crossing it dark; a pale spot between veins 7 and 8, and a larger one between veins 3 and 4. Hind wing uniform yellowish hyaline.

In the var. *primularis* the basal orange patch to the fore wing is generally absent; the area below the cell is brighter yellow, and the transverse band and apical fuscous area are more extensive.

In *glacialis* the wings are whitish hyaline; the cell of the fore wing from the orange basal patch to near the end suffused with fuscous.

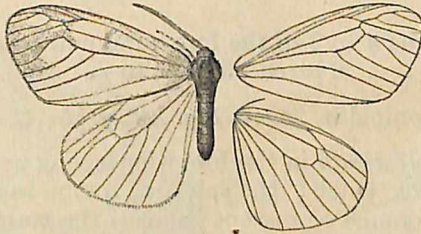


Fig. 190.—*Agalope hyalina*, ♂. 1.

Hab. Himalayas, from Simla to Sikkim; Manipur; Burma.
Exp., ♂ 42, ♀ 50 millim.

Genus CHELURA.

Chelura, Hope, *Trans. Linn. Soc.* xviii, p. 444 (1841).

Type, *C. bifasciata*, Hope.

Range. The Himalayas; Burma.

Fore wing with the apex more produced than in *Agalope*; the outer margin more oblique and excised; veins 4 and 5 on a longer stalk; veins 10 and 11 given off closer together.

SECT. I. Veins 4 to 9 of fore wing not much curved; vein 6 from below the angle of cell.

603. *Chelura bifasciata*, Hope, *Trans. Linn. Soc.* xviii, p. 444; *C. & S.* no. 451.

Antennæ, head, thorax, and abdomen black, the terminal segments of the last consisting of red-brown horny plates. Wings

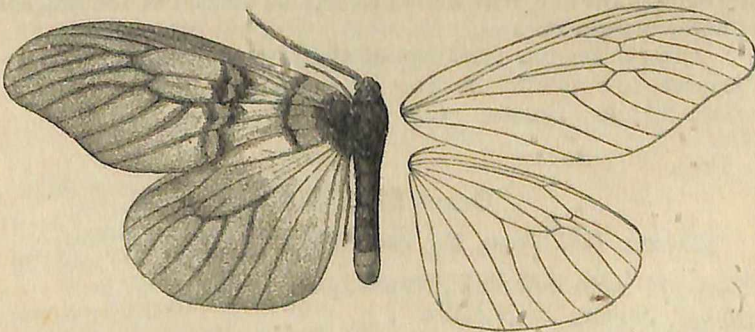


Fig. 191.—*Chelura bifasciata*, ♂. 1.

fuscous hyaline, the veins blackish; fore wing with the base black,



then a subbasal orange band edged with black; an orange medial band edged with black.

Hab. Naini Tal; Nepal; Sikhim; Assam. *Exp.* 90 millim.

SECT. II. Veins 4 to 9 of the fore wing much curved; vein 6 given off close to 7.

604. *Chelura eronioides*, Moore, *Lep. Atk.* p. 15; *C. & S.* no. 452.

Differs from *bifasciata* in the fore wing having a small white spot on the basal black patch; the subbasal orange band present, but not the medial orange or fuscous bands; the marginal area with the pale patches between the fuscous-edged veins reduced to spots. In one abnormal specimen vein 6 of the hind wing forks before the margin.

Hab. Sikhim. *Exp.* 64 millim.

605. *Chelura basiflava*, Moore, *P. Z. S.* 1879, p. 391; *C. & S.* no. 450; *Waterh. Aid.* ii, pl. 131, fig. 3.

Differs from *eronioides* in the collar, tegulæ, and end of abdomen being chestnut; the whole base of fore wing chestnut; two fuscous antemedial bands on a pale ground; the outer half fuscous, with four pale spots in the cell and a series between the nervules beyond the cell. Hind wing with the base pale; the outer area fuscous, with a series of pale spots beyond the cell.

Hab. Sikhim. *Exp.* 68 millim.

606. *Chelura glacialis*, Moore, *P. Z. S.* 1872, p. 570; *C. & S.* no. 453.

♂. Collar and thorax olive-brown; the first and last segments of abdomen olive-brown, the medial segments whitish, with a lateral white stripe. Fore wing with the base olive-brown, followed by a whitish-hyaline area, then an irregular fuscous band; the apical marginal area fuscous, with pale spots in the interspaces. Hind wing whitish hyaline, with a fuscous spot at the end of the cell, and the outer margin fuscous.

♀ with the fuscous markings on the wings much reduced.

Appears to "mimic" *Abraaxas leopardina*.

Hab. Sikhim; Burma. *Exp.* 57 millim.

Genus **ELCYSMA**.

Elcysma, Butl. *Trans. Ent. Soc.* 1881, p. 4.

Type, *E. westwoodi*, Voll., from Japan.

Range. Japan; Nāga Hills.

Fore wing as in *Chelura* Sect. I. Hind wing with the outer margin produced into a long tail between veins 3 and 7; veins 4 and 5 stalked.

607. *Elcysma dohertyi*, *Elw. P. Z. S.* 1890, p. 386, pl. xxxiv, fig. 4.

♂. Antennæ, head, thorax, and abdomen black. Wings fuscous hyaline, with the veins darker. Fore wing with a small basal black

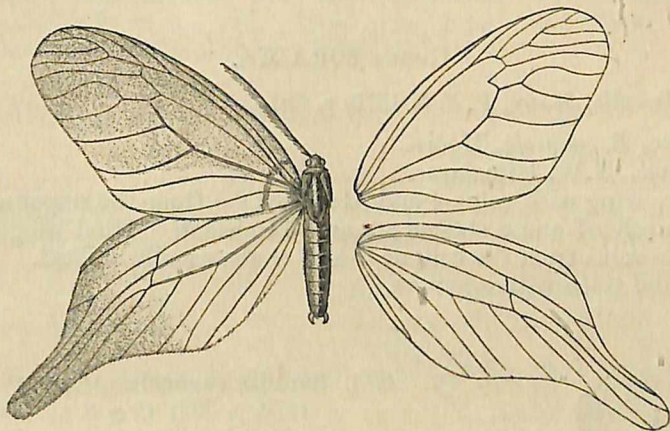


Fig. 192.—*Elcysma dohertyi*, ♂. 1.

patch, followed by a broad subbasal orange band, edged with fuscous. On the left fore wing of the type veins 7 and 8 anastomose before the margin.

Differs from *westwoodi* in vein 10 of fore wing being given off much closer to the end of the cell; veins 4 and 5 of hind wing being on a shorter footstalk, and 7 being given off from 6 just before the margin instead of from the cell.

Hab. Nágas, 5000 feet. *Exp.* 72 millim.

Subfamily PHAUDINÆ.

The mouthparts wanting; branches of antennæ not dilated at extremities; antennæ not flabellate at tips.

Key to the Genera.

- a. Hind wing broad and rounded.
 - a'. Fore wing with vein 1 c present, 3 and 4 stalked; 11 not anastomosing with 12. 1. BORADIA, p. 286.
 - b'. Fore wing with vein 1 c absent, 3 and 4 from the cell; 11 anastomosing with 12. 2. ANOMÆOTES, p. 286.
- b. Hind wing long and narrow.
 - a'. Abdomen without tufts of hair. 3. ALOPHOGASTER, [p. 287.
 - b'. Abdomen with short lateral and long anal paired tufts of hair 4. PHAUDA, p. 287.

- c. Hind wing with the outer margin produced into a long tail, or in some females the whole wing filamentous; frenulum absent [p. 288.
5. HIMANTOPTERUS,

Genus **BORADIA**.

Boradia, Moore, P. Z. S. 1879, p. 391.

Type, *B. carneola*, Moore.

Range. N.W. Himalayas.

Fore wing with veins 4 and 5 stalked; 6 from the upper angle of the cell; 7 and 8 stalked; 9 and 11 absent. Hind wing with all the veins from the cell, or 3 and 4 abnormally stalked. Mid and hind tibiæ without spurs.

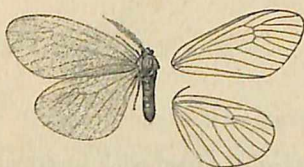


Fig. 193.

Boradia carneola, ♂. 1.

608. *Boradia carneola*, Moore, P. Z. S. 1879, p. 392; C. & S. no. 366.

Antennæ, head, and thorax grey; abdomen black. Wings uniform yellowish hyaline.

Hab. Kángra. Exp. 36 millim.

Genus **ANOMÆOTES**.

Anomæotes, Feld. Reis. Nov. pl. C, fig. 5, Erkl. Het. p. 1 (1874).
Akesina, Moore, P. Z. S. 1888, p. 395.

Type, *A. levis*, Feld., from Natal.

Range. Kángra; Natal; Angola.

Antennæ bipectinated. Mid and hind tibiæ without spurs. Fore wing with vein 1 c absent, 6 from near the middle of cell, 7 and 8 stalked, 9 and 10 absent, 11 anastomosing with 12.

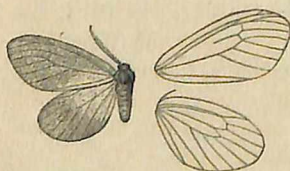


Fig. 194.

Anomæotes basalis, ♂. 1.

609. *Anomæotes basalis*, Moore, P. Z. S. 1888, p. 396; Butl. Ill. Het. vii, p. 28, pl. cxxi, fig. 9; C. & S. no. 491 B.

♂. Antennæ fuscous; head, thorax, and abdomen pale fulvous. Base of wings fulvous, the remainder semidiaphanous, fuscous.

Hab. Kángra. Exp. 28 millim.

Genus **ALOPHOGASTER**, nov.

Type, *A. rubribasis*, Hmpsn.

Range. Nāga Hills.

Antennæ bipectinated, with short branches. Fore wing with all the veins from the cell. Hind wing long and narrow. Abdomen without tufts of hair. Tibiæ without spurs.

610. *Alophogaster rubribasis*, n. sp.

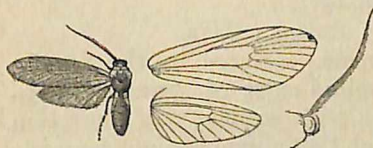


Fig. 195.

Alophogaster rubribasis, ♂. 1.

♂. Antennæ black; head, thorax, and abdomen scarlet, the last with black bands on the segments above. Wings semi-diaphanous fuscous; fore wings with the base scarlet; the rest of the wing with purple tints in a side light.

Hab. Nāga Hills. Exp. 27 millim. Type in coll. Elwes.

Genus **PHAUDA**.

Phauda, *Wlk. Cat. i*, p. 256 (1854).

Type, *P. flammans*, Wlk.

Range. China; North India; Java; Sumatra.

Antennæ with short bipectinations in the male, simple in the female. Wings very long and narrow; fore wing with the apex rounded and outer margin very oblique; hind wing with vein 6 from near the middle of discocellulars. Mid and hind tibiæ with minute terminal pairs of spurs. Abdomen with lateral tufts of hair on all except the first two segments, and a pair of long anal tufts in the male.

SECT. I. Fore wing with veins 7 and 8 arising from the cell.

611. *Phauda flammans*, *Wlk. Cat. i*, p. 257; *C. & S. no.* 284; *Bull. Ill. Het. i*, p. 20, pl. 9, fig. 2.

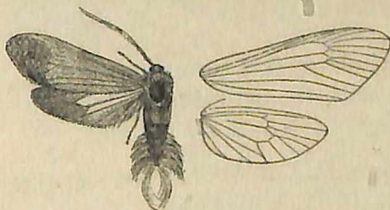


Fig. 196.

Phauda flammans, ♂. 1.

Antennæ black, with white tips; head and thorax scarlet; abdomen black, sparsely covered with scarlet hairs and with thick scarlet lateral tufts, a pair of long, black, anal tufts in the male. Fore wing scarlet; a large, rounded, black patch on outer margin. Hind wing semi-diaphanous; the basal area reddish, the outer area blackish.

Hab. Simla; Sikhim; Burma. Exp., ♂ 34, ♀ 30 millim.

SECT. II. Fore wing with veins 7 and 8 stalked.

612. *Phauda fuscalis*, *Swinh. Cat. Het. Mus. Oxon., ined.*

♀. The wings fuscous, with only the base of fore wing red.

Hab. Assam. *Exp.* 43 millim.

Genus **HIMANTOPTERUS.**

Himantopterus, *Westmael, Bull. Acad. Brux. iii, p. 162 (1836).*

Thymara, Doubleday, Zoologist, i, p. 197 (1843).

Type, *H. fuscinervis*, *Westm., from Java.*

Range. Africa; Assam; S. India; Burma; Java.

The antennæ bipectinated in the male, serrated in the female. Mid and hind tibiæ with minute terminal pairs of spurs. Frenulum absent. Wings covered with hair-like scales; the neurulation

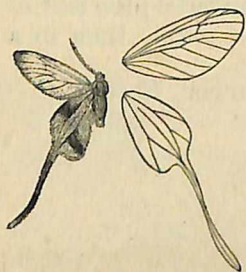


Fig. 197.—*Himantopterus zaida*, ♂. 1.

varies so much that a genus might be made for each species; the hind wing narrow and terminating in a long tail, in the females of some of the species filiform throughout. The neurulation of hind wing much aborted; the costal and internal veins, when present, anastomose for some distance with the subcostal and median, which meet toward the end of the broad part of the wing to form the cell.

They are degraded forms which have arisen from an ancestral type; the veinlet in the cell and vein 1 c of fore wing being more or less developed, show that they belong to the *Zygænida*, and the absence of mouthparts places them in the subfamily *Phaudina* near *Pryeria*, while on the other hand they are allied to the *Psychida*.

613. *Himantopterus dohertyi*, *Elwes, Trans. Ent. Soc. 1890, p. 332, pl. x, figs. 1-7.*

♂. Fuscous; the collar and end of abdomen orange. Fore wing with the disk diaphanous; veins 4 and 5 from the lower angle of the cell, 10 and 11 absent. Hind wing with the basal part orange, the distal portion and tail black, with a few yellowish hairs at tip; neurulation less aborted than the other members of the genus, 8 veins being present.

♀. The thorax ochreous: the whole of fore wing diaphanous; hind wing filiform throughout, but with the neurulation as in male.

Hab. Nāga Hills, 5000 feet. *Exp.*, ♂ 24, ♀ 34 millim.

614. *Himantopterus caudatus*, *Moore, P. Z. S. 1879, p. 394; C. & S. no. 458; Elwes, Trans. Ent. Soc. 1890, pl. x, figs. 9, 11.*

Differs from *dohertyi* in the disk of the fore wing being reddish; veins 4 and 5 stalked and 10 present. Hind wing broader and orange, with a round black spot below the costa and another near the anal angle; the tail black; veins 1 and 3 absent.

Hab. Nilgiris and Wynaad, 3000 feet; Burma. *Exp.* ♂ 20 millim.

615. *Himantopterus zaida*, Doubleday, *Zoologist*, i, p. 197; *Elwes*, *Trans. Ent. Soc.* 1890, pl. x, figs. 8, 10; *C. & S.* no. 459.

♂. Head, thorax, and abdomen ochreous. Fore wing ochreous, with the veins and margins black. Hind wing broader than in *caudatus* and ochreous, with two similar black spots and the tail black; veins 1, 3, and 4 absent.

Hab. Khási Hills. *Exp.* 20 millim.

The following species formerly recorded as Indian are omitted.

Debos iratus, Swinh., *C. & S.* no. 277, is probably a *Tinea*.

Diopsis perdica, Cram., *C. & S.* no. 350, Geometer from Amboina.

Codane leucomelas, Moore, *C. & S.* no. 442, is from Siam.

The genus *Chatamla*, Moore, *C. & S.* nos. 426, 427, 428, belongs to the *Epiplimidæ*.

Atossa nelcinna, Moore, *C. & S.* no. 457, belongs to the *Uraniidæ*. *C. & S.* nos. 351-359 form the family *Epicopiidæ*.

Family PSYCHIDÆ.

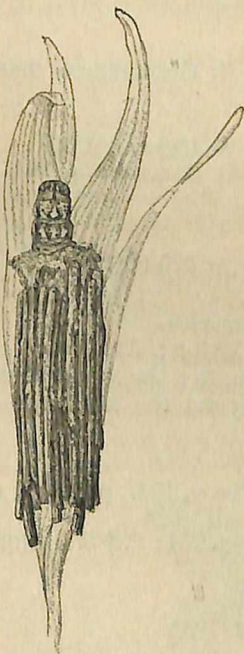


Fig. 198.—Larva of *Clania crameri*. ♂.

The *larvæ* feed in a case composed of a silk lining with twigs, grass, and bits of leaves or vegetable matter attached to the outside. The pupa is formed inside the larva-case. The perfect female also lives in the case and is devoid of legs, wings, antennæ, and mouth-parts (being thus merely a vermiform egg-sac); the three thoracic segments bear corneous dorsal plates. In the genera *Bijugis* and *Fumea*, however, the antennæ are articulated. Copulation takes place by the male alighting on the case and inserting his protrusible abdomen between the case and the ventral surface of the female; in *Fumea* the female comes out of the case for copulation. Parthenogenesis is known to be the normal method of reproduction in *Apterona helix*, but it is extremely doubtful if it often occurs in other species of *Psychidæ*.

The males have the antennæ bipectinated (or serrate in the genus *Apterona*); the proboscis, palpi, and ocelli absent. Fore wing with two internal nervures, 1 \bar{b} being forked at the base; a single or forked veinlet in the cell. Hind wing with a frenulum and three internal nervures.*

* After the *Psychidæ* would follow the *Solenobia* section of the *Tineidæ*, if the *Heterocera* could be arranged in a linear series.

Key to the Subfamilies.

- a.* Fore wing with veins 1 *b* and *c* anastomosing.
 - a'.* Fore wing with vein 1 *b* sending several branches to inner margin 1. *Æceticinæ*.
 - b'.* Fore wing with vein 1 *b* sending no branch to inner margin 3. *Chaliinæ*.
- b.* Fore wing with veins 1 *b* and *c* anastomosing or separate.
 - a'.* Fore wing with vein 1 *b* sending one branch to inner margin 2. *Psychinæ*.
- c.* Fore wing with veins 1 *b* and *c* separate; 1 *b* sending no branch to inner margin.
 - a'.* Hind tibiæ with one pair of spurs 5. *Psychoidinæ*.
 - b'.* Hind tibiæ with two pairs of spurs 4. *Canephorinæ*.

Subfamily **ÆCETICINÆ**, *H.-S.*

Fore wing with vein 1 *c* anastomosing with 1 *b*, which emits several branches to the inner margin; a forked veinlet in the cell of both wings.

Key to the Genera.

- a.* Antennæ bipectinate to two-thirds length; abdomen long; wings long and narrow 1. **ÆCETICUS**, p. 290.
- b.* Antennæ bipectinate to tip; abdomen shorter; wings broader and shorter.
 - a'.* Fore tibia with a spine 2. **CLANIA**, p. 291.
 - b'.* Fore tibia without a spine 3. **AMATISSA**, p. 292.

Genus **ÆCETICUS**.

Oiketicus, *Lands. Guild. Trans. Linn. Soc.* xv, p. 375 (1827).

Dappula, *Moore, Lep. Ceyl.* ii, p. 103 (1883).

Type, *O. kirbyi*, L. Guild., from Central America.

Range. Central and S. America; China; Ceylon; Australia.

♂. Antennæ bipectinated to two-thirds length; the wings long and straight; the abdomen extending far beyond the anal angle. Fore tibia with a very long spine.

616. **Æceticus tertius**, *Templ. Trans. Ent. Soc.* v, 1847, p. 39, pl. v, figs. 1-5 (larva-case).

Oiketicus templetonii, *Westw. P. Z. S.* 1854, p. 234; *C. & S.* no. 492.

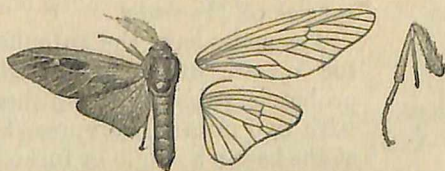


Fig. 199.—*Æceticus tertius*, ♂. 1.

♂. Head and thorax greyish black; abdomen fuscous. Fore

wing greyish fuscous; the veins streaked with brown; a black patch at end of cell; a black streak beyond the end of cell; a dark patch at base of inner margin. Hind wing greyish fuscous; the veins streaked with brown.

Larva-case covered with minute comminuted fragments of vegetable matter.

Hab. Hongkong; Ceylon. *Exp.* 36 millim.

Genus CLANIA.

Clania, *Wlk. Cat.* iv, p. 963 (1855).

Eumeta, *Wlk. Cat.* iv, p. 964 (1855).

Cryptothelea, *Wlk. Cat.* iv, p. 970 (1855).

Lansdownia, *Heyl. Ann. Soc. Ent. Belg.* xxv, 1881, p. 66.

Type, *C. lewini*, Westw., from Australia.

Range. Centr. America; Africa; Japan; Formosa; India and Ceylon; Borneo; Java; Celebes; Australia; Duke of York Island.

♂. Antennæ bipectinated to tips; abdomen shorter than in *Æceticus*. Wings large and broad: fore wing with veins 4 and 5 stalked, 6 present, 8 and 9 stalked; hind wing with vein 8 sending branches to the costa. Fore tarsus with the terminal joint long; tibia with a long spine.

617. *Clania crameri*, *Westw. P. Z. S.* 1854, p. 236; *Moore, Lep. Ceyl.* ii, pl. 118, figs. 1, 1 a (larva-case); *C. & S.* no. 490.

♂. Head, thorax, and abdomen clothed with light and dark brown hair. Fore wing red-brown, the veins streaked with black; the interspaces with pale streaks; more or less fuscous suffusion on outer area. Hind wing smoky brown. Wings rather short and broad.

Larva-case formed of longitudinally arranged twigs.

Hab. Ceylon. *Exp.* 30 millim.

618. *Clania variegata*, *Snell. Tijd. Ent.* xxii, 1879, p. 114.

Eumeta layardii, *Moore, Lep. Ceyl.* ii, p. 102, pl. 118, figs. 2, 2a (larva-case); *C. & S.* no. 491.

Eumeta pryri, *Leech, P. Z. S.* 1888, p. 598.

Eumeta sikkima, *Moore, Indian Museum Notes*, ii, no. 1, p. 67 (1891).

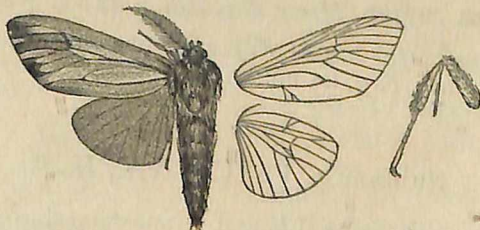


Fig. 200.—*Clania variegata*, ♂. 1.

♂. Differs from *crameri* in the wings being longer, the apex of fore wing more produced and pointed; fore wing with the pale

streaks in the interspaces more prominent. The form *sikkima* is darker.

The number and position of the branches between vein 1*b* of the fore wing and the inner margin, and also between vein 8 of the hind wing and the costa, are very variable; a bar between veins 7 and 8 of the hind wing towards the apex is sometimes developed in addition to the one at centre of cell; these variations occurring in specimens from the same locality.

Hab. Shanghai; Canara; Nilgiris; Ceylon; Borneo; Celebes.
Exp. 40–42 millim.

Genus **AMATISSA**.

Amatissa, *Wlk. Journ. Linn. Soc.* vi, p. 138 (1862).

Bambalina, *Moore, Lep. Ceyl.* ii, p. 103 (1883).

Kophene, *Moore, Lep. Atk.* p. 72 (1879).

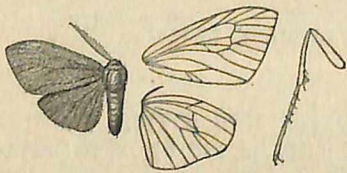
Type, *A. consorta*, *Templ.*

Range. Calcutta; Ceylon; Borneo.

Fore tibia without a spine; the terminal joint of tarsus long. Antennæ plumose. Fore wing with vein 1*b* sending two spurs to inner margin and anastomosing with 1*c*; veins 8 and 9 stalked; a forked veinlet in the cell, the lower branch sending a spur to median nervure. Hind wing with vein 6 absent; 8 connected with 7 by a bar and not sending spurs to the costa; a forked veinlet in cell.

619. *Amatissa consorta*, *Templ. Trans. Ent. Soc.* v, 1847, p. 40, pl. v, figs. 6, 7, (larva-case); *C. & S.* no. 489.

Amatissa inornata, *Wlk. Journ. Linn. Soc.* vi, p. 138.



♂. Head, thorax, abdomen, and fore wing uniform dark brown.

Larva-case covered with minute comminuted fragments of vegetable matter.

Hab. Colombo, Ceylon; Borneo.

Fig. 201.—*Amatissa consorta*, ♂. 1. *Exp.* 28 millim.

320 *Amatissa cuprea*, *Moore, Lep. Atk.* p. 72; *C. & S.* no. 497.

♂. Uniform bright brown with a slight golden tinge.

Hab. Calcutta. *Exp.* 24 millim.

Subfamily PSYCHINÆ, *H.-S.*

Fore wing with veins 1*b* and *c* anastomosing or remaining separate; 1*b* emitting a single branch to inner margin; the veinlets in the cell single or forked. Fore tibiæ with or without a spine; hind legs shorter than fore legs; tibiæ with no spurs or with a minute terminal pair.

Key to Genera and Subgenera.

- A. Fore tibia with a long spine. I. ACANTHOPSYCHE, p. 293.
 a. Fore wing with veins 1b and c anastomosing.
 a'. Hind wing with the cell closed.
 a². Vein 6 absent in both wings. . . (1) *ÆCETICOIDES*, p. 293.
 b². Fore wing vein 6 present; hind wing vein 6 absent. . . (2) *DASARATHA*, p. 294.
 c². Fore wing vein 6 absent; hind wing vein 6 present. . . (3) *BRACHYCYTTARUS*, p. 295.
 d². Vein 6 present in both wings. . (5) *METISA*, p. 296.
 b'. Hind wing with the cell open. . (4) *PTEROMA*, p. 296.
 b. Fore wing with veins 1b and c separate. (6) *AMICTA*, p. 297.
 B. Fore tibia without a spine. II. PSYCHE, p. 297.
 a. Fore wing with veins 1b and c anastomosing.
 a'. Vein 6 present in both wings. . (1) *MANATHA*, p. 298.
 b'. Fore wing vein 6 present; hind wing vein 6 absent. (2) *HEYLAERTSIA*, p. 298.
 c'. Fore wing vein 6 absent; hind wing vein 6 present. (3) *CHALIOIDES*, p. 299.
 d'. Vein 6 absent in both wings. . (4) *EURYCYTTARUS*, p. 299.
 b. Fore wing with veins 1b and c not anastomosing. (5) *BARANDRA*, p. 300.

Genus **ACANTHOPSYCHE.**

Acanthopsyche, *Heyl. Ann. Soc. Ent. Belg.* 1881, p. 66.

♂. Antennæ bipectinated to tips, the branches diminishing in length from the middle. Fore tibiæ with a very long spine.

ubgenus **ÆCETICOIDES.**

Oiketicoides, *Heyl. Ann. Soc. Ent. Belg.* 1881, p. 66.

Type, *Æ. inquinata*, Led., from Europe.

Range. Europe; Japan; India; Ceylon; Australia.

♂. Fore wing with vein 1c anastomosing with 1b; vein 6 absent in both wings. Hind wing with a bar between veins 7 and 8.

SECT. I. Veins 4 and 5 of both wings stalked. Fore wing with vein 7 from cell.

621. ***Acanthopsyche* (*Æceticoides*) *bipars***, *Wlk. Cat.* xxxii, p. 406
C. & S. no. 866.

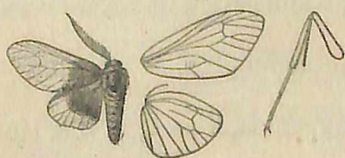


Fig. 202.—*Æceticoides bipars*, ♂. ♀.

♂. Head, thorax, and abdomen black, clothed with white hairs. Fore wing hyaline, the basal area smoky black; veins and margins narrowly black. Hind wing with the basal two-thirds smoky black; the marginal area hyaline; the veins and margins narrowly black.

Hab. Bombay. *Exp.* 18–28 millim.



- *622. *Acanthopsyche* (*Æceticoides*) *elwesi*, *Heyl. Ann. Soc. Ent. Belg.* 1890, p. xi.

♂. Head, thorax, and abdomen clothed with greyish-black hair; legs black, the tarsi yellowish. Wings uniform greyish black; fore wing with apex rounded; veinlet in cell single. Hind wing rounded, the upper part of the cell much shorter than the lower.

Hab. Ganjam. *Exp.* 18 millim.

SECT. II. Veins 4 and 5 of both wings from the cell. Fore wing with vein 7 stalked with 8 and 9.

623. *Acanthopsyche* (*Æceticoides*) *cana*, *Hmps. Ill. Het.* ix, ined., pl. 19, fig. 21, pl. 176, fig. 8 (larva-case).

♂. Head white; thorax and abdomen pale ochreous brown; wings greyish fuscous.

Larva-case rather smooth, covered with comminuted vegetable scales and fibres.

Hab. Pundaloya, Ceylon. *Exp.* 24 millim.

SECT. III. Fore wing with veins 4 and 5 from cell, 7 from below angle of cell.

- *624. *Acanthopsyche* (*Æceticoides*) *minor*, *Moore, Lep. Atk.* p. 73; *C. & S.* no. 498.

♂. Head, thorax, and abdomen pilose. Wings covered with minute scales; pale cupreous brown, palest below.

Hab. Calcutta. *Exp.* 15 millim.

Subgenus DASARATHA.

Dasaratha, *Moore, P. Z. S.* 1888, p. 396.

Type, *D. himalayana*, *Moore.*

Range. Punjab.

♂. Fore wing with veins 1*b* and *c* anastomosing; vein 6 present; hind wing with vein 6 absent; a bar between veins 7 and 8. The veinlet in the cell of both wings forked.

625. *Acanthopsyche* (*Dasaratha*) *himalayana*, *Moore, P. Z. S.* 1888, p. 397; *C. & S.* no. 497 A.

♂. Nearly uniform dark brown; the head and thorax rather darkest. Fore wing with veins 7, 8, 9 stalked; 4 and 5 from cell in both wings.

Hab. Dharmśāla, Punjab. *Exp.* 18 millim.

626. *Acanthopsyche* (*Dasaratha*) *longicauda*, *Warren, P. Z. S.* 1888, p. 299; *C. & S.* no. 491 A.

♂. Head, thorax, and abdomen pale ochreous grey; antennæ

brownish ; terminal segments of abdomen with a very long tuft of brownish hair. Wings hyaline, with a few ochreous and fuscous

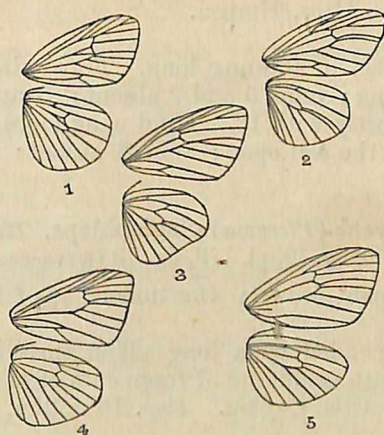


Fig. 203.

1. *Acanthopsyche* (*Dasaratha*) *himalayana*.
2. *A.* (*Pteroma*) *plagiophleps*.
3. *A.* (*Brachycyttarus*) *subteralbata*.
4. *A.* (*Metisa*) *plana*.
5. *A.* (*Amicta*) *rhabdophora*.

scales ; fore wing with the costa brown ; vein 7 from the cell ; both wings with veins 4 and 5 stalked.

Larva-case covered with pieces of straw placed longitudinally.

Hab. Campbellpur. *Exp.* 31 millim.

Subgenus BRACHYCYTTARUS.

Brachycyttarus, *Hmpsn. Ill. Het. ix*, ined.

Type, *B. subteralbatus*, *Hmpsn.*

Range. Ceylon.

♂. Fore wing with veins 1 *b* and *c* anastomosing ; the cell very short ; veins 4 and 5 stalked ; 6 absent ; 8 and 9 stalked. Hind wing somewhat triangular in shape, with the upper part of the cell short ; a bar between veins 7 and 8.

627. *Acanthopsyche* (*Brachycyttarus*) *subteralbata*, *Hmpsn. Ill. Het. ix*, ined., pl. 159, fig. 23, pl. 176, fig. 12 (larva-case).

♂. Head, thorax, and abdomen dark brown. Wings dark brown ; the underside of hind wing shining bluish white.

Larva-case covered by comminuted leaves and suspended by a silken thread.

Hab. Colombo, Ceylon. *Exp.* 15 millim.

Subgenus PTEROMA.

Pteroma, *Hmps.* *Ill. Het.* ix, ined.

Type, *P. plagiophleps*, *Hmps.*

Range. Ceylon.

♂. The branches of antennæ long. Fore wing with veins 1 *b* and *c* anastomosing; veins 6 and 7 absent; 8 and 9 stalked; 11 anastomosing shortly with 12. Hind wing more rounded than in *Brachycyttarus*; the cell open; vein 6 absent; a bar between 7 and 8.

628. *Acanthopsyche* (*Pteroma*) *plagiophleps*, *Hmps.* *Ill. Het.* ix, ined., pl. 159, fig. 19, pl. 176, fig. 13 (larva-case).

♂. Uniform pale brown; the underside of hind wing bluish white.

Larva-case suspended by a long silken thread; both case and thread covered with comminuted fragments of leaves.

Hab. Nawala-pittia, Ceylon. *Exp.* 16 millim.

Subgenus METISA.

Metisa, *Wlk. Cat.* iv. p. 957 (1855).

Babula, *Moore, J. A. S. B.* lix, pt. 2, p. 262 (1890).

Type, *M. plana*, *Wlk.*

Range. India and Ceylon.

♂. Fore wing with veins 1 *b* and *c* anastomosing; vein 6 present. Hind wing with vein 6 present, 8 coincident with 7 to end of cell.

629. *Acanthopsyche* (*Metisa*) *plana*, *Wlk. Cat.* iv, p. 958; *C. & S.* no. 494; *Moore, Lep. Ceyl.* ii. pl. 118, fig. 9.

♂. Head pale brown; thorax and abdomen black-brown, almost bare of scales. Wings very pale brown.

Hab. Colombo, Ceylon. *Exp.* 16 millim.

630. *Acanthopsyche* (*Metisa*) *moorei*, *Heyl. Bull. Soc. Ent. Belg.* 1890, p. 2.

Babula grotei, *Moore, J. A. S. B.* lix, pt. 2, p. 262.

♂. Head, thorax, and abdomen grey-brown; wings coppery brown. Fore wing with veins 7, 8, and 9 stalked.

Hab. Calcutta; Bangalore. *Exp.* 16–20 millim.

*631. *Acanthopsyche* (*Metisa*?) *snelleni*, *Heyl. Bull. Soc. Ent. Belg.* 1890, p. 3.

♂. Head, thorax, and abdomen dark brown; wings yellowish brown, the veins darker; fore wing with the apex produced; veins 8 and 9 stalked.

Larva-case grey, formed of comminuted vegetable matter.

Hab. Assam. *Exp.* 22 millim.

Subgenus AMICTA.

Amicta, Heyl. *Ann. Soc. Ent. Belg.* 1881, p. 66.

Type, *A. quadrangularis*, Christ., from Europe.

Range. Europe; Turkestan; Ceylon; Java.

Fore wing with veins 1 *b* and *c* separate. The typical section has vein 6 of both wings absent.

SECT. II. The cell of both wings short; fore wing with vein 6 present; veins 7, 8, 9, and 10 stalked.

632. *Acanthopsyche (Amicta) rhabdophora*, Hmps. *Ill. Het.* ix, ined., pl. 159, fig. 22, pl. 176, figs. 10, 10 *a*, *b*, *c*, *d* (larva-case).

♂. Head, thorax, and abdomen black. Fore wing smoky black, the base whitish. Hind wing pure white.

Larva-case formed of comminuted fragments of vegetable matter, that of the male rougher and suspended by a long thread, whilst the case of the female is smoother and without a thread.

Hab. Pundaloya, Ceylon. *Exp.* 14 millim.

Genus **PSYCHE.**

Psyche, Schrank, *Fauna Boica*, ii, 2 Abth. p. 87 (1802).

♂. Antennæ bipectinated to tips, the branches short or long. Fore tibia with no spine. Fore wing with 10 to 12 veins; veins 1 *b* and *c* anastomosing or separate. Hind wing with 7 or 8 veins.

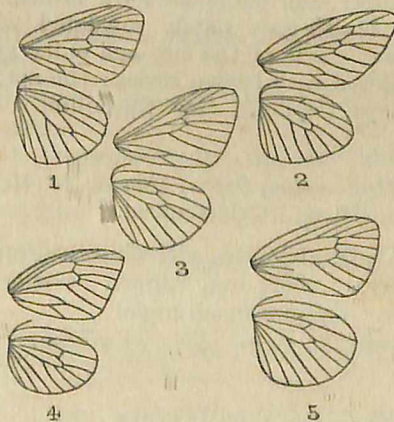


Fig. 204.

1. *Psyche (Manatha) albipes.*
2. *P. (Chalkioides) vitrea.*
3. *P. (Heylaertsia) griseata.*

4. *P. (Eurycyttarus) pileata.*
5. *P. (Barandra) fumata.*

Subgenus MANATHA.

Manatha, Moore, *A. M. N. H.* (4) xx, p. 346 (1877).

Type, *M. albipes*, Moore.

Range. Ceylon.

♂. Fore wing with veins 1 *b* and *c* anastomosing, 4 and 5 and 8 and 9 stalked; vein 6 from near upper angle of cell. Hind wing with vein 6 present; a bar between veins 7 and 8.

In the subgenus *Megalophanes*, Heyl., type *viciella*, Den. and Schiff., vein 6 of the fore wing arises from near the lower angle of cell.

633. *Psyche* (*Manatha*) *albipes*, Moore, *A. M. N. H.* (4) xx, p. 347; *id. Lep. Ceyl.* ii, pl. 118, figs. 4, 4 *a* (larva-case); *C. & S.* no. 493.

♂. Uniform dark brown; the tarsi pure white.

Larva-case covered with comminuted vegetable matter.

Hab. Colombo, Ceylon. *Exp.* 20 millim.

Subgenus HEYLAERTSIA, nov.

Type, *H. griseata*, Hmps.

Range. Ceylon.

♂. Fore wing with veins 1 *b* and *c* anastomosing; vein 6 present, 8 and 9 stalked; a forked veinlet in cell. Hind wing with vein 6 absent; a bar between veins 7 and 8; veinlet in cell single.

634. *Psyche* (*Heylaertsia*) *griseata*, Hmps. *Ill. Het.* ix, ined., pl. 159, fig. 13.

♂. Head, thorax, and abdomen dark brown. Fore wing dark brown, with a bluish-grey patch powdered with brown scales between the lower angle of the cell and outer angle. Hind wing blue-grey, powdered with brown scales; the apex and cilia brown.

Hab. Pundaloya, Ceylon. *Exp.* 26 millim.

635. *Psyche* (*Heylaertsia*) *fusca*, Hmps. *Ill. Het.* ix, ined., pl. 159, fig. 14, pl. 176, fig. 16 (larva-case).

♂. Head, thorax, abdomen, and wings uniform dark brown.

Larva-case rather short and formed of short pieces of stick arranged transversely in a quadrangle.

Hab. Hewahetta, Ceylon. *Exp.* 24 millim.

636. *Psyche* (*Heylaertsia*) *nudilineata*, Hmps. *Ill. Het.* ix, ined., pl. 159, fig. 4.

♂. Head, thorax, and abdomen dark brown. Fore wing pale brown, with three indistinct oblique bands, devoid of scales—medial,

postmedial, and submarginal. Hind wing still paler, with traces of similar bands.

Hab. Nawala-pittia, Ceylon. *Exp.* 20 millim.

Subgenus CHALIOIDES.

Chalioides, *Hmps.* *Ill. Het.* ix, ined.

Type, *C. vitrea*, *Hmps.*

Range. Ceylon.

Fore wing with veins 1 *b* and *c* anastomosing; 4 and 5 stalked; 6 absent; 8 and 9 stalked. Hind wing with vein 6 present; a bar between veins 7 and 8. Forked veinlets in the cell of each wing. Wings rather long and acute.

637. *Psyche* (*Chalioides*) *vitrea*, *Hmps.* *Ill. Het.* ix, ined., pl. 159, fig. 15.

♂. Head, thorax, and abdomen covered with grey-brown pile. Wings perfectly hyaline, the margins very narrowly black.

Hab. Kandy, Ceylon. *Exp.* 28 millim.

Subgenus EURYCYTTARUS.

Eurukuttarus, *Hmps.* *Ill. Het.* viii, p. 66 (1891).

Type, *E. pileatus*, *Hmps.*

Range. Kashmir; Nilgiris; Ceylon.

Vein 6 of both wings absent. Fore wing with veins 1 *b* and *c* anastomosing. Hind wing with a bar between veins 7 and 8. Veinlets in the cell of both wings single.

SECT. I. Fore wing with veins 7, 8, and 9 from angle of cell;
8 and 9 stalked.

638. *Psyche* (*Eurycyttarus*) *pileata*, *Hmps.* *Ill. Het.* viii, p. 66, pl. 144, fig. 13.

♂. Uniform brownish fuscous; the thorax, abdomen, and base of wings rather paler.

Hab. Nilgiris, S. slopes, 3000 ft. *Exp.* 20 millim.

639. *Psyche* (*Eurycyttarus*) *nigra*, n. sp.

♂. Uniform deep black-brown; apex of fore wing rounded.

Hab. Kala, Kashmir (*McArthur*). *Exp.* 17 millim. Type in coll. Leech.

SECT. II. Fore wing with veins 7 and 8 from angle of cell;
9 from before the angle.

640. *Psyche* (*Eurycyttarus*) *rotunda*, *Hmps.* *Ill. Het.* ix, ined., pl. 159, fig. 16, pl. 176, fig. 11 (larva-case),

♂. Differs from *pileata* in the wings being broader and more rounded.

Larva-case rough and covered with scales of bark on the upper part, with stalks and fibres on the lower, overlapping each other like tiles.

Hab. Pundaloya, Ceylon. *Exp.* 18 millim.

SECT. III. Fore wing with vein 8 absent.

641. *Psyche* (*Eurycyttarus*) *decemvena*, n. sp.

♂. Uniform dark brown; fore wing with the outer margin rather straight and erect.

Hab. Kiris and Gurais Valley, Kashmir, 8000 ft. (*Leech*).
Exp. 17 millim. Type in coll. *Leech*.

Subgenus BARANDRA.

Barandra, *Moore*, *P. Z. S.* 1888, p. 396.

Type, *B. fumata*, *Moore*.

Range. N.W. Himalayas.

♂. Fore wing with veins 1 *b* and *c* not anastomosing; vein 6 absent; 8 and 9 stalked. Hind wing with vein 6 absent; a bar between 7 and 8. Veinlets in the cell of both wings single.

642. *Psyche* (*Barandra*) *fumata*, *Moore*, *P. Z. S.* 1888, p. 396; *C. & S.* no. 491 c.

♂. Head, thorax, and abdomen brown; the pro- and mesothorax dark; metathorax with two dark posterior spots. Wings uniform pale brown.

Hab. Dharmasala. *Exp.* 22 millim.

Subfamily CHALIINÆ, nov.

Fore wing with veins 1 *b* and *c* anastomosing and not sending any branches to inner margin. Veinlets in cell of both wings single or forked. Hind tibiæ with no spurs.

Key to the Genera.

- | | |
|---|----------------------|
| <i>a.</i> Fore tibia with a long spine. | |
| <i>a'.</i> Hind wing with veins 5 and 8 absent. . . . | 1. CHALIA, p. 301. |
| <i>b'.</i> Hind wing with veins 5 and 8 present .. | 2. MAHASENA, p. 301. |
| <i>b.</i> Fore tibia without a spine | 3. PTEROXYs, p. 302. |

Genus **CHALIA**.

Chalia, Moore, *A. M. N. H.* (4) xx, p. 345 (1877).

Type, *C. doubledayi*, Westw.

Range. Ceylon.

♂. Antennæ with the branches decreasing to tip. Fore tibia with a very long spine. Wings broad and rounded; fore wing with 12 veins; hind wing with veins 5 and 8 absent; veinlets in cell single.

643. *Chalia doubledayi*, Westw. *P. Z. S.* 1854, p. 235; *C. & S.* no. 495; Moore, *Lep. Ceyl.* ii, pl. 118, figs. 5, 5a (larva-case).

♂. Head, thorax, and abdomen covered with grey pile. Wings perfectly hyaline.

Larva-case formed of longitudinally arranged twigs.

Hab. Colombo, Ceylon. *Exp.* 20 millim.

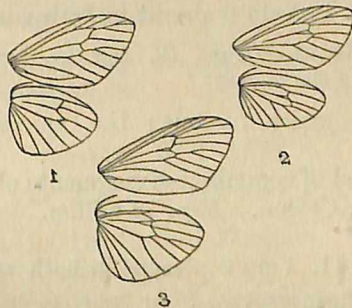


Fig. 205.

1. *Chalia doubledayi*. 2. *Pterorxys goniatus*. 3. *Mahasena hockingi*.

Genus **MAHASENA**.

Mahasena, Moore, *P. Z. S.* 1877, p. 601.

Type, *M. andamana*, Moore.

Range. N.W. Himalayas; Andamans.

♂. Antennæ with the branches decreasing to tip. Fore tibia with a very long spine. Wings longer than in *Chalia*; fore wing with 12 veins; hind wing with 8 veins; the veinlets in the cell forked.

644. *Mahasena andamana*, Moore, *P. Z. S.* 1877, p. 602, pl. 59, fig. 4; *C. & S.* no. 496.

♂. Antennæ and legs brownish fuscous; head, thorax, and abdomen deep fuscous. Wings smoky brown, deep fuscous towards base; hind wing with veins 4 and 5 from cell; the fork of veinlets in the cell of both wings long.

Hab. Andamans. *Exp.* 26 millim.

645. *Mahasena hockingi*, Moore, P. Z. S. 1888, p. 397; *Butl. Ill. Het.* vii, pl. 121, fig. 5; C. & S. no. 496 A.

♂. Very dark red-brown; the hairs on thorax and abdomen blackish; hind wing with veins 4 and 5 stalked; the fork of the veinlets in the cell of both wings short.

Hab. Kangra. *Exp.* 32 millim.

Genus **PTEROXYS.**

Pteroxys, *Hmps.* *Ill. Het.* ix, ined.

Type, *P. goniatus*, *Hmps.*

Range. Ceylon.

♂. Antennæ with the branches long and plumose. Fore tibia without a spine. Wings long and narrow. Fore wing with veins 1 *b* and *c* anastomosing; 8 and 9 stalked. Hind wing with a bar between veins 7 and 8. Veinlets in the cell of both wings forked.

SECT. I. Vein 6 absent in both wings.

646. *Pteroxys goniatus*, *Hmps.* *Ill. Het.* ix, ined., pl. 150, fig. 20, pl. 176, fig. 14 (larva-case).

♂. Uniform brownish fuscous; the apices of both wings pointed.

Larva-case formed of comminuted fragments of vegetable matter.

Hab. Pundaloya, Ceylon. *Exp.* 12 millim.

SECT. II. Vein 6 present in both wings.

647. *Pteroxys uniformis*, *Hmps.* *Ill. Het.* ix, ined., pl. 159, fig. 17, pl. 176, fig. 15 (larva-case).

♂. Uniform dark brown; the apices of the wings less acute.

Larva-case very short and formed of small pieces of twigs arranged transversely in a quadrangle.

Hab. Pundaloya, Ceylon. *Exp.* 14 millim.

Subfamily CANEPHORINÆ, Heyl.

♂. Fore wing with veins 1 *b* and *c* not anastomosing; 1 *b* not giving off a branch. Hind tibiæ with two pair of spurs.

Genus **MOFFATIA.**

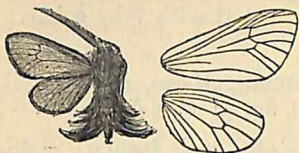
- Moffatia*, Moore, J. A. S. B. lix, pt. 2, p. 263 (1890).

Type, *M. plumicauda*, Moore.

Range. Kunáwar.

Antennæ plumose; abdomen with very long lateral tufts of hair from base to apex. Fore wing with vein 1 *c* not anastomosing with 1 *b*; veins 4 and 5 on a short stalk; 8 and 9 stalked. Hind wing with vein 6 absent; 8 connected with 7 by a bar; veinlet in cell of both wings single.

648. *Moffatia plumicauda*, Moore, *J. A. S. B.* lix, pt. 2, p. 264.



♂. Dark greyish black, the tufts on abdomen black. Wings hyaline, with scattered hair-like scales; margins rather broadly black; veins black.

Hab. Upper Kunáwar. *Exp.* 24 millim.

Fig. 206.—*Moffatia plumicauda*, ♂. $\frac{1}{2}$.

Subfamily PSYCHOIDINÆ, Heyl.

♂. Fore wing with veins 1 *b* and *c* not anastomosing, 1 *c* very slight; 1 *b* not giving off a branch. Hind tibiæ with a single pair of spurs.

Key to the Genera.

- | | |
|---|----------------------|
| a. Antennæ bipectinated; tibiæ with the spurs long | 1. DIABASIS, p. 303. |
| b. Antennæ not pectinated but roughly scaled; tibiæ with the spurs minute | 2. APRATA, p. 303. |

Genus DIABASIS.

Diabasis, Heyl. *Ann. Soc. Ent. Belg.* 1881, p. 67.

Type, *D. helicinoides*, Heyl., from Europe.

Range. Europe; Nilgiris.

♂. Antennæ bipectinated, the branches very far apart and slightly swollen at extremities. Wings elongated. Hind legs longer than fore legs, the tibiæ with a pair of long terminal spurs.

649. *Diabasis nilgirensis*.

Bijugis sikkimensis, Heyl. *Ann. Soc. Ent. Belg.* 1890, p. 2 (nom. inept.).



Fig. 207.—*Diabasis nilgirensis*, ♂. $\frac{2}{3}$.

♂. Fore wing with veins 6 and 10 absent; 8 and 9 stalked. Hind wing with veins 6 and 7 stalked, 8 absent; veinlets in cell in both wings forked. Head, thorax, and fore wing pale reddish brown; abdomen and hind wing brownish ochreous. Fore tibia with a long spine.

Hab. Nilgiri plateau, 7000 ft. *Exp.* 16 millim.

Genus APRATA.

Aprata, Moore, *Lep. Ceyl.* ii, p. 106 (1883).

Type, *A. mackwoodi*, Moore.

Range. Ceylon.

Antennæ covered with rough scales; fore tibia without a spur; hind tibia with one pair of minute spurs. Fore wing broad and

rounded; all the veins present; veins 8 and 9 stalked; a forked veinlet in cell of both wings. Hind wing with veins 4 and 5 on a short stalk; all the veins present; 8 connected with 7 by a bar.

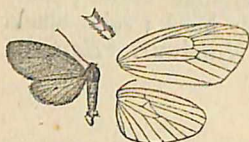


Fig. 208.—*Aprata mackwoodi*, ♂. $\frac{1}{2}$.

650. *Aprata mackwoodi*, Moore, *Lep. Ceyl.* ii, p. 107, pl. 118, fig. 8; *C. & S.* no. 487.

♂. Uniform bright dark brown; abdomen covered with yellow hair, the terminal segment with a silky grey tuft.

Hab. Ceylon. *Exp.* 20 millim.

Species formerly recorded as Indian which are omitted.

Aprata thwaitesi, Moore, C. & S. no. 488, is a *Tinea* probably allied to *Eustixis*.

Rasicota albescens, Moore, J. A. S. B. 1890, lix, pt. 2, p. 263. Type lost; description unrecognizable.

Fumea? limulus, Rogenh. Verh. zool.-bot. Ges. xxxix, Sitzungsab. p. 60, is a *Tinea*.

Family COSSIDÆ.

Proboscis absent; palpi usually minute or absent; antennæ bipectinated to tip or with distal half simple in both sexes, or wholly simple in female. Tibiæ with spurs absent or minute. Fore wing with vein 1 *b* forked at base; 1 *c* present; an areole formed by veins 7 and 10; veins 7 and 8 forking after the areole; the inner margin usually more or less lobed. Hind wing with three internal veins; vein 8 free from the base or connected with 7 by an erect bar at end of cell. Both wings with forked veinlets in cell. The female may have as many as nine bristles to the frenulum.

Larva. Smooth, with a few hairs; internal feeders, boring galleries in wood or the pith of reeds &c. and often doing considerable damage.

Pupæ in a cocoon formed of silk and chips of wood.*

Key to the Genera.

- a. Hind wing with no bar between veins 7 and 8.
 - a'. Wings broad; tibiæ with spurs 1. *Cossus*, p. 305.
 - b'. Wings long and narrow; tibiæ without spurs.
 - a². Palpi present.
 - a³. Hind wing with veins 4 and 5

* After the *Cossidæ* would follow the *Alavona* section of the *Tineidæ*, if the *Heterocera* could be arranged in a linear series.

- given off separately; antennæ simple in ♀ 2. DUOMITUS, p. 307.
- b³. Hind wing with veins 4 and 5 from a point.
- a⁴. Palpi minute; antennæ with proximal half bipectinated in both sexes 3. AZYGOPHLEPS, p. 309.
- b⁴. Palpi with 3rd joint large. Hind wing with veins 6 and 7 stalked; antennæ of ♂ bipectinated to tips 6. EREMOCOSSUS, p. 313.
- b². Palpi absent 5. PHRAGMATÆCIA, p. 312.
- b. Hind wing with a bar between veins 7 and 8 4. ZEUZERA, p. 310.

Genus COSSUS.

Cossus, *Fabr. Ent. Syst.* iii, pt. ii, p. 3 (1794).

Brachylia, *Feld. Reis. Nov. Lep. Atl.* pl. 82, fig. 7, *Erk.* p. 2 (1867).

Type, *C. ligniperda*, Fabr., from Europe.

Range. Universally distributed.

Palpi slight and flattened in front of face; antennæ of male with the branches short, of female simple; mid tibiæ with one, hind tibiæ with two pairs of minute spurs.

Fore wing with vein 11 given off from the subcostal nervure. Hind wing with vein 8 free from the base; the wings broad; the veinlets in cell with a short fork.

SECT. I. Fore wing with vein 6 from angle of cell; the antennæ of male bipectinate to tip.

651. *Cossus acronyctoides*, *Moore, P. Z. S.* 1879, p. 411, pl. 34, fig. 4
C. & S. no. 1584.

Cossus cashmirensis, *Moore, Lep. Atl.* p. 86; *C. & S.* no. 1583.

♂. Head, thorax, and abdomen dark brown. Fore wing brown, the outer half evenly striated with fine lines over its whole surface. Hind wing with faint reticulations.

The form *cashmirensis* has some of the striæ of the fore wing coalescing into somewhat prominent lines, the best marked being one across end of cell, one beyond the cell from veins 6 to 3, and one from the costa before the apex, but these are somewhat variable.

♀. Greyer; the base of fore wing fuscous.

Hab. Kashmir; Ganjam; Bombay; Mhow; Nilgiris. *Exp.* 36-53 millim.

652. *Cossus nigromaculatus*, n. sp.

♀. Head, thorax, and abdomen blackish brown. Fore wing with the inner margin deeply angled near the base; colour brown, greyish towards the costa; a black blotch on the costa near the base;

a small blotch above centre of cell; a large, very irregular, black blotch beyond the cell from the costa to vein 1 c extending along vein 3 towards outer margin; an apical black blotch; the outer half of wing reticulated with fine black lines. Hind wing pale.

Hab. Nilgiris, 8000 ft. (*Minchin*). *Exp.* 66 millim. Type in coll. Elwes.

SECT. II. Vein 6 of fore wing given off above the angle of cell.

653. *Cossus cadambæ*, *Moore*, *P. Z. S.* 1865, p. 822; *C. & S.* no. 1582.

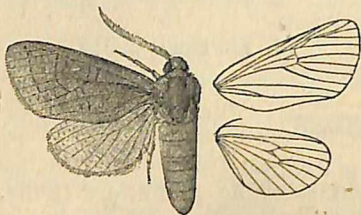


Fig. 209.—*Cossus cadambæ*, ♂. †.

♂. Head, thorax, and fore wing dull brown; the last with two indistinct dark lines across the end of the cell, and two from near the base of vein 2 to inner margin; a dark postmedial line from costa to vein 2, with some indistinct strigæ beyond it; a similar submarginal line with indistinct strigæ beyond it.

Abdomen and hind wing paler; the latter with some faint strigæ towards outer margin.

Hab. Calcutta. *Exp.* 52 millim.

SECT. III. Male with the antennæ serrated at tip, the branches of the proximal half longer. Fore wing with the areole much larger.

654. *Cossus parvipunctus*, n. sp.

♂. Head, thorax, and abdomen brown. Fore wing brown, with a few indistinct dark specks round the end of cell, and three more prominent specks above the centre of vein 1 b. Hind wing paler brown.

Hab. Naga Hills, 1500 ft., Oct. (*Doherty*). *Exp.* 52 millim. Type in coll. Elwes.

655. *Cossus pallidalæ*, n. sp.

♂. Head, thorax, and abdomen ochreous white. Fore wing white, slightly suffused with rufous, especially in the cell; numerous wavy rufous strigæ in the cell and between vein 2 and the inner margin; a few rufous strigæ on the outer area; marginal line rufous. Hind wing white.

The distal portions of the antennæ are broken, but the species appears to belong to the 3rd section.

Hab. Sikkim (*Möller*). *Exp.* 38 millim. Type in coll. Elwes.

*656. *Cossus stigmaticus*, *Moore*, *Lep. Atk.* p. 86; *C. & S.* no. 1598.

♂. Pale ochreous brown. Fore wing striated with pale brown; pale brown blotches at end of cell, apex, and below apex; two



large red spots below the origin of vein 2, the upper tinged with black.

Hab. Sikkim. *Exp.* 52 millim.

Genus DUOMITUS.

Duomitus, *Butl. Ann. N. H.* (5) vi, p. 68 (1880).

Xyleutes, *Hübner Verz.* p. 195 (1818), gen. non descr.

Chalcidica, *Hübner Verz.* p. 197 (1818), gen. non descr.

Hinnaya, *Moore, Lep. Ceyl.* ii, p. 153 (1883).

Type, *D. ceramicus*, Wlk.

Range. S. America; S. Africa; India; Ceylon; Amboina; Australia; New Britain.

Palpi minute; antennæ of male with proximal half bipectinated, the distal half simple, wholly simple in female. Legs without spurs. Wings long and narrow; fore wing with the areole very large; vein 11 given off from 10. Hind wing with no bar between veins 7 and 8; veins 4 and 5 given off separately; the fork of the veinlets in the cell of both wings broad.

657. *Duomitus niger*, *Moore, A. M. N. H.* (4) xx, 1877, p. 348; *id. Lep. Ceyl.* ii, pl. 143, figs. 2, 2 a (larva); *C. & S.* no. 1594.

♀. Head and thorax black, thickly irrorated with grey scales; abdomen black. Fore wing black, thickly irrorated with grey scales, leaving a black patch beyond end of cell. Hind wing black, irrorated with grey scales towards centre of outer area.

Larva ochreous white; pupa red-brown. The "Black Borer" of Coffee-planters.

Hab. Nilgiris; Ceylon. *Exp.* 60 millim.

658. *Duomitus ceramicus*, *Wlk. Cat.* xxxii, p. 587.

Duomitus ligneus, *Butl. Ann. N. H.* (5) vi, p. 68; *id. Ill. Het.* vi, pl. 108, fig. 3; *C. & S.* no. 1599.

Head, thorax, and abdomen pale ochreous brown, more or less suffused with black; patches of black scales at each side of meta-thorax. Fore wing pale ochreous brown; costa with some black striæ; some black streaks in and below the cell; outer area marbled with black; a large irregular whitish patch at outer angle extending towards apex as a series of decreasing spots suffused with black; some black streaks beyond the cell towards apex. Hind wing fuscous, slightly marbled with black; some diffused pale marks at centre of outer margin.

Hab. Sikkim; Nias; Ceram. *Exp.* 104 millim.

659. *Duomitus strix*, *Cram. Pap. Exot.* ii, p. 77, pl. 145 A.

Zeuzera signata, *Wlk. Cat.* vii, p. 1537; *C. & S.* no. 1597.

Zenzero bubo, *Butl. A. M. N. H.* (5) x, 1832, p. 228.

♂. Head, thorax, and abdomen black, grizzled with grey scales;

some white at base of abdomen and each segment slightly fringed with white. Fore wing pale brownish white, closely reticulated with black markings; some black spots along costa, the most prominent being one at the base, one antemedial, and one post-medial; a spot on inner margin near base; one beyond end of cell; one above the centre of vein 1 *b*; a marginal series, the subapical spot expanding into a large blotch. Hind wing pale clouded with fuscous and with black reticulations, obsolescent on the part covered by the fore wing; a marginal series of spots.

♀ paler; the colour of thorax and ground-colour of fore wing whitish.

The Sikhim specimen is less heavily marked, the black blotches on fore wing smaller.

Hab. Sikhim; Sylhet; Java; Nias; New Ireland; New Britain.
Exp., ♂ 110–130, ♀ 170–188 millim.

660. *Duomitus leuconotus*, *Wlk. Cat. vii*, p. 1537; *C. & S.* no. 1591; *Moore, Lep. Ceyl. ii*, pl. 142, figs. 3, 3 a.

♂. Differs from *strix* in the head and abdomen being black; the thorax covered with erect white scales. Fore wing blackish; the reticulations not so close; the inner marginal area with irregular white conjoined patches; white patches on the costa towards the apex; a black streak beyond the cell. Hind wing blackish with black reticulations; a white patch on outer margin towards anal angle.

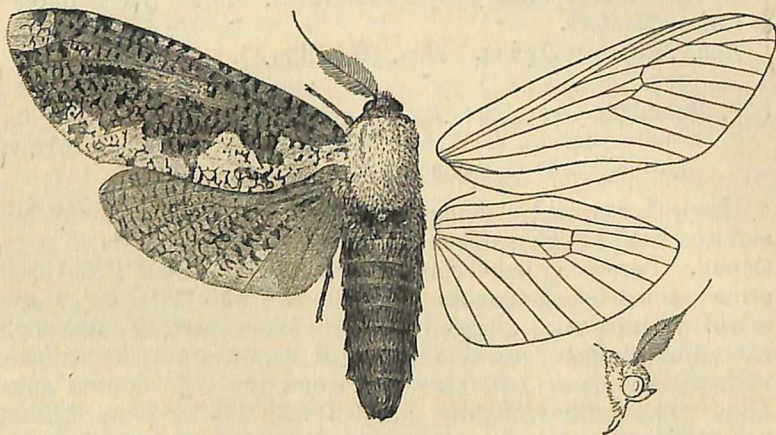


Fig. 210.—*Duomitus leuconotus*, ♂. †

♀ with a large white patch sometimes developed at centre of costa of fore wing and those towards apex more developed.

Hab. Simla; Sikhim; Calcutta; Ceylon. *Exp.*, ♂ 98–128, ♀ 180 millim.

661. *Duomitus mineus*, *Cram. Pap. Exot.* ii, p. 52, pl. 131 D; *C. & S.* no. 1592.

Antennæ, head, thorax, and abdomen dark metallic blue-green. Fore wing yellow with a pinkish tinge; base blue-green; spots of the same colour along the costa, the largest being beyond the end of the cell and just before the apex; small spots at centre and end of cell; a large transverse oval spot from median nervure to inner margin; a large longitudinal spot from below the end of the cell at vein 1 *b* to near the apex at vein 7; a marginal series of spots increasing in size to outer angle and continued along the inner margin. Hind wing yellow, with some black down on inner area, and blue-black streaks in the interspaces beyond the cell; two spots on the costa near apex; a series of marginal spots.

Hab. Sikkim; Sylhet; Calcutta; Ganjam; Manilla; Java. *Exp.*, ♂ 68–93, ♀ 108–132 millim.

662. *Duomitus fuscipars*, n. sp.

♂. Head and thorax dark brown, grizzled with grey; abdomen fuscous. Fore wing with the costal half very deep red-brown; the inner area more or less thickly suffused with white scales, the inner margin being white tessellated with black marks. Hind wing paler red-brown; a large white triangular patch tessellated with black on the outer margin between veins 1 *b* and 4.

Hab. Sikkim (*Moller*). *Exp.* 44 millim. Type in coll. Elwes.

Genus *AZYGOPHLEPS*, nov.

Type, *A. scalaris*, Fabr.

Range. Africa; China; throughout India and Burma; Cambodia.

Palpi minute; antennæ bipectinated to half the length in both sexes, the branches longest at the middle of pectinated portion and rapidly diminishing towards base and apex; shorter in female than in male. Legs without spurs. Wings long and narrow; the neuration as in *Duomitus* except that veins 4 and 5 of hind wing arise from a point.

663. *Azygophleps albofasciata*, *Moore, Lep. Atk.* p. 87; *C. & S.* no. 1585.

♂. Antennæ, head, thorax, and abdomen black; collar white. Fore wing brown, with numerous fine black striæ; a broad white band below the subcostal nervure from the base to the apex. Hind wing pale, with numerous faint brown striæ.

Hab. Kashmir; Sikkim. *Exp.* 54–57 millim.

664. *Azygophleps scalaris*, *Fabr. Syst. Ent.* iii, pt. 2, p. 5; *C. & S.* no. 1586, part.

Zeuzera bivittata, *Wlk. Cat.* xxxii, p. 586; *C. & S.* no. 1587.

Antennæ black; head white; thorax white, with a black line on collar and a broad yellow stripe on the vertex; abdomen white.

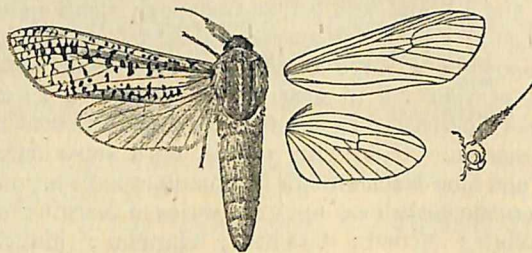


Fig. 211.—*Azygophleps scalaris*, ♂. ¼.

Fore wing white, with numerous black strigæ forming reticulations; the interno-median interspace having hardly any strigæ; yellow streaks from the base to the end of cell and along the basal two thirds of inner margin. Hind wing white.

Hab. Angola; Karáchi; Bengal; Burma; Cambodia. *Exp.*, ♂ 40, ♀ 56 millim.

665. *Azygophleps pusilla*, *Wlk. Cat.* vii, p. 1538; *C. & S.* no. 1596; *Butl. Ill. Het.* vi, pl. 107, fig. 9.

♂. Differs from *scalaris* in the thorax being without the yellow stripe. Fore wing without yellow stripes; the strigæ very much finer; a white band from the base below the subcostal nervure to the apex. Some specimens are more or less suffused with pale brown on inner and outer areas, and some have a black streak below the cell and a series of marginal spots developed.

Hab. Bengal; Deccan; Bangalore; Nilgiris. *Exp.* 26–40 millim.

Genus ZEUZERA.

Zeuzera, *Latr. Dict. d'Hist. Nat.* xxiv, p. 186 (1804).

Zenzera, *Latr. Hist. Nat. Ins.* xiv, p. 175 (1805).

Latagia, *Hübner. Verz.* p. 196 (1818).

Type, *Z. æsculi*, *Latr.*, from Europe.

Range. Europe; Japan; throughout India and Ceylon; Burma.

Palpi absent; antennæ as in *Duomitus*. Legs without spurs. Wings long and narrow; the neurulation as in *Duomitus* except that there is an erect bar between veins 7 and 8 of hind wing at end of cell.

SECT. I. Fore wing with vein 6 from angle of cell.

A. *Hind wing with outer margin evenly rounded.*

666. *Zeuzera conferta*, *Wlk. Cat.* vii, p. 1536; *C. & S.* no. 1589; *Butl. Ill. Het.* vi, pl. 107, fig. 10.

♂. Head, thorax, and abdomen whitish; pro-, meso-, and meta-thorax with paired black spots; abdomen with dorsal and paired lateral black spots and ventral bands. Wings white, evenly, but rather sparsely, spotted with blue-black spots, leaving a small space at end of and beyond cell of fore wing unspotted.

Hab. Sylhet. *Exp.* 70 millim.

667. *Zeuzera indica*, Herr.-Schäffer, *Samml. aussereur. Schmett.* no. 166; *C. & S.* no. 1590.

Zeuzera paucipunctata, *Wlk. Cat.* vii, p. 1537.

♂. Differs from *conferta* in the thorax being unmarked; the basal and terminal segments of abdomen each with three dorsal blue-black streaks; each of the other segments with one dorsal streak, those on the second and third segments triangular. Fore wing with the spots fewer and large, the most conspicuous being a spot at centre of cell, one near the apex, and those on each side of vein 1 *b*. Hind wing with three large spots below the end of the cell; one between veins 1 *b* and *c*, the largest between veins 1 *c* and 2, the smallest between veins 2 and 3; a marginal series of spots, the one nearest anal angle large.

Hab. Simla; Sikkim; Sylhet. *Exp.* 96–114 millim.

B. *Hind wing with the outer margin deeply excised near anal angle.*

668. *Zeuzera postexcisa*, *Hmps. Ill. Het.* ix, ined., pl. 159, fig. 18.

♂. Head, thorax, and abdomen white; collar with paired blue-black marks; tegulae with a blue-black spot; pro-, meso-, and meta-thorax with paired blue-black blotches, the last with an additional spot on the vertex; abdomen with blue-black marks at sides and on vertex. Fore wing white, with numerous small round blue-black spots; the cell with few spots and those beyond it obsolescent; the marginal series prominent. Hind wing white, with some small obsolescent spots beyond the cell and some prominent blue-black spots on outer margin, those at the excision conjoined into a prominent band.

Hab. Ceylon. *Exp.* 52 millim.

SECT. II. Fore wing with vein 6 from below angle of cell; outer margin of hind wing evenly rounded.

669. *Zeuzera multistrigata*, *Moore, P. Z. S.* 1881, p. 327; *C. & S.* no. 1593.

Differs from *postexcisa* in the collar, tegulae, and prothorax being without marks, meso- and metathorax with paired blue-black lateral spots; metathorax and each segment of abdomen fringed with black but without spots. Fore wing with the veins tinged with ochreous, the spots much more numerous; those beyond the cell

not obsolescent; the clusters at middle and end of cell and a marginal series being the most prominent. Hind wing white, with black spots in the cell and in the interspaces below and beyond it,

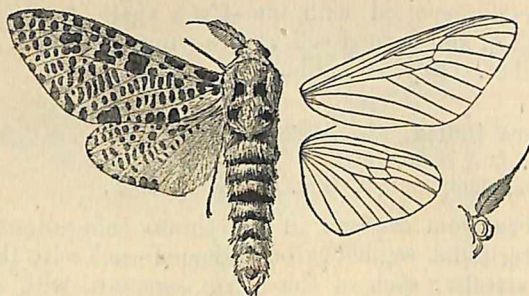


Fig. 212.—*Zeuzera multistrigata*, ♂. †.

but none on inner area; three blue-black spots on outer margin between veins 1c and 2.

Hab. Dharmasāla; Sikhim; Nāgas. *Exp.*, ♂ 50–62, ♀ 64–98 millim.

SECT. III. Fore wing with vein 6 from above angle of cell.

670. *Zeuzera coffeæ*, *Nietn. Edin. New Phil. Journ.* xv, 1862, p. 36; *C. & S.* no. 1588; *Moore, Lep. Ceyl.* ii, pl. 143, figs. 1, 1a, b (larva).

Zeuzera oblita, *Swinh. Trans. Ent. Soc.* 1890, p. 198.

Zeuzera roricaryana, *Wlk. Journ. Linn. Soc.* vi, p. 177 (1862).

♂. Differs from *multistrigata* in the pro-, meso-, and metathorax each having a pair of small black spots; abdomen black, clothed with white hairs. Fore wing with the spots small, black, and all obsolescent except those along the costa, outer and inner margins. Hind wing with a few obsolescent small spots and a prominent marginal series from the apex to vein 2, where they are sometimes conjoined.

♀. With the spots of the fore wing fewer in number, but more prominent and tinged with metallic blue.

Larva and *pupa* red-brown. This is the “White Borer” of Coffee-planters.

Hab. Nāga Hills; Rangoon; Nilgiris; Ceylon; Borneo. *Exp.*, ♂ 40, ♀ 46 millim.

Genus PHRAGMATÆCIA.

Phragmatæcia, *Newm. Zoologist*, viii, p. 2931 (1850).

Type, *P. castaneæ*, Hübner.

Range. Europe; Africa; Asia; Java; S. America.

Palpi absent; a tuft of hair on frons; antennæ of male bipectinated to two-thirds length, the branches short. Legs without spurs. Wings long and narrow; neuration as in *Azygophleps*.

671. *Phragmatæcia castaneæ*, *Hübner. Beitr. ii. i. i. c. p. 9* (1790).
Bombyx arundinis, *Hübner. Eur. Schmett., Bomb. figs. 200, 201.*
Zeuzera innotata, *Wlk. Cat. xxxii, p. 587.*
Phragmatæcia saccharum, *Moore, Lep. Atk. p. 87; C. & S. no. 1602.*
Phragmatæcia minor, *Moore, Lep. Atk. p. 87; C. & S. no. 1601.*
Phragmatæcia minima, *Hmps. Ill. Het. viii, p. 66, pl. 144, fig. 14.*

Head, thorax, and abdomen brownish white. Fore wing brownish white irrorated with dark specks. Hind wing white or brownish white.

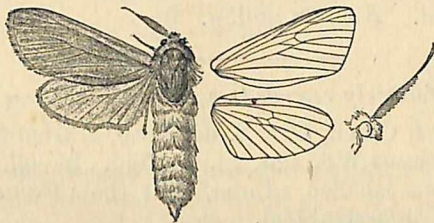


Fig. 213.—*Phragmatæcia castaneæ*, ♂. 1.

In some specimens the striations of the fore wing are absent.

Hab. Europe; Africa; Madagascar; China; Nilgiris; Ceylon.
Exp., ♂ 22–38, ♀ 54 millim.

672. *Phragmatæcia impura*, *Hmps. Ill. Het. viii, p. 66, pl. 144, fig. 7.*

♀. Head, thorax, and fore wing smoky black; abdomen and hind wing pale fuscous.

Hab. Nilgiris, S. slopes, 3000 feet. *Exp.* 36 millim.

Genus **EREMOCOSSUS**, nov.

Type, *E. fœdus*, Swinh.

Range. Karáchi.

Palpi with the third joint large and rounded; antennæ of male bipectinated to tips, the branches short. Legs without spurs,

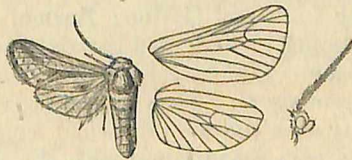


Fig. 214.—*Eremocossus fœdus*, ♂. 1.

the femora hairy. Wings long and narrow; fore wing with inner margin evenly curved; vein 11 given off from the subcostal



nervure. Hind wing with veins 4 and 5 from a point; 6 and 7 stalked; 8 free.

673. *Eremocossus fœdus*, *Swinh. P. Z. S.* 1884, p. 515, pl. 47, fig. 1; *C. & S.* no. 1600.

♂. Head, thorax, and abdomen ochreous white. Fore wing pale brownish ochreous, with ill-defined white longitudinal bands in and below the cell; a similar submarginal transverse band. Hind wing white.

Hab. Karáchi. *Exp.* 28 millim.

Species formerly recorded as Indian which are omitted.

Zeuzera asylos, Cram., *C. & S.* no. 1586, is from S. Africa.

Duomitus capensis, Wlk. *Cat.* vii. p. 1533. In coll. B. M. are two specimens labelled 'India,' but the 'Record' shows the locality to be doubtful.

Family ARBELIDÆ.

Allied to the *Cossidæ*. Proboscis absent; palpi slight and porrect; antennæ of male bipectinated to tips; the branches short; legs with the spurs minute or absent. Frenulum absent. Fore wing with vein 1*b* forked at the base; 1*c* absent; no areole. Hind wing with three internal veins; a simple veinlet in the cell of each wing.

Larvæ borers in wood.

Key to the Genera.

- a. Hind wing with a bar between veins 7 and 8 . . 1. ARBELA, p. 314.
b. Hind wing with no bar between veins 7 and 8; [p. 315.
the cell short 2. ENCAUMAPTERA,

Genus ARBELA.

Arbela, *Moore, P. Z. S.* 1879, p. 411.

Type, *A. tetraonis*, Moore.

Range. Peninsular India and Ceylon; Burma.

Palpi minute; antennæ bipectinated to tips in male, the branches short, simple in female. Mid and hind tibiæ slightly hairy, with minute terminal pairs of spurs. Fore wing with veins 7, 8, 9 stalked together. Hind wing with the cell of normal length; vein 6 given off below the angle; vein 8 connected with the subcostal nervure by an oblique bar near centre of cell.

674. *Arbela quadrinotata*, *Wlk. Cat.* vii, p. 1521; *C. & S.* no. 1603; *Moore, Lep. Ceyl.* ii, pl. 143, fig. 3.
Cossus abruptus, *Wlk. Cat.* xxxii, p. 584; *C. & S.* no. 1581.

Cossus tessellatus, *Moore, Lep. Atk.* p. 85; *C. & S.* no. 1604.
Zenzera pardicolor, *Moore, Lep. Atk.* p. 86; *C. & S.* no. 1595.

♂. Head and thorax rufous. Fore wing pale rufous, with numerous dark rufous bands of strigæ; a spot at end of cell and

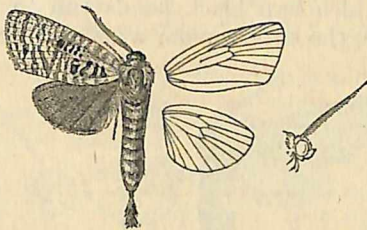


Fig. 215.—*Arbela quadrinotata*, ♂. 1.

those between the median nervure and vein 1 *b* being most prominent. Abdomen and hind wing fuscous.

♀. Head, thorax, and abdomen ochreous white. Fore wing ochreous white, with the markings as in male. Hind wing pale, slightly suffused with fuscous, with numerous obsolescent brown strigæ.

Hab. Calcutta; Ganjam; Ceylon. *Exp.*, ♂ 38, ♀ 40 millim.

675. *Arbela tetraonis*, *Moore, P. Z. S.* 1879, p. 411, pl. 34, fig. 3; *C. & S.* no. 1605.

♀. Differs from *quadrinotata* in the ground-colour being paler, the markings not so rufous; fore wing with a prominent submarginal series of conjoined spots; a marginal series of spots; hind wing whitish, with some brown spots and streaks below and beyond the cell; a marginal series of spots; abdomen with brown tufts.

Hab. Poona; Bombay; Raipur. *Exp.* 36–50 millim.

676. *Arbela dea*, *Swinh. Trans. Ent. Soc.* 1890, p. 199, pl. vi, fig. 7.

♂. Head whitish; antennæ, thorax, and abdomen brown. Fore wing irrorated with a few dark scales; some pale strigæ along the costa. Hind wing black-brown.

♀. Paler, with a dark spot at end of cell of fore wing.

Hab. Rangoon. *Exp.*, ♂ 24, ♀ 29 millim.

Genus **ENCAUMAPTERA**, nov.

Type, *E. stigmata*, Hmps.

Range. Nilgiris.

Palpi porrect; antennæ of male bipectinated to tips, the branches short. Legs hairy; tibiæ without spurs. Fore wing with veins 7, 8, 9, 10 stalked together. Hind wing with no bar between veins 7 and 8; vein 8 short; the cell short; veins 6 and 7 given off from the angle, 7 curved upwards and almost touching 8.

677. *Encaumaptera stigmata*, *Hmps.* *Ill. Het.* viii, p. 66, pl. 144, fig. 1.

♂. Mouse-grey. Fore wing with a patch of short scales below the end of the cell, with a copper-coloured longitudinal streak below it from which two black bands run to inner margin, the inner one oblique, the outer erect; a patch of short black scales

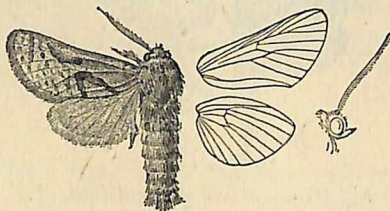


Fig. 216.—*Encaumaptera stigmata*, ♂. 1.

beyond the end of the cell, with a small copper spot at its lower extremity; and a dark band from the costa to its upper extremity; a dark band from the costa near the apex; outer area with some dark striæ. Hind wing paler.

Hab. Nilgiris, 3500 feet. *Exp.* 40 millim.

Family HEPIALIDÆ.

Proboscis absent; palpi usually absent. Antennæ very short and filiform. Legs short and without spurs. Fore wing with vein 1 *a* forming a fork with *b* or separate; a bar from vein 12 to the costa near the base. Hind wing with 12 veins; 3 internal veins; a bar from vein 12 to the costa near the base; veinlets in the cell of both wings forked. Frenulum absent.

Larvæ internal feeders in wood or the roots of grasses &c.*

Key to the Genera.

- a.* Palpi present. Fore wing with no bar between vein 1 *b* and median nervure . . . 1. PALPIFER, p. 316.
- b.* Palpi absent. Fore wing with a bar between vein 1 *b* and median nervure.
 - a'.* Veins 8, 9, 10 of both wings stalked . . . 2. HEPIALISCUS, p. 317.
 - b'.* Vein 10 of both wings not stalked with 8 and 9 3. PHASSUS, p. 318.

Genus **PALPIFER**, nov.

Type, *P. seannotatus*, Moore.

Range. Himalayas; Ceylon; Tenasserim.

Palpi large, rounded, and ascending. Antennæ short and setiferous. Legs hairy; tibiæ without spurs. Fore wing without a

* Next to the *Hepialidæ* would come the *Micropterygidæ*, if the *Heterocera* could be arranged in a linear series.

bar between vein 1 *b* and the median nervure; veins 7 and 8 and 9 and 10 stalked in both wings, and the veinlets in cell forked.

678. *Palpifer sexnotatus*, Moore, *P. Z. S.* 1879, p. 413; *C. & S.* no. 1611.

Hepialus murinus, Moore, *P. Z. S.* 1879, p. 413; *C. & S.* no. 1608.

Hepialus taprobanus, Moore, *Lep. Ceyl.* iii, p. 545.

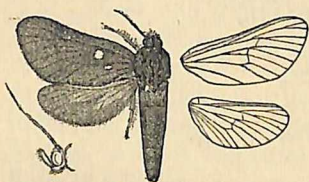


Fig. 217.—*Palpifer sexnotatus*, ♂. $\frac{1}{2}$.

♀. Head, pro- and mesothorax dark brown; metathorax fulvous yellow; abdomen black-brown. Fore wing dark red-brown; two white subbasal spots below the median nervure; a round white spot at centre of cell; traces of a postmedial dark line; some ochreous specks on costa near apex; a black speck at centre of inner margin.

Hind wing—the basal area fulvous yellow, extending along the costa nearly to apex; the outer area dark red-brown.

Hab. Dharmasāla; Sikkim; Ceylon. *Exp.* 34 millim.

*679. *Palpifer tavoyanus*, Moore, *J. A. S. B.* lv, pt. 2, 1886, p. 98; *C. & S.* no 1612.

♂. Pale vinous brown; hind part of thorax and 1st segment of abdomen clothed with ochreous hairs. Fore wing with some dark quadrate costal marks, others in and below the cell; an irregular medial band with dentate margin; a series of small marginal lunules and a black spot above outer angle; all these markings with narrow ochreous edges. Hind wing dark vinous brown, ochreous at base; cilia ochreous from anal angle to vein 4.

Hab. Tavoy. *Exp.* 77 millim.

Genus **HEPIALISCUS**, nov.

Type, *H. nepalensis*, Wlk.

Range. Himalayas.

Palpi absent. Antennæ short and filiform. Fore wing with veins 1 *a* and *c* short and slender; a bar between veins 1 *b* and *c* and the median nervure; both wings with veins 8, 9, 10 stalked, and two veinlets in the cell which are bent down and meet near centre of median nervure. Legs short and hairy; tibiæ without spurs.

In *Hepialus*, Fabr., type *humuli*, vein 8 is given off from the cell in both wings.

Larva feeding in the roots of grasses &c.

680. *Hepialiscus nepalensis*, Wlk. *Cat.* vii, p. 1557; *C. & S.* no. 1609.

Hepialus indicus, Wlk. *Cat.* vii, p. 1558; *C. & S.* no. 1606.

Hepialus pauperatus, Wlk. *Cat.* xxxii, p. 593; *C. & S.* no. 1610;

Butl. Ill. Het. vi, pl. 108, figs. 6, 7.

Hepialus marcidus, *Butl. A. M. N. H.* (5) vi, p. 69; *C. & S.* no. 1607.

Head, thorax, and abdomen greyish or reddish brown. Fore wing greyish or ochreous brown, with four indistinct series of small dark specks or small ring-spots on indistinct pale oblique bands; a submarginal series of specks or ring-spots on pale spots. Hind wing pale fuscous.

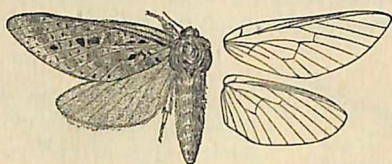


Fig. 218.—*Hepialiscus nepalensis*, ♂. 1.

In the form *indicus* = *marcidus* black blotches are developed in, beyond, and below the cell of the fore wing.

Hab. Simla; Kulu; Nepal; Sikhim. *Exp.*, ♂ 44, ♀ 56 millim.

Genus PHASSUS.

Phassus, *Wlk. Cat.* vii, p. 1566 (1855).

Endoclyta, *Feld. Reis. Nov., Lep., Atl.* pl. 81, fig. 3, *Erk.* p. 4 (1837).

Type, *P. hübnéri*, Geyer, from Mexico.

Range. Mexico; S. America; Africa; Japan; China; throughout India, Ceylon, and Burma; Perak; Borneo.

Palpi absent. Antennæ short and filiform. Fore and mid legs fringed with hair on both sides; hind legs aborted in male, the femur and tibia short, the latter with a curved tuft of long hairs, the tarsus more or less aborted, in some species only represented by a bristle. Both wings with veins 9 and 10 stalked; a forked veinlet in the cell, and vein 12 fringed with hair. Fore wing with a bar between vein 1 b and median nervure.

The prothorax, consisting of two pieces, is ankylosed to the mesothorax consisting of three pieces, the metathorax, consisting of one large piece, being freely moveable on the mesothorax.

Larvæ borers in trunks of trees.

681. *Phassus aboë*, *Moore, Lep. E. I. Co.* p. 437; *C. & S.* no. 1615; *Butl. Ill. Het.* vi, pl. 109, fig. 1.

Phassus salsettensis, *Moore, P. Z. S.* 1879, p. 412, pl. 34, fig. 5; *C. & S.* no. 1621.

♂. Head, thorax, and abdomen dull brown. Fore wing dull brown; seven indistinct dark quadrate marks on the costa; a triangular dark mark at centre of cell extending downwards along vein 2; two large dark marks in upper end of cell, two small marks in the lower end; four oblique bands of irregular ring-marks across the marginal area, the innermost bent below the costa, with a white spot at the bend; a number of irregular ring-marks

below the cell. Hind wing dark brown; two very indistinct quadrate marks at apex. The tuft on hind tibia ochreous.

♀. The first postmedial band of fore wing straighter and without the white spot inside it.

Hab. Sikkim; Bombay. *Exp.*, ♂ 70, ♀ 88 millim.

682. *Phassus punctimargo*, n. sp.

♂. Head and thorax dark red-brown; abdomen duller brown. Fore wing dark red-brown; the inner area, two oblique bands on the outer area, and the outer angle with a glossy leaden tinge; some very indistinct yellowish quadrate marks on the costa; two indistinct postmedial lines, the inner with a white spot inside it beyond the cell, the outer curved at middle; between these two lines is a series of irregular ring-marks; a similar submarginal series; traces of white specks on the outer margin; some indistinct irregular ring-marks on inner area. Hind wing pale brown, with two very indistinct dark marks near the apex; the outer margin dark.

♀. Paler red-brown; fore wing with the white spot absent; the outer postmedial line nearly straight; a series of prominent white spots and streaks on outer margin of both wings more or less conjoined in places and differently developed in the several individuals.

Hab. Sikkim. *Exp.*, ♂ 54, ♀ 90-108 millim. Type in coll. B. M.

683. *Phassus damor*, Moore, *Lep. E. I. Co.* p. 437; *C. & S.* no. 1618; *Bull. Ill. Het.* vi, pl. 109, fig. 3.

Endoclyta similis, *Feld. Reis. Nov.* pl. 81, fig. 3; *C. & S.* no. 1522.

Head, thorax, and abdomen grey-brown. Fore wing grey-brown; some dark brown quadrate marks along the costa; a triangular brown mark at centre of cell joined below the cell to an oblique irregular brown mark which extends to vein 1 and nearly fills the end of the cell and an area beyond and below it, leaving a curved pale streak from the middle to upper angle of cell; a small spot on vein 1 just before the brown band; a streak beyond the end of the cell; three double oblique bands of more or less coalesced spots, one at end of cell, the second postmedial, the third submarginal. Hind wing fuscous; some brown spots on costa and outer margin near the apex.

Hab. Sikkim. *Exp.*, ♂ 66, ♀ 88 millim.

684. *Phassus purpurascens*, Moore, *Lep. Ceyl.* ii, p. 156, pl. 143, fig. 4; *C. & S.* no. 1620.

♀. Differs from *damor* in the ground-colour of the wings being purplish. Fore wing with a white "comma" mark in the cell before the middle, another at upper end, with from one to four white specks just outside the cell; a black subbasal speck between

veins 1 *b* and *c*; no brown spot on vein 1 *b*; the triangle in the cell smaller; the oblique streak more diffused. Hind wing without markings. Hind tarsus of male represented by a bristle.

In some specimens the ground-colour of the fore wing is redder brown; a number of white specks are scattered about the wing and incomplete circular black marks appear on the costa and on each side of vein 1 *b*.

Hab. Ceylon and ? Perak. *Exp.* 114–136 millim.

685. *Phassus signifer*, *Wlk. Cat.* vii, p. 1568; *C. & S.* no. 1622;

Butl. Ill. Het. v, pl. 109, fig. 2.

Phassus undulifer, *Wlk. Char. undescr. Het.* p. 102; *C. & S.* no. 1623.

Phassus chalybeatus, *Moore, P. Z. S.* 1879, p. 412; *C. & S.* no. 1617.

♂. Head, thorax, abdomen, and ground-colour of fore wing yellowish flesh-colour or pale grey-brown. Differs from *purpurascens* in the costal marks of the fore wing being larger and fewer; the conjoined triangle and diffused streak terminating at vein 2; a

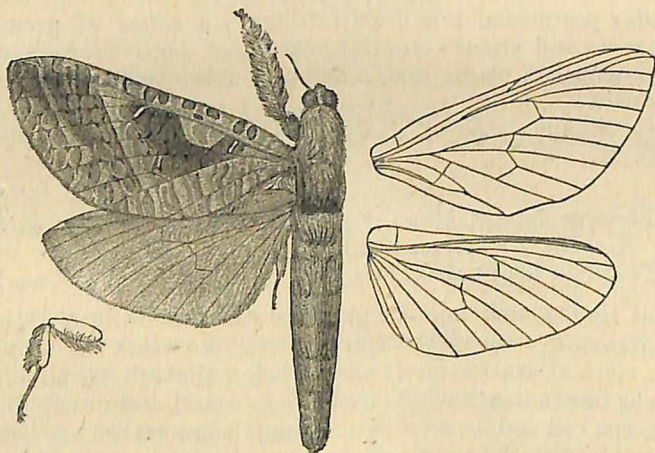


Fig. 219.—*Phassus signifer*, ♂. †.

number of obscure ring-marks on inner area; the postmedial band better defined, and the submarginal spots larger and more conjoined. Hind wing flesh-coloured.

♀. Darker; fore wing with the costal marks larger; the hind wing suffused with fuscous and with obscure marks at apex.

In a Burmese specimen the ground-colour of the fore wing is pale brownish yellow, with no white spots in the cell; the hind wing ochreous brown. The species is thus extremely variable, but may chiefly be known by the darker discal markings of fore wing terminating along vein 2.

Hab. Sylhet; Bernardmyo, Burma; E. Pegu; Borneo. *Exp.*, ♂ 100, ♀ 154 millim.



686. *Phassus malabaricus*, Moore, P. Z. S. 1879, p. 412; C. & S. no. 1619.

♂. Differs from *signifer* in the markings of the fore wing being pale chestnut in colour; the costal markings small; the yellowish-white mark before the middle of the cell triangular or a longitudinal not transverse streak; the spots of the postmedial and submarginal bands rounded not elongated. Hind wing reddish fuscous.

♀. The fore wing greyish or reddish brown.

Hab. Canara; Nilgiri plateau, 6000–8000 feet. *Exp.*, ♂ 102, ♀ 126 millim.

687. *Phassus auratus*, n.sp.

♂. Head and thorax black-brown. Fore wing very dark brown; the basal half of the costa and cell brassy yellow, with some brown marks on the costa; a brassy-yellow patch at apex; an indistinct yellowish mark near centre of outer margin; a faint postmedial oblique line with a yellowish-white spot on it at veins 5 and 6. Abdomen and hind wing fuscous, the latter slightly red-brown at apex. Tuft on hind tibia ochreous.

Hab. Bernardmyo, Burma (*Doherty*). *Exp.* 42 millim. Type in coll. Elwes.

688. *Phassus albofasciatus*, Moore, P. Z. S. 1879, p. 413, pl. 34, fig. 8; C. & S. no. 1616.

♀. Head and thorax grey-brown. Fore wing grey-brown; an ill-defined greyish-white fascia from the base to the apex; the inner area reddish brown; the whole wing closely covered by wavy black striæ and obscure spots and ring-marks. Abdomen and hind wing fuscous.

Hab. Nilgiri plateau, 7000–8000 feet. *Exp.* 64–84 millim.

689. *Phassus viridis*, n. sp.

♂. Head, thorax, fore and mid legs, and fore wing pale sap-green; the last with a small white spot at end of cell and a white speck beyond it. Abdomen, hind wing, and hind legs dark fuscous; the hind wing with the costal edge green. Tibial tuft fuscous.

Hab. Nilgiris. *Exp.* 86 millim. Type in Mus. Oxon.

Species formerly recorded as Indian which are omitted.

Gorgopis vilis, Wlk., C. & S. no. 1614, is a Tineid of the genus *Alavona*.

Family CALLIDULIDÆ.

A family of day-flying moths of medium size. Antennæ simple, the palpi long, with the third joint well developed. Mid tibia with one pair of long spurs, hind tibia with two pairs. Hind wing with two internal veins; 3, 4, 5 arising close together; the cell open; 6 and 7 arising not far from the base of the wing; 8 bent down and nearly touching 7 near origin of 6; a minute precostal spur.

Larva unknown.

Key to the Genera.

- | | |
|--|------------------------|
| a. Frenulum absent | 1. CLEOSIRIS, p. 322. |
| b. Frenulum present but minute; the retinaculum arising from below the median nervure of fore wing. | |
| a'. Fore wing with veins 8, 9, 10 stalked; male with a patch of raised scales below the costa of hind wing | 2. CALLIDULA, p. 323. |
| b'. Fore wing with veins 8, 9, 10 arising from an areole | 3. PTERODECTA, p. 324. |
| c. Frenulum long; male with the retinaculum from the subcostal nervure of fore wing; vein 6 from the middle of discocellulars; 7 and 8 from close to angle of cell | 4. HERIMBA, p. 325. |

Genus CLEOSIRIS.

Tetragonus, Geyer, *Hübner. Zutr.* 4, p. 17 (1832), nom. præocc.
Cleosiris, *Boisd. Spec. Gén. Léop.* i, pl. 23, fig. 3 (1836).

Type, *C. catamita*, Hübn.

Range. Throughout India, Ceylon, and Burma; Penang; Java; Borneo.

Frenulum absent. Palpi with the third joint long and obliquely porrect. Fore wing with vein 1 *b* forked at the base; veins 8 and 9 stalked, the apex acute. Hind wing with veins 6 and 7 arising very near the base; outer margin angled at vein 4.

690. *Cleosiris catamita*, Geyer, *Hübner. Zutr.* pl. iv, p. 17; *C. & S.* no. 482; *Moore, Lep. Ceyl.* ii, pl. 99, figs. 4, 4 a.
Cleosiris major, *Moore, P. Z. S.* 1883, p. 15; *C. & S.* no. 483.

Head, thorax, and abdomen dark yellowish red-brown. Fore wing yellowish red-brown; traces of fulvous postmedial spots. Hind wing uniform red-brown. Underside: the ground-colour yellowish, greenish, or brownish, with numerous dark striæ; fore wing with three grey spots tinged with rufous in the cell, near

base, at middle and end; an indistinct rufous oblique band from apex to vein 2; two submarginal very indistinct maculate lines; hind wing with three grey rufous-ringed spots in the cell, one near base and two near the end; four very indistinct rufous bands,

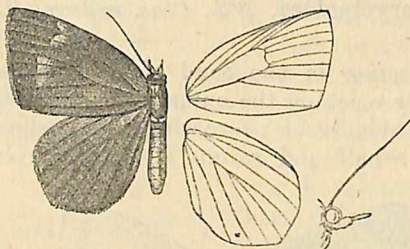


Fig. 220.—*Cleosiris catamita*, ♂. 1.

one medial, two postmedial, and one submarginal and maculate the two postmedial bands may coalesce, forming a more prominent irregular band; the marking of the underside may be brown instead of rufous.

Hab. Sikkim; Sylhet; Nilgiris; Ceylon; Burma; Andamans; Nicobars; Tenasserim; Penang; Java. *Exp.* 40–48 millim.

Genus **CALLIDULA**.

Callidula, *Hübner*, *Verz.* p. 66 (1818).

Datanga, *Moore*, *Lep. Atk.* p. 21 (1879).

Type, *C. petavia*, Cram.

Range. Afghanistan; Sikkim; Assam; Burma; Malacca; Philippines; Borneo; Sumatra; Java.

Frenulum present but minute; the retinaculum arising from below the median nervure of fore wing. Palpi with the third joint somewhat long and upturned. Fore wing with vein 1 δ not forked at the base. Veins 8, 9, 10 stalked. Hind wing with veins 6 and 7 arising not so near the base as in *Cleosiris*; male with a large patch of raised scales below the middle of vein 8.

691. *Callidula minor*, *Moore*, *Lep. Atk.* p. 21; *C. & S.* no. 486.

♂. Dark red-brown. Fore wing with an oblique nearly regular orange band from the costa beyond the middle to vein 2 near outer margin; some specimens with traces of a submarginal orange band. Underside yellowish, with numerous dark striae; fore wing with a grey dark-ringed spot at centre of cell and two at its end which are sometimes conjoined; some red at end and beyond the cell; hind wing with a grey dark-ringed spot at centre of cell; a larger one at end of cell; an indistinct waved red and grey post-medial line. Cilia orange.

Settles on the upperside of leaves, with the wings raised over

the back, just as does the Hesperid *Astictopterus vanites*, from which it is difficult to distinguish the present species.

Hab. Karen Hills ; Moulmein. *Exp.* 34 millim.

92. *Callidula erycinoides*, *Wlk. Char. undescr. Het.* p. 3; *C. & S.* no. 481.

Differs from *minor* in the band of the fore wing being pale yellow and nearly reaching the outer angle, near which it is curved and attenuated. Underside: fore wing dusky yellow, suffused with fuscous on outer half and rufous at apex, the costa with dark

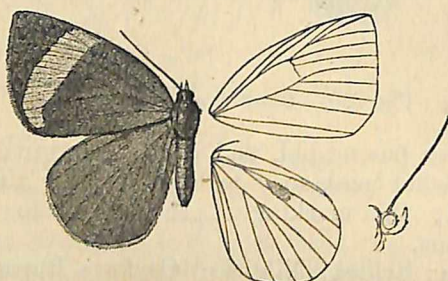


Fig. 221.—*Callidula erycinoides*, ♂. 1.

striae, or wholly suffused with rufous with dark striae; the band as on upperside; a white black-ringed spot in cell near the base and transverse streaks at middle and end. Hind wing yellowish, suffused and striated with rufous; two grey spots at end of cell; a waved black postmedial line. Both wings with a marginal series of white specks; the cilia pale near apex of each wing.

Hab. Sikkim; Buxar; Nágas. *Exp.* 46 millim.

693. *Callidula attenuata*, *Moore, Lep. Atk.* p. 21; *C. & S.* no. 485.

Differs from *erycinoides* in the band of the fore wing being red, and from *minor* in its narrowing towards outer margin and being present on the underside; the cilia pale red.

Hab. Sikkim; Margharita, S.E. of Sadiya, Assam; Khásis; E. Pegu. *Exp.* 40 millim.

Genus **PTERODECTA.**

Pterodecta, *Butl. A. M. N. H.* (4) xx, p. 399 (1877).

Type, *P. anchora*, Moore.

Range. Japan; Himalayas from Kángra to Bhutan.

Palpi with the third joint porrect and long. Frenulum present, but minute, the retinaculum from below the median nervure of fore wing. Fore wing with vein 1 *b* forked at the base; 9 arising from 10 and anastomosing with 8 to form an areole; the apex acute; the outer margin angled at vein 6. Hind wing with veins 6 and 7 arising near the base; the outer margin angled at vein 2.

694. *Pterodecta anchora*, Moore, *Pagenst. JB. Nassau. Ver.* 1887, p. 238, pl. ii, fig. 24; *C. & S.* no. 480.

Head, thorax, abdomen, and wings dark brown. Fore wing

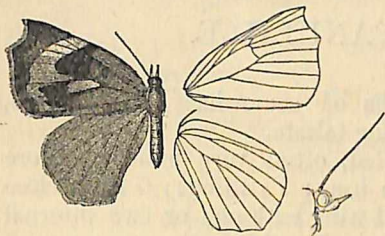


Fig. 222.—*Pterodecta anchora*, ♂. 1.

with an orange-yellow spot below the cell between veins 2 and 3; an orange-yellow post-medial curved band from the costa to vein 2, sending a projection inwards along vein 3 so as nearly to join the spot. Cilia fulvous. Underside yellowish brown, striated with black; the fore wing yellow, except the outer area; two small white black-ringed spots in the cell, a larger one on a black patch at end, and a black patch below the end of cell. Hind wing with a grey spot at end of cell.

Hab. Himalayas from Kulu to Bhutan, 5000–10,000 feet. *Exp.* 40 millim.

Genus HERIMBA.

Herimba, Moore, *Lep. Atk.* p. 20 (1879).

Type, *H. atkinsoni*, Moore.

Range. Sikkim; Burma.

Palpi upturned, with the third joint of moderate length and somewhat porrect. Fore wing with vein 1*b* forked at the base, 6 from the middle of the discocellulars; 7 and 8 from close to the upper angle of cell; 9 and 10 arising close together before the end of cell and anastomosing shortly. Hind wing with veins 6 and 7 arising not very near the base, 8 almost touching them close to their origin. Frenulum long; retinaculum in male arising from the subcostal nervure of fore wing.

695. *Herimba atkinsoni*, Moore, *Lep. Atk.* p. 21, pl. 2, fig. 3; *C. & S.* no. 484.

♂. Glossy black-brown, with a golden-brown tinge. Fore wing

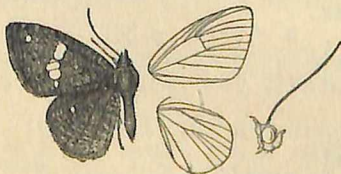


Fig. 223.

Herimba atkinsoni, ♂. 1.

with golden-brown specks along the costa; an oblique white medial band consisting of a spot at end of cell, a trifold spot below it, and small spot above vein 1*b*; a small white subapical spot. Hind wing speckled with golden brown; a minute white spot between veins 5 and 6. Underside with numerous golden-brown strigæ.

Hab. Sikkim; Burma. *Exp.* 33 millim.

Family DREPANULIDÆ.

Small or moderate-sized moths of somewhat slender build, generally with the apex of fore wing falcate.

Palpi slender and slightly scaled, often very minute. Fore wing with vein 1 *b* forked at the base; 1 *c* absent; 5 from close to the lower angle of cell. Hind wing with one or two internal veins; 1 *a* short when present; 5 from near lower angle of cell; the discocellulars angled; the origin of veins 6 and 7 before the angle of cell; 8 bent down and nearly or quite touching 7.

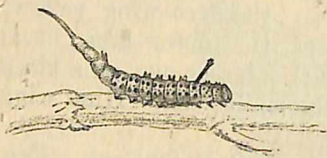


Fig. 224.—Larva of *Teldenia vestigiata*. ♀. (From Moore, Lep. Ceyl. ii, pl. 124, fig. 1 *b*.)

Larva smooth, with the anal prolegs absent*; the anal somite usually with a long process, the others often humped. Spins a cocoon amongst leaves.

Key to the Genera.

- a*. Proboscis present.
 - a'*. Frenulum present.
 - a*². Fore wing with the apex rounded. 2. *MACROCILIX*, p. 329.
 - b*². Fore wing with the apex acute.
 - a*³. Fore wing with the apex produced upwards. 16. *CAMPTOCHILUS*, p. 351.
 - b*³. Fore wing with the apex not produced upwards.
 - a*⁴. Fore wing with vein 10 stalked with 7, 8, 9; no areole.
 - a*⁵. Hind wing with the outer margin rounded.
 - a*⁶. Both wings with the discocellulars nearly straight. 1. *EUCHERA*, p. 327.
 - b*⁶. Both wings with the discocellulars much angled. 3. *MACRAUZATA*, p. 330
 - b*⁵. Hind wing with the outer margin angled at vein 3 . . 4. *AUZATA*, p. 331.
 - b*⁴. Fore wing with veins 9 and 10 anastomosing with 7 and 8 to form an areole.
 - a*⁵. Palpi slight and porrect.
 - a*⁶. Hind wing with the anal angle produced and lobed 5. *DITRIGONA*, p. 331.

* Except in *Euchera*.

- b^6 . Hind wing with the anal angle rounded.
- a^7 . Antennæ not thickened and flattened 8. DREPANA, p. 333.
- b^7 . Antennæ thickened and flattened 7. LEUCODREPANA, p. 333.
- b^5 . Palpi upturned, reaching vertex of head.
- a^6 . Hind wing with the anal angle rounded 6. TELDENIA, p. 332.
- b^6 . Hind wing with the anal angle highly excised .. 10. THYMISTADA, p. 343.
- c^5 . Palpi long, porrect, and thickly scaled. Fore wing with veins 8 and 9 from end of areole..... 9. SPICA, p. 342.
- b' . Frenulum absent.
- a^2 . Fore wing with an areole.
- a^3 . Hind wing with the outer margin rounded 11. DEROCA, p. 344.
- b^3 . Hind wing with the outer margin angled at vein 6..... 12. PHALACRA, p. 345.
- b^2 . Fore wing with no areole..... 13. DRAPETODES, p. 346.
- b . Proboscis and frenulum absent.
- a' . Fore wing with veins 9, 10, 11 stalked, 9 anastomosing with 7 and 8 to form the areole 15. ORETA, p. 347.
- b' . Fore wing with veins 8, 9, 10 stalked. 14. CILIX, p. 347.

Genus EUCHERA.

Euchera, *Hübner. Zutr.* 3, p. 29, no. 260 (1825).

Cyclidia, *Guen. Sp. Gén. Léop. Phal.* i, p. 62 (1857).

Type, *E. substigmatica*, Hübn.

Range. Japan ; China ; Himalayas ; Assam ; Burma ; Sumatra.

Palpi upturned, reaching vertex of head. Antennæ thickened and laminate. Mid tibiae with one pair of short spurs; hind tibiae with two pairs. Fore wing broad; the costa arched; the apex slightly acute; vein 1 *a* forming a fork with 1 *b*, and then leaving it again as a spur; 5 from some way above the angle of cell; 6 from below the upper angle; 7, 8, 9, 10 stalked. Hind wing with the costa slightly excised before the apex; the discocellulars nearly straight; 5 from some way above lower angle of cell.

696. *Euchera substigmatica*, *Hübner. Zutr.* 3, p. 29, no. 260, figs. 519, 520; *C. & S.* no. 3119.

Head black; thorax white; abdomen brownish white. Fore wing pale grey; traces of two antemedial, one medial, and two postmedial pale waved lines; an oblique line from the apex crossing the postmedial lines to centre of inner margin, beyond which the area is whiter; two pale brown blotches above inner margin near outer angle; a waved submarginal line formed of dark specks

with two black specks inside it at outer angle. Hind wing white; a large round black spot at end of cell; indistinct medial and postmedial brown bands; a submarginal waved line of black specks.

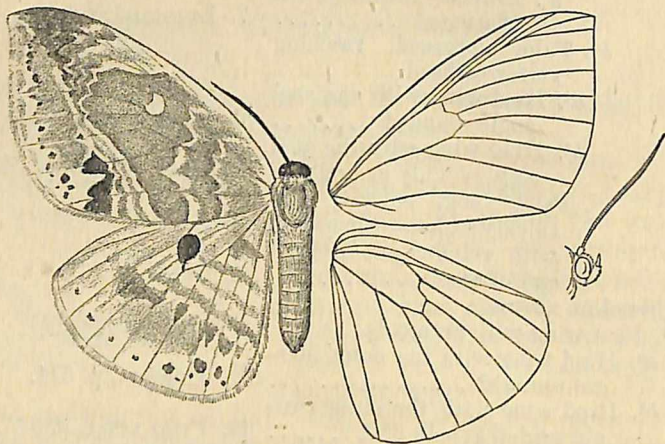


Fig. 225.—*Euchera substigmaria*, ♂. 1.

Larva with 10 prolegs: black with head and anal segment ringed with black; a sublateral white line; series of white and yellow lateral transverse streaks.

Hab. Dharmasāla; Nepal; Sikhim; Assam; Burma. *Exp.* 82 millim.

697. *Euchera rectificata*, *Wlk. Cat.* xxiv, p. 1142; *C. & S.* no. 3128.
Cyclidia patulata, *Wlk. Cat.* xxxv, p. 1537.
Cyclidia muricolaria, *Wlk. Cat.* xxvi, p. 1483; *C. & S.* no. 3124.

Head and thorax greyish brown. Fore wing greyish brown; two antemedial waved white lines, with traces of another between them; a similar postmedial set of lines, but doubly curved; a pale submarginal line, with a series of large brown spots beyond it connected by a waved line; a white spot at end of cell. Hind wing grey, irrorated with brown scales; medial and postmedial brown bands obsolete towards the costa; a submarginal series of brown spots connected by a waved line.

Hab. Sikhim; Nágas. *Exp.* 76–84 millim.

698. *Euchera pitmani*, *Moore, J. A. S. B.* lv, pt. 2, 1886, p. 99; *C. & S.* no. 3118.

Head, thorax, and abdomen white; frons black; antennæ ochreous. Wings white; fore wing with some fuscous marks on basal half of costa; a subbasal narrow line; a broad medial fuscous band, the discocellulars and veins crossing it white; a postmedial curved line and submarginal series of spots, beyond which is a

series of smaller black spots and fuscous series on margin. Hind wing white, with postmedial and submarginal series of fuscous spots; a series of black spots before the margin.

Hab. Tavoy. *Exp.*, ♂ 66, ♀ 74 millim.

Genus **MACROCILIX.**

Macrocilix, *Butl. Ill. Het.* vi, p. 18 (1886).

Type, *M. mysticata*, Wlk.

Range. Himalayas; Khási Hills; Borneo.

Palpi very minute; proboscis present. Mid tibia with one pair of spurs; hind tibia with two pairs. Fore wing with the apex rounded; the discocellulars highly angled; vein 6 from some way below the angle of cell; 7, 8, 9 stalked.

SECT. I. Antennæ with the branches long in male, short in female. Fore wing with veins 10 and 11 stalked and not forming an areole with 9.

699. *Macrocilix mysticata*, *Wlk. Cat.* xxvi, p. 1617; *Butl. Ill. Het.* vi, pl. 106, fig. 4; *C. & S.* no. 1258.

Head, thorax, and abdomen white; vertex of thorax and abdomen fulvous. Wings semitransparent white. Fore wing with a broad somewhat irregular golden-brown postmedial band from the subcostals to inner margin, with a white streak on the discocellulars and short streaks on veins 3 and 4; two pale lines on the band from the cell to inner margin; two submarginal

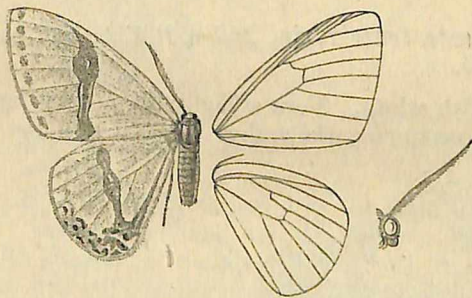


Fig. 226.—*Macrocilix mysticata*, ♂. 1.

lunulate fuscous interrupted bands. Hind wing similar; the band sending a tooth outwards near inner margin, and another along the inner margin halfway to the base with a silvery line on it; some silvery scales on the outer edge of the band near inner margin; a yellow patch on the outer margin near anal angle with three black specks on it.

Hab. Dharmasála; Sikhim. *Exp.* 42 millim.

SECT. II. Antennæ of male thickened and flattened by appressed serrations. Fore wing with veins 10 and 11 from cell; 10 anastomosing with 8 and 9 to form an areole.

700. *Macrocilix orbiferata*, *Wlk. Cat.* xxiv, p. 1126.

Argyris insignata, *Moore, P. Z. S.* 1867, p. 645; *C. & S.* no. 1262.

♂. Head, thorax, and abdomen white; antennæ ochreous. Fore wing white; a broad fuscous streak on basal half of costa; an antemedial irregular indistinct fuscous band; a similar post-medial broader band, its median portion traversed by a white line; a maculate submarginal band. Hind wing white; a postmedial band obsolescent towards costa, broad towards inner margin, and traversed by a white line; a yellow patch at anal angle, with sub-marginal and marginal series of dark spots and strigæ on it.

Hab. Sikkim; Bhutan; Khâsis; Borneo. *Exp.* 27 millim.

Genus **MACRAUZATA.**

Macrauzata, *Butl. Ill. Het.* vii, p. 43 (1889).

Type, *M. fenestraria*, *Moore.*

Range. Japan; N.W. Himalayas; Sikkim.

Palpi very minute; proboscis present. Antennæ with short pectinations in female; mid and hind tibiæ with very short terminal pairs of spurs. Frenulum present. Fore wing with the apex falcate and acute, the discocellulars highly angled; vein 6 from angle of cell; 7, 8, 9, 10 stalked and from some way before the angle.

701. *Macrauzata fenestraria*, *Moore, P. Z. S.* 1867, p. 639; *C. & S.* no. 3504.

♀. Yellowish white. Fore wing with a very large irregular hyaline patch occupying the end of the cell and the area beyond

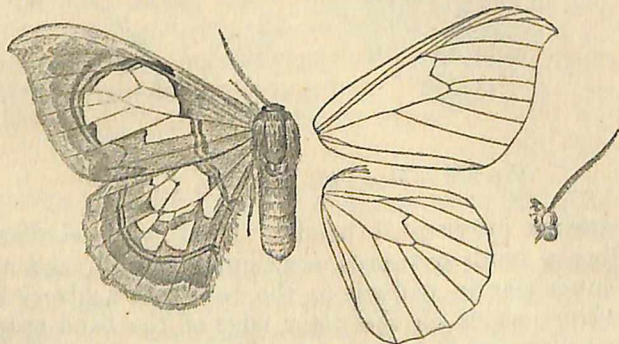


Fig. 227.—*Macrauzata fenestraria*, ♀. 1.

and below it, the veins crossing it yellowish; two fulvous lines

crossing the wing on the inner edge of the hyaline area and two running round its outer edge, then bent before the inner margin, some dark ferruginous on the upper edge of the patch; a waved submarginal pale line. Hind wing similar; the hyaline patch much more irregular.

Hab. Japan; Kángra; Sikhim. *Exp.* 60–66 millim.

Genus **AUZATA**.

Auzata, *Wlk. Cat.* xxvi, p. 1620 (1862).

Type, *A. semipavonaria*, *Wlk.*

Range. Himalayas.

Palpi slight and upturned; proboscis present. Antennæ slightly thickened and flattened. Frenulum present. Fore wing with the apex acute; outer margin angled slightly at vein 3; vein 6 from just below the angle of cell; veins 7, 8, 9, 10 stalked and from the angle. Hind wing angled at vein 3 and crenulate from thence to anal angle.

702. *Auzata semipavonaria*, *Wlk. Cat.* xxvi, p. 1620; *Butl. Ill. Het.* vi, pl. 106, fig. 1; *C. & S.* no. 1257.

Head, thorax, and abdomen white. Fore wing white; two waved and curved indistinct antemedial brownish-fuscos lines interrupted at the veins; two similar postmedial lines with a large “comma”-shaped yellow-brown mark on them from veins 1 to 5,

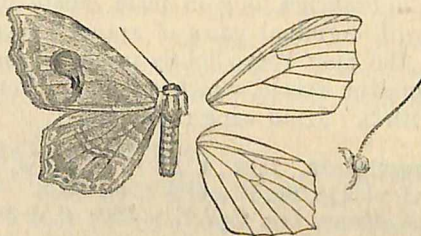


Fig. 228.—*Auzata semipavonaria*, ♂. $\frac{1}{2}$.

with a black spot centred with silvery blue on it at the beginning of the “tail”; submarginal and marginal similar lines. Hind wing white, with three similar pairs of lines, but without the spot; traces of a third line outside the postmedial pair.

Hab. Simla; Kulu; Sikhim. *Exp.*, ♂ 42, ♀ 50 millim.

Genus **DITRIGONA**.

Ditrigona, *Moore, Lep. Atk.* p. 58 (1879).

Type, *D. triangularia*, *Moore.*

Range. Sikhim.

Palpi minute, proboscis present. Antennæ with the branches rather short; mid tibia with one pair of long spurs, hind tibia

with two pairs. Frenulum present. Fore wing with the apex produced and acute; vein 6 from the areole, which is large and formed by vein 10 anastomosing with 8 and 9. Hind wing with the anal angle much produced and slightly lobed.

703. *Ditrigona triangularis*, Moore, *P. Z. S.* 1867, p. 612; *C. & S.* no. 4024.

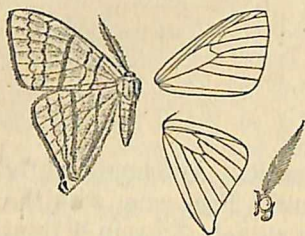


Fig. 229.—*Ditrigona triangularis*, ♂. $\frac{1}{2}$.

Head, thorax, and abdomen white. Fore wing white; two waved, slightly oblique, antemedial fuscous lines; a straight medial line and two waved postmedial lines; costa ochreous. Hind wing with an antemedial nearly straight line; a medial straight line and two postmedial slightly waved lines, all meeting near anal angle; a black spot on the anal lobe. Cilia of both wings fuscous.

Hab. Sikhim. *Exp.*, ♂ 36, ♀ 38 millim.

Genus TELDENIA.

Teldenia, Moore, *Lep. Ceyl.* ii. p. 119 (1882).

Type, *T. vestigiata*, Butl.

Range. Sikhim; Nāga Hills; Ceylon.

Palpi slender, reaching the vertex of head; proboscis present. Antennæ with the branches long in male, ciliate in female. Mid and hind tibiæ with terminal pairs of spurs. Frenulum present. Fore wing with the apex very slightly produced and acute; veins 6, 7, and 10 from the areole, which is long and formed by vein 9 anastomosing with 8. Hind wing rounded.

704. *Teldenia vestigiata*, Butl. *A. M. N. H.* (5) vi, 1880, p. 222; *id.* *Ill. Het.* vi, pl. 118, fig. 10; *C. & S.* no. 3601.

Teldenia alba, Moore, *Lep. Ceyl.* ii. p. 120; *C. & S.* no. 3600.

♂. Pure white; fore wings with a postmedial series of ochreous spots, inwardly bordered by dark lunules, the four upper spots placed in pairs, the three lower recurved towards the base; two indistinct interrupted waved lines beyond the spots, the inner line recurved towards base near inner margin; a series of marginal black specks.

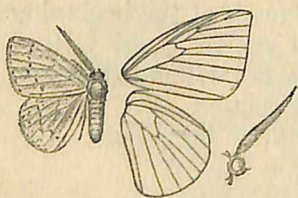


Fig. 230.—*Teldenia vestigiata*, ♂. $\frac{1}{2}$.

Larva green, with subdorsal series of purple spots and a lateral series of black spots; dorsal tubercles on 1st and 11th somites, and a slender process

on 3rd somite; a long slender process projecting backwards from 11th somite.

Hab. Sikhim; Nāgas; Ceylon. *Exp.* 25 millim.

Genus **LEUCODREPANA**, nov.

Type, *L. idæoides*, Hmps.

Range. Sikkim; Naga Hills.

Proboscis present; palpi porrect, slender, and reaching beyond the frons; antennæ thickened and flattened in both sexes. Mid tibiæ with one pair of long spurs, hind tibiæ with two pairs. Frenulum present. Fore wing with the apex somewhat acute; vein 6 given off after the angle of cell; 7 from end of areole, which is long, and formed by 9 and 10 anastomosing strongly with 8; 11 from the cell.

705. *Leucodrepana idæoides*, n. sp.

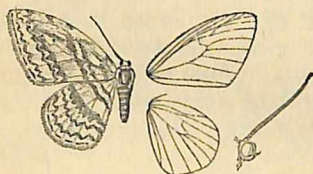


Fig. 231.—*Leucodrepana idæoides*, ♂. $\frac{1}{2}$.

Pure shining white; fore wing with an indistinct subbasal fuscous line; both wings with two oblique antemedial waved lines and two postmedial, angled below the costa of fore wing and bent towards inner margin of hind wing; a waved submarginal and fine marginal line.

Hab. Sikkim, 10,000 feet (Möller, Elwes). Exp. 33 millim. Type in coll. Elwes.

706. *Leucodrepana nivea*, n. sp.

♀. Differs from *idæoides* in being of a less shining white; fore wing with no subbasal line; the first pair of lines more oblique; the outer area with three waved lines at even distances apart.

Hab. Sikkim (Elwes). Exp. 31 millim. Type in coll. Elwes.

707. *Leucodrepana obliquilinea*, n. sp.

Differs from the two preceding species in having the first pair of lines exceedingly oblique, arising from near the apex, and almost straight; the three outer lines disposed as in *idæoides*, but almost straight.

Hab. Sikkim (Möller); Naga Hills, 6000 feet (Doherty). Exp., ♂ 30, ♀ 34 millim. Type in coll. Elwes.

Genus **DREPANA**.

Drepana, Schr. *Faun. Boica*, ii, 2, p. 155 (1802).

Albara, Wlk. *Cat.* xxxv, p. 1566 (1866).

Agnidra, Moore, *P. Z. S.* 1867, p. 618.

Peridrepana, Butl. *Ill. Het.* vii, p. 43 (1889).

Callidrepana, Feld. *Reis. Nov. Lep.* pl. 83, fig. 11, *Erkl.* p. 2 (1867).

Type, *D. falcataria*, Linn., from Europe.

Range. N. America; Europe; Japan; Himalayas; Nilgiris; Ceylon; Assam Hills; Burma; Sumatra; Borneo; Solomon Islands. Palpi slight and upturned; proboscis present. Frenulum present.

Fore wing with the apex generally produced and acute; veins 6 and 11 may be given off from the cell or from the areole, which may be formed by the anastomosis of veins 8, 9, and 10, or 8 and 9 only.

SECT. I. (*Drepana*). Fore wing with vein 10 given off after the areole; 11 from the cell. Antennæ bipectinate in male, ciliated in female; mid tibia with one pair of spurs, hind tibia with two pairs.

A. Fore wing with the apex falcate, the areole long.

708. *Drepana pallida*, Moore, *Lep. Atk.* p. 84; C. & S. no. 1239.

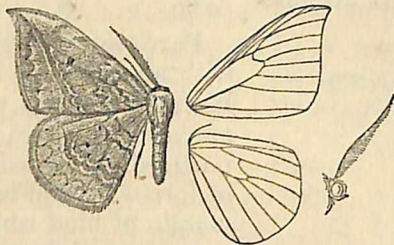


Fig. 232.—*Drepana pallida*, ♂. †.

Pale brown. Fore wing with traces of several antemedial lines; a dark spot at end of cell; an oblique fulvous band from near apex to inner margin beyond the middle, slightly bent near inner margin; a series of indistinct submarginal dark specks. Hind wing similar, the fulvous band curved.

Hab. Sikhim. *Exp.*, ♂ 44, ♀ 60 millim.

709. *Drepana hyalina*, Moore, *P. Z. S.* 1888, p. 401; *Butl. Ill. Het.* vii, pl. 125, fig. 1.

White, with a slight fuscous tinge. Fore wing crossed by two waved fuscous antemedial lines; a dark speck at lower angle of cell; two waved lines beyond the cell, the outer line expanding into a band towards inner margin; submarginal and marginal series of indistinct specks. Hind wing with one antemedial, two post-medial, and one submarginal indistinct waved lines.

In a Kulu specimen the markings are almost obsolete.

Hab. Dharmasala; Kulu. *Exp.* 43 millim.

710. *Drepana rufofasciata*, n. sp.

Head, thorax, and abdomen pale brown. Fore wing pale brown, with a broad median rufous band occupying half the wing, and bearing two white spots on the costa, from which indistinct pale waved lines proceed to inner margin; a round grey-centred dark spot at lower angle of cell; a submarginal series of black specks. Hind wing pale brown, with traces of two antemedial pale lines; a black speck at end of cell; three postmedial waved lines.

Hab. Sikhim (*Elwes*). *Exp.* 43 millim. Type in coll. Elwes.

711. *Drepana ochreipennis*, n. sp.

Reddish ochreous, clouded with reddish brown. Fore wing crossed by ante- and postmedial whitish narrow bands or series of small spots; a dark speck at end of cell. Hind wing with a speck at end of cell, and a postmedial white band or series of spots.

Hab. Sikkim (Möller). *Exp.*, ♂ 28, ♀ 30 millim. Type in coll. Elwes.

B. Fore wing with the apex not falcate.

712. *Drepana quinnaria*, Moore, *P. Z. S.* 1867, p. 618; *C. & S.* no. 3142.

♂. White, with a very slight ochreous tinge; the branches of antennæ ochreous; fore wing crossed by about seven very indistinct pale waved lines; hind wing by one medial and three post-medial similar lines.

♀. Purer white, with the lines slightly better marked.

Hab. Sikkim, 7000–10,000 feet. *Exp.*, ♂ 38, ♀ 36 millim.

713. *Drepana innotata*, n. sp.

♀. Head, thorax, and abdomen white. Wings hyaline, with a few scattered white scales and absolutely without markings.

Hab. Kulu (Graham-Young). *Exp.* 36 millim. Type in coll. Elwes.

C. Fore wing falcate; the areole short; vein 6 from angle of cell.

714. *Drepana fasciata*, n. sp.

♀. Head, antennæ, and legs brown; thorax and abdomen white. Wings silvery white, crossed by ante- and postmedial straight ferruginous lines; a waved submarginal indistinct line; cilia and costa of fore wing ferruginous.

Hab. Sikkim (Möller). *Exp.* 48 millim. Type in coll. Elwes.

SECT. II. (*Albara*). Fore wing with vein 10 from end of areole;
11 from the cell.

A. Antennæ simple in female; the distal portion serrate in male.

715. *Drepana specularia*, *Wlk. Cat.* xxxv, p. 1553; *Bull. Ill. Het.* vi, pl. 106, fig. 3; *C. & S.* no. 1255.

Red-brown; the head chestnut. Fore wing with traces of two antemedial and two postmedial waved lines; a pale spot in the cell, two below the origin of vein 2, a large patch in and beyond the end of cell, the discocellulars and veins 3 and 4 where they cross it dark; postmedial and submarginal indistinct waved lines.



Hind wing with a semihyaline patch in and beyond the end of cell, the veins crossing it dark; traces of two antemedial, two postmedial, and a submarginal dark waved line.

Hab. Sikkim. *Exp.* 46 millim.

716. *Drepana discipilaria*, Moore, *P. Z. S.* 1867, p. 619; *C. & S.* no. 1253.

Agnidra usta, *Butl. Ill. Het.* vi, p. 17, pl. 106, fig. 2; *C. & S.* no. 1256.

♂. Differs from *specularia* in the head being dark brown; the pale patches at end of cell of both wings replaced by a round dark spot with grey centre.

Hab. Sikkim. *Exp.* 44 millim.

717. *Drepana perhamata*, n. sp.

♀. Fore wing with the apex extremely produced. Head, thorax, and legs dull red-brown. Fore wing with a broad purplish-fuscous medial band with waved edges; an indistinct waved postmedial line; the outer area suffused with fuscous, the nervules crossing it pale. Hind wing with the basal area fuscous, its outer edge waved; two pale specks at end of cell; an indistinct postmedial waved line.

♂. Much more uniform purple; some brown appearing near the postmedial waved lines of both wings.

Hab. Nāga and Jaintia Hills. *Exp.*, ♂ 38, ♀ 42 millim. Type in coll. Elwes.

718. *Drepana muscularia*, *Wlk. Cat.* xxxv, p. 1554; *C. & S.* no. 1254.

♂. Dark purple-grey; the vertex of head fulvous. Fore wing with the costa fulvous; antemedial, postmedial, and submarginal waved dark lines; a large patch of vinous red occupying the lower half of outer area. Hind wing similar, the whole outer area vinous.

Hab. Sikkim. *Exp.* 42 millim.

719. *Drepana violacea*, *Butl. Ill. Het.* vii, p. 42, pl. 124, fig. 7.

♂. Pale purplish grey; the head brown. Fore wing with the costa fulvous; both wings with traces of a faint antemedial line and an oblique well-defined fulvous postmedial line, which becomes medial on the hind wing; cilia pale brown at tips.

Hab. Dharmasāla. *Exp.* 38 millim.

720. *Drepana lilacina*, Moore, *P. Z. S.* 1888, p. 401; *Butl. Ill. Het.* vii, pl. 124, figs. 8, 9; *C. & S.* no. 1238 B.

Drepana simillima, Moore, *P. Z. S.* 1888, p. 402; *C. & S.* no. 1242 A.

Pale brownish grey; the antennæ darker. Fore wing with an indistinct oblique antemedial chestnut line; a chestnut postmedial line from apex to inner margin beyond the middle; some dark



submarginal specks. Hind wing with subbasal and medial straight chestnut lines.

One specimen from Sikkim has the chestnut lines very broad and prominent, and a chestnut band at middle of abdomen.

Hab. Dharmasála; Kángra; Sikkim. *Exp.* 40 millim.

721. *Drepana orphnina*, n. sp.

♂. Uniform dark purplish grey. Fore wing with traces of a dark line on discocellulars, and two antemedial, three postmedial, and one submarginal line. Hind wing with traces of one antemedial, three postmedial, and one submarginal line. Underside pale, the costa of fore wing tinged with red.

Hab. Nága Hills, 6000 feet (*Doherty*). *Exp.* 32 millim. Type in coll. Elwes.

722. *Drepana prunicolor*, Moore, *Lep. Atk.* p. 288.

♂. Dark purplish grey. Fore wing with an acutely angled yellowish antemedial line; a similar postmedial line met at the angle by a yellow line from the apex; a pale submarginal line. Hind wing with slightly curved subbasal, medial, and submarginal yellowish lines.

Hab. Sikkim. *Exp.* 36 millim.

***723. *Drepana postica*, Moore, *Lep. Atk.* p. 84, pl. 2, fig. 8; C. & S. no. 1241.**

♂. Head, thorax, abdomen, and fore wing purplish brown, the last with the base and outer angle yellowish; an indistinct antemedial line; an oblique dark line from near the apex to centre of inner margin; a submarginal series of specks. Hind wing pale yellow, with ante- and postmedial curved darker lines; some submarginal specks; both wings with a white speck at end of cell.

Hab. Sikkim. *Exp.* 37 millim.

724. *Drepana vinacea*, Moore, *Lep. Atk.* p. 85; C. & S. no. 1244.

♂. Head, thorax, and abdomen dark purplish grey. Fore wing reddish brown, suffused with purplish on inner and outer areas; a double oblique line from near the apex to inner margin beyond the middle; an indistinct waved submarginal line. Hind wing entirely suffused with purplish; the double line medial; traces of two submarginal lines. Underside ochreous, with a speck at end of cell of each wing; purplish blotches beyond the oblique line of the fore wing; hind wing with a curved medial line.

Hab. Sikkim. *Exp.* 42 millim.

725. *Drepana fenestraria*, Moore, *P. Z. S.* 1867, p. 618; C. & S. no. 3141.

♀. Head, thorax, and abdomen pale ochreous. Fore wing pale

ochreous, slightly suffused with fuscous; an oblique black line from lower angle of cell to inner margin; an oblique postmedial line from apex; a trifid hyaline patch before the postmedial line from vein 2 to 5, the latter being bent; a lunulate submarginal pale line; a marginal fine dark line. Hind wing pale ochreous, with straight ante- and postmedial lines and wavy submarginal line, the area between the two latter suffused with fuscous; a fine marginal line.

Hab. Sikhim. *Exp.* 36 millim.

726. *Drepana trilinearis*, Moore, *P. Z. S.* 1867, p. 618; *C. & S.* no. 3143.

♂. Differs from *fenestraria* in the head being black. Fore wing with the basal and costal areas suffused with fuscous; no oblique line from lower angle of cell; no hyaline patch; vein 5 straight, the postmedial line angled below the costa; the submarginal line of both wings straight. Hind wing with the inner area slightly suffused with fuscous; the ante- and postmedial lines indistinct.

Hab. Sikhim. *Exp.* 32 millim.

727. *Drepana excisa*, n. sp.

♂. Fore wing with the outer margin deeply excised below the apex; hind wing angled at vein 4; hind tibiae with one pair of spurs.

Differs from *fenestraria* in not being suffused with fuscous: fore wing with the hyaline patch extending from veins 2 to 4; vein 5 straight; the postmedial line curved. Hind wing with the submarginal line straight.

Hab. Sikhim; Nāga Hills, 1500 feet (*Doherty*). *Exp.* 28 millim. Type in coll. Elwes.

B. (*Callidrepana*). *Antennæ bipectinated in both sexes, the branches long in the male.*

723. *Drepana argenteola*, Moore, *Lep. E. I. Co.* p. 369 (1859).

Drepana patrana, Moore, *P. Z. S.* 1865, p. 816; *C. & S.* no. 1240.

Drepana biocularis, Moore, *Lep. Atk.* p. 84, pl. 2, fig. 9; *C. & S.* no. 1236.

Drepana bracteata, *Hmps.* *Ill. Het.* ix, ined., pl. 160, fig. 5.

Head fulvous; thorax and abdomen pale fawn-colour. Wings pale or dark fawn-colour. Fore wing with traces of an antemedial wavy line; a dark patch on the discocellulars, often wanting; a double brown line from the apex to inner margin beyond the middle; a series of submarginal dark specks on the veins; the area in the cell and below the costa, the veins, the outer edge of the oblique line, and the outer margin spangled with brilliant bluish-silver scales. Hind wing with a double straight medial line not reaching the



costa; a postmedial series of specks; silvery scales on outer edge of the line and on outer margin.

The form *bracteata* from Ceylon is much darker, with the discocellular patch of the fore wing broken up into three small spots, and with more silvery irroration.

Hab. Sikkim; Burma; Ceylon; Java. *Exp.*, ♂ 35-45, ♀ 50 millim.

729. *Drepana argentilinea*, *Wlk. Cat.* xxxii, p. 394.

Callidrepana argentifera, *Druce, P. Z. S.* 1888, p. 574, pl. 29, fig. 3.

♂. Ochreous white. Fore wing with a dark line with a few silvery scales on it along basal two-thirds of costa; two dark streaks at end of cell; an elongate black spot on discocellulars with some silvery scales on it; a dark streak from upper angle of cell to near apex, then curved round and waved to inner margin and with silvery scales on it; an indistinct streak beyond the cell; a marginal silvery line; the marginal area slightly suffused with orange. Hind wing with a silvery submarginal line towards anal angle, with orange suffusion between it and margin.

Hab. Burma; Singapore; Sula; Solomons. *Exp.* 26 millim.

730. *Drepana pulcherrima*, n. sp.

♂. Head bright chestnut; thorax and abdomen ochreous brown. Fore wing pale olive-green suffused with chestnut, especially on inner basal area; a waved and angled indistinct antemedial black line; a postmedial oblique chestnut line from costa before apex to inner margin beyond the middle, with an indistinct black line before it angled below the costa; a submarginal series of black specks; numerous silvery and a few black scales below the costa, on inner basal area, and on each side of the oblique line. Hind wing with the costal area yellow, without markings; the inner half of wing chestnut-brown, irrorated with silvery scales; black ante- and postmedial lines, the latter followed by a red-brown band, then a black-brown band, and a marginal red-brown band with some yellow lunules at anal angle; both wings with a marginal silvery line. Cilia of both wings red-brown tipped with silver. Under-side yellow, with a medial black band across the hind wing.

Allied to *D. micacea*, *Wlk.*, from Borneo.

Hab. Tenasserim Valley, Burma (*Doherty*). *Exp.* 42 millim. Type in coll. Druce.

731. *Drepana duplex*, *Moore, P. Z. S.* 1865, p. 816, pl. 43, fig. 8; *C. & S.* no. 1237.

♀. Head and thorax purplish grey; abdomen and fore wing pale brown, suffused with purplish grey. Fore wing with two antemedial waved dark lines; a dark oblique line from the apex to centre of inner margin, the outer line deep black; a pale apical

patch with dark outline irrorated with brown, but without purplish suffusion; the marginal area similar, with a brown submarginal line. Hind wing pale brownish ochreous; a broad purplish antemedial band with dark outer edge; the outer area striated with brown. Cilia of both wings dark.

Hab. Sikhim. *Exp.* 68 millim.

732. *Drepana specularis*, Moore, *P. Z. S.* 1879, p. 407; *id. Lep. Ceyl.* ii, pl. 124, fig. 2; *C. & S.* no. 1243.

Head, thorax, and abdomen pale ochreous brown; the vertex of head and shaft of antennæ white. Fore wing pale ochreous brown; an indistinct antemedial irregular fuscous band; the outer area suffused with fuscous, leaving the veins pale; a pale oblique line from near the apex to inner margin beyond the middle; a submarginal series of black spots. Hind wing wholly suffused with fuscous, except the base and apex; the oblique line medial; two hyaline spots beyond the cell between veins 4 and 6; the submarginal spots indistinct.

Hab. Sikhim; Ceylon. *Exp.*, ♂ 34, ♀ 66 millim.

733. *Drepana flava*, Moore, *Lep. Atk.* p. 84, pl. 2, fig. 7; *C. & S.* no. 1238.

♀. Chrome-yellow; head and antennæ fulvous. Fore wing with an indistinct dark waved antemedial line; a speck at end of cell; two short waved lines beyond lower angle of cell; a waved postmedial line; two series of dark submarginal lunules, two of the outer series below the apex having white centres. Hind wing with a dark spot at end of cell; a waved postmedial line and two submarginal series of lunules.

Hab. Sikhim. *Exp.* 58 millim.

SECT. III. Fore wing with vein 11 given off from the middle of the areole, 10 from the end of it; mid tibia with no spurs; hind tibia with a terminal pair.

A. *Antennæ of female ciliate; of male bipectinate, the distal portion serrate.*

734. *Drepana albonotata*, Moore, *Lep. Atk.* p. 83 (1879); *C. & S.* no. 1235.

Callidrepana ochrea, Butl. *Ill. Het.* vi, p. 17, pl. 105, fig. 10 (1886).

♂. Head, thorax, and abdomen yellow. Wings chrome-yellow. Fore wing with the costa dark; traces of an antemedial waved dark line; a dark speck in the cell, and two silvery-white specks at end of it, the speck at lower angle on a fulvous ground; traces of waved postmedial and submarginal dark lines; a purplish marginal patch below the apex, the cilia beyond it rufous, all the

markings irrorated with silvery scales. Hind wing with traces of antemedial, postmedial, and submarginal waved dark lines.

The form *ochrea* differs in having an orange tinge, and the lines almost obsolete, as are the silvery-white specks at end of cell of both wings.

In the Nilgiri specimen the apex of fore wing is rather more produced.

Hab. Sikkim; Nilgiris. *Exp.* 34–38 millim.

735. *Drepana sadana*, Moore, *P. Z. S.* 1865, p. 817; *C. & S.* no. 1242.

♂. Head, thorax, and abdomen yellow; frons and antennæ brown. Fore wing luteous yellow; traces of an antemedial waved dark line; an orange spot in the cell and one at end of it; a large purplish or red-brown patch beyond the lower angle of cell, with two dark spots on it and some chestnut on its upper edge; a submarginal series of indistinct spots, two below the apex being prominent; a chestnut patch on outer margin below the apex. Hind wing with indistinct antemedial, postmedial, and submarginal waved dark lines.

The patch of fore wing is very variable in extent, being sometimes joined to the marginal patch and occupying the whole outer area except the costa, while sometimes both are almost absent.

Hab. Sikkim. *Exp.* 40 millim.

736. *Drepana xanthoptera*, n. sp.

♂. Head, thorax, and abdomen reddish yellow. Wings bright ochreous. Fore wing with a curved red-brown antemedial line; an oblique line from the costa before the apex to centre of inner margin; a submarginal series of dark specks, the two nearest the apex with white spots inside them; apex and outer margin suffused with red-brown. Hind wing with ante- and postmedial red-brown lines; a white speck at end of cell; a submarginal series of dark specks.

Hab. Nāga Hills, 1500 feet (*Doherty*); Khāsi Hills. *Exp.* 30–36 millim. Type in coll. Elwes.

737. *Drepana ferrea*, *Hmps.* *Ill. Het.* ix, ined., pl. 160, fig 15.

♀. Chestnut-brown, with a purplish tinge. Fore wing with indistinct maculate ante- and postmedial fuscous bands; two white dark-outlined specks at end of cell; traces of a submarginal series of dark specks; a dark blotch on outer margin below the apex. Hind wing with the markings similar; one white speck at end of cell.

Hab. Ceylon. *Exp.* 42 millim.

738. *Drepana quadripunctata*, *Wlk. Journ. Linn. Soc.* vi, p. 175.

Head red-brown; thorax, abdomen, and wings reddish ochreous, the last with waved ante- and postmedial lines and two black

specks on the discocellulars; the postmedial line of fore wing angled beyond the cell, the angle ending in a dark speck on vein 6. Underside with the black specks and postmedial line prominent on both wings.

Hab. Nāga Hills; Perak. *Exp.*, ♂ 26, ♀ 38 millim.

739. *Drepana vira*, Moore, *P. Z. S.* 1865, p. 817; *C. & S.* no. 1245.

Head, thorax, and fore wing violaceous grey; abdomen and hind wing yellow. Fore wing with an antemedial erect red-brown line arising from a dark spot on the costa; a similar postmedial spot; a white speck at upper angle of cell and two at lower angle; an oblique submarginal nearly straight red-brown line; cilia chestnut. Underside yellow.

Hab. Sikhim. *Exp.* 30 millim.

B. Antennæ bipectinate to apex in male.

740. *Drepana fulva*, n. sp.

♂. Bright fulvous yellow; head and collar bright ferruginous. Fore wing with traces of two dark specks beyond the cell in the interspaces between veins 2 and 4; the cilia fuscous, greyish at tips. Hind wing uniform fulvous yellow.

♀. Much browner.

Hab. Sikhim (*Elwes*). *Exp.* 44 millim. Type in coll. *Elwes*.

741. *Drepana hyalinata*, Moore, *P. Z. S.* 1867, p. 638; *C. & S.* no. 3506.

Fore wing with the apex rounded, the outer margin slightly angled.

♀. Antennæ bipectinate, the branches long. Head, thorax, and abdomen grey; vertex of thorax and abdomen suffused with rust-red. Fore wing hyaline; the basal area sparsely clad with rust-red scales, and terminating in an angle at lower extremity of cell; traces of an irregular hyaline antemedial line; an irregular submarginal rust-red band outlined in black, curved and narrow below the costa and angled at vein 3. Hind wing hyaline, with some rust-red scales on inner margin, and a rust-red lunulate submarginal band outlined in black.

Hab. Sikhim. *Exp.* 32 millim.

Genus *SPICA*.

Spica, *Swinh.* *P. Z. S.* 1889, p. 424.

Type, *S. luteola*, *Swinh.*

Range. Sikhim.

Palpi of moderate length, the first two joints thickly scaled; proboscis present. Antennæ of male with the branches short and

close together; mid tibiae with one pair of spurs, hind tibiae with two pairs. Fore wing with vein 6 from just above angle of cell; 7 and 10 from the areole, 8 and 9 from end of it; frenulum present.

742. *Spica luteola*, *Swinh. P. Z. S.* 1889, p. 424, pl. 44, fig. 10.

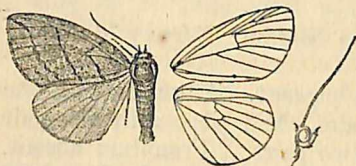


Fig. 233.—*Spica luteola*, ♂. 1.

Hab. Sikkim. *Exp.* 34 millim.

Head, thorax, and abdomen orange-yellow. Fore wing yellow, irrorated with orange scales; an angled ferruginous antemedial line; an oblique postmedial line; reniform outlined with ferruginous; a curved submarginal line; an oblique apical streak. Hind wing pale ochreous.

Genus THYMISTADA.

Thymistada, *Wlk. Cat.* xxxii, p. 515 (1865).

Type, *T. tripunctata*, *Wlk.*

Range. Sikkim.

Palpi slender, upturned and reaching vertex of head; proboscis present. Antennae with the branches long in male. Mid tibia with one pair of long spurs; hind tibia with two pairs. Frenulum present. Fore wing with the apex falcate and pointed; outer margin angled at vein 3; veins 6, 7, and 10 from the areole, which is large and formed by the anastomosis of 8 and 9. Hind wing with the inner margin deeply excised at anal angle.

743. *Thymistada tripunctata*, *Wlk. Cat.* xxxii, p. 515; *C. & S.* no. 1234.

Erosia cervinaria, *Moore, P. Z. S.* 1867, p. 646; *C. & S.* no. 3052.

Head red-brown; thorax, abdomen, and fore wing dark purplish brown; the last with waved dark antemedial, postmedial, and submarginal lines, in some specimens, with a few grey scales on their outer edges; three dark specks on the discocellulars; costa and outer margin red-brown; cilia black, with pale tips. Hind wing pale fuscous; a dark patch at anal angle, with a bent line of white scales on it;

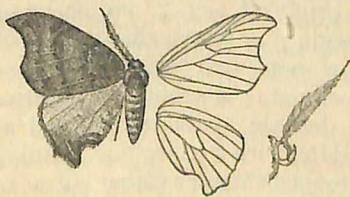


Fig. 234.

Thymistada tripunctata, ♂. 1.

cilia pale at apical area, black with pale tips towards anal angle.

♀. Paler.

There is a large paler form also from Sikkim.

Hab. Sikkim. *Exp.* 36-40 millim.

Genus **DEROCA**.

Deroca, *Wlk. Cat.* iv, p. 822 (1855).

Type, *D. hyalina*, *Wlk.*

Range. Japan ; N.W. Himalayas ; Sikkim ; Nágas ; Manipur ; Pegu.

Palpi short and slight ; proboscis present. Antennæ with the branches long in male, short in female. Mid tibia with one pair of minute spurs, hind tibia with two pairs. Frenulum absent. Fore wing with apex rounded ; vein 6 from the areole, 7 and 10 from the end of it. Hind wing with vein 8 anastomosing strongly with 7.

744. *Deroca hyalina*, *Wlk. Cat.* iv, p. 823 ; *C. & S.* no. 899.

Head, thorax, and abdomen blackish, sparsely covered with white hair. Wings hyaline ; fore wing with traces of two antemedial waved lines, and both wings with two postmedial and one submarginal waved line ; a series of marginal spots and a marginal more or less prominent dark line.

There is a small less completely hyaline form from Sikkim that may be distinct.

Hab. N.W. Himalayas ; Sikkim ; Nágas ; Manipur ; E. Pegu. *Exp.* 34-44 millim.

745. *Deroca inconclusa*, *Wlk. Cat.* vii, p. 1727.

Deroca maculata, *Moore, P. Z. S.* 1872, p. 575 ; *C. & S.* no. 900.

Differs from *hyalina* in the wings being clothed sparsely with

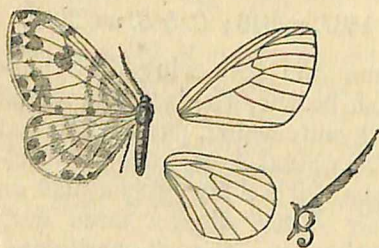


Fig. 235.—*Deroca inconclusa*, ♂. †.

white hair. Fore wing with two black spots below the costa on basal area ; two below them in and below the cell ; a series of three antemedial spots, on costa, at origin of vein 2, and on inner margin ; a postmedial series of four spots, two being on the discocellulars ; a submarginal series of dentate spots interrupted at middle, with a white line running through them ; three pairs of marginal spots. Hind wing with two indistinct postmedial maculate bands ; a black spot at apex, a pair at middle of outer margin, and a pair at anal angle.

Hab. Japan ; N.W. Himalayas ; Nágas ; Manipur. *Exp.*, ♂ 33, ♀ 36-43 millim.

Genus **PHALACRA.**

Phalacra, *Wlk. Cat.* xxxv, p. 1638 (1866).

Type, *P. vidhisara*, Wlk.

Range. India and Ceylon.

Palpi short and slight; proboscis present. Antennæ serrate in male, thickened and flattened in female. Mid tibia with one pair of long spurs, hind tibia with two pairs. Frenulum absent. Fore wing produced, the apex acute; vein 6 from below the angle of cell; 7 from the areole which is formed by 9 and 10 anastomosing with 8. Hind wing with the outer margin straight from anal angle to vein 6, where it is angled.

SECT. I. Wings with the outer margins not excised
below the apices.

746. *Phalacra vidhisara*, *Wlk. Cat.* xxi, p. 319; *Moore, Lep. Ceyl.* iii, pl. 201, figs. 1, 1 a (larva); *C. & S.* no. 4011.

Phalacra metagonaria, *Wlk. Cat.* xxxv, p. 1639.

Pale reddish brown, sparsely irrorated with black scales. Fore wing with traces of an antemedial waved black line; postmedial and submarginal series of black specks. Hind wing with an in-

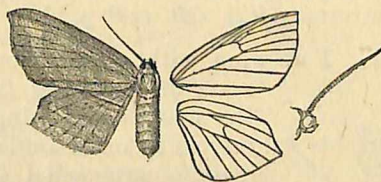


Fig. 236.—*Phalacra vidhisara*, ♀. 1.

distinct subbasal line; a double medial line; postmedial and submarginal series of black specks. Cilia of both wings traversed by a black line.

Larva fusiform, the head broad; lateral and dorsal setæ and prolonged anal setaceous spines; colour green, with a dorsal pink band laterally bordered by yellow, and two red lines.

Pupa purple-brown, covered with white bloom.

Hab. Bombay; Calcutta; Nilgiris; Ceylon. *Exp.*, ♂ 28, ♀ 38 millim.

SECT. II. Both wings with the outer margins excised
below the apices.

747. *Phalacra excisa*, n. sp.

♀. Grey-brown. Fore wing with the outer margin excised below the apex and angled at vein 4; traces of numerous waved

lines; a black spot in the cell; a pale postmedial band with waved edges; a dark speck on the costa before the apex. Hind wing paler, with the lines nearly straight, two antemedial, four postmedial, and one submarginal line being prominent, the outer margin excised between the apex and the much-produced angle at vein 6.

Hab. Sikkim. *Exp.* 36 millim. Type in coll. Knyvett.

Genus DRAPETODES.

Drapetodes, *Guen. Sp. Gén. Léop. Phal.* i, p. 424 (1857).

Type, *D. mitaria*, *Guen.*

Range. Sikkim; Sylhet; Nágas; Ceylon; Singapore.

Palpi slender and upturned, reaching vertex of head, the third joint short; proboscis present. Antennæ thickened and flattened in both sexes. Legs naked; mid tibia with one pair, hind tibia with two pairs of long spurs. Frenulum absent. Fore wing with the apex rounded; vein 6 from below the angle of cell; 7 from the angle; 8, 9, 10 stalked.

748. *Drapetodes mitaria*, *Guen. Sp. Gén. Léop. Phal.* i, p. 424; *C. & S.* no. 3590.

Drapetodes fratercula, *Moore, Lep. Ceyl.* iii, p. 541, pl. 200, figs. 1, 1 a (larva); *C. & S.* no. 3589.

Anisodes? *platycerata*, *Wlk. Cat.* xxvi, p. 1586.

Fulvous yellow. Fore wing with a plumbeous line below the costa of fore wing from the base to the apex, then passing inside the outer margin to outer angle; two indistinct dentate antemedial lines; two dark specks at end of cell; the area just beyond the cell suffused with purplish grey; three obliquely-waved and curved lines from the costa near apex to centre of inner margin, where they almost meet; the area near outer angle suffused with purplish grey. Hind wing with two subbasal lines; a broad medial purplish-grey band with dark edges, three waved lines beyond it, and a leaden submarginal line.

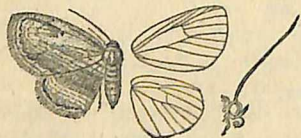


Fig. 237.

Drapetodes mitaria, ♂. 1.

The form *fratercula*, from Sikkim, the Nágas, and Ceylon, has the basal area of both wings, the apex of fore wing, and outer area of hind wing very pale yellow, and all the markings well defined; the meso- and metathorax and abdomen pale, the last with dark bands.

Larva pale salmon-pink; head pale yellow, with two brown transverse bands; anal somite tapering to a bifid point, each somite with six small setaceous glandular spines. Dorsal surface of 1st, 2nd, and 3rd somites dull green, of 4th, 5th, 10th, and 11th dark brown; lateral area of 6th to 9th yellow; a lateral series of six

dark brown diagonal stripes. Spins a cocoon in a rolled-up leaf ; pupa covered with white bloom.

Hab. Sikhim ; Sylhet ; Nágas ; Ceylon ; Singapore. *Exp.*, ♂ 28, ♀ 32 millim.

Genus **CILIX**.

Cilix, *Leach*, *Edinb. Encycl.* ix, p. 134 (1815).

Euclea, *Hübner*, *Verz.* p. 149 (1818).

Type, *C. glaucata*, Scop.

Range. N. America ; Europe ; Himalayas.

Proboscis absent ; antennæ of male bipectinated, the branches short, of female serrate. Fore wing with veins 6 and 7 from angle of cell ; 8, 9, 10 stalked. Hind wing with vein 8 anastomosing with 7 beyond the cell.

In American and European specimens the palpi are minute and porrect ; the hind tibiæ have two pairs of spurs ; fore wing with vein 7 separate from 8, 9, 10. In Himalayan specimens the palpi are absent ; the hind tibiæ have but one pair of spurs, and vein 7 of the fore wing is bent upwards and almost, or quite, anastomoses with 8, 9, 10.

749. *Cilix glaucata*, Scop. *Ent. Carn.* p. 221.

Bombyx ruffa, *Linn.* *Syst. Nat.* i, 2, p. 1068.

Bombyx compressa, *Fabr.* *Gen. Ins.* p. 279.

Geometra modesta, *Naturf.* xiii, 27, pl. 3, fig. 4.

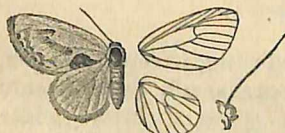


Fig. 238.

Cilix glaucata, ♀. 1.

Head and thorax fuscous ; collar and tegulæ pure white ; abdomen white, slightly ringed with fuscous. Fore wing pure shining white ; a large leaden patch on centre of inner margin irrorated with white, with some olive on its upper edge and above it ; a more or less obsolete fuscous band from beyond the upper angle of cell to the leaden patch ; raised ridges of white scales on end of median nervure and origins of veins 2, 3, 4 ; a submarginal fuscous line from vein 6 to inner margin, with a series of marginal leaden lunules beyond it ; cilia fuscous. Hind wing white, with a marginal fuscous lunular band.

Hab. N. America ; Europe ; Simla ; Dalhousie. *Exp.*, ♂ 24, ♀ 26 millim.

Genus **ORETA**.

Oreta, *Wlk.* *Cat.* v, p. 1166 (1855).

Cobanilla, *Moore*, *Lep. Ceyl.* ii, p. 120 (1883).

Type, *O. extensa*, Wlk.

Range. N. America ; Japan ; throughout India, Ceylon, and Burma ; Java.

Proboscis absent. Antennæ serrate in both sexes or bipectinate in male. Legs fringed with hair. Frenulum absent. Fore wing produced and falcate, the apex rounded; vein 6 from angle of cell; 7 and 8 stalked; 9, 10, 11 stalked, 9 anastomosing shortly with 7 and 8.

SECT. I. (*Oreta*). Palpi minute; mid and hind tibiæ without spurs.

A. *Antennæ with the serrations not coalescing.*

750. *Oreta extensa*, *Wlk. Cat. v*, p. 1166; *Moore, Lep. Ceyl. ii*, pl. 124, figs. 3, 3a; *C. & S. no. 1246.*

Oreta suffusa, *Wlk. Cat. v*, p. 1167.

Head and legs bright orange or scarlet; thorax and abdomen yellow, with a pink tinge. Both wings yellow, suffused with pinkish brown, sometimes uniformly, but generally the basal area of

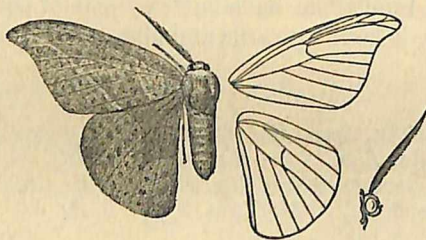


Fig. 239.—*Oreta extensa*, ♂. †.

fore wing and the whole outer area of hind wing, except the apex, is not suffused; both wings with numerous small, dark, evenly distributed and more or less prominent spots, and two white specks on the discocellulars. Fore wing with a yellow oblique line from the apex to inner margin beyond the middle, and a fuscous spot at outer angle.

The form *suffusa* is much duller in colour and suffused with brown.

Larva spins a cocoon in a rolled-up leaf.

Hab. The whole of India, Ceylon, and Burma; Java. *Exp.*, ♂ 38–43, ♀ 40–54 millim.

751. *Oreta sanguinea*, *Moore, Lep. Atk. p. 85*; *C. & S. no. 1249.*

♀. Differs from *extensa* in having the thorax and abdomen slightly suffused with pale crimson. Fore wing with the basal two-thirds pale crimson, followed by a broad yellow band with irregular edges; the marginal area greyish fuscous at apex and outer angle, pale crimson at middle. Hind wing with the basal half and apex pale crimson; the outer half yellow.

Hab. Sikkim. *Exp.* 50 millim.

752. *Oreta violacea*, *Hmps.* *Ill. Het.* viii, p. 62, pl. 141, fig. 18.

♀. Differs from *extensa* in being yellow, with a purplish, not pinkish, brown tinge; the collar white; head and legs less brilliant orange; fore wing with the whole basal area yellowish; the oblique yellow line from the apex curved; the apex greyish. Hind wing suffused with purplish, the base, a medial line, and a patch on outer margin yellowish.

Hab. Nilgiris, S. slopes, 3000 feet. *Exp.* 28 millim.

753. *Oreta obtusa*, *Wlk. Cat.* v, p. 1167; *C. & S.* no. 1247.

Oreta vatama, *Moore, P. Z. S.* 1865, p. 816; *C. & S.* no. 1250.

♂. Differs from *extensa* in the frons and legs being more brilliant scarlet; the thorax and abdomen yellowish. Wings with the ground-colour yellowish, evenly striated with brown. Fore wing with a bright chestnut curved line from apex to centre of inner margin, the area within it suffused with pinkish-brown, except a patch on base of inner margin bounded by an indistinct dark line; a pinkish-brown patch on centre of outer margin; the apex dark, with some white scales on the origin of the oblique line. Hind wing with a broad medial pinkish-brown band with dark edges. Both wings with some white on the discocellulars; cilia of fore wing and at apex of hind wing red.

♀. More suffused with brown; the line from apex of fore wing less curved.

Hab. Kashmir; Sikkim; Sylhet. *Exp.*, ♂ 40, ♀ 48 millim.

B. *Male with the antennae thickened and flattened by the coalescing of the serrations.*

754. *Oreta obliquilinea*, n. sp.

Differs from *obtusa* in being ochreous yellow; the head and legs not so brilliantly scarlet. Wings with evenly-disposed brown striae; a straight oblique brown line with greyish outer edge from apex of fore wing to inner margin of hind wing before the middle. Underside of fore wing and costal area of hind wing more or less suffused with red.

The male from the Punjab has almost the whole fore wing and the apex of hind wing suffused with brown.

Hab. Kálapáni, Punjab; Sikkim; Sylhet. *Exp.*, ♂ 38, ♀ 42 millim. Type in B. M.

755. *Oreta albipuncta*, *Hmps.* *Ill. Het.* ix, ined., pl. 160, fig. 8.

♂. Head, thorax, and abdomen pale red-brown. Wings pale red-brown, with evenly disposed dark striae. Fore wing with an indistinct antemedial line; a white spot at end of cell; a post-medial dark and pale red line angled below the costa; some fuscous suffusion at apex. Hind wing with a medial dark and pale red line.

Hab. Trincomali, Ceylon. *Exp.* 26 millim.

756. *Oreta castanea*, *Hmps.* *Ill. Het.* viii, p. 62, pl. 141, fig. 17.

♂. Pale reddish brown. Wings evenly striated with brown; an oblique line from the apex of fore wing to middle of inner margin of hind wing, bent near the apex, where there is a deep black spot above it. Fore wing with traces of an antemedial dark line; the costa red-brown; a white speck on discocellulars.

Hab. Nilgiris, N. slopes, 3500 feet. *Exp.* 28 millim.

757. *Oreta rotundapex*, *Hmps.* *Ill. Het.* viii, p. 61, pl. 141, fig. 6.

♂. Dark purplish olive-brown. Wings thickly striated with brown. Fore wing crossed by a broad, medial, indistinct darker band with a vinous tinge. Hind wing with a medial, pale, straight line, the area inside it and the marginal area with a vinous tinge.

Hab. Nilgiris, N. slopes, 3500 feet. *Exp.* 36 millim.

758. *Oreta pavaca*, *Moore*, *P. Z. S.* 1865, p. 815; *C. & S.* no. 1248.

♂. Head with the frons crimson, the vertex red-brown; thorax and abdomen red-brown, the latter reddish towards extremity. Fore wing red-brown, the basal, costal, and more especially the outer areas suffused with silvery scales; discocellulars silver. Hind wing red-brown, the inner area slightly suffused with silver scales; the discocellulars silver. Underside brilliant crimson; both wings with numerous dark specks; the inner area of hind wing yellowish.

Hab. Sikhim. *Exp.* 44 millim.

SECT. II. Mid and hind tibiæ with terminal pairs of spurs.

Antennæ bipectinate in male, the branches long.

A. *Palpi short and porrect.*

759. *Oreta griseotincta*, n. sp.

♂. Palpi and legs scarlet; head, thorax, abdomen, and wings chestnut-brown. Fore wing slightly irrorated with silvery grey; medial and postmedial dark lines angled below the costa and approaching each other towards inner margin; a blackish patch on costa before apex; three black submarginal specks towards inner margin. Hind wing chestnut-brown, very slightly irrorated with silvery grey; ante- and postmedial indistinct curved lines. Cilia of both wings red-brown. Underside with the costal area of both wings suffused with scarlet.

Hab. Sikhim (*Möller*). *Exp.* 32 millim. Type in coll. Elwes.

B. (Cobanilla). *Palpi upturned, reaching vertex of head.*

760. *Oreta marginata*, Moore, *Lep. Ceyl.* ii, p. 121, pl. 124, fig. 4;
C. & S. no. 1264.

♂. Frons red; head, thorax, and abdomen ochreous. Fore wing yellow, the costa red; the area below the medial two-thirds of costa suffused with red-brown; an indistinct dark spot on discocellulars; outer margin from below apex to near outer angle red-brown. Hind wing yellow, the cilia red-brown. Underside suffused with crimson.

Hab. Ceylon; E. Pegu. *Exp.* 32 millim.

Genus **CAMPTOCHILUS**, nov.

Type, *C. reticulatum*, Moore.

Range. Sikhim.

Palpi short and porrect; proboscis present. Antennæ ciliated in female. Mid tibia with one pair of spurs, hind tibia with two pairs. Frenulum present. Fore wing with the costa bent beyond the middle, the apex being produced upwards. Vein 6 from below the angle of cell; 7 and 8 stalked. Hind wing with a slight vesicle between veins 1 *a* and *b*; the discocellulars straight; vein 8 almost straight.

761. *Camptochilus reticulatum*, Moore, *Lep. Atk.* p. 233, pl. 8, fig. 3;
C. & S. no. 3243.

Head, thorax, and abdomen brick-red. Fore wing brick-red, with evenly-disposed darker striæ over the whole wing, except a

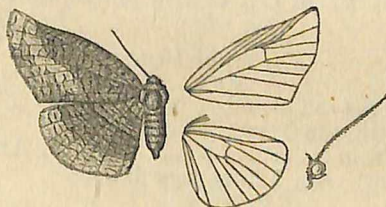


Fig. 240.—*Camptochilus reticulatum*, ♀. 1.

broad oblique yellow band from the apex to below vein 2. Hind wing similar, the yellow band marginal from apex to anal angle, and with the reticulations continued on it; a medial straight line.

Hab. Sikhim. *Exp.* 38–40 millim.

Species formerly recorded as Indian which are omitted.

Argyris deliaria, Wlk., C. & S. no. 1259, is a Geometer (*Acadina*).

- Argyris delphiaria*, Guen., C. & S. no. 1260, is a Geometer.
Argyris extrusata, Wlk., C. & S. no. 1261, „ „
Argyris ocellata, H.-S., C. & S. no. 1263, „ „
Problepsis vulgaris, Butl. Ill. Het. vii, p. 43, „ „
Argyris cinerea, Butl., C. & S. no. 1258 A, „ „
Argyris apollinaria, Guen., is a Geometer.
Citix olivacea, Hmps. Ill. Het. viii, p. 63, is a Noctua (*Acontiinae*).
Drapetodes bilineata, Wlk., C. & S. no. 3588. Type lost; description unrecognizable.

Family THYRIDIDÆ.

Moths generally with hyaline patches and striæ on the wings. Palpi obliquely upturned and slender. Antennæ almost simple. Fore wing with vein 1 *a* forming a fork with 1 *b* at base; 1 *c* absent; 5 from near lower angle of cell. Hind wing with two internal veins; vein 8 nearly touching vein 7 just before or after the end of the cell. Mid tibia with one pair of spurs; hind tibia with two pairs.

Larva Pyraliform, with five pairs of prolegs.*

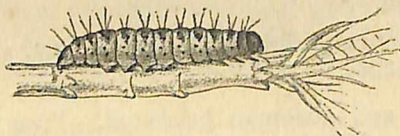


Fig. 241.—Larva of *Striglina scitaria*. †.
 (From Moore, Lep. Ceyl. iii. pl. 175, fig. 1 a.)

Key to the Genera.

- a.* Hind wing with the cell closed.
 - a'*. Hind wing with vein 5 from the centre of the discocellulars..... 1. ADDÆA, p. 353.
 - b'*. Hind wing with vein 5 from near lower angle of cell.
 - a*². Fore wing with veins 7, 8 and 9, 10 stalked 3. DIXOA, p. 355.
 - b*². Fore wing with veins 7 and 8 stalked, 9 and 10 from cell [p. 364.
 - c*². Fore wing with veins 8 and 9 stalked . 5. HYPOLAMPUS,
 - d*². Fore wing with all the veins from cell. 6. CAMADENA, p. 366.
 - a*³. Fore wing with veins 7 and 8 from angle of cell; 9 and 10 from some way before the angle 2. STRIGLINA, p. 353.

* After the *Thyrididæ* would follow the *Pyralidæ*, if the *Heterocera* could be arranged in a linear series.

- b*³. Fore wing with veins 7, 8, 9, 10 given off near angle of cell.
*a*⁴. Fore wing with the costa excised. 7. HERDONIA, p. 367.
*b*⁴. Fore wing with the costa evenly arched.
*a*⁵. Hind wing with the outer margin nearly evenly curved [p. 355.
4. RHODONEURA,
*b*⁵. Hind wing with the outer margin much excurved at centre . . 8. DYSODIA, p. 368.
b. Hind wing with the cell open.
a'. Fore wing with veins 7 and 8 from the cell [p. 370.
10. HYPERTHYRIS,
b'. Fore wing with veins 7 and 8 stalked . . 9. GLANYCUS, p. 369.

Genus ADDÆA.

Addæa, *Wlk. Cat.* xxxiv, p. 1201 (1865).

Mesopempta, *Meyr. Trans. Ent. Soc.* 1886, p. 217.

Type, *A. subtesselata*, Wlk., from Australia.

Range. Ceylon; Ceram; New Guinea; Australia; Solomons.

Palpi upturned, short, and thickly scaled. Antennæ annulated and minutely ciliated. Hind tibia rather thickened. Fore wing with veins 8 and 9 stalked; 10 from just before the angle of cell. Hind wing with vein 5 from the centre of discocellulars.

762. *Addæa trimeronalis*, *Wlk. Cat.* xix, p. 916; *C. & S.* no. 4386.
Mesopempta heliopsamma, *Meyr. Trans. Ent. Soc.* 1886, p. 217.

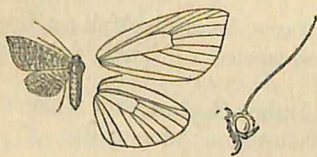


Fig. 242.

Addæa trimeronalis, ♂. †.

Pale red-brown. Wings evenly and closely striated with slightly darker lines. Underside with a rather darker spot on the discocellulars of fore wing.

Hab. Ceylon; New Guinea. *Exp.* 15 millim.

Genus STRIGLINA.

Striglina, *Guen. Ann. Soc. Ent. Fr.* 1877, p. 283

Sonagara, *Moore, Lep. Atk.* p. 179 (1882).

Type, *S. scitaria*, Wlk.

Range. Japan; Formosa; throughout India, Ceylon, and Burma; Andamans; Borneo; Australia; Solomons; Fiji.

Palpi upturned and thickly scaled, the third joint short. Antennæ minutely ciliate in male, simple in female. Femora and tibiæ hairy. Fore wing with veins 8 and 9 from cell, 9 and 10 from some way before the angle. Hind wing with vein 5 from just above lower angle of cell.

763. *Striglina scitaria*, *Wlk. Cat.* xxvi, p. 1488; *Moore, Lep. Ceyl.* iii, pl. 175, figs. 1, 1 a (larva).
Striglina lineola, *Guen. Ann. Soc. Ent. Fr.* 1877, p. 284; *C. & S.* no. 2786.
Thermesia reticulata, *Wlk. Cat.* xxxiii, p. 1062; *C. & S.* no. 2811.
Sonagara strigosa, *Moore, Lep. Atk.* p. 180; *C. & S.* no. 2813.
Anisodes pyrinata, *Wlk. Cat.* xxvi, p. 1582.
Homodes thermesioides, *Snell. Tijds. v. Ent.* xx, 1877, p. 28.
Azazia navigatorum, *Feld. Reis. Nov.* pl. 117, fig. 4.
Laginia reticulata, *Wlk. Cat.* xxxv, p. 1560.
Sonagara superior, *Butl. A. M. N. H.* (5) xx, 1887, p. 433.
Sonagara vialis, *Moore, P. Z. S.* 1883, p. 27, pl. 6, fig. 9; *C. & S.* no. 2814.
Sonagara strigipennis, *Moore, Lep. Atk.* ii, p. 180; *C. & S.* no. 2812.

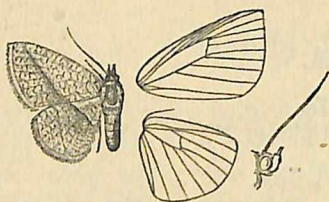


Fig. 243.
Striglina scitaria, ♂. 1.

Reddish ochreous, the wings evenly striated with brown; an oblique red-brown line from the apex of fore wing to inner margin of hind wing before the middle. Underside with a dark spot at end of cell of fore wing; the oblique line coming out as black streaks.

Some specimens have a line on the hind wing from the same point on costa as the oblique line, and either curved to inner margin above anal angle or oblique to outer margin before anal angle.

The Sikhim forms *vialis* and *strigipennis* are large; the former is bright coloured, with a dark ring-spot at end of cell of fore wing and has the oblique line to hind wing; the latter with the line curved.

Larva olivaceous, the first somite ochreous, head blackish; a few fine short dorsal hairs; some transverse series of black dots on second to terminal somites.

Hab. Japan; Formosa; throughout India, Ceylon, and Burma; Andamans; Borneo; New Guinea; Solomons; Australia; Fiji. *Exp.* 24–43 millim.

764. *Striglina decussata*, *Moore, P. Z. S.* 1883, p. 27, pl. 6, fig. 8; *C. & S.* no. 2810.

Striglina bivittata, *Moore, P. Z. S.* 1883, p. 27, pl. 6, fig. 7.

♂. Differs from *scitaria* in being browner. Wings with small dark spots instead of striæ; no oblique line; fore wing with a dark spot at end of cell and one below it.

The form *decussata*, from N.E. India and Burma, is large and brighter fulvous, whilst *bivittata*, from the Andamans and Borneo, is a small brown form with medial and marginal bands to both wings developed; the spots at end of cell of fore wing may be absent in any of the forms, but small fulvous and large brown forms also occur in Sikhim.

Hab. Sikhim; Assam; Nágas; E. Pegu; Borneo. *Exp.* 26 millim.

Genus **DIXOA**, nov.

Type, *D. albatalis*, Swinh.

Range. Canara; Poona; Raipur.

Palpi upturned, reaching vertex of head, the third joint short. Antennæ minutely ciliated. Fore wing with veins 7, 8, and 9, 10 stalked. Hind wing with vein 5 from just above lower angle of cell.

765. *Dixoa albatalis*, Swinh. *P. Z. S.* 1889, p. 422, pl. 44, figs. 1, 2.

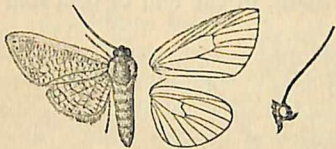


Fig. 244.—*Dixoa albatalis*, ♂. 1.

Head, thorax, and abdomen covered with white scales. Wings pure white, with evenly disposed small fuscous striae over the whole surface, these being more prominent on the underside.

Hab. Canara; Poona; Raipur.
Exp. ♂ 30, ♀ 40 millim.

Genus **RHODONEURA**.

Rhodoneura, Guen. *Sp. Gén. Léop., Phal.* ii, pl. i, fig. 8 (1857).

Pharambara, *Wlk. Cat.* xxxiv, p. 1274 (1865).

Osea, *Wlk. Journ. Linn. Soc.* vii, p. 73 (1864).

Microsea, *Butl. Ill. Het.* iii, p. 71 (1879).

Banisia, *Wlk. Journ. Linn. Soc.* vii, p. 77 (1864).

Letchena, *Moore, Lep. Ceyl.* iii, p. 257 (1887).

Durdara, *Moore, Lep. Atk.* p. 176 (1882).

Type, *R. pudicula*, Guen., from Java and Celebes.

Range. W. Indies; S. America; S. Africa; Madagascar; Aden; China; throughout India and Ceylon; Burma; Andamans; Borneo; Java; Celebes; Australia; New Britain; Tonga.

Palpi slight, upturned, reaching above vertex of head, the 3rd joint variable in length. Fore wing slightly produced and acute at apex. Fore wing with veins 6, 7, 8, 9, 10 given off close to the angle of cell. Hind wing with vein 5 from just above lower angle of cell.

SECT. I. Palpi with the third joint very long; antennæ almost simple.

766. *Rhodoneura obliquialis*, Warr. *MS.*

♂. Head, thorax, and abdomen silvery white; head and thorax suffused with brown; abdomen with brown bands. Wings silvery white; basal area covered with brown striae; an oblique line from the apex of fore wing, which becomes double towards inner margin and treble on the hind wing; another submarginal line becoming double on the hind wing; a marginal waved line. Underside with the costa of fore wing chestnut.

Hab. Sikhim. Exp. 42 millim. Type in coll. Elwes.

SECT. II. Palpi with the third joint of moderate length; antennæ nearly simple in both sexes.

A. Outer margin of both wings nearly evenly curved.

767. *Rhodoneura acaciusalis*, *Wlk. Cat.* xix, p. 901; *C. & S.* no. 4439. *Siculodes strigatula*, *Feld, Reis. Nov., Lep.* pl. 134, fig. 9.

Head and collar brown; thorax and abdomen pale, suffused with reddish brown. Fore wing ochreous white, with numerous brown specks and spots below the centre of costa, in the end of cell, and

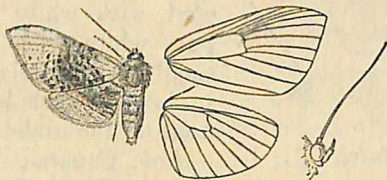


Fig. 245.—*Rhodoneura acaciusalis*, ♂. †.

over the whole of the inner area except the base; the nervules beyond the cell salmon-colour. Hind wing ochreous white; the whole medial area streaked and spotted with dark brown; the nervules beyond the cell salmon-pink. Underside striated with chestnut, the nervules bright crimson; veins 6, 7, 8 of fore wing streaked with black.

The form *strigatula*, from China, has the brown markings of the body and wings obsolete; the striae brown and more prominent; underside with the chestnut suffusion of the hind wing obsolete. In a Sikhim variety the hind wing has the striae very numerous and bright pink on both upper and under sides. In another form the striae of both wings are pink. In a small male from Burma the striae are obsolescent and few in number.

Hab. China; Sikhim; Moulmein. *Exp.* 22–32 millim.

768. *Rhodoneura multipunctata*, *Warr. MS.*

Differs from *obliquialis* in the head, thorax, and abdomen being without brown suffusion or bands. Wings with less silvery sheen, evenly striated with fuscous, and without lines; fore wing with two submarginal series of black dots; hind wing with one series. Underside with a costal series of black dots to hind wing.

Hab. Sikhim; Assam; Burma. *Exp.* 34–40 millim. Type in coll. Elwes.

769. *Rhodoneura reticulalis*, *Moore, P. Z. S.* 1877, p. 616; *C. & S.* no. 4376.

♀. Head and thorax brown; abdomen white, suffused with brown. Wings white, reticulated with brown almost evenly over the whole surface; costa of fore wing slightly suffused with brown. Underside with the reticulations rather more prominent.

Hab. Andamans. *Exp.* 29 millim.

770. *Rhodoneura anticalis*, *Wlk. Cat.* xxxiv, p. 1238.

Rhodoneura tetraonalis, *Moore, P. Z. S.* 1877, p. 616, pl. 60, fig. 10.

Differs from *reticulalis* in the wings being striated with fuscous; apex of fore wing with two small black dots. Underside with a conspicuous black spot centred with white at the apex of fore wing; a short fuscous postmedial band above inner margin.

Hab. Rangoon; Andamans; Mysol. *Exp.* 24 millim.

771. *Rhodoneura nævina*, *Moore, Lep. Atk.* p. 212; *C. & S.* no. 4375.

♂. Differs from *anticalis* in being whiter, with fewer striæ on the wings and with some prominent waved black marks on the inner portion of two of the postmedial series of striæ of the fore wing. Underside with the area above the cell of fore wing suffused with golden scales; postmedial and submarginal double series of waved chestnut marks on inner half of wing.

Hab. Sikkim. *Exp.* 30 millim.

772. *Rhodoneura hypargyra*, n. sp.

♂. Head and collar brown; thorax white, more or less tinged with brown; abdomen white, with a dark band on penultimate segment. Fore wing silvery white, with a few dark strigæ; costa fuscous, with short white streaks on it; a black speck at lower angle of cell; a short medial band from vein 2 to inner margin and postmedial spot on vein 2; three subapical black specks. Hind wing silvery white, with a few brown strigæ and short black sub-basal, medial, and postmedial lines; three submarginal black specks towards apex and two towards anal angle. Underside of fore wing with the costal area brown, much spangled with silvery scales, especially at upper angle of cell.

Hab. Tenasserim Valley; Mergui (*Doherty*). *Exp.* 22 millim. Type in coll. Druce.

773. *Rhodoneura bastialis*, *Wlk. Cat.* xix, p. 902; *C. & S.* no. 4442.

Rhodoneura marmorealis, *Moore, P. Z. S.* 1877, p. 617; *C. & S.* no. 4374.

Rhodoneura denticulosa, *Moore, Lep. Ceyl.* iii. p. 267; *C. & S.* no. 4373.

Differs from *anticalis* in having two black dots on underside of fore wing at apex, with an oblique line across the apex from costa to outer margin.

The male has the striæ of the upperside aggregated in the form of bands, whilst in the female they are separated.

Hab. Assam; Nágas; Burma; Ceylon; Andamans; Solomons. *Exp.* 20–22 millim.

774. *Rhodoneura myrsusalis*, *Wlk. Cat.* xix, p. 892.

Letchena elaralis, *Wlk. Cat.* xix, p. 901; *C. & S.* no. 4498.

Pyralis? idalialis, *Wlk. Cat.* xix, p. 903; *C. & S.* no. 4449.

- Durdara pyraliata*, Moore, *Lep. Atk.* p. 177; *C. & S.* no. 2789.
Durdara lobata, Moore, *Lep. Atk.* p. 177; *C. & S.* no. 2787.
Durdara zonula, Swinh. *P. Z. S.* 1885, p. 469, pl. 28, fig. 12;
C. & S. no. 2790.

Grey-brown, some specimens with a slight red or pink tinge. Wings somewhat lineally striated with dark brown. Fore wing with the costa yellow; cilia fuscous on fore wing, white on hind wing. Underside silvery grey, the striæ prominent and chestnut-brown; fore wing with two brownish postmedial and one subapical patch.

The variety *idalialis* has one to three small hyaline spots below the lower angle of cell of fore wing, with an ochreous streak below them, beneath which is another hyaline spot.

Hab. Brazil; Natal; throughout India, Ceylon, and Burma; Borneo. *Exp.* 22–26 millim.

775. *Rhodoneura myrtæa*, Drury, *Exot. Ins.* ii, pl. 2, fig. 3; *C. & S.* no. 2788.
Durdara fenestrata, Moore, *P. Z. S.* 1883, p. 27, pl. vi, fig. 6;
C. & S. no. 2785.
Durdara ovifera, Butl. *P. Z. S.* 1892, p. 129, pl. vi, fig. 7.
Thermesia fenestrina, Feld. *Reis. Nov.* pl. 117, fig. 2.
Microscia plagifera, Butl. *Trans. Ent. Soc.* 1886, p. 420.

Differs from *myrsusalis* in being brick-red; the striæ less distinct. Fore wing without the yellow costa. Underside suffused with pink, the striæ well defined; a dark brown subapical patch on margin of fore wing.

The form *fenestrata* has two hyaline spots on the fore wing, with an ochreous streak between them; *ovifera* from Borneo has the 3rd joint of palpi and the hyaline spots long; whilst *plagifera* from Tonga has only the upper spot, which is oval.

Hab. W. Indies; throughout India; Andamans; Borneo; Celebes; Tonga. *Exp.* 28 millim.

776. *Rhodoneura semitesselalis*, Wlk. *Cat.* xxxiv, p. 1246.

Differs from *myrtæa* in being fuscous; the thorax and abdomen in some specimens slightly suffused with pink. Fore wing with all three spots below the cell hyaline; the centre of the marginal area occupied by a large irregular patch of hyaline globules, outlined with ochreous and red. Hind wing with a medial band of globules similar to those on the fore wing; a number on inner area and at apex and centre of outer area.

Hab. E. Pegu; Australia. *Exp.* 26 millim.

777. *Rhodoneura locusalis*, Wlk. *Cat.* xix, p. 903; *C. & S.* no. 4453.
Pyralis? thyralis, Wlk. *Cat.* xxxiv, p. 1234; Moore, *Lep. Ceyl.* iii, pl. 178, fig. 10; *C. & S.* no. 4499.

♀. Greenish grey; abdomen pinkish at extremity. Wings with

slight brown striæ; a marginal pink line. Fore wing with the outer margin slightly excurved at veins 2, 3, 4; an ochraceous patch irrorated with pink beyond and below the end of cell, with two pairs of hyaline spots on it and a single spot below them. Underside silvery grey; the striations of the hind wing and those on the patch of fore wing bright chestnut and prominent.

Hab. Ceylon. *Exp.* 16 millim.

778. *Rhodoneura nitens*, *Butl. A. M. N. H.* (5) xx, 1887, p. 116; *Hmps. Ill. Het.* ix, pl. 171, fig. 8.

Pharambara hamifera, *Moore, Lep. Atk.* p. 213; *C. & S.* no. 4380.

Microsca marginepunctalis, *Leech, Entom.* 1889, p. 66, pl. 4, fig. 10.

♂. Head, thorax, and abdomen brownish white. Fore wing white, suffused with olive or pale red-brown, especially beyond the cell, and evenly striated with dark lines; indistinct antemedial, medial, and submarginal bands; a white patch striated with dark lines at or just below the apex, with a black line or patch on its lower edge. Hind wing similar but less clouded, and with medial and submarginal bands only. Underside paler, the bands bright chestnut-brown: fore wing with series of longitudinal and transverse black costal striæ; a large apical red-brown patch with a large white hamate mark on it; some golden scales on the retinaculum and silvery scales on subcostal nervure from middle to end of cell: hind wing with medial, postmedial, and submarginal bands.

Hab. Nilgiris; Ceylon; Japan; Solomons. *Exp.* 28-32 millim.

779. *Rhodoneura pallida*, *Butl. Ill. Het.* iii, p. 71, pl. 58, fig. 7.

♀. Differs from *nitens* in being paler. Fore wing suffused and striated with pale reddish brown; the apical patch red-brown, with the white black-edged strigæ small; the submarginal band of both wings regular, with a pale centre.

Hab. Japan; Sikhim; Assam. *Exp.* 24 millim.

780. *Rhodoneura glaphyralis*, n. sp.

♂. Head, thorax, and abdomen variegated pale yellow and brown. Wings pale yellow, striated with reddish brown, which forms ill-defined medial and submarginal bands to both wings; the submarginal band not continued on apical area of fore wing; six or seven short bands from the costa of fore wing to subcostal nervure. Underside of fore wing with black and white streaks on the subcostal nervures in the cell and beyond the upper angle.

Hab. Sikhim (*Möller*). *Exp.* 34 millim. Type in coll. Elwes.

781. *Rhodoneura exusta*, *Butl. Ill. Het.* iii, p. 71, pl. 58, fig. 8.

Microsca ardens, *Butl. Ill. Het.* iii, p. 71, pl. 58, fig. 9.

Microsca exusta, var. *erecta*, *Leech, Entom.* 1889, p. 66, pl. 4, fig. 3.

Head, thorax, and abdomen chestnut. Wings chestnut, striated

with brown. Fore wing with very indistinct subbasal and ante-medial bands; a postmedial band expanding towards the costa; a prominent subapical band from costa to outer margin; a short band at outer angle. Hind wing with an indistinct subbasal band; a broad medial band. Underside of fore wing with the markings below the costa as in *nitens*; a very prominent dark medial band, interrupted in the Sikhim specimen.

Hab. Japan; Sikhim. *Exp.*, ♂ 20–33, ♀ 30 millim.

782. *Rhodoneura emblicalis*, Moore, *Lep. Atk.* p. 213; *C. & S.* no. 4379.

Pharambara sphoraria, *Swinh. Trans. Ent. Soc.* 1892, p. 18, pl. 1, fig. 17.

Head, thorax, and abdomen pale red-brown. Wings striated with red-brown; the basal two-thirds red-brown, the outer third ochreous: fore wing with a subapical line from the costa to outer margin at vein 5. Underside with series of longitudinal and transverse black streaks on the costa of fore wing; the subcostal nervure and nervules streaked with black and white; an oblique similar streak across the cell.

Hab. Sikhim; Khásis; Calcutta. *Exp.*, ♂ 24, ♀ 20 millim.

783. *Rhodoneura disparalis*, *Hmps. Ill. Het.* ix, ined., pl. 171, fig. 11.

♀. Head and collar bright rust-red; thorax pale. Wings reddish white; a red-brown band, which extends on the fore wing from the centre of the costa to apex, narrowing to the centre of inner margin of hind wing; outer margin red-brown; fore wing with a white triangular mark on the costa before the apex. Underside with a red-brown patch on the costa of fore wing at base.

Hab. Ceylon. *Exp.* 26 millim.

784. *Rhodoneura atripunctalis*, *Wlk. Cat.* xxxiv, p. 1523.

♂. Differs from *disparalis* in being browner; the wings striated with brown; a prominent black spot on outer margin of fore wing below the apex on both upper and under sides.

Hab. Nilgiris; Java. *Exp.* 28 millim.

785. *Rhodoneura bipuncta*, n. sp.

♂. Head dark red-brown; thorax and abdomen paler. Fore wing pale reddish chestnut, with a large medial greyish subtriangular patch on the costa and a smaller postmedial patch; an oblique ferruginous band from the costa just beyond the middle to median nervure and a more indistinct band from lower angle of cell to inner margin; two prominent white subapical spots. Hind wing pale chestnut, with a prominent medial ferruginous band. Underside of fore wing with the white subapical spots very prominent on a dark chestnut patch.

Hab. Tenasserim Valley (*Doherty*). *Exp.* 28 millim. Type in coll. Druce.

786. *Rhodoneura vinosa*, *Butl. P. Z. S.* 1892, p. 130, pl. vi, fig. 8.
Pharambara reticulata, *Moore, Lep. Atk.* p. 212 (nom. præocc.)
C. & S. no. 4382.

♂. Head, thorax, and abdomen dark red-brown, with a purplish tinge. Fore wing glistening purplish brown, evenly striated with dark lines; antemedial, medial, and postmedial red-brown bands with dark edges; a curved irregular line from the postmedial band on the costa to outer angle; a very irregular submarginal line sending spurs to the outer margin. Hind wing with no postmedial band. Underside with some black and white streaks below the subcostal nervure of fore wing.

Some specimens have a pair of white spots near the origin of vein 2 of both wings, sometimes with dark spots between the white ones.

♀ without the purplish tinge; the bands of both wings replaced by lines, which on the fore wing are Y-shaped.

Hab. Sikhim; Margharita, Assam; Borneo. *Exp.*, ♂ 37, ♀ 42 millim.

787. *Rhodoneura fasciata*, *Moore, Lep. Atk.* p. 213, pl. 7, fig. 22;
C. & S. no. 4383.

♂. Head ferruginous; thorax pale red-brown; abdomen ochreous. Fore wing ochreous white, slightly striated with brown; a broad chestnut oblique band occupying the whole wing, except the costal and outer areas, and running up to the costa at end of cell; a black line on discocellulars and spot beyond; some silvery spots on medial area above vein 1. Hind wing with the basal half chestnut, suffused with silvery scales; the outer half ochreous, streaked with brown. Underside of fore wing with the costa, veins beyond the cell, and vein 1 speckled with black; a black patch below end of cell; two white submarginal spots below the apex. Hind wing with medial and marginal reddish bands.

Hab. Sikhim. *Exp.* 30 millim.

788. *Rhodoneura cuprealis*, n. sp.

Head, thorax, and abdomen red-brown. Fore wing with the ground-colour pale, thickly irrorated with brilliant coppery scales and crossed by about six ill-defined brilliant coppery bands, the most conspicuous being a portion of a band across the end of the cell. Hind wing similar, with a prominent broad medial band. Underside with the costal area of fore wing and inner area of hind wing pale.

Some specimens are much darker than others.

Hab. Tenasserim Valley (*Doherty*). *Exp.*, ♂ 22-24, ♀ 28 millim. Type in coll. Druce.

789. *Rhodoneura alternata*, Moore, *Lep. Atk.* p. 212; *C. & S.* no. 4378.

♀. Differs from *vinosa* in being paler. Fore wing with the lines and bands ill-defined; a darker patch beyond the cell, another on costa before apex, one submarginal, and one at outer angle. Hind wing with the lines ill-defined; the medial band prominent near inner margin; a darker patch at anal angle. Underside without the black streaks on the subcostals of fore wing.

Hab. Sikkim. *Exp.* 36 millim.

790. *Rhodoneura oligosticha*, n. sp.

♂. Head, thorax, and abdomen pale red-brown. Wings ochreous, slightly suffused with rufous and with sparse rufous striæ: fore wing with the costa dark red-brown, and obscure darker patches on discocellulars and centre of outer margin. Underside similar.

Hab. Sikkim (Möller). *Exp.* 28 millim. Type in coll. Elwes.

791. *Rhodoneura subcostalis*, n. sp.

♂. Head, thorax, and abdomen pale brown, irrorated with fuscous. Wings ochreous, closely striated with brown. Fore wing with an indistinct antemedial line expanding into a spot on median nervure; a postmedial band expanding into a spot beyond the cell; two curved lines near apex, terminating in a black submarginal spot. Hind wing with traces of a medial band and submarginal very irregular line. Underside of fore wing with the cell and veins beyond its upper angle streaked with black; a rufous streak from upper angle of cell to apex.

Hab. Simla. *Exp.* 32 millim. Type in coll. Moore.

792. *Rhodoneura ferrofusa*, n. sp.

♂. Head, thorax, and abdomen ferruginous. Fore wing ochreous, striated with ferruginous; the basal area ferruginous; a postmedial patch on the costa continued as a narrow band to inner margin; outer area with reticulated lines, which are very variable, even on the two sides of the same specimen. Hind wing ochreous, striated and reticulated with ferruginous lines.

Hab. Bombay. *Exp.* 52 millim. Type in coll. Moore.

793. *Rhodoneura uniformis*, n. sp.

♀. Head, thorax, and abdomen bright brick-red. Wings bright brick-red, with faint evenly-disposed dark striæ, which are rather more prominent on underside. Tarsal joints ringed with white.

Hab. Andamans. *Exp.* 34 millim. Type in B. M.

794. *Rhodoneura micacealis*, *Wlk. Cat.* xxxiv, p. 1275.

♂. Red-brown. Wings evenly striated with short dark lines:

fore wing with a white spot at end of cell; two antemedial, and single medial, postmedial, and subapical curved black lines: hind wing with antemedial, medial, and postmedial lines. Underside with patches of bluish-silvery scales scattered over the whole of both wings.

Hab. Ceylon; Mysol. *Exp.* 22 millim.

795. *Rhodoneura striativena*, *Hmps.* *Ill. Het.* viii, p. 126, pl. 154, fig. 1.

♂. Ochreous white. Wings slightly striated with brown: hind wing with traces of a medial band. Underside of fore wing with transverse dark striæ from the costa, and black streaks in the cell and on the nervules beyond the upper angle; some ferruginous marks below the cell.

Hab. Nilgiris, S. slopes, 3000 feet; Burma. *Exp.* 24 millim.

796. *Rhodoneura splendida*, *Butl. A. M. N. H.* (5) xx, 1887, p. 117.

♂. Dull smoky white. Wings evenly striated with brown: fore wing with a dark longitudinal streak below the costa, which forks before the outer margin. Underside with some bluish-silvery specks in the cell of fore wing, and a speck on a dark patch beyond the cell.

Hab. Andamans; Solomons. *Exp.* 20 millim.

B. *Outer margin slightly excised below the apex in both wings.*

797. *Rhodoneura bracteata*, n. sp.

♂. Head, thorax, and abdomen pale, suffused with red-brown. Wings whitish, slightly striated with red-brown. Fore wing with the basal area darker; large postmedial triangular darker patches on costa and inner margin, with a line between them; a curved submarginal line sending a spur to centre of outer margin; some pale streaks on costa. Hind wing with indistinct subbasal and medial lines and some reticulated lines on marginal area. Underside with a few metallic scales below the costa and in cell of fore wing.

Hab. Andamans. *Exp.* 19 millim. Type in coll. Moore.

798. *Rhodoneura rufareta*, n. sp.

♂. Head, thorax, and abdomen pale, suffused with reddish brown. Wings white, reticulated with red-brown. Fore wing with an antemedial line; a medial line forking towards costa and inner margin; a curved submarginal line sending an oblique spur to centre of outer margin. Hind wing with lines forming large reticulations on outer half of wing; cilia rufous. Underside of fore wing with large chestnut subtriangular ante- and postmedial patches on the costa.

Hab. Sikkim (*Möller, Knyvett*). *Exp.* 26 millim. Type in coll. Elwes.



C. Fore wing with the outer margin oblique and crenulate from vein 5 to outer angle.

799. *Rhodoneura hypoxantha*, n. sp.

♂. Palpi with the first two joints fringed with yellow; head, thorax, abdomen, and wings purplish black. Fore wing with indistinct yellowish spots on basal half; a large white patch reticulated with dark lines in and below the end of cell; a submarginal white spot on vein 5. Hind wing with a subbasal white spot and another beyond end of cell. Underside with the basal half of fore wing and whole hind wing spotted with bright yellow.

The specimen from Burma is larger, with the hyaline spots yellowish.

Hab. Mussooree; Sikkim; Burma. *Exp.* 28 millim. Type in coll. Moore.

800. *Rhodoneura tristis*, n. sp.

♂. Head, thorax, and abdomen red-brown. Wings red-brown, with evenly-disposed darker striæ; the basal area yellowish: fore wing with a very indistinct oblique medial line and four white specks on the costa towards apex: hind wing with indistinct antemedial, medial, and postmedial oblique lines. Underside much more varied with yellow, the striæ and lines more prominent; a whitish spot at apex of fore wing.

Hab. Sikkim (Möller). *Exp.* 31 millim. Type in coll. Elwes.

SECT. III. Antennæ serrated in female.

801. *Rhodoneura munda*, Warr. MS.

♀. Differs from *vinosa* ♀ in being of a pale reddish white. Fore wing with three medial lines, the inner and outer irregular, the middle line straight; the postmedial line more erect and less curved; the submarginal line represented by a line across the apex from the costa to outer margin. Hind wing with subbasal, medial, postmedial, and submarginal irregular lines. Underside with a white streak on the nervules beyond the upper angle of the cell of fore wing.

Hab. Sikkim. *Exp.* 30 millim. Type in B. M.

Genus **HYPOLAMPRUS**, nov.

Type, *H. striatalis*, Swinh.

Range. China; Himalayas; India; Ceylon; Burma.

Palpi slight, upturned, and reaching above vertex of head. Antennæ minutely ciliated in male. Neuration as in *Rhodoneura*, except that veins 8 and 9 of the fore wing are stalked.

SECT. I. Outer margin of both wings evenly curved.

802. *Hypolamprus striatalis*, *Swinh. P. Z. S.* 1885, p. 875; *C. & S.* no. 4385.

Pharambara intimalis, *Moore, Lep. Atk.* p. 213; *C. & S.* no. 4381.

Pale red-brown. Wings evenly striated with short lines; traces of a medial band; fore wing with indistinct postmedial and submarginal lines. Underside of fore wing with five white specks on the costa; a tuft of silver scales on the retinaculum and others below the costa; a dark spot beyond the cell. Legs banded with white.

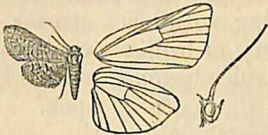


Fig. 246.

Hypolamprus striatalis, ♂. †

Hab. Dharmasala; Calcutta; Poona; Nilgiris; Ceylon. *Exp.* 18 millim.

803. *Hypolamprus obscuralis*, n. sp.

♂. Pale chestnut; wings indistinctly striated with darker lines. Fore wing with indistinct darker medial and postmedial bands, obsolete towards inner margin; an oblique line from costa towards outer angle and irregular subapical and submarginal lines; cilia with a dark line through them. Hind wing with indistinct subbasal, medial, postmedial, and subapical lines. Underside similar.

Hab. Sikkim (*Möller*). *Exp.* 20 millim. Type in coll. Elwes.

804. *Hypolamprus lobulatus*, *Moore, Lep. Atk.* p. 214, pl. 7, fig. 12; *C. & S.* no. 4384.

♀. Head, thorax, and abdomen brownish ochreous, suffused with silvery scales. Fore wing ochreous white; some brown specks on inner margin; two brown spots below the middle of cell; a postmedial band narrowing to inner margin; a subapical line arising from a spot on the costa and ending on outer margin at vein 3. Hind wing ochreous white; a brown spot near base; a medial nearly straight band; traces of a curved submarginal line; a marginal line. Underside with a ferruginous streak below the costa; the subcostal nervure and nervules streaked with black; silvery scales in and below the cell.

Hab. Sikkim. *Exp.* 26 millim.

805. *Hypolamprus atrostriatus*, n. sp.

♂. Ochreous, suffused with ferruginous red-brown; wings sparsely striated with red-brown, some of the striae forming large reticulations on the outer area of both wings. Underside of fore wing with black and white streaks on the subcostal nervures in and beyond the cell.

Hab. Naga Hills, 3000 feet (*Doherty*). *Exp.* 20 millim. Type in coll. Elwes.

SECT. II. Hind wing with the outer margin excised
towards anal angle.

806. *Hypolamprus subrosealis*, *Leech, Entom.* 1889, p. 66, pl. iv,
fig. 14.

♂. Pale red-brown. Wings evenly speckled with fuscous; hind wing redder. Underside of fore wing with black streaks on the costa and in and beyond the cell; series of brilliant opalescent globular scales in the cell and on the nervules beyond towards the apex; a white spot with a black speck in the centre at apex.

Hab. China; Dharmasāla; Ceylon. *Exp.* 22 millim.

807. *Hypolamprus angulalis*, *Moore, Lep. Atk.* p. 214; *C. & S.*
no. 4387.

♂. Differs from *subrosealis* in the hind wing being more excised near anal angle; the cilia white towards outer angle of fore wing and anal angle of hind wing. Underside of both wings suffused with silvery scales; the discocellulars black; no opalescent scales in and beyond the cell of fore wing.

Hab. Rangoon. *Exp.* 20 millim.

SECT. III. Fore wing long; hind wing with the apex acute,
the outer margin straight.

808. *Hypolamprus trifascialis*, *Moore, P. Z. S.* 1877, p. 614, pl. 60,
fig. 9; *C. & S.* no. 4468.

♂. Head, thorax, abdomen, and fore wing ferruginous; the last with the costa, apex, and outer area pale. Hind wing with the basal two-thirds ferruginous, deeper in tone outwardly; post-medial area whitish; outer area pale ferruginous. Underside brighter, with rich chestnut maculate bands across both wings; the ground-colour of hind wing whitish.

Hab. Burma; Andamans. *Exp.* 30 millim.

Genus **CAMADENA.**

Camadena, *Moore, Lep. Atk.* p. 214.

Type, *C. vespertilionis*, *Moore.*

Range. Sikkim.

Palpi upturned, reaching vertex of head; antennæ simple. Hind leg of male with the tibia extremely long and swollen, the terminal pair of spurs short; a tuft of long hair from base, the tarsus very short; normal in female. Fore wing very acute and produced at apex; veins 8 and 9 stalked. Hind wing very acute and produced at apex.

809. *Camadena vesperitilonis*, Moore, *Lep. Atk.* p. 214; *C. & S.* no. 4388.

Caustoloma acutipennis, Moore, *Lep. Atk.* p. 230; *C. & S.* no. 3144.

♂. Yellow; the vertex of head, thorax, and abdomen suffused with red-brown. Wings yellow, slightly striated with red-brown. Fore wing with a red-brown band just beyond the middle, broad toward costa, narrow towards inner margin, with a silvery speck

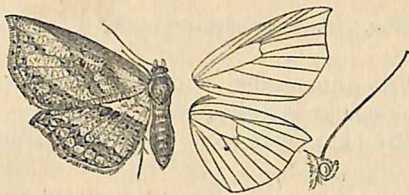


Fig. 247.—*Camadena vesperitilonis*, ♀. 1.

on it at end of cell and extending along the costa to apex; an indistinct series of submarginal double specks. Hind wing with a dark spot at end of cell, with a silvery speck on it, and an indistinct submarginal series of specks.

♀. Suffused with brown; the wings much more thickly striated with brown; the band on fore wing nearly obsolete; the silvery spots and submarginal double specks much more prominent on both wings.

Hab. Sikkim. *Exp.*, ♂ 32, ♀ 40 millim.

Genus **HERDONIA.**

Herdonia, *Wlk. Cat.* xix, p. 963 (1859).

Type, *H. osacesalis*, Wlk.

Range. China; Sylhet; Burma.

Palpi short and porrect. Antennæ almost simple in both sexes. Fore wing with the costa excised at middle; vein 6 from below angle of cell; 7, 8, 9 from the angle; 10 absent. Hind wing with vein 5 from just above lower angle of cell; a forked veinlet in the cell.

810. *Herdonia osacesalis*, *Wlk. Cat.* xix, p. 964; *Feld. Reis. Nov.*, *Lep.* pl. 134, fig. 4; *C. & S.* no. 4427.

Head, thorax, and abdomen pale red-brown. Fore wing silvery red-brown, almost entirely covered with broad conjoined darker strigæ, some of which form a highly irregular bright chestnut submarginal band; apex suffused with fuscous and irrorated with silvery scales. Hind wing opalescent white, with basal and medial red-brown bands, broadest at inner margin and having

paler centres ; a marginal red-brown band striated with black, with

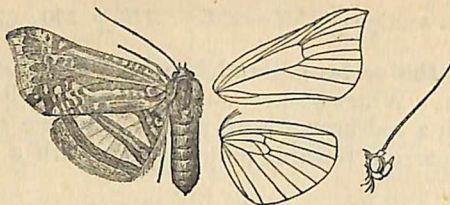


Fig. 248.—*Herdonia osacesalis*, ♀. †.

a black line on its inner edge and another through the centre, beyond which the colour is paler.

Hab. China ; Sylhet ; Rangoon. *Exp.* 46 millim.

Genus **DYSODIA.**

Dysodia, *Clemens*, *Pr. Ac. N. Sc. Phil.* 1860, p. 349.

Platythyris, *Gr. & R. Ann. N. Y. Lyc.* viii, p. 361 (1867).

Varnia, *Wlk. Journ. Linn. Soc.* vii, p. 69 (1864).

Pachythyris, *Feld. Reis. Nov., Lep.* pl. 75, fig. 1 (1867).

Type, *D. vitrina*, *Boisd.*, from N. America.

Range. N. and S. America ; throughout India, Ceylon, and Java.

Palpi thickly scaled, upturned, reaching above vertex of head, the third joint acute. Antennæ simple in both sexes. Legs with femora and tibiæ very hairy. Fore wing excurved at veins 2, 3, 4 ; veins 7, 8, 9 from close to the angle of cell. Hind wing with vein 5 from lower angle of cell ; the outer margin irregular and excised below the apex. Thorax and abdomen stout.

811. ***Dysodia ignita***, *Wlk. Cat.* xxxiii, p. 825 ; *C. & S.* no. 2211.

Varnia fenestrata, *Moore, P. Z. S.* 1881, p. 376 ; *C. & S.* no. 2210.

Varnia taprobana, *Moore, Lep. Ceyl.* iii, p. 67, pl. 151, fig. 7 ; *C. & S.* no. 2214.

Varnia inæqualis, *Wlk. Cat.* xxxiii, p. 828 ; *C. & S.* no. 2212.

Pachythyris siculoides, *Feld. Reis. Nov., Lep.* pl. 75, fig. 1.

Pachythyris rajah, *Boisd. Léop. Hét.* p. 492 ; *C. & S.* no. 210.

Head and collar dark red-brown ; thorax, abdomen, and wings

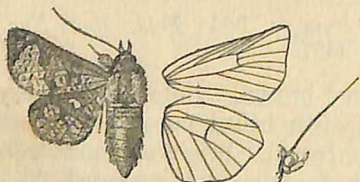


Fig. 249.

Dysodia ignita, ♂. †.

dark red-brown or ochreous suffused with fiery red ; wings with numerous brown striæ. Fore wing with an irregular dark band wide at costa ; an oblique subapical line from the costa to outer margin ; a submarginal band from vein 4 to inner margin, sometimes reduced to a fine line. Hind wing



with several fine short lines on the outer half, these being obscured in the specimens which are suffused with dark brown.

The colour and distribution of the suffusion are very variable.

The form *inaequalis* = *fenestrata* has two hyaline spots at the end of cell of hind wing, generally connected and large.

Hab. Throughout India, Ceylon, and Java. *Exp.* 32–38 millim.

812. *Dysodia viridatrix*, *Wlk. Cat.* xv, p. 1777; *C. & S.* no. 2207.

Head, thorax, and abdomen yellowish green. Wings yellowish green, with slight dark striæ. Fore wing with some dark strigæ on costa; a postmedial oblique line; an outwardly-oblique line from the costa to outer margin; a short line near outer angle; a yellow patch at end of cell; some yellow suffusion beyond the postmedial line below the costa. Hind wing with a hyaline spot at end of cell; indistinct postmedial and submarginal lines. Cilia yellow.

Larva bores in wood, living in a cocoon of silk and sawdust, over which is a spiral strip of bark.

Hab. Sikkim; Bangalore; Ceylon. *Exp.*, ♂ 25, ♀ 28 millim.

813. *Dysodia albifurca*, n. sp.

♂. Head and collar red-brown; thorax paler; abdomen with the first five segments pale ochreous, the terminal segments red-brown; a very prominent dorsal tuft of scales on fifth segment. Wings red-brown with darker striæ, the basal area and centre of outer area of both wings ochreous; fore wing with a medial Y-shaped whitish band and two white spots on the costa towards apex. Underside with the band more prominent and a deep chestnut band beyond it crossing both wings.

Hab. Sikkim (Möller). *Exp.* 26 millim. Type in coll. Elwes.

Genus GLANYCUS.

Glanycus, *Wlk. Cat.* iii, p. 634 (1855).

Type, *G. insolitus*, *Wlk.*

Range. Sikkim; Sylhet.

Palpi upturned, reaching vertex of head and thickly scaled. Antennæ of male fasciculated. Legs hairy; mid tibiæ with one pair of spurs, hind tibiæ with two pairs. Fore wing with the outer margin very obliquely rounded; veins 7 and 8 stalked. Hind wing excised below the apex; the cell open.

SECT. I. Hind wing with the anal angle truncate.

814. *Glanycus insolitus*, *Wlk. Cat.* iii, p. 635; *Bull. Ill. Het.* v, pl. 84 fig. 12; *C. & S.* no. 784.

♀. Head, thorax, and abdomen black, shot with metallic blue; collar and tegulæ fringed with crimson; abdomen with the basal

segment crimson; a dorsal crimson line; the terminal segments fringed with crimson. Fore wing blue-black, a broad basal crimson band and narrower antemedial, medial, and postmedial bands, which are conjoined into reticulations, the postmedial band running outwards to centre of outer margin, then along it to the

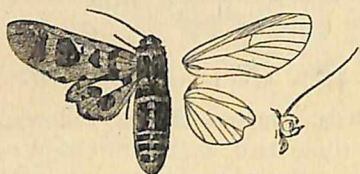


Fig. 250.

Glanycus insolitus, ♀. 1.

outer angle, leaving two spots on the margin, then inwards to join the medial band; a hyaline streak on the discocellulars. Hind wing blue-black; the inner and outer areas crimson, the former giving off a band to median nervure, and the latter with three blue-black spots on it; a large angled hyaline patch in the end of cell.

Hab. Sylhet; Sikkim. *Exp.* 38 millim.

SECT. II. Hind wing with the anal angle produced.

815. *Glanycus tricolor*, Moore, *Lep. Atk.* p. 38; *Waterh. Aid.* ii, pl. 131, fig. 1; *C. & S.* no. 785.

♂. Blue-black; the collar and first abdominal segment broadly fringed with crimson; abdomen with lateral crimson bands meeting at the extremity. Fore wing with a hyaline streak on the discocellulars. Hind wing with a very large hyaline spot in the cell extending to near outer margin.

Hab. Sikkim. *Exp.* 36 millim.

Genus **HYPERTHYRIS.**

Hyperthyris, Leech, *Trans. Ent. Soc.* 1889, p. 121.

Type, *H. aperta*, Leech.

Range. China; Sikkim.

Palpi upturned, reaching above vertex of head, the 1st and 2nd joints heavily scaled, the 3rd joint naked. Antennæ slightly ciliate. Femora and tibiæ thickly scaled; mid tibia with one pair of spurs, hind tibiæ with two pairs. Fore wing with the cell closed; vein 6 from below the angle, 7, 8, 9 from the angle. Hind wing with the cell open; veins 4, 5, and 6, 7 stalked to near the margin.

816. *Hyperthyris aperta*, Leech, *Trans. Ent. Soc.* 1889, p. 122, pl. vii, fig. 7.

♂. Head black; frons and palpi in front grey; collar black, tipped with golden brown; abdomen black. Fore wing hyaline,

slightly golden brown at base; the margins broadly black; a large triangular black mark from the costa to lower angle of cell; veins narrowly black. Hind wing with the margins broadly black; a large hyaline space above median nervure and a smaller one below it.

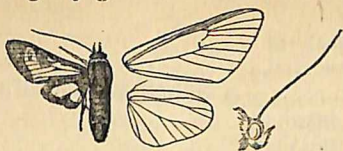


Fig. 251.

Hyperthyris aperta, ♂. $\frac{1}{2}$.

Hab. Kiukiang, China; Sikkim.

Exp. 24 millim.

Species formerly recorded as Indian which is omitted.

Thyridiphora fenestrata, Warr., C. & S. no. 1773 B, is a Pyrale.

Family LIMACODIDÆ.

Fore wing with two internal veins, vein 1 *b* forked at the base. Hind wing with vein 8 arising free, then bent down and usually anastomosing shortly with 7 near the base of the cell; three internal veins.

Larva: *Limaciform*, and either bearing series of spinous stinging tubercles, or smooth and segmented, or unsegmented with very thick transparent cuticle; the head, legs, and claspers small and often retractile.

Cocoon: hard and compact; round or oval in shape, with a lid for the escape of the imago prepared by the larva.

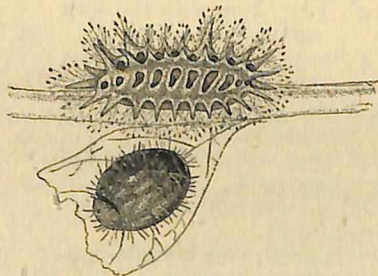


Fig. 252.—Larva and cocoon of *Thosesa aperiens*. $\frac{1}{2}$.
 (From Moore, Lep. Ceyl. ii, pl. 130, fig. 4.)

Key to the Genera.

- A. Fore wing short, the outer margin evenly rounded.
 - a. *Larva* (of known species) segmented and bearing series of spinous tubercles.
 - Imago*: head and thorax smoothly scaled; fore wing with vein 11 not curved along 12.

- a'*. Palpi porrect.
- a*². Palpi extremely elongate.
- a*³. Palpi with a terminal brush of hairs; fore wing with veins 7, 8, 9 stalked 1. SCOPELODES, p. 373.
- b*³. Palpi without a terminal brush; fore wing with vein 7 from the cell..... 2. HYPHORMA, p. 375.
- b*². Palpi shorter, but reaching beyond the frontal tuft.
- a*³. Fore wing with vein 7 from below angle of cell.
- a*⁴. Fore wing with veins 8, 9, 10 stalked [p. 376.] 3. MACROPLECTRA,
- b*⁴. Fore wing with vein 10 from the cell..... 4. OXYPLAX, p. 376.
- b*³. Fore wing with vein 7 from angle of cell.
- a*⁴. Fore wing with veins 8 and 9 stalked 7. NATADA, p. 380.
- b*⁴. Fore wing with veins 8, 9, 10 stalked 9. BIRTHAMA, p. 384.
- c*³. Fore wing with vein 7 stalked with 8 and 9.
- a*⁴. Hind wing with veins 6 and 7 on a short stalk or from cell.
- a*⁵. Fore wing short, broad, and rounded..... 5. SUSICA, p. 377.
- b*⁵. Fore wing with the apex more produced.
- a*⁶. Fore wing with vein 10 from angle of cell or before it.
- a*⁷. Fore wing with the apex somewhat rectangular.. 6. THOSEA, p. 377.
- b*⁷. Fore wing with the apex rounded..... 12. PARASA, p. 387, [p. 383.]
- b*⁶. Fore wing with vein 10 stalked with 7, 8, 9..... 8. TETRAPHLEPS,
- b*⁴. Hind wing with veins 6 and 7 on a long stalk..... 10. CONTHEYLA, p. 384.
- c*². Palpi slighter and not reaching beyond frontal tuft.
- a*³. Hind wing with vein 8 anastomosing with 7 near the base 11. MIRESA, p. 385.
- b*³. Hind wing with vein 8 anastomosing with 7 near end of cell..... [p. 391.] 13. SPATULIFIMBRIA,
- b'*. Palpi upturned.
- a*². Palpi reaching vertex of head.
- a*³. Fore wing with veins 7, 8, 9, 10 stalked 14. IDONAUTON, p. 391.
- b*³. Fore wing with veins 7, 8, 9 stalked.
- a*⁴. Hind tibia with two pairs of spurs; male with proximal half of antennæ pectinated..... [p. 392.] 15. CHALCOCE LIS,
- b*⁴. Hind tibia with one pair of spurs; male with antennæ simple [p. 392.] 16. TRIPLOPHLEPS,

- c³. Fore wing with veins 8 and 9 stalked [p. 393.
 17. ORTHOCRASPEDA,
 d³. Fore wing with veins 8, 9, 10 stalked [p. 393.
 18. CERATONEMA,
 b². Palpi extending above vertex of head; fore wing with vein 7 from below angle of cell, 8 and 9 stalked 19. ARÆOGYIA, p. 394.
 b. Larva (of known species) segmented and non-tuberculate.
Imago: Fore wing with vein 11 curved and running along vein 12.
 a'. Palpi short and slender; male with proximal half of antennæ bipectinated; hind wing with veins 6 and 7 from the cell.
 a². Head and thorax smoothly scaled .. 20. CANIA, p. 395.
 b². Head and thorax clothed with erect pile. 21. ALTHA, p. 396.
 b'. Palpi reaching vertex of head; male with antennæ simple; hind wing with veins 6 and 7 stalked 22. NAROSA, p. 398.
 c. Larva non-segmented, smooth, and oval, with very thick cuticle.
Imago: Fore wing with vein 11 not curved; head and thorax clothed with erect pile.
 a'. Hind wing with vein 8 not sending a spur to the costa 23. BELIPPA, p. 399.
 b'. Hind wing with vein 8 sending a spur to the costa 24. NAGODA, p. 400.
 B. Fore wing elongate, the apex produced, the outer margin excised, veins 6, 7, 8, 9, 10 stalked. Palpi upturned 25. MAHANTA, p. 401.

Genus SCOPELODES.

Scopelodes, Westw. *Nat. Libr.* 37 (*Ent.* vii.), p. 222 (1841).

Type, *S. unicolor*, Westw.

Range. N. China; Sikhim; Assam; Sylhet; Burma; Ceylon; Borneo; Java.

Antennæ in male with proximal half bipectinated. Palpi with 2nd and 3rd joints very long, the latter ending in a large brush of hairs. Legs hairy; mid tibia without spurs, hind tibia with one pair of spurs in male, two pairs in female. Fore wing with veins 7, 8, and 9 stalked together; vein 11 straight. Hind wing with veins 6 and 7 from angle of cell, 8 anastomosing with 7 near the base. There are indications of numerous fine veinlets between vein 1 b of fore wing and inner margin, and vein 8 of hind wing and costa.

SECT. I. Hind wing with veins 6 and 7 from cell in male, stalked in female.

817. **Scopelodes venosa**, *Wlk. Cat.* v, p. 1105; *C. & S.* no. 1270.
Scopelodes ursina, *Butl. Ill. Het.* vi, p. 3, pl. 101, figs. 7, 8; *C. & S.* no. 1269.
Scopelodes aurogrisea, *Moore, Lep. Ceyl.* ii, p. 126, pl. 128, figs. 1, 1 a, b (larva and cocoon); *C. & S.* no. 1265.
Scopelodes testacea, *Butl. Ill. Het.* v, p. 3, pl. 101, fig. 5; *C. & S.* no. 1268.

Palpi brown, sometimes tinged with fuscous, the brush whitish at base, black at tip. Head, thorax, and fore wing varying from pale silky ochreous to smoky brown. Hind wing paler. Abdomen yellow, the distal segments terminating in a black spot or sometimes dorsally fringed with black; anal tuft black.

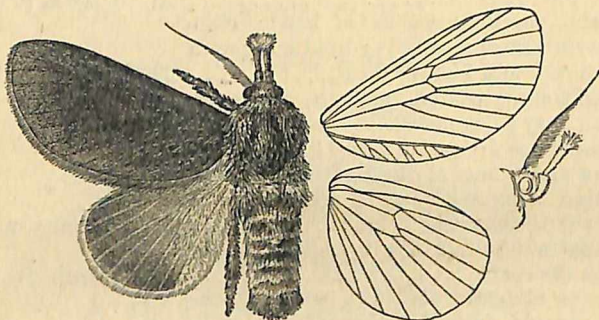


Fig. 253.—*Scopelodes venosa*, ♂. $\frac{1}{2}$.

The darkest form *venosa*, from Sikhim and Sylhet, is smoky brown, with the inner margin of hind wing yellow, the veins on underside standing out pale on a dark ground; legs almost black. The form *ursina*, also from Sikhim and Sylhet, is ruddy brown, the hind wing fuscous in male; *aurogrisea*, from Ceylon, is paler, the hind wing ochreous, with fuscous margin in both sexes; *testacea*, from Sikhim, Sylhet, Moulmein, is pale ochreous without a pale border to hind wing.

Larva: green above, yellow below; two rows of large, broad, densely-spined tubercles; a red, white, and blue transverse dorsal stripe on 8th somite; a black spot on anal segment.

Cocoon purple, brown, and oval.

Hab. Sikhim; Sylhet; Moulmein; Ceylon. *Exp.*, ♂ 51–64, ♀ 74 millim.

818. **Scopelodes sericea**, *Butl. A. M. N. H.* (5) vi, p. 63; *id. Ill. Het.* vi, pl. 101, fig. 6; *C. & S.* no. 1267.

♀. Differs from *venosa* in the palpi being more thickly clothed with hair, and uniform fulvous in colour. Wings silky ochreous.

Hab. Sikhim. *Exp.* 78 millim.

SECT. II. Hind wing with veins 6 and 7 stalked in both sexes.

819. *Scopelodes unicolor*, *Westw. Nat. Libr.* xxxvii, p. 222, pl. 28, fig. 2.

Scopelodes palpalis, *Wlk. Cat.* v, p. 1105; *C. & S.* no. 1266.

Scopelodes vulpina, *Moore, Lep. Atk.* p. 73, pl. 3, fig. 22; *C. & S.* no. 1271.

Bethura minax, *Wlk. Journ. Linn. Soc.* vi, p. 173.

Nyssia micacea, *Wlk. Cat.* xxxii, p. 481.

Differs from *sericea* in the palpi, head, thorax, and fore wing being redder brown; hind wing uniform pale yellow; abdomen more orange.

Hab. Sikhim; Assam; Java; Borneo. *Exp.*, ♂ 44, ♀ 60 millim.

820. *Scopelodes contracta*, *Wlk. Cat.* v, p. 1105.

♂. Palpi blackish, the base of brush pale. Head and thorax dark brown; abdomen blackish, the sides and extremity clothed with golden-yellow hairs. Wings very dark brown, somewhat darker at apex of fore wing and inner margin of hind wing.

Hab. China; Sikhim. *Exp.* 37 millim.

Genus HYPHORMA.

Hyphorma, *Wlk. Cat.* xxxii, p. 493 (1865).

Type, *H. minax*, *Wlk.*

Range. N. China; Sikhim.

♀. Antennæ simple. Palpi with no terminal brush of hairs. Hind tibia with a terminal pair of spurs. Fore wing with vein 7 from end of cell, 8 and 9 stalked, 10 from before the angle. Abdomen with long lateral and ventral tufts of hair.

821. *Hyphorma minax*, *Wlk. Cat.* xxxii, p. 493.

♀. Head, thorax, and abdomen red-brown, the vertex of thorax and basal segments of abdomen deep red, the tufts of hair on

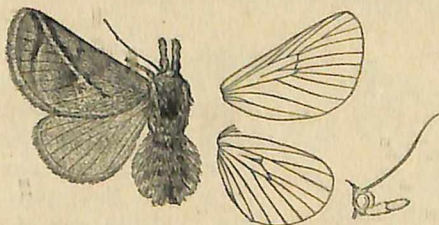


Fig. 254.—*Hyphorma minax*, ♀. 1.

abdomen pale at sides and below. Fore wing silky red-brown; an oblique dark line from the costa before the apex to lower angle of

cell; another from the same point on the costa curved to outer angle. Hind wing paler. Fore tibia with a silvery-white spot.

Hab. N. China; Sikhim. *Exp.* 44 millim.

Genus **MACROPLECTRA**, nov.

Type, *M. minutissima*, Swinh.

Range. Burma.

♂. Antennæ heavily bipectinated to three-fourths length. Palpi long and porrect, the 3rd joint minute. Hind tibia with two pairs of long spurs. Fore wing with vein 7 given off below the angle of cell; veins 8, 9, 10 stalked. Hind wing with veins 6 and 7 from angle of cell.

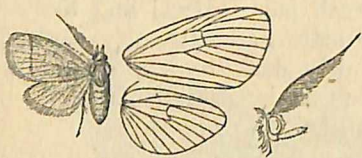


Fig. 255.

Macroplectra minutissima, ♂. ♀.

822. **Macroplectra minutissima**,
Swinh. Trans. Ent. Soc. 1890,
p. 195, pl. vi, fig. 11.

♂. Head, thorax, abdomen, and wings ochreous. Fore wing with a dark line from the costa before the apex to outer angle. Hind wing paler.

Hab. Rangoon. *Exp.* 12 millim.

Genus **OXYPLAX**, nov.

Type, *O. ochracea*, Moore.

Range. Khâsis; Ceylon.

♂. Antennæ bipectinated to the tips. Palpi stout and porrect, reaching beyond the frontal tuft. Hind tibia without spurs. Fore wing with the apex produced upwards, the outer and inner margins forming a continuous curve; vein 7 from below the angle of cell, 8 and 9 stalked. Hind wing with veins 6 and 7 from angle of cell, 8 anastomosing with 7 to near end of cell.

823. **Oxyplax ochracea**, Moore, *Lep. Ceyl.* ii, p. 129, pl. 129, figs. 3, 3 a;
C. & S. no. 1297.

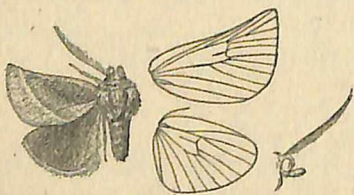


Fig. 256.

Oxyplax ochracea, ♂. ♀.

♂. Head pale, fuscous at sides; thorax fulvous. Fore wing fulvous, suffused with fuscous below the basal part of costa and towards outer margin; a curved white line from apex to centre of inner margin. Abdomen and hind wing fuscous.

Larva: pale green, whitish above, with two dorsal rows of black spots; a black dorsal patch on 1st somite and single spot on anal somite;

lateral and sublateral series of spatulate spinous tubercles, those at anterior and posterior ends pinkish.

Cocoon round and pale brown.

Hab. Khásis; Ceylon. *Exp.* 26 millim.

Genus **SUSICA**.

Susica, *Wlk. Cat.* v, p. 1113 (1855).

Tadema, *Wlk. Cat.* vii, p. 1758 (1856).

Type, *S. pallida*, Wlk.

Range. China; Nepal; Sikhim; Moulmein.

Antennæ bipectinated to two-thirds length in male, simple in female. Palpi long, the 3rd joint short. Hind tibia with two pairs of spurs in both sexes. Fore wing short, broad, and rounded; veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 stalked.

824. *Susica pallida*, *Wlk. Cat.* v, p. 1114; *C. & S.* no. 1303; *Butl. Ill.*

Het. vi, pl. 102, fig. 4.

Tadema sinensis, *Wlk. Cat.* vii, p. 1759.

♂. Pale silky brown. Fore wing with an oblique line from the costa just before the apex to inner margin before middle, expanding into a small spot beyond the lower end of cell; a submarginal line

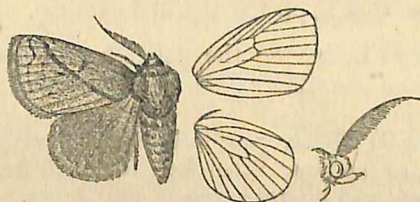


Fig. 257.—*Susica pallida*, ♂. 1.

from the same point on the costa to outer margin above outer angle, more or less angled below the costa. Hind wing slightly browner. Underside of fore wing suffused with black near the base.

Hab. China; Nepal; Sikhim; Moulmein. *Exp.*, ♂ 25, ♀ 48 millim.

Genus **THOSEA**.

Thosea, *Wlk. Cat.* v, p. 1068 (1855).

Aphendala, *Wlk. Cat.* xxxiii, p. 494 (1865).

Anzabe, *Wlk. Cat.* v, p. 1093 (1855).

Type, *T. unifascia*, Wlk.

Range. Throughout India, Ceylon, and Burma; China; Java.

Palpi projecting beyond frontal tuft. Fore wing with the apex somewhat rectangular; veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 from cell or on a short stalk. Mid tibia with one pair of spurs, hind tibia with two pairs.

SECT. I. Male with the antennæ bipectinated to tips.

825. *Thosea cana*, *Wlk. Cat.* xxxii, p. 484; *C. & S.* no. 1295; *Moore, Lep. Ceyl.* ii, pl. 130, figs. 3, 3 *a, b* (larva).
Aphendala transversata, *Wlk. Cat.* xxxii, p. 495; *C. & S.* no. 1298.

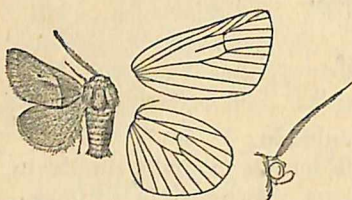


Fig. 258.—*Thosea cana*, ♂. 1.

Palpi long and slight. Greyish brown; fore wing with a dark oblique line with light outer edge from centre of costa to inner margin; a similar but erect line from costa before apex to outer angle; a dark speck at end of cell. Hind wing slightly browner.

An ochreous race is found at Dalhousie and Murree.

Larva green; a yellowish-white dorsal stripe; a subdorsal row of short spinous tubercles; a sublateral row of larger tubercles; spiracles with pale rings.

Cocoon purplish brown and oval.

Hab. Kulu; Sikhim; Poona; Nilgiris; Ceylon. *Exp.*, ♂ 26, ♀ 30 millim.

826. *Thosea aperiens*, *Wlk. Cat.* xxxii, p. 476; *C. & S.* no. 1294; *Moore, Lep. Ceyl.* ii, pl. 130, figs. 4, 4 *a* (larva).

Differs from *cana* in having the palpi shorter and stouter and the lines of the fore wing paler; the first line much further from the base.

Larva grass-green above, purple-brown below; subdorsal and sublateral series of spinous tubercles; a dorsal series of round purple-brown spots and lateral series of oval spots.

Hab. Ceylon. *Exp.*, ♂ 30, ♀ 35 millim.

827. *Thosea tripartita*, *Moore, Trans. Ent. Soc.* 1884, p. 376; *C. & S.* no. 1299; *Forsayeth, Trans. Ent. Soc.* 1884, pl. 14, fig. 14 (larva).

Differs from *cana* in the basal half of the fore wing being dark brown, the pale line bounding it more erect; the submarginal pale line outwardly oblique and reaching the margin above outer angle.

Larva green, with subdorsal series of small and sublateral series of long spinous tubercles; dorsal and lateral series of blue spots.

Hab. Dharmasāla; Sikhim; Manpuri; Ganjam; Jubbulpore; Mhow. *Exp.* 26 millim.

828. *Thosea recta*, *Hmps. Ill. Het.* ix, ined., pl. 160, fig. 3.

♂. Differs from *tripartita* in having the fore wing slightly more produced at apex, and suffused with white below the costa and

beyond the antemedial line; the submarginal line absent; the costa, basal area below the cell, and a large patch at outer angle dark. Head, thorax, and abdomen reddish brown.

Hab. Nawala-pittia, Ceylon. *Exp.* 22 millim.

829. *Thosea fasciata*, Moore, *P. Z. S.* 1888, p. 403; *Butl. Ill. Het.* vii, pl. 124, fig. 6; *C. & S.* no. 1296 A.

♂. Head, thorax, abdomen, and fore wing red-brown. Fore wing irrorated with dark scales; the basal area slightly darker red-brown, with an erect outer edge; no submarginal line; a dark speck at end of cell. Hind wing duller brown; the underside paler and irrorated with black scales.

Hab. Dharmasala. *Exp.* 34 millim.

830. *Thosea sinensis*, Wlk. *Cat.* v, p. 1093.

Parasa loesa, Moore, *Lep. E. I. Co.* ii, p. 417, pl. 11 a, fig. 12; *C. & S.* no. 1286 A.

Head, thorax, abdomen, and fore wing grey; the last irrorated with dark scales; a dark speck at end of cell; an oblique dark line from costa before apex to inner margin beyond the middle. Hind wing rather duller brown. Male with a conspicuous white spot at end of fore tibia.

Larva yellow or green, with a white or yellow dorsal stripe, sometimes with a red spot at middle, subdorsal and sublateral series of spinous tubercles reddish towards tips.

Cocoon purplish grey.

Hab. Hongkong; Formosa; Cachar; Pegu; Java. *Exp.*, ♂ 30, ♀ 40 millim.

831. *Thosea unifascia*, Wlk. *Cat.* v, p. 1068; *C. & S.* no. 1277.

Differs from *sinensis* in being red-brown instead of grey.

Hab. Rangoon; Moulmein; Bhamo. *Exp.*, ♂ 36, ♀ 40 millim.

832. *Thosea cervina*, Moore, *A. M. N. H.* (4) xx, p. 348; *id. Lep. Ceyl.* ii, pl. 129, figs. 2, 2 a (larva); *C. & S.* no. 1275.

Thosea duplexa, Moore, *Lep. Ceyl.* ii, p. 130, pl. 131, fig. 3, ♀; *C. & S.* no. 1276.

♂. Head, thorax, and abdomen red-brown. Fore wing silky grey-brown, with a dark speck at end of cell, and a slightly incurved line from costa just before apex to near outer angle which is red-brown with a pale outer edge. Hind wing and underside dull brown. Antennæ with basal joint pale; a conspicuous white spot at end of fore tibia.

♀. With the submarginal line of fore wing erect; the basal joint of antennæ dark; no white spot on tibia.

Larva green, with a yellow-bordered dorsal irregular band, linear and purplish anteriorly, dilated at middle and cleft behind,



purple streaked, and with the angles at middle red; anterior and posterior subdorsal spinous tubercles; lateral and sublateral series of longer tubercles.

Hab. Sikhim; Ceylon. *Exp.*, ♂ 38, ♀ 44 millim.

833. *Thosea rara*, *Swinh. P. Z. S.* 1889, p. 408, pl. 43, fig. 9.

♀. Differs from *cervina* in the postmedial line of fore wing being pale and oblique, with a diffused fuscous band on its outer edge; nervules near outer margin pale.

Hab. Thyetmyo, Burma. *Exp.* 40 millim.

834. *Thosea cotesi*, *Swinh. MS.*

♂. Head, thorax, and abdomen brown, the scales with pale tips. Fore wing brown, irrorated with pale scales; a pale line from apex to inner margin beyond the middle. Hind wing nearly black, the cilia pale.

♀. Paler; the oblique line on fore wing dark.

Hab. Darang, Assam. *Exp.*, ♂ 22, ♀ 26 millim.

SECT. II. Male with the distal half of the antennæ serrated.

835. *Thosea divergens*, *Moore, Lep. Atk.* p. 75, pl. 3, fig. 23; *C. & S.* no. 1325.

Aphendala divaricata, *Moore, Trans. Ent. Soc.* 1884, p. 376; *C. & S.* no. 1296.

♂. Differs from *aperiens* in being pale reddish brown; the oblique and submarginal lines of fore wing fine, dark, and starting from the same point on the costa.

Hab. Sikhim; Assam; Nágas. *Exp.* 34 millim.

Genus NATADA.

Natada, *Wlk. Cat.* v, p. 1108 (1855).

Phocoderma, *Butl. Ill. Het.* vi, p. 4 (1886).

Phlossa, *Wlk. Cat.* xv, p. 1673 (1858).

Type, *N. rufescens*, *Wlk.*

Range. Throughout India, Ceylon, and Burma; China.

Palpi extending beyond frontal tuft. Hind tibia with two pairs of spurs. Fore wing with vein 7 from angle of cell, 8 and 9 stalked. Hind wing with veins 6 and 7 from the cell, or on a short stalk.

SECT. I. Male antennæ bipectinate to apex, the branches short.

836. *Natada rufescens*, *Wlk. Cat.* v, p. 1109; *C. & S.* no. 1273; *Butl. Ill. Het.* vi, pl. 102, fig. 10.

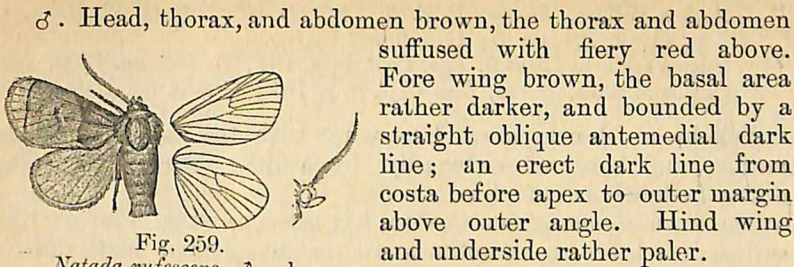


Fig. 259.

Natada rufescens, ♂. 1.

♂. Head, thorax, and abdomen brown, the thorax and abdomen suffused with fiery red above. Fore wing brown, the basal area rather darker, and bounded by a straight oblique antemedial dark line; an erect dark line from costa before apex to outer margin above outer angle. Hind wing and underside rather paler.

Hab. Rangoon. *Exp.* 34 millim.

837. *Natada convergens*, *Wlk. Cat.* iv, p. 868; *C. & S.* no. 979.

♀. Head, thorax, and abdomen pale ochreous. Fore wing pale ochreous, irrorated with dark brown scales; a brown speck at end of cell; costa red-brown; an oblique brown line from the costa, before the apex, to centre of inner margin; a red-brown line from nearly the same point on the costa to outer margin above the angle, curved below the costa. Hind wing reddish brown. Underside pale; hind wing irrorated with dark scales.

Hab. Sylhet. *Exp.* 50 millim.

838. *Natada conjuncta*, *Wlk. Cat.* v, p. 1150.

Natada neutra, *Swinh. Trans. Ent. Soc.* 1890, p. 195.

Phlossa fimbriata, *Wlk. Cat.* xv, p. 1673.

Miresa cuprea, *Moore, Lep. Atk.* p. 74, pl. 3, fig. 8; *C. & S.* no. 1310.

♂. Head and collar pale or copper colour; thorax and abdomen dark brown. Fore wing dark brown; the outer two-thirds silky in texture, with some short strigæ of raised scales; a dark dot at end of cell; a submarginal coppery band, narrow at middle, wide towards apex and outer angle. Hind wing and underside pale brown.

Hab. N. China; Formosa; Sikhim; Rangoon; E. Pegu. *Exp.* 26 millim.

839. *Natada cephica*, *Swinh. Trans. Ent. Soc.* 1890, p. 192.

♂. Palpi longer. Head and thorax dark brown, the thorax black posteriorly. Fore wing pale reddish brown, the costa and outer margin dark brown; an obsolescent waved broken postmedial black line, bent inwards at lower angle of cell and reaching the centre of inner margin. Abdomen and hind wing pale brown. In some specimens the fore wing is wholly clouded with fuscous.

Hab. Rangoon. *Exp.* 18 millim.

SECT. II. Male antennæ bipectinate to apex, the branches long.

840. *Natada nararia*, *Moore, Lep. E. I. Co.* p. 415, pl. 21, figs. 8, 8a (larva); *C. & S.* no. 1287.

Susica cosmiana, *Swinh. P. Z. S.* 1886, p. 440, pl. 40, fig. 9; *C. & S.* no. 1301.

Susica suffusa, Moore, *P. Z. S.* 1888, p. 403; *Butl. Ill. Het.* vii, p. 41, pl. 124, fig. 5; *C. & S.* no. 1315 B.
Susica fraterna, Moore, *Lep. Ceyl.* ii, p. 131; *C. & S.* no. 1302.
Susica signata, Moore, *Lep. Ceyl.* ii, p. 131; *C. & S.* no. 1304.

Pale brownish ochreous. Fore wing with the basal two-thirds redder, and bordered outwardly by a dark brown somewhat diffused slightly curved line.

The form *signata*, from Ceylon, has the fore wing more or less suffused with brown, sometimes with a conspicuous black dot at end of cell.

Larva yellowish green above, pink below; a yellow or pinkish dorsal band; a subdorsal series of red-tipped spinous tubercles; a sublateral series of larger whitish tubercles with very short spines, the tubercles at each end being long, those at posterior end longest.

Cocoon purplish brown.

Hab. Dharmasāla; Mhow; Nilgiris; Ceylon. *Exp.*, ♂ 12–20, ♀ 22 millim.

841. *Natada sericea*, Hmps. *Ill. Het.* ix, ined., pl. 161, fig. 15.

♂. Differs from *nararia* in being uniform silky ochreous white; fore wing with an indistinct darker submarginal line.

Hab. Pundaloya, Ceylon. *Exp.* 20 millim.

842. *Natada unicolor*, Moore, *Lep. E. I. Co.* p. 415, pl. 21, figs. 7, 7 a (larva).

♂. Uniform pale reddish brown; a fuscous spot on prothorax; metathorax and abdomen tipped with fuscous.

Larva green; a pale blue dorsal line; the lateral paired spinous processes on each somite yellow.

Hab. Calcutta. *Exp.* 24 millim.

SECT. III. Male with distal half of antennæ serrated.

843. *Natada ocellata*, Moore, *Lep. Atk.* p. 74; *C. & S.* no. 1324.

Head, thorax, and abdomen ochreous brown; some of the hairs on the vertex of thorax and abdomen black. Fore wing ochreous brown, irrorated with black, especially below the costa; a purplish-grey patch beyond the lower angle of cell with a deep red-brown mark beyond it; a fine submarginal black line. Hind wing suffused with fuscous.

Hab. Sikhim; Khásis; Nágas; Burma. *Exp.*, ♂ 40, ♀ 60 millim.

844. *Natada velutina*, Koll. *Hügel's Kaschmir*, iv, p. 473; *C. & S.* no. 1274; *Butl. Ill. Het.* vi, pl. 102, fig. 1.
Natada rugosa, *Wlk. Cat.* v, p. 1109.

Head, thorax, and abdomen dark red-brown. Fore wing dark silky red-brown; an oblique line, which is curved below the costa, from near the apex to inner margin near base, the scales on its inner side (especially below the costa and towards the inner margin) more erect, giving exactly the appearance of ruffled seal-skin; a curved submarginal line. Hind wing and underside paler. Fore tibia of male with a silvery-white spot.

Hab. Himalayas; Sind; Poona; Bengal; Cachar; Burma.
Exp., ♂ 60, ♀ 78 millim.

Genus **TETRAPHLEPS**, nov.

Type, *T. brevilinea*, Wlk.

Range. Sikhim; Nilgiris.

Antennæ of male bipectinated to tips. Palpi obliquely porrect, projecting beyond frontal tuft. Fore wing with veins 7, 8, 9, 10 stalked together. Hind wing with veins 6 and 7 on a short stalk.

SECT. I. Antennæ with the branches long; fore wing with the apex rounded.

845. *Tetraphleps brevilinea*, Wlk. *Cat.* xxxii, p. 475; *C. & S.* no. 1308.

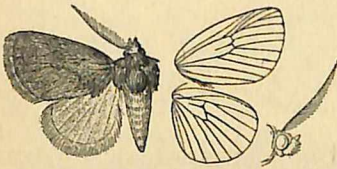


Fig. 260.

Tetraphleps brevilinea, ♂. †.

Head, thorax, and base of abdomen dark brown, the remainder of abdomen pale ochreous brown. Fore wing dark red-brown; the basal area and costa slightly darker. Hind wing pale ochreous brown. Underside pale red-brown.

Hab. Sikhim. *Exp.*, ♂ 36, ♀ 40 millim.

SECT. II. Antennæ with the branches shorter; fore wing with the apex produced.

846. *Tetraphleps crispa*, Swinh. *P. Z. S.* 1889, p. 409, pl. 43, fig. 4.

♂. Head, thorax, and abdomen red-brown, suffused with fiery red above. Fore wing dark red-brown; a dark speck at end of cell; a purplish gloss forming an oblique line from apex to middle of inner margin; another along outer margin. Hind wing and underside dull brown. Silvery-white spots at end of coxa, femur, and tibia of fore leg.

Hab. Sikhim. *Exp.* 38 millim.

847. *Tetraphleps nilgirica*, Hmps. *Ill. Het.* viii, p. 63, pl. 142, fig. 13.

♂. Differs from *crispa* in the head, thorax, and abdomen being chestnut-brown. Fore wing with the purplish oblique line rather

dark ; no marginal purplish shade ; a chestnut submarginal nearly straight line.

Hab. Nilgiri plateau, 7000 feet. *Exp.* 38 millim.

Genus **BIRTHAMA.**

Birthama, *Wlk. Journ. Linn. Soc.* vi, p. 175 (1862).

Type, *B. obliqua*, *Wlk.*, from Borneo.

Range. Ceylon ; Burma ; Borneo.

Antennæ bipectinated to two-thirds length in male, simple in female. Palpi reaching beyond frontal tuft. Hind tibia with a terminal pair of spurs in male, two pairs in female. Fore wing with vein 7 from angle of cell, 8, 9, 10 stalked. Hind wing with veins 6 and 7 from angle of cell.

848. *Birthama junctura*, *Wlk. Cat.* xxxiii, p. 857.

Head, thorax, and abdomen bright red-brown. Fore wing red-brown ; the basal area darkest, and bounded by an oblique dark

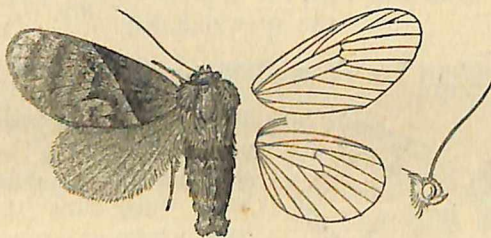


Fig. 261.—*Birthama junctura*, ♀. 1.

medial line ; outer area with two indistinct waved postmedial lines and two oblique lines across the apex. Hind wing paler.

Hab. Burma ; Borneo. *Exp.*, ♂ 36, ♀ 48 millim.

849. *Birthama obliquifascia*, *Hmps. Ill. Het.* ix, ined., pl. 160, fig. 4.

♀. Head, thorax, and abdomen red-brown. Fore wing pale reddish brown, irrorated with black scales ; a broad oblique black line from the costa before the apex to inner margin before the middle. Hind wing paler. Cilia of both wings red-brown.

Hab. Ceylon. *Exp.* 34 millim.

Genus **CONTHEYLA.**

Contheyla, *Wlk. Cat.* xxxii, p. 384 (1865).

Type, *C. vestita*, *Wlk.*

Range. N.W. Himalayas and Peninsular India.

Antennæ bipectinated to tip in male, ciliated in female. Palpi reaching beyond frontal tuft. Fore wing with veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 on a long stalk. Hind tibia with a terminal pair of spurs in male, two pairs in female.

850. *Contheyla vestita*, *Wlk. Cat.* xxxii, p. 385; *C. & S.* no. 1279; *Hmps. Ill. Het.* viii, pl. 143, fig. 10.

♂. Head and thorax smoky black. Fore wing smoky black; a pale speck at end of cell; apical area grey, which colour is continued to outer angle as a series of conjoined marginal spots; a

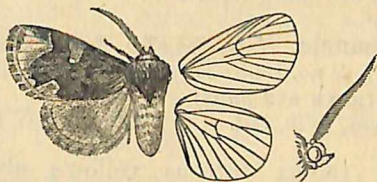


Fig. 262.—*Contheyla vestita*, ♂. †.

large grey patch on inner margin near outer angle; base of cilia fulvous; the tips chequered brown and ochreous. Abdomen, hind wing, and underside ochreous, suffused with fuscous.

♀. The head, thorax, and fore wing paler and browner.

Hab. Nilgiri plateau, 6700 feet. *Exp.* 34 millim.

851. *Contheyla propexa*, *Swinh. P. Z. S.* 1889, p. 409.

♂. Head, thorax, abdomen, and fore wing very pale brown, irrorated with black scales. Fore wing with a black spot beyond the lower end of the cell; an elongated medial black mark from the median nervure to vein 1 *b*; a black oblique line from the apex to vein 5; a spot at outer angle. Hind wing dark fuscous.

Hab. Satara; Poona. *Exp.* 24 millim.

852. *Contheyla melanosticta*, n. sp.

♂. Head, thorax, and abdomen pale reddish ochreous; tegulae smoky black. Fore wing ochreous, with a broad irregular smoky-black stripe below the cell from base to outer angle; a black spot beyond the cell; a black subapical patch with waved outer edge; a series of black marginal specks. Hind wing pale fuscous; the cilia ochreous.

♀. With the tegulae ochreous. Fore wing with the black markings much reduced, especially the streak from the base, of which there is only scattered traces.

Hab. Jubbulpore; Mandi, N.W. Himalayas. *Exp.* 27 millim. Type, ♂ in coll. Moore, ♀ in coll. Elwes.

Genus MIRESA.

Miresa, *Wlk. Cat.* v, p. 1123 (1855).

Type, *M. albipuncta*, H.-S.

Range. Japan; China; throughout India and Ceylon.

Palpi not reaching beyond frontal tuft. Antennæ of male with the distal half serrated, mid and hind tibiæ with terminal pairs of spurs. Fore wing with veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 on a short stalk or from cell.

SECT. I. Fore wing with vein 10 from end of cell.

853. *Miresa albipuncta*, Herr.-Schäffer, *Samml. aussereur. Schmett.* i, fig. 179; *C. & S.* no. 1305; *Forsayeth, Trans. Ent. Soc.* 1884, pl. 14, figs. 8 a-c (larva and pupa).

Miresa guttifer, *Wlk. Cat.* v, p. 1124; *C. & S.* no. 1312.

Head yellow; thorax fulvous yellow; abdomen ochreous fulvous. Fore wing red-brown; a silvery-white spot beyond the lower angle of cell; a faint silvery postmedial line. Hind wing

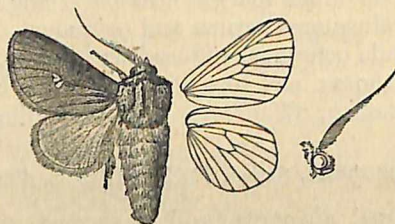


Fig. 263.—*Miresa albipuncta*, ♂. †.

ochreous. Underside ochreous; both wings suffused with red-brown towards the costa.

The Burmese form has the thorax and fore wing rather darker.

Larva green; two pairs of dorsal and two of lateral spinous tubercles at anterior and posterior ends, the dorsal pairs longest; a lateral brown line, beneath which the colour is pale, with a series of brown spots; stigmata on a pale brown line.

Hab. Throughout India and Ceylon. *Exp.*, ♂ 32-43, ♀ 46 millim.

854. *Miresa inornata*, *Wlk. Cat.* v, p. 1125; *C. & S.* no. 1313.

Differs from *albipuncta* in the fore wing being duller red-brown; the white spot beyond the cell absent; an indistinct submarginal curved line. Hind wing darker.

Hab. Japan; China; N.W. Himalayas; Nágas. *Exp.*, ♂ 36, ♀ 50 millim.

855. *Miresa argentifera*, *Wlk. Cat.* v, p. 1124; *C. & S.* no. 1306; *Moore, Lep. Ceyl.* ii, pl. 129, figs. 1, 1 a (larva).

Differs from *albipuncta* in the spot beyond the cell of the fore wing being absent; a broken ill-defined postmedial silvery line, curved from the costa to vein 2, then straighter and more promi-

nent to inner margin; some silvery scales towards outer margin a series of silvery marginal spots.

Larva green; two pairs of dorsal and two of lateral spinous tubercles at anterior and posterior ends, the dorsal pair longest; intervening series of minute subdorsal and sublateral spinous tubercles; a pink stripe at base of the anterior and posterior tubercles; a pale dorsal line; spiracular rings pale.

Hab. Ceylon. *Exp.* 36 millim.

856. *Miresa bracteata*, *Butl. A. M. N. H.* (5) vi, p. 64; *id. Ill. Het.* vi, pl. 102, fig. 2; *C. & S.* no. 1307.

Differs from *argentifera* in the postmedial silvery line of the fore wing being bent inwards at vein 5 and expanding into a large triangular silvery spot beyond the lower angle of the cell; the marginal silvery spots larger.

Hab. Sikkim; Nágas. *Exp.*, ♂ 38, ♀ 41 millim.

SECT. II. Fore wing with vein 10 stalked with 7, 8, 9.

857. *Miresa decedens*, *Wlk. Cat.* v, p. 1125; *C. & S.* no. 1311; *Butl. Ill. Het.* vi, pl. 102, fig. 3.

Differs from *argentifera* in having the fore wing much darker brown instead of red-brown; the hind wing also darker.

Hab. Assam; Nilgiris. *Exp.* 36 millim.

858. *Miresa nivaha*, *Moore, Lep. E. I. Co.* p. 413; *C. & S.* no. 1315.

Differs from *decedens* in the head, thorax, and vertex of abdomen being dark red-brown instead of yellow.

Hab. Canara. *Exp.* 38 millim.

Genus PARASA.

Parasa, *Moore, Lep. E. I. Co.* p. 413 (1859).

Neæra, *Herr.-Schäffer, Samml. aussereur. Schmett.* i, fig. 176 (1854), nom. præocc.

Type, *P. lepida*, Cram.

Range. N. America; W. and S. Africa; Madagascar; Japan; China; throughout India, Ceylon, and Burma; Java.

Palpi projecting beyond frontal tuft. Fore wing rounded at apex, veins 7, 8, 9 stalked; the veinlet in cell forked or the lower discocellular absent, the fork of the veinlet replacing it. Hind wing with veins 6 and 7 on a short stalk or from cell. Hind tibia with a terminal pair of spurs.

SECT. I. Antennæ of male bipectinated, the distal half serrated.

859. *Parasa lepida*, *Cram. Pap. Exot.* ii, pl. 130 E; *C. & S.* no. 1286;
Moore, Lep. Ceyl. ii, pl. 128, figs. 2, 2a, b (larva and cocoon).
Næra media, *Wlk. Cat.* v, p. 1140.
Limacodes graciosa, *Westw. Cab. Or. Ent.* p. 50.
Nyssia latifascia, *Wlk. Cat.* v. p. 1136; *C. & S.* no. 1317.

♂. Head green, red-brown at the sides; thorax green, with a brown stripe on the vertex; abdomen brown. Fore wing pea-green; a red-brown basal patch on the costa; the outer area red-brown, widest at inner margin. Hind wing yellowish at base, red-brown towards outer margin. Legs with the joints pale tipped.

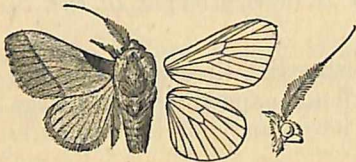


Fig. 264.—*Parasa lepida*, ♂. 1.

♀. The red-brown stripe on thorax wider, and nearly the whole of the hind wing red-brown.

Larva pale green, whitish or bright yellowish green above; three dorsal mauve or green bands; subdorsal and sublateral series of short spinous tubercles, the spines of the anterior and posterior tubercles tipped with red.

Eggs flat and overlapping each other, and covered by a transparent cement.

Cocoon purple-brown.

Hab. Throughout India and Ceylon; Java. *Exp.* ♂, 30, ♀ 42–50 millim.

860. *Parasa repanda*, *Wlk. Cat.* v, p. 1141; *C. & S.* no. 1290; *Butl. Ill. Het.* vi, pl. 102, fig. 5.

♀. Differs from *lepida* in the basal brown patch of the fore wing being broader with an irregular lower edge; the marginal brown area narrower and even throughout, with a silvery-white line on its inner edge.

Hab. Sikkim; Assam. *Exp.* 52 millim.

861. *Parasa dharma*, *Moore, Lep. E. I. Co.* p. 414, pl. xi a, fig. 7.

Differs from *repanda* in the head being dark brown; tegulae with only a small green spot. Fore wing with the green area confined to the disk and crescentic in shape, extending from near the base to near the apex; the marginal band suffused with silvery scales beyond the white line; a fine dark submarginal line. Hind wing with the basal two-thirds yellow, the brown marginal area more sharply defined.

Hab. Rangoon; Java. *Exp.*, ♂ 26, ♀ 34 millim.

862. *Parasa argenteilinea*, n. sp.

♂. Differs from *repanda* in the brown basal patch of the fore wing being absent; an even brown band along inner margin; the silvery line starting from the costa nearer the apex, straight, and ending above inner margin, not recurved. Hind wing pale ochreous.

Hab. Sikkim; Margharita, Assam (*Doherty*). *Exp.* 24 millim. Type in coll. Elwes.

863. *Parasa hilaris*, *Westw. Cab. Or. Ent.* p. 50; *C. & S.* no. 1282.

Parasa læta, *Westw. Cab. Or. Ent.* p. 50; *C. & S.* no. 1284; *Moore,*

Lep. Ceyl. ii. pl. 130, fig. 1.

Parasa hockingii, *Moore, P. Z. S.* 1888, p. 403.

Parasa mirza, *Swinh. Trans. Ent. Soc.* 1890, p. 192.

Differs from *lepida* in the thorax being without the brown stripe. Fore wing with the red-brown patch covering the whole basal area, its outer edge angled; the marginal band very variable in width, with an irregular inner edge. Hind wing with only a slight tinge of brown towards outer margin.

Hab. Throughout India and Ceylon. *Exp.*, ♂ 26, ♀ 30–34 millim.

864. *Parasa pastoralis*, *Butl. A. M. N. H.* (5) vi, p. 63; *id. Ill. Het.* vi. pl. 102, fig. 9; *C. & S.* no. 1288.

Differs from *hilaris* in the basal patch of the fore wing being suffused with ochreous; some red-brown suffusion beyond the patch; the marginal band suffused with yellow except the veins, its inner edge more curved.

P. consocia, *Wlk.* = *tessellata*, *Moore*, from Japan and China, only differs in being without the brown suffusion and the marginal band being narrower at outer angle.

Hab. Dharmasāla; Sikkim; Bhutan; Nāgas. *Exp.*, ♂ 40, ♀ 56 millim.

*865. *Parasa punica*, *Herr.-Schäffer, Samml. aussereur. Schmett.* i, fig. 177; *C. & S.* no. 1289.

♀. Differs from *hilaris* in having the basal patch of fore wing with a dentate outer edge; the marginal band very narrow with a dentate inner edge; in the figure a curved pale postmedial line is represented.

Hab. Sylhet. *Exp.* 40 millim.

*866. *Parasa similis*, *Feld. Reis. Nov.* pl. 82, fig. 15; *C. & S.* no. 1292.

♂. Differs from *hilaris* in the basal brown patch of the fore wing being restricted to a spot below the median nervure; the marginal brown band widest at middle.

Hab. Ceylon. *Exp.* 30 millim.



*867. *Parasa isabella*, Moore, *Lep. E. I. Co.* p. 415; *C. & S.* no. 1283.

♂. Head, thorax, and fore wing grass-green; the last with a large buff-coloured patch from the costa to lower angle of cell, suffused with brown and edged with black; a similarly-coloured marginal band expanding into large patches at apex and outer angle. Abdomen and hind wing ochreous brown.

Larva green, with a purple dorsal stripe and paired anterior red-brown spinous processes.

Hab. Bengal. *Exp.* 40 millim.

868. *Parasa bicolor*, *Wlk. Cat.* v, p. 1142; *C. & S.* no. 1281; *Butl. Ill. Het.* vi, pl. 102, fig. 11.

Head and thorax pea-green. Fore wing pea-green, the costa and cilia narrowly brown; a small brown speck near inner margin between veins 1 b and 1 c, and another between veins 4 and 5. These specks are sometimes edged inwardly with white and form a more or less complete series to the apex. Abdomen, hind wing, and underside ochreous fuscous.

Hab. Sikkim; throughout Continental India and Burma. *Exp.*, ♂ 35, ♀ 38 millim.

869. *Parasa viridis*, *Hmps. Ill. Het.* ix, ined., pl. 160, fig. 9.

♂. Differs from *bicolor* in being without the brown specks and in having a brown patch on the margin above outer angle and on inner margin before the angle. Thorax edged with fuscous.

Hab. Ceylon. *Exp.* 30 millim.

870. *Parasa albipuncta*, n. sp.

♂. Differs from *viridis* in the marginal brown band having expanded into a large patch between veins 3 and 5; a white speck on the patch on inner margin. Hind wing ochreous.

Hab. Mao, Manipur (*Doherty*). *Exp.* 26 millim. Type in coll. Elwes.

871. *Parasa herbifera*, *Wlk. Cat.* v, p. 1136; *C. & S.* no. 1316; *Butl. Ill. Het.* vi, pl. 102, fig. 6.

Parasa fumosa, *Swinh. P. Z. S.* 1889, p. 408, pl. 43, fig. 12.

Head and thorax pea-green. Fore wing with the basal two-thirds dark purplish brown in the male, dark reddish brown in the female; the outer marginal area a different shade of brown. Abdomen and hind wing dark brown.

Hab. Simla; Nepal; Nilgiris. *Exp.*, ♂ 30, ♀ 34 millim.

SECT. II. Male with antennæ serrated throughout.

872. *Parasa dentata*, n. sp.

Head and thorax pale brown; abdomen darker. Fore wing with the basal area pale brown, bounded by an antemedial curved black line, beyond which is a purplish-grey band, then a large discal brown patch, on which is a semicircular dark-outlined mark, its outer edge highly dentate; marginal area grey; a marginal black line most prominent at apex; cilia with two black lines. Hind wing fuscous, with marginal and ciliary lines.

Hab. Sikhim (Möller); Nágas (Doherty). *Exp.*, ♂ 30, ♀ 44 millim. Type in coll. Elwes.

Genus **SPATULIFIMBRIA**.

Spatulicraspeda, *Hmps.* *Ill. Het.* ix, ined.

Type, *S. castaneiceps*, *Hmps.*

Range. Ceylon.

Antennæ bipectinated to three-fourths length in male, ciliated in female. Palpi slight and short. Hind tibia with two pairs of spurs. Fore wing with veins 7, 8, 9 stalked. Hind wing with vein 8 bent down and anastomosing with 7 near end of cell, 6 and 7 stalked.

873. *Spatulifimbria castaneiceps*, *Hmps.* *Ill. Het.* ix, ined., pl. 161, figs. 16, 17.

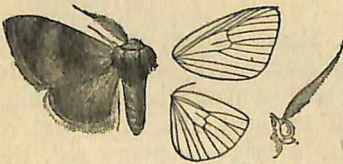


Fig. 265.

Spatulifimbria castaneiceps, ♂. ♀.

♂. Head and collar chestnut; thorax and abdomen black-brown. Fore wing black-brown; a dark band on discocellulars and another from costa before apex to outer margin above outer angle. Hind wing black-brown; cilia pale towards apex.

♀. Thorax and fore wing chestnut; the submarginal band reaching the inner margin. Hind wing smoky black; the cilia concolorous.

Cocoon round and streaked with brown and white.

Hab. Ceylon. *Exp.*, ♂ 17, ♀ 22 millim.

Genus **IDONAUTON**.

Idonauton, *Swinh. Cat. Het. Mus. Oxon.*, ined.

Type, *I. apicale*, *Wlk.*

Range. Sylhet; Singapore; Borneo.

Antennæ bipectinated to half the length in male, ciliated in female. Palpi upturned, reaching vertex of head. Tibiæ without spurs in male.

Fore wing with veins 7, 8, 9, 10 stalked together. Hind wing with veins 6 and 7 stalked.

874. *Idonauton apicale*, Wlk. *Cat.* v, p. 1150; *C. & S.* no. 1280.

Nyssia rubriplaga, Wlk. *Journ. Linn. Soc.* vi, p. 144.

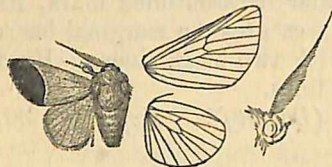


Fig. 266.

Idonauton apicale, ♂. 1.

Head, thorax, and abdomen chestnut. Fore wing chestnut, with an oval marginal chocolate patch bounded on the inside by a white semicircular line. Hind wing paler.

Hab. Sylhet; Singapore; Borneo. *Exp.*, ♂ 25, ♀ 36 millim.

Genus **CHALCOCELIS**, nov.

Type, *C. fumifera*, Swinh.

Range. Burma; Singapore.

♂. Antennæ with proximal half bipectinated. Palpi reaching vertex of head. Hind tibia with two pairs of spurs. Fore wing with veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 stalked.

875. *Chalcocelis fumifera*, Swinh. *Trans. Ent. Soc.* 1890, p. 195, pl. vi, fig. 13.

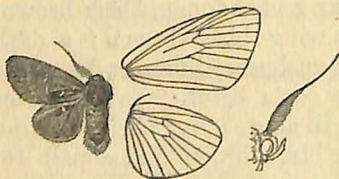


Fig. 267.

Chalcocelis fumifera, ♂. 1.

♂. Head, thorax, abdomen, and wings dark smoky brown. Fore wing with a patch below the middle of the cell, the inner part of which is bright coppery red, the outer dark brown with a conspicuous white dot in the middle of it.

Hab. Rangoon; Singapore. *Exp.* 22 millim.

Genus **TRIPLOPHLEPS**, nov.

Type, *T. inferna*, Swinh.

Range. Burma.

♂. Antennæ simple. Palpi reaching vertex of head. Hind tibia with one pair of spurs. Fore wing with veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 stalked.

876. *Triplophleps inferma*, Swinh. *Trans. Ent. Soc.* 1890, p. 194.

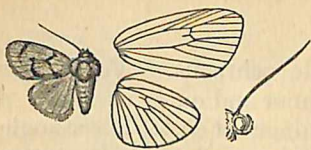


Fig. 268.
Triplophleps inferma, ♂. †.

♂. Head, thorax, abdomen, and wings greyish fuscous. Fore wing with a black antemedial curved line, not quite reaching either the costa or inner margin; a postmedial blackish curved line from the lower angle of cell to vein 1 *b*; an obliquely-curved line from the costa before the apex to above outer angle.

Hab. Rangoon. *Exp.* 22 millim.

Genus **ORTHOCRASPEDA**, nov.

Type, *O. trima*, Moore.

Range. Burma; Java.

♀. Antennæ simple. Palpi reaching vertex of head. Mid tarsi tufted with hair; hind tibiæ with one pair of spurs. Fore wing with veins 8 and 9 stalked; the outer margin straight and erect. Hind wing with veins 6 and 7 stalked.

877. *Orthocraspeda trima*, Moore, *Lep. E. I. Co.* p. 416, pl. xi a, figs. 13, 13 a, pl. 21, fig. 9 (larva).

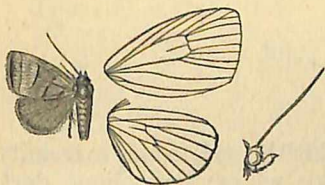


Fig. 269.
Orthocraspeda trima, ♂. †.

♀. Head, thorax, and abdomen pale brown. Fore wing pale brown, with four oblique black-brown lines, one subbasal from subcostal nervure to inner margin, a similar medial line, one postmedial from subcostal to vein 2, and one submarginal from the costa before apex to outer angle; a marginal dark line. Hind wing fuscous.

Larva: the first four somites brown; the posterior somites green, with a brown dorsal band expanding on the last somites, a yellow patch on each side of the narrow part; paired lateral spinous tubercles to each somite.

Hab. E. Pegu; Java. *Exp.* 20 millim.

Genus **CERATONEMA**, nov.

Type, *C. retractatum*, Wlk.

Range. Sikhim; Nāga Hills.

♂. Antennæ simple. Palpi reaching vertex of head. Hind tibiæ with two pairs of spurs. Fore wing with veins 8, 9, 10 stalked. Hind wing with veins 6 and 7 from cell.

SECT. I. Palpi with 3rd joint of moderate length.

878. *Ceratonema albifusum*, n. sp.

♂. Head, thorax, and abdomen pale ochreous. Fore wing ochreous, suffused with whitish along inner and outer margins; a broken medial band of dark scales, prominent at costa, lower angle of cell, and inner margin; a submarginal series of dark specks. Hind wing whitish.

Hab. Nágas, 6000 feet (*Doherty*). *Exp.* 23 millim. Type in coll. Elwes.

879. *Ceratonema retractatum*, *Wlk. Cat.* xxxii, p. 487; *C. & S.* no. 1291.

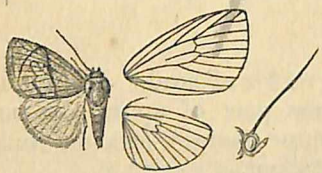


Fig. 270.

Ceratonema retractatum, ♂. 1.

♂. Head, thorax, and abdomen ochreous. Fore wing ochreous, the veins darker; a dark oblique line from the costa before the middle to centre of inner margin; a fine waved postmedial line from vein 6 to inner margin; an oblique line from costa before apex to outer margin at vein 3. Hind wing pale yellow; an ochreous streak near anal angle.

Hab. Sikhim. *Exp.* 24 millim.

SECT. II. Palpi with 3rd joint minute.

880. *Ceratonema fasciatum*, n. sp.

♂. Head, thorax, and abdomen whitish; collar and extremity of abdomen fuscous. Fore wing silky white; an oblique dark band from costa just beyond middle to inner margin just before the middle; a dark speck beyond it on the costa and another on vein 1 *b*; two dark specks on outer margin below the apex. Hind wing yellowish white, with two dark specks on margin below the apex.

Hab. Nágas, 6000 feet (*Doherty*). *Exp.* 28 millim. Type in coll. Elwes.

Genus *ARÆOGYIA*, nov.

Type, *A. spatulata*, *Hmpsn.*

Range. Sikhim.

♂. Antennæ simple. Palpi upturned and long, reaching above vertex of head. Hind tibiæ with two pairs of spurs; legs naked. Fore wing with vein 7 from below angle of cell, 8 and 9 stalked. Hind wing with veins 6 and 7 from the cell.

881. *Aræogyia spatulata*, n. sp.

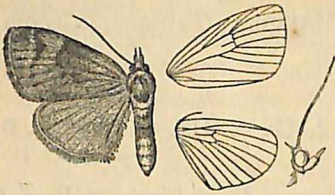


Fig. 271.

Aræogyia spatulata, ♂. ½.

♂. Head and thorax purplish black; abdomen fuscous, darkest on middle segments. Fore wing black, irrorated with a few leaden scales; a patch of leaden scales on the costa before apex, and on inner margin before outer angle. Hind wing fuscous; cilia with a few spatulate scales, and a conspicuous patch of them at anal angle.

Hab. Sikhim (*Elwes*). *Exp.* 16 millim. Type in coll. *Elwes*.

882. *Aræogyia castanea*, n. sp.

♂. Head pale; thorax chestnut; abdomen pale, the middle segments darker. Fore wing chestnut; a large blackish patch beyond the cell from the costa to vein 3, darkest on the discocellulars, where there are a few white scales. Hind wing fuscous.

Hab. Sikhim (*Elwes*). *Exp.* 18 millim. Type in coll. *Elwes*.

Genus **CANIA**.

Cania, *Wlk. Cat.* v, p. 1177 (1855).

Type, *C. bilinea*, *Wlk.*

Range. China; throughout India and Burma; Malacca; Java.

Antennæ in male bipectinated to three-fourths length. Palpi slight and short. Fore wing with vein 11 curved and running along 12. Hind wing with veins 6 and 7 from the cell. Mid tibia with one pair of spurs, hind tibia with two pairs.

SECT. I. Fore wing with vein 7 from angle of cell, 10 from before the angle.

883. *Cania bilinea*, *Wlk. Cat.* v, p. 1142.

Cania sericea, *Wlk. Cat.* v, p. 1178; *C. & S.* no. 1321; *Butl. Ill. Het.* vi, pl. 102, fig. 7.

Miresa mollis, *Wlk. Cat.* xxxii, p. 475; *C. & S.* no. 1314.

Nyssia malaccana, *Wlk. Cat.* xxxii, p. 481.

Aspidiotus bicarinatus, *Wlk. Cat. Homopt. Suppl.* p. 306 (1858).

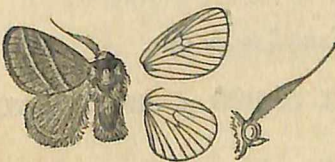


Fig. 272.—*Cania bilinea*, ♂. ½.

♂. Head, thorax, and fore wing reddish ochreous, the head and collar rather darker. Fore wing with two oblique lines with pale outer edges from the costa before the apex to near centre of inner margin; cilia ochreous or brownish. Abdomen and hind wing ochreous.

♀. The lines of the fore wing indistinct and without the pale edges.

Hab. China; Dharmasāla; Sikkim; Manipur; Ganjam; S. India; Malacca; Java. *Exp.* 34 millim.

884. *Cania bandura*, Moore, *Lep. E. I. Co.* p. 417, pl. xi a, fig. 9; *C. & S.* no. 1280 A.

♂. Head and collar fuscous; thorax and abdomen yellowish white. Fore wing silky black, with a yellowish-white basal patch; the costa and outer margin narrowly yellowish white. Hind wing yellowish white, with a slight fuscous suffusion.

Hab. Rangoon; Malacca; Java. *Exp.* 36 millim.

SECT. II. Fore wing with vein 7 stalked with 8 and 9,
10 from the angle.

885. *Cania pulligonis*, Swinh. *P. Z. S.* 1889, p. 408, pl. 43, figs. 7, 8.

♂. Head, thorax, and abdomen ochreous. Fore wing ochreous, the whole disk suffused with dark brown, red-brown, and grey scales; an indistinct oblique line from the costa before apex to centre of inner margin; a curved submarginal line starting from the same point on the costa as the postmedial line. Hind wing ochreous.

♀. Head, thorax, and fore wing uniform dark vinous brown. Fore wing with the two lines ochreous, the submarginal line more oblique and less curved. Hind wing darker than in male.

Hab. Canara. *Exp.*, ♂ 25, ♀ 28 millim.

Genus **ALTHA**.

Altha, Wlk. *Journ. Linn. Soc.* vi, p. 173 (1862).

Belgoræa, Wlk. *Cat.* xxxii, p. 496 (1865).

Type, *A. nivea*, Wlk.

Range. Throughout India, Ceylon, and Burma; Java; Borneo.

Palpi short and slight. Mid and hind tibiæ without spurs. Fore wing with vein 7 from the cell or stalked with 8 and 9. Hind wing with veins 6 and 7 from the cell.

SECT. I. Fore wing with vein 7 stalked with 8 and 9.

A. Male with antennæ pectinated to the tips.

886. *Altha castaneipars*, Moore, *P. Z. S.* 1865, p. 819; *C. & S.* no. 1309.

♂. Head, thorax, and wings yellowish white. Fore wing with a large chestnut subbasal irregular patch, with a blue-grey line

across the middle from the median nervure to lower edge; traces of two postmedial lines, with a costal black speck at their origin; a pale brown suffusion towards outer angle. Underside of fore wing suffused with black below the costa and median nervure. End of abdomen with some fulvous hairs.

Hab. Sikkim; Nágas. *Exp.* 40 millim.

B. Male with distal half of antennæ serrated.

887. *Altha nivea*, *Wlk. Journ. Linn. Soc.* vi, p. 173.

Candyba punctata, *Moore, Lep. Ceyl.* ii, pl. 132, fig. 4; *C. & S.* no. 1326 (*nec Wlk.*).

Belgoræa subnotata, *Wlk. Cat.* xxxii, p. 497.

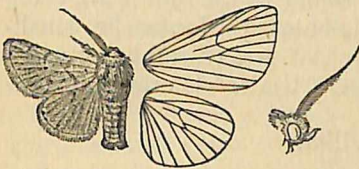


Fig. 273.—*Altha nivea*, ♂. 1.

The wings broader and rounder. Pure white. Fore wing with a black dot beyond lower end of cell and two on outer margin below apex. Hind wing with two black dots on outer margin below apex. Underside with costa of fore wing black.

In a fresh specimen from Sikkim prominent olive markings appear on the fore wing as patches in and below the cell and forming an irregular postmedial band.

Candyba punctata, *Wlk.*, is from Brazil, and the genus is distinct from *Altha*.

Hab. Simla; Kulu; Sikkim; Sibságar; Ranchi; Ganjam; S. India; Ceylon. *Exp.* 30 millim.

888. *Altha lacteola*, *Swinh. Trans. Ent. Soc.* 1890, p. 193.

♂. Differs from *nivea* in the fore wing being slightly blotched and streaked with orange in a similar manner to *adala*, but not nearly as much; no black spot beyond end of cell and only a trace of the subapical dark streak. Hind wing slightly suffused with ochreous except on costal and inner areas. Underside with the costa of fore wing white.

There is a single specimen from Ceylon in coll. Swinhoe of a form with the wings as much marked with red as in *Narosa conspersa*.

Hab. Rangoon; Ceylon. *Exp.* 24 millim.

SECT. II. Fore wing with vein 7 from the cell.

A. Fore wing with vein 10 from before end of cell.

889. *Altha adala*, *Moore, Lep. E. I. Co.* p. 418; *id. Lep. Ceyl.* ii, pl. 132, figs. 3, 3a (larva); *C. & S.* no. 1318.

Head, thorax, abdomen, and fore wing brownish white. Fore wing

whitish, spotted and streaked with red-brown marks forming indistinct bands, the most prominent being a red-brown spot below middle of cell, two in the end of it, and one beyond; a black dot beyond lower angle of cell and two on margin below apex. Hind wing silvery white, with a dark dot on margin below apex.

Larva pale green, with indistinct dorsal and lateral rows of bluish-green dots and longitudinal lines and a sublateral row of white dots.

Cocoon oval and whitish.

Hab. Nágas; Nilgiris; Ceylon; Java. *Exp.* 28 millim.

890. *Altha rufotessellata*, Moore, *Lep. Atk.* p. 73, pl. 3, fig. 24; C. & S. no. 1320.

Differs from *adala* in the ground-colour of the fore wing being ochreous, more closely and evenly distributed; the broken brownish-orange bands of fore wing and spot at end of cell being more prominent. Hind wing bright orange. Underside orange, yellow towards outer margin.

Hab. Simla; Sikhim. *Exp.* 34 millim.

B. Fore wing with vein 10 from end of cell.

891. *Altha contaminata*, Hmps. *Ill. Het.* viii, p. 63, pl. 142, fig. 3.

Differs from *adala* in the ground-colour of the thorax and fore wing being whiter; fore wing with the markings more prominent. The abdomen, the whole of hind wing except costa, and underside suffused with black; hind wing with a marginal series of black dots.

Hab. Nilgiris, 6000–8000 feet. *Exp.* 28 millim.

Genus **NAROSA**.

Narosa, *Wlk. Cat.* v, p. 1151 (1855).

Type, *N. conspersa*, Wlk.

Range. Peninsular India and Ceylon; Nága Hills; Borneo; Java.

Antennæ ciliated in male, simple in female. Palpi reaching vertex of head. Mid tibia with one pair of spurs, hind tibia with two pairs. Fore wing with veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 stalked.

892. *Narosa conspersa*, *Wlk. Cat.* v, p. 1151; C. & S. no. 1319; Moore, *Lep. Ceyl.* ii, pl. 132, figs. 2, 2a, b (larva).

Narosa velutina, *Wlk. Journ. Linn. Soc.* vi, p. 171.

Head and thorax white, slightly spotted with red-brown. Fore wing yellowish white, spotted and streaked with red-brown marks, forming indistinct broken transverse oblique lines; a large ferru-

ginous patch near base of inner margin; two brown specks on outer margin above veins 2 and 3. Abdomen and hind wing pale yellow.

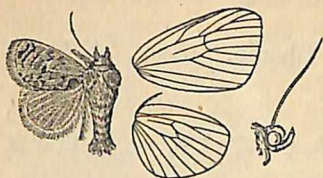


Fig. 274.

Narosa conspersa, ♂. $\frac{1}{2}$.

Larva naked, oval, and transversely corrugated; with paired dorsal humps; green, with white subdorsal lines and a series of white sublateral spots; legs yellow and retractile.

Cocoon oval; whitish, with a circular brown spot at one end.

Hab. Nágas; S. India; Ceylon; Borneo. *Exp.* 22 millim.

893. *Narosa dœnia*, Moore, *Lep. E. I. Co.* p. 416.

Head, thorax, and abdomen pale and dark brown. Fore wing pale brown, irrorated with fuscous; a diffused curved dark brown band from vein 2 near the outer margin curving up to and along the subcostal nervure, then down to inner margin before the middle; a marginal dark band, widest at apex; some dark apical specks. Hind wing silky fuscous; cilia paler.

Hab. Ganjam; Nágas; Java. *Exp.* 20 millim.

Genus **BELIPPA**.

Belippa, Wlk. *Cat.* xxxii, p. 508 (1865).

Cheromettia, Moore, *Lep. Ceyl.* ii, p. 133 (1883).

Type, *B. horrida*, Wlk., from China.

Range. China; Ceylon; Sikhim, Cachar, Manipur, and Burma; Java.

Antennæ with the proximal one-third bipectinated in male, ciliated in female. Palpi reaching vertex of head. Hind tibia with two pairs of spurs. Fore wing with veins 7, 8, 9 stalked. Hind wing with veins 6 and 7 from the cell.

SECT. I. Hind wing with outer margin rounded in male.

894. *Belippa laleana*, Moore, *Lep. E. I. Co.* p. 417; *C. & S.* no. 1285.
Cheromettia ferruginea, Moore, *A. M. N. H.* (4) xx, p. 348; *id.*
Lep. Ceyl. ii, pl. 132, figs 1, 1 a, b (larva); *C. & S.* no. 1322.

Head, thorax, abdomen, and fore wing fulvous, the last with a



Fig. 275.—*Belippa laleana*, ♂. $\frac{1}{2}$.

dark speck at end of cell; a small black patch with a few white scales on it at apex, where the tips of the cilia also are black. Hind wing paler and yellower, with small black marginal streaks at apex and anal angle.

Larva naked, oval, and convex



above; pale bluish green, with several longitudinal rows of small yellow spots and a subdorsal row of black dots.

Cocoon round and whitish.

Hab. Sikkim; Ceylon; Rangoon; Bhamo. *Exp.*, ♂ 34, ♀ 42 millim.

895. *Belippa thoracica*, Moore, *Lep. Atk.* p. 74, pl. 3, fig. 7; *C. & S.* no. 1278.

♂. Head and thorax white; collar sometimes fringed with black; abdomen fuscous. Fore wing black-brown or dark olive-brown, more or less irrorated with white scales; a white spot at end of cell; two white spots on inner margin, which are sometimes obsolete; in the olive-brown specimens a blackish apical patch suffused with white is prominent and a pale line runs from its inner edge on the costa towards outer angle. Hind wing fuscous; the cilia blackish at apex.

Hab. Sikkim, 7000 feet. *Exp.* 32 millim.

SECT. II. Male with outer margin of hind wing straight.

896. *Belippa apicata*, Moore, *Lep. Atk.* p. 75; *C. & S.* no. 1323.

♂. Head and thorax chestnut; abdomen dark brown. Fore wing red-brown; the basal area rather darker and bounded by a slightly waved medial line; a dark spot at end of cell; an indistinct waved postmedial line from costa to outer angle; a black apical patch suffused with grey. Hind wing black-brown; the cilia ochreous.

Hab. Sikkim; Manipur. *Exp.* 30 millim.

897. *Belippa lohor*, Moore, *Lep. E. I. Co.* p. 430, pl. xiii a, fig. 3.

♂. Differs from *apicata* in the fore wing being rather narrower and having the area beyond the cell suffused with fuscous. Hind wing with a large triangular hyaline patch from the lower angle of cell to outer margin from below apex to vein 2.

Hab. Cachar; Java. *Exp.* 28 millim.

Genus **NAGODA**.

Nagoda, Moore, *Lep. Ceyl.* iii, p. 542 (1887).

Type, *N. nigricans*, Moore.

Range. Ceylon.

Antennæ with the proximal one-third bipectinated in male, ciliated in female. Palpi short and porrect. Fore wing with veins 7, 8, 9 stalked. Hind wing with vein 8 sending a spur to the costa; veins 6 and 7 from the cell. Hind tibia without spurs in male, with a terminal pair in female. End of abdomen and hind tarsi tufted with hair in male.

898. *Nagoda nigricans*, Moore, *Lep. Ceyl.* iii, p. 542, pl. 211, fig. 10 (♂); *Hmps. Ill. Het.* ix, pl. 161, fig. 1 (♀).

♂. Head pale; thorax and abdomen clothed with red-brown dark brown, black, and grey scales. Fore wing hyaline; the base, inner margin, and apex broadly black; the costa, veins, and outer margin narrowly so. Hind wing hyaline; the costa and inner margin broadly black, the veins and outer margin narrowly black.

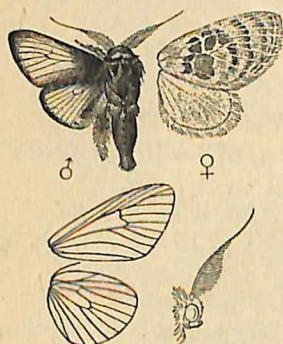


Fig. 276.

Nagoda nigricans. 1.

♀ yellowish white. Fore wing with three bright ferruginous spots in cell, two below it, the outer one large; two small dark spots below the cell, and two below vein 1; a maculate dark band from veins 5 to 2; two dark maculate curved bands from the costa before apex to outer margin above outer angle.

Larva greenish blue, with dorsal and lateral darker stripes and series of lunular markings seen through the thick cuticle.

Cocoon rounded and greyish white.

Hab. Ceylon. *Exp.*, ♂ 30, ♀ 38 millim.

Genus MAHANTA.

Mahanta, Moore, *Lep. Atk.* p. 78 (1879).

Type, *M. quadrilinea*, Moore.

Range. Sikkim.

♂. Palpi upturned, reaching vertex of head. Antennæ with the branches very short. Hind tibia with a minute terminal pair of spurs. Fore wing elongate, the apex produced, the outer margin excised; veins 6, 7, 8, 9, 10 stalked together, 11 not curved. Hind wing subquadrate; the upper part of cell short; veins 6 and 7 on a long stalk; 8 almost touching 7 near the end of the cell; the veinlet in cell running obliquely to the median nervure.

899. *Mahanta quadrilinea*, Moore, *Lep. Atk.* p. 78, pl. 3, fig. 20; *C. & S.* no. 1478.

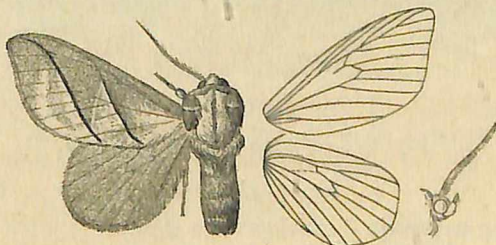


Fig. 277.—*Mahanta quadrilinea*, ♂. 1.

♂. Head grey; palpi fulvous; collar and tegulæ fulvous, the

latter with a white bar across each; thorax grey, abdomen ochreous. Fore wing ochreous; an oblique medial dark line; a similar line from the apex to inner margin beyond the middle; inner area suffused with grey, which is diffused along the lines towards the costa and along outer margin towards apex; cilia fuscous. Hind wing uniform ochreous.

Hab. Sikhim. *Exp.* 52 millim.

Species formerly recorded as Indian which are omitted.

Aphendala conspersa, Butl. P. Z. S. 1880, p. 673 = *Miresa quadri-notata*, Moore, C. & S. no. 1315 A, is an *Acontid*.

Limacodes grisea, Hmps. Ill. Het. viii, p. 63, is an *Acontid*.

Proneca fola, Swinh. Trans. Ent. Soc. 1890, p. 194, pl. vi, fig. 8, is a *Hypogrammid*.

Rabila frontalis, Wlk., C. & S. no. 1300, is a *Leucanid*.

Natada basalis, Wlk., C. & S. no. 1272. Type lost; description unrecognizable.

Family LASIOCAMPIDÆ.

A family of moths mostly of large size. Palpi porrect and generally large; proboscis absent; eyes small; antennæ bipectinate in both sexes; legs generally with minute terminal pairs of spurs to mid and hind tibiæ and rather hairy. Fore wing with vein 1 *a* not forked with *b*; 1 *c* rarely present; the cell medial in position; veins 6 and 7 from the angle; veins 9 and 10 always stalked and from before the angle. Hind wing with two internal veins; 6 and 7 arising very near the base; 8 curved and almost touching 7 or connected with it by a bar, thus forming a precostal cell; accessory costal veinlets generally present. Frenulum absent.

Larva with lateral downwardly-directed tufts of hair, and often subdorsal tufts or dorsal humps on anterior somites thickly clothed with hair.

Cocoon closely woven of silk and hair.

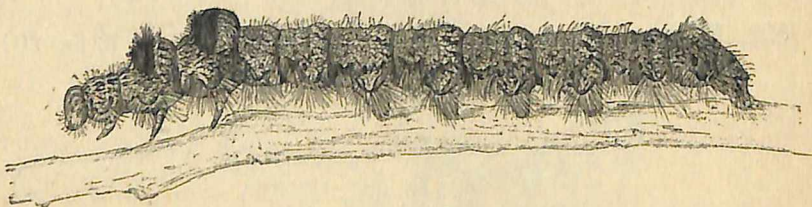


Fig. 278.—Larva of *Suana concolor*. $\frac{1}{2}$.

Key to the Genera.

- A. Hind wing with vein 8 running close along 7; no bar between them; few, or no, accessory costal veinlets.
- a*. The cell of both wings closed.

- a*². Fore wing long and narrow, the apex produced.
- a*³. Fore wing with veins 8, 9, 10 stalked 1. BHIMA, p. 404.
- b*³. Fore wing with vein 8 not stalked with 9 and 10.
- a*⁴. Hind wing with veins 4 and 5 stalked 2. TARAGAMA, p. 404.
- b*⁴. Hind wing with veins 4 and 5 from angle of cell 3. SUANA, p. 406.
- b*². Fore wing broader.
- a*³. Hind wing with the costa excised.. 4. LEBEDA, p. 407.
- b*³. Hind wing with the costa highly arched near the base..... 10. CLISIOCAMPA, p. 417.
- c*³. Hind wing with the costa not excised and evenly rounded.
- a*⁴. Fore wing with veins 6 and 7 from the cell. Hind wing with veins 4 and 5 from the cell.
- a*⁵. Palpi long 6. ARGUDA, p. 412.
- b*⁵. Palpi short 13. TRICHIURA, p. 420.
- b*⁴. Fore wing with veins 6 and 7 stalked. Hind wing with veins 4 and 5 stalked or from the cell.
- a*⁵. Fore wing with the outer margin evenly rounded. [p. 408.]
- a*⁶. Palpi long 5. METANASTRIA,
- b*⁶. Palpi short 9. CHILENA, p. 416.
- b*⁵. Fore wing with the outer margin angulate and excised 8. BHARETTA, p. 415.
- c*⁴. Fore wing with veins 6, 7, 8 stalked. Hind wing with veins 3, 4, 5 stalked 7. SYRASTRENA, p. 414.
- d*⁴. Fore wing with veins 7 and 8 stalked.
- a*⁵. Fore wing with vein 6 from the cell 12. KOSALA, p. 418.
- b*⁵. Fore wing with vein 6 stalked with 7 and 8 11. ALOMPRA, p. 417.
- b*¹. Hind wing with the cell open 14. CRINOCRASPEDA, [p. 420.]
- c*¹. Both wings with the cell open 15. TRABALA, p. 421.
- B. Hind wing with vein 8 remote from 7; a bar connecting them and forming a large precostal cell with numerous accessory costal veinlets.
- a*¹. Fore wing with the stalk of veins 9 and 10 short.
- a*². Fore wing short, the apex rounded .. 16. LENODORA, p. 422.
- b*². Fore wing longer, the apex produced. 18. ODNOSTIS, p. 425.
- b*¹. Fore wing with the stalk of veins 9 and 10 long.
- a*². Hind wing with veins 4 and 5 from the cell [p. 428.]
- b*². Hind wing with veins 4 and 5 stalked 19. GASTROPACHA, [p. 429.]
- c*². Hind wing with veins 3, 4, 5 stalked. 20. STENOPHYLLOIDES, 17. ESTIGENA, p. 424.

Genus **BHIMA**.

Bhima, Moore, P. Z. S. 1888, p. 403.

Type, *B. undulosa*, Wlk.

Range. Himalayas; Khâsis; Manipur.

Palpi slight and porrect. Antennæ with the branches becoming abruptly short at middle in male. Legs without spurs. Fore wing long and narrow; veins 6 and 7 from angle of cell; 8, 9, 10 stalked. Hind wing with veins 4 and 5 stalked; 8 almost touching 7; slight accessory costal veinlets.

900. *Bhima undulosa*, Wlk. Cat. vi, p. 1477; C. & S. no. 1509.

♂. Frons ochreous white; antennæ, head, thorax, and abdomen very dark red-brown. Both wings very dark red-brown, irrorated with ochreous scales; fore wing with two pale waved indistinct

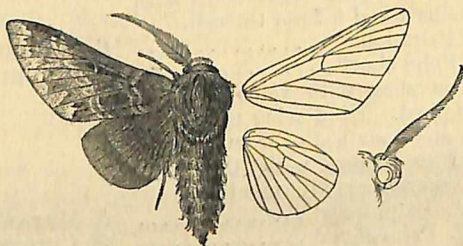


Fig. 279.—*Bhima undulosa*, ♂. 1.

antemedial lines; a white spot at end of cell; two oblique waved postmedial lines; a highly-dentate submarginal line; outer area pale; hind wing with the submarginal dentate line indistinct.

♀ with the frons red-brown; the abdomen with a very large pale terminal tuft; the wings more suffused with ochreous.

The Kangra female is much suffused with grey; the abdominal tuft is white; the markings of wings whitish; the hind wing crossed by two waved lines just beyond the middle.

Cocoon formed of brownish hairs.

Hab. Kangra; Nepal; Khâsis; Manipur. Exp., ♂ 52, ♀ 82-92 millim.

Genus **TARAGAMA**.

Taragama, Moore, Lep. E. I. Co. p. 427 (1859).

Type, *T. siva*, Lef.

Range. Spain; Bagdad; throughout India and Ceylon; Philippines; Borneo; Java.

Palpi broad and obliquely porrect. Antennæ with the branches becoming abruptly short at middle in male; short throughout in female. Legs without spurs. Fore wing long and narrow; veins 6, 7, 8 stalked; the stalk of 9 and 10 long. Hind wing with veins 4 and 5 stalked; 8 almost touching 7; slight accessory costal veinlets.

901. *Taragama dorsalis*, *Wlk. Cat.* xxxv, p. 1947.

Taragama castanoptera, *Moore, P. Z. S.* 1888, p. 404; *C. & S.* no. 1499 B.

Taragama igniflua, *Moore, Lep. Ceyl.* ii, p. 147, pl. 142, figs. 2, 2 a; *C. & S.* no. 1502.

Taragama hyperantheræ, *Moore, P. Z. S.* 1883, p. 18; *C. & S.* no. 1501.

Taragama intensa, *Moore, P. Z. S.* 1883, p. 18; *C. & S.* no. 1503.

♂. Antennæ fulvous; head, collar, and thorax greyish white; tegulæ deep red-brown; abdomen red-brown, each segment fringed with grey. Fore wing deep red-brown; a white spot at base; one on costa just beyond the middle forming part of an almost obsolete medial line; a waved postmedial oblique white

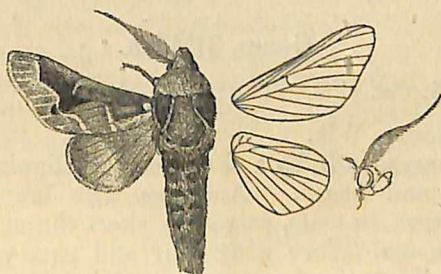


Fig. 280.—*Taragama dorsalis*, ♂. 1.

line, obsolescent at middle; margins narrowly white. Hind wing deep red-brown, with a large white patch at anal angle; outer margin narrowly white.

♀. The pale fringe to abdominal segments broader; hind wing paler, with the pale patch produced across the wing as an indistinct band.

The Javan race is very pale in both sexes.

Hab. N.W. Himalayas; Calcutta; throughout S. India and Ceylon; Philippines; Borneo; Java. *Exp.*, ♂ 54, ♀ 80–102 millim.

902. *Taragama siva*, *Lef. Zool. Journ.* iii, p. 210.

Bombyx ganesa, *Lef. Zool. Journ.* iii, p. 211; *C. & S.* no. 1500; *Moore, Lep. E. I. Co.* ii, pl. 22, figs. 4, 4 a (larva).

Megasoma pallidum, *Wlk. Cat.* vi, p. 1450; *C. & S.* no. 1504.

Megasoma venustum, *Wlk. Cat.* vi, p. 1449.

Megasoma albicans, *Wlk. Cat.* vi, p. 1450.

♂. Differs from *dorsalis* in the tegulæ being ochreous red-brown; the abdomen white, sometimes slightly tinged with red-brown. Fore wing grey; a red-brown spot ringed with white at base; a yellow-brown subbasal patch; the white medial line distinct and angled inwards below the cell; a red-brown spot in the cell produced beyond the lower angle as a streak; a very irregular white

postmedial line. Hind wing white; a slight fuscous suffusion on outer area; a dark patch on outer margin near anal angle.

♀. Differs from *dorsalis* in the abdomen being almost wholly white; fore wing with a conspicuous white spot on the postmedial line (which is obsolescent except at costa) at veins 4 and 5; hind wing white, with a reddish tinge on outer area; the cilia red-brown near anal angle.

Larva pale ochreous brown; large dark dorsal patches of hair on 2nd and 3rd somites; small black spots on 4th to 9th; long lateral tufts of ochreous hair; subdorsal series of small hairy papillæ; paired larger dorsal papillæ on 10th and 11th somites.

Cocoon formed of pale hair.

Hab. Throughout N.W. and S. India. *Exp.*, ♂ 48, ♀ 66-84 millim.

Genus **SUANA.**

Suana, *Wlk. Cat.* vi, p. 1502 (1855).

Type, *S. concolor*, Wlk.

Range. Throughout India and Ceylon; Philippines; Java.

Palpi long and broad. Antennæ with branches gradually shortening to apex in male, extremely short throughout in female. Legs without spurs. Fore wing long and narrow; veins 6, 7, 8 stalked; the stalk of veins 9 and 10 long. Hind wing with the outer margin straight in the male; veins 4 and 5 stalked or from angle of cell; 8 almost touching 7; one slight accessory costal veinlet.

903. ***Suana concolor***, *Wlk. Cat.* vi, p. 1463; *C. & S.* no. 1508.

Lebeda bimaculata, *Wlk. Cat.* vi, p. 1463; *C. & S.* no. 1506;

Moore, Lep. Ceyl. ii, pl. 140, figs. 1, 1 a, b (larva).

Suana ampla, *Wlk. Cat.* vi, p. 1502; *C. & S.* no. 1505.

Suana cervina, *Moore, P. Z. S.* 1879, p. 410; *C. & S.* no. 1507.

♂. Head, thorax, and abdomen dark red-brown. Fore wing

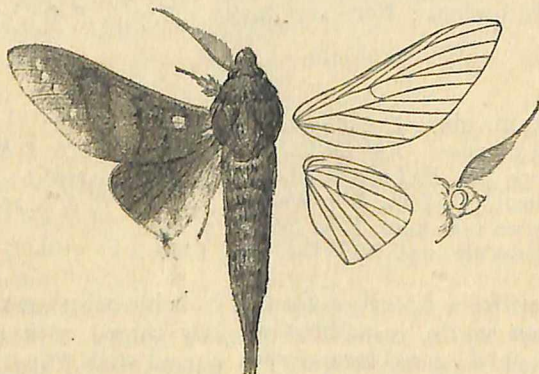


Fig. 281.—*Suana concolor*, ♂. 1.

dark red-brown, the costa greyish; a more or less distinct yellowish

subbasal spot; a silvery-white spot at end of cell; two antemedial, a medial, and two postmedial dark waved lines; a submarginal lunulate line, with yellow marks more or less prominent in the undulations. Hind wing darker red-brown.

Some specimens lose the white spot and others are very dark.

♀. Much paler; the markings similar; fore wing with a small grey patch at base.

The form *ampla* = *concolor* has lost the white spot at end of cell of fore wing which is present in *bimaculata*; all the intergrades are represented.

Larva pale brown covered with numerous black striae; 2nd and 3rd somites with raised dorsal humps covered with close black or dark brown hair; some specimens (or a younger stage?) have small white-haired dorsal papillae on 4th to 10th somites, each with a pair of red-brown papillae in front and a pair of crimson papillae on each side; 11th somite with a black dorsal tuft; lateral brown tufts on each somite; head longitudinally banded with black.

Hab. Throughout India and Ceylon; Philippines; Java. *Exp.*, ♂ 52-64, ♀ 106-146 millim.

Genus **LEBEDA.**

Lebeda, *Wlk. Cat.* vi, p. 1453 (1855).

Type, *L. nobilis*, Wlk.

Range. The Himalayas; Assam Hills; Sylhet.

Palpi long and broad. Antennae with the branches gradually decreasing to apex in male, short throughout in female; mid and hind tibiae with a minute terminal pair of spurs. Fore wing broad, the apex rounded; veins 6 and 7 stalked; the stalk of veins 9 and 10 short. Hind wing with the costa deeply excised; veins 4 and 5 from end of cell; 8 nearly touching 7; slight accessory costal veinlets.

904. *Lebeda nobilis*, *Wlk. Cat.* vi, p. 1456; *C. & S.* no. 1465; *Butl. Ill. Het.* v, pl. 100, figs. 5, 6.

♂. Head and thorax pale red-brown; palpi black at sides and below; abdomen redder brown. Fore wing pale brown; two oblique antemedial pale lines, which nearly meet on the inner margin; a white spot at end of cell; two postmedial pale curved lines; a dark streak from the middle of cell to outer area, where it expands into a large marginal patch; a very indistinct lunulate submarginal line with two dark spots on it near the outer angle. Hind wing red-brown, with two pale curved postmedial lines. Underside: the basal area of both wings red-brown; the outer area pale, with two postmedial lines.

♀. More uniform red-brown varying to grey-brown; fore wing with the postmedial lines straighter and without the dark streak.

The distance between the lines on the inner margin of the fore wing varies much.

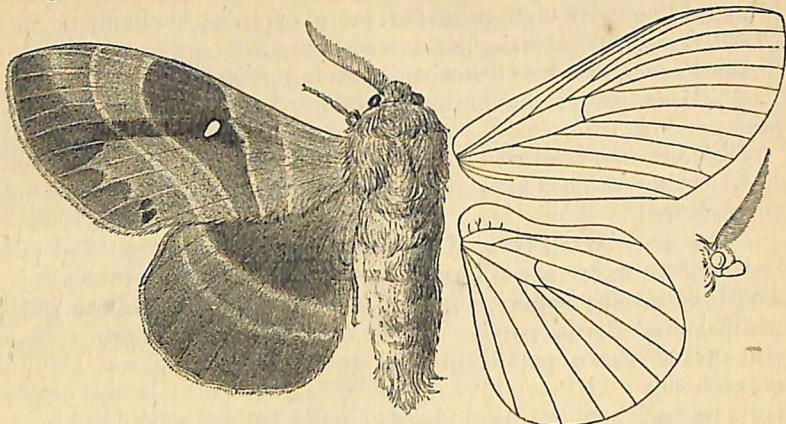


Fig. 282.—*Lebeda nobilis*, ♂. †.

Hab. N.W. and E. Himalayas; Sylhet; Nágas. *Exp.*, ♂ 96–120, ♀ 138–148 millim.

Genus **METANASTRIA.**

Metanastria, *Hübner. Verz.* p. 186 (1818).

Eutricha, *Hübner. Verz.* p. 188 (1818).

Eona, *Wlk. Cat.* vi, p. 1417 (1855).

Chatra, *Moore, Lep. Atk.* p. 80 (1879).

Type, *M. hyrtaca*, Cram.

Range. Europe; Japan; China; S. Africa; throughout India, Ceylon, and Burma; Java; Borneo.

Palpi long and broad. Antennæ with the branches gradually decreasing to apex in male, short throughout in female. Mid and hind tibiæ with minute terminal pairs of spurs. Fore wing broad; vein 1 *c* present; 6 and 7, or 6, 7, 8, stalked; the stalk of veins 9 and 10 long. Hind wing with veins 4 and 5 stalked or from cell; 8 almost touching 7; slight accessory costal veinlets.

SECT. I. Fore wing with vein 8 from the angle of cell in both sexes.

A. *Hind wing with veins 4 and 5 stalked.*

905. *Metanastria aconyta*, Cram. *Pap. Exot.* ii, pl. 131 A; C. & S. no. 1457.

Lebeda opponens, *Wlk. Cat.* vi, p. 1462; C. & S. no. 1466.

Bombyx quadricincta, *Fabr. Mant. Ins.* ii, p. 111.

Lasiocampa trifascia, *Wlk. Cat.* vi, p. 1439.

Lasiocampa substrigosa, *Wlk. Cat.* vi, p. 1441.

Lasiocampa subparallela, *Wlk. Cat.* xxxii, p. 562; C. & S. no. 1490.

♂. Pale reddish brown. Fore wing with two antemedial lines

approaching each other at inner margin; two postmedial nearly parallel lines; an indistinct lunulate submarginal line with two small dark spots on it near outer angle, either or both of which may be absent; the nervules pale; the outer margin of both wings fuscous. Underside of fore and hind wings crossed by two indistinct lines.

♀. Fore wing with the lines not so parallel and more curved.

Hab. Sikkim; Canara. *Exp.*, ♂ 48–60, ♀ 92 millim.

906. *Metanastria nanda*, Moore, *Lep. E. I. Co.* p. 423, pl. xii a, fig. 3; *C. & S.* no. 1464.

♂. Differs from *aconyta* in the inner of the two postmedial lines of the fore wing being curved and approaching the antemedial line at inner margin; the dark spots near outer angle large; the nervules not pale; hind wing with the basal inner area clothed with red hair.

This may be a variety of *aconyta*.

Hab. Sikkim. *Exp.* 64 millim.

907. *Metanastria latipennis*, Wlk. *Cat.* vi, p. 1457; *Butl. Ill. Het.* v, pl. 99, figs. 1, 2.

Lebeda variegata, Moore, *A. M. N. H.* (4) xx, p. 347; *C. & S.* no. 1473.

Lebeda vulpina, Moore, *Lep. Atk.* p. 81; *C. & S.* no. 1475.

Lebeda placida, Moore, *Lep. Atk.* p. 80; *C. & S.* no. 1467.

Lebeda fasciata, Moore, *Trans. Ent. Soc.* 1884, p. 375; *C. & S.* no. 1459.

Chatra grisea, Moore, *Lep. Atk.* p. 80; *C. & S.* p. 1479.

Eutricha cheela, Moore, *P. Z. S.* 1879, p. 408; *C. & S.* no. 1486.

Dark brown, dark red-brown, or grey-brown. Fore wing sometimes with a chestnut patch near the base; a white speck at end of cell; indistinct curved antemedial, medial, and two postmedial lines, the last waved; a series of grey and black submarginal lunules expanding into a large spot on inner margin, each lunule with a faint chestnut spot inside it, most prominent in the brown specimens.

In the Ceylon form *variegata* the head and thorax are rather greyer; the abdomen and hind wings browner.

Hab. Sikkim; Calcutta; Ceylon; Burma; Borneo. *Exp.*, ♂ 78–88, ♀ 126 millim.

908. *Metanastria fulgens*, Moore, *Lep. Atk.* p. 81; *C. & S.* no. 1460.

♂. Differs from *latipennis* in being much darker red-brown. Fore wing with a large yellowish patch at outer angle; the lines black; three indistinct irregular antemedial lines and three highly-waved postmedial lines, the outer line coalescing at middle with the submarginal spots, which are dark. Hind wing with traces of three dark lines.

♀. Paler.

Hab. Sikkim. *Exp.*, ♂ 78, ♀ 106 millim.



909. *Metanastria lidderdalii*, *Butl. Ill. Het.* v, p. 73, pl. 100, figs. 1, 2; *C. & S.* no. 1461.

Lebeda stigmata, *Butl. Ill. Het.* v, p. 73; *C. & S.* no. 1471.

♂. Uniform dark red-brown. Fore wing with a white spot at end of cell; three dark postmedial curved lines; a series of dark submarginal spots between the veins.

♀. Without the white spot at end of cell of fore wing.

In the form *stigmata* the first line of the fore wing is nearer the end of the cell, and in the female there is a white spot present at end of cell.

Hab. Sikkim; Bhutan. *Exp.*, ♂ 98–108, ♀ 146 millim.

910. *Metanastria ampla*, *Wlk. Cat.* vi, p. 1412; *C. & S.* no. 1491.

Lebeda ferruginea, *Wlk. Cat.* vi, p. 1458.

♂. Differs from *lidderdalii* in the white spot at end of cell of fore wing being usually reduced to a speck; the three postmedial lines waved; the submarginal spots nearer the margin.

♀. Paler or more dusky; fore wing with a dark antemedial line; hind wing with traces of three dusky bands.

Hab. Sikkim; Sylhet; Burma; Java; Philippines. *Exp.*, ♂ 98, ♀ 140–150 millim.

B. *Hind wing with veins 4 and 5 from angle of cell.*

911. *Metanastria undans*, *Wlk. Cat.* vi, p. 1458; *C. & S.* no. 1472.

Odonestis excellens, *Butl. Ill. Het.* ii, p. 19, pl. xxvi, figs. 4, 5.

♂. Head, thorax, and abdomen ochreous red-brown. Fore wing ochreous red-brown, darkest at base and outer area; two antemedial waved lines; three waved postmedial lines, the two outer ones approaching each other at inner margin. Hind wing uniform ochreous red-brown.

Hab. Japan; Sylhet. *Exp.* 85 millim.

SECT. II. Fore wing with vein 8 stalked with 6 and 7 in the male.
Hind wing with veins 4 and 5 stalked.

12. *Metanastria hyrtaca*, *Cram. Pap. Exot.* iii, pl. 249 f.

Lebeda lusca, *Fabr. Mant. Ins.* ii, p. 112; *C. & S.* no. 1463.

Bombyx buddha, *Lef. Zool. Journ.* iii, p. 209; *C. & S.* no. 1458; *Moore, Lep. E. I. Co.* pl. 12 a, figs. 2, 2 a; *Forsayeth, Trans. Ent. Soc.* 1884, pl. xv, figs. 3, 3 a, b (larva).

Bombyx brahma, *Lef. Zool. Journ.* iii, p. 208.

Lebeda plagiata, *Wlk. Cat.* vi, p. 1464.

Lasiocampa bhira, *Moore, P. Z. S.* 1879, p. 410, pl. 34, fig. 2; *C. & S.* no. 1488.

♂. Pale or dark red-brown; palpi black below. Fore wing with two antemedial pale lines and two postmedial angulated lines, with an almost black patch between the upper part of the ante- and post-

medial lines crossed by the pale veins and with a white lunule on it; a lunulate submarginal line. Underside of hind wing with two pale lines.

♀. Fore wing with the two antemedial and two postmedial lines much more distinct and without the dark patch and white lunule; the submarginal lunulate line very indistinct. Hind wing with an indistinct pale line.

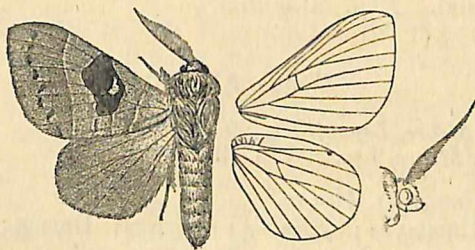


Fig. 283.—*Metanastria hyrtaca*, ♂. †.

Larva dark grey; a narrow crimson dorsal line across second somite behind a tuft of short dense hair; lateral tufts of whitish-brown hair; 3rd to 10th somites with dorsal oval brown velvety patches, each with four blue papillæ armed with long hairs.

Hab. E. Himalayas; Assam; Bombay; Mhow; Ganjam; Madras; Ceylon. *Exp.*, ♂ 48, ♀ 74 millim.

913. *Metanastria repanda*, *Wlk. Cat.* vi, p. 1460; *C. & S.* no. 1470; *Butl. Ill. Het.* vi, pl. 101, figs. 1, 2.

♂. Differs from *hyrtaca* in being darker brown; the black patch of fore wing narrower, with the white lunule on its inner edge; the submarginal lunulate line more distinct.

♀. Fore wing with the antemedial lines more erect; the inner postmedial line more angled below the costa; a series of dark spots on the lunulate line.

This may be a variety of *hyrtaca*.

Hab. Nepal; Assam; Bassein. *Exp.*, ♂ 50, ♀ 90 millim.

SECT. III. Fore wing with vein 8 stalked with 6 and 7 in both sexes.

914. *Metanastria recta*, *Wlk. Cat.* vi, p. 1461; *C. & S.* no. 1469.

♀. Grey-brown, without any red tinge; fore wing with the two antemedial and two postmedial lines almost straight and parallel, not curved or angled; the submarginal line dark and distinct. Hind wing without trace of the pale line on upperside.

This may be a variety of *repanda*.

Hab. N. India. *Exp.* 70 millim.

915. *Metanastria obliquifascia*, *Swinh. Cat. Het. Mus. Oxon.* p. 263.

♂. Very dark red-brown; head and thorax suffused with purplish. Fore wing with an indistinct dark line from the base curving up to the costa beyond the middle; an oblique line from near the apex to middle of inner margin, with an irregular series of pale spots beyond it; the area between the line and spots purplish. Hind wing paler red-brown.

Hab. Sikkim. *Exp.* 50 millim.

Genus ARGUDA.

Arguda, *Moore, Lep. Atk.* p. 79 (1879).

Radhica, *Moore, Lep. Atk.* p. 79 (1879).

Type, *A. decurtata*, Moore.

Range. Himalayas; Nilgiris; Ceylon; Burma; Philippines; Amoy; Singapore; Australia; Tasmania.

Palpi very long; antennæ with branches gradually decreasing to apex. Mid and hind tibiæ with minute terminal pairs of spurs. Fore wing broad, the outer margin rather erect; veins 6 and 7 from angle of cell; the stalk of veins 9 and 10 short. Hind wing with veins 4 and 5 from cell; 8 almost touching 7; slight accessory costal veinlets.

SECT. I. (*Radhica*). Palpi with 3rd joint heavily fringed with hair. Fore wing with outer margin irregularly waved.

916. *Arguda flavovittata*, *Moore, Lep. Atk.* p. 79; *C. & S.* no. 1477.

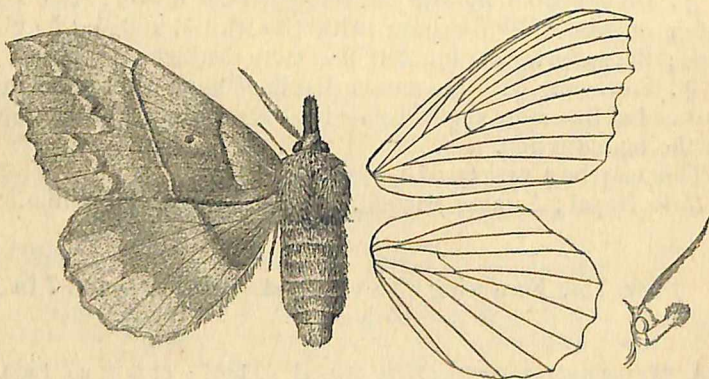


Fig. 284.—*Arguda flavovittata*, ♀. †.

♀. Palpi blackish; head, thorax, and abdomen brownish ochreous; a dark stripe on head and thorax, ending in a grey spot. Wings brownish ochreous; a slightly irregular antemedial dark line; a black speck at end of cell; a nearly straight postmedial line,

inwardly dark, outwardly ochreous; a submarginal series of ochreous lunules inwardly defined with fuscous, the one between veins 3 and 4 displaced towards the margin. Hind wing with straight dark antemedial and irregular lunulate submarginal lines. Cilia of both wings dark. Underside of hind wing with a prominent waved antemedial line.

Hab. Dharmasála; Naini Tal; Bhutan. *Exp.* 80 millim.

SECT. II. Palpi with the 3rd joint not thickly fringed with hair. Fore wing with outer margin nearly straight.

917. *Arguda bheroba*, Moore, *Lep. E. I. Co.* p. 424, pl. xii a, fig. 5; *C. & S.* no. 1492.

♂. Head, thorax, and abdomen pale red-brown; wings rather darker red-brown; fore wing with a curved antemedial dark line; a very prominent white spot at end of cell; a nearly straight and slightly oblique dark postmedial line; outer margin suffused with grey. Underside: fore wing with a dark postmedial line; hind wing with a large dark patch extending from the middle of costa to lower angle of cell, with an indistinct line from it to inner margin; traces of a dark postmedial line.

Hab. Sikkim; Ceylon; Singapore; Amoy; Philippines. *Exp.* 68 millim.

918. *Arguda rosea*, Hmps. *Ill. Het.* viii, p. 65, pl. 144, fig. 18.

♂. Palpi black; head and thorax pale reddish brown, with a dark stripe on vertex; abdomen black, the terminal segment clothed with red hair. Wings pale red-brown; fore wing with the basal and outer areas tinged with pink; nearly straight oblique antemedial and medial lines; a waved postmedial line, curved at veins 3 and 4; a dark speck at end of cell. Hind wing suffused with pink, except on costa. Underside: fore wing suffused with fuscous below the apex, hind wing on base and outer areas, with grey on medial area; waved indistinct dark antemedial and medial lines.

Hab. Nilgiris, 6000 feet. *Exp.* 100 millim.

SECT. III. (*Arguda*). Male with the branches of antennæ much longer.

919. *Arguda vinata*, Moore, *P. Z. S.* 1865, p. 820; *C. & S.* no. 1474.

Differs from *rosea* in the colour being much paler grey-brown; the abdomen grey-brown, red-brown above. Fore wing with the antemedial and medial lines more distinct, oblique, and inwardly edged with grey; the postmedial waved line straighter. Hind wing pale grey-brown, the base and inner margin suffused with red-brown; an indistinct curved postmedial line. Under-

side : fore wing red-brown, with a pale suffusion beyond the medial and postmedial lines. Hind wing suffused with brown; three indistinct waved pale bands.

Hab. Sikkim. *Exp.*, ♂ 70, ♀ 86 millim.

920. *Arguda rectilinea*, n. sp.

♂. Differs from *vinata* in the palpi being pale; thorax with a narrow dark streak on vertex; abdomen not suffused with ferruginous. Fore wing with the ante- and postmedial lines dark, indistinct, and less oblique; the black speck at end of cell more prominent; the waved submarginal line very indistinct. Hind wing vinous red-brown, with an indistinct dark medial line which is waved on the underside; no pale bands below.

Hab. Bassein, Burma. *Exp.* 43 millim. Type in coll. Elwes.

921. *Arguda decurtata*, Moore, *Lep. Atk.* p. 79; *C. & S.* no. 1476.

♂. Differs from *rosea* in the colour being browner; the abdomen pale red-brown; the antemedial line more oblique; the medial line double, the space between it and the postmedial line usually darker than the ground-colour; the postmedial line outwardly edged with grey. Underside: fore wing with two indistinct postmedial lines, the outer margin suffused with grey; hind wing with a dark waved antemedial line; a curved grey medial band; a lunulate grey postmedial line; outer margin suffused with grey; dark lunules on the margin.

♀. Paler.

Hab. Sikkim. *Exp.*, ♂ 52, ♀ 68 millim.

922. *Arguda albigutta*, *Wlk. Cat.* vi, p. 1419.

♂. Palpi red-brown at sides, white above; head ochreous; branches of antennæ black; thorax and abdomen bright red-brown; abdominal tuft grizzled. Fore wing bright red-brown, the outer area suffused with grey; a large white spot at end of cell; curved antemedial and postmedial fine pale lines; an irregular submarginal series of indistinct black spots. Hind wing red-brown, with a yellow tinge.

♀. Paler; the palpi white or dark grey above; fore wing with the white spot absent.

Hab. Subáthu, N.W. Himalayas; Australia; Tasmania. *Exp.* 51 millim.

Genus SYRASTRENA.

Syrastrena, Moore, *Trans. Ent. Soc.* 1884, p. 373.

Type, *S. minor*, Moore.

Range. Sikkim.

Palpi very long and broad. Antennæ with the branches decreasing to apex. Mid and hind tibiæ with minute terminal

pairs of spurs. Fore wing with veins 6, 7, 8 stalked; the stalk of veins 9 and 10 long. Hind wing with veins 3, 4, 5 stalked; 8 nearly touching 7; one accessory costal veinlet.

923. *Syrastrena minor*, Moore, *Lep. Atk.* p. 78; *C. & S.* no. 1439.

♂. Pale reddish brown; fore wing slightly irrorated with grey scales; medial and postmedial nearly straight oblique pale lines.

Hab. Sikkim. *Exp.* 40–46 millim.

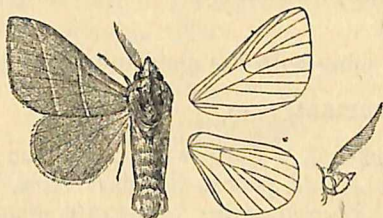


Fig. 285.—*Syrastrena minor*, ♂. 1.

Genus **BHARETTA.**

Bharetta, Moore, *P. Z. S.* 1865, p. 820.

Type, *B. cinnamomea*, Moore.

Range. Sikkim; Manipur.

Palpi long. Antennæ with the branches rather short. Mid and hind tibiæ with minute terminal pairs of spurs. Fore wing with the apex acute; the outer margin angled at vein 6; veins 6 and 7 stalked; the stalk of veins 9 and 10 long. Hind wing with veins 4 and 5 stalked; 8 nearly touching 7; one prominent accessory costal veinlet.

SECT. I. Hind wing with the apex and outer margin evenly rounded.

924. *Bharetta cinnamomea*, Moore, *P. Z. S.* 1865, p. 820, pl. 43, fig. 6; *C. & S.* no. 1327.

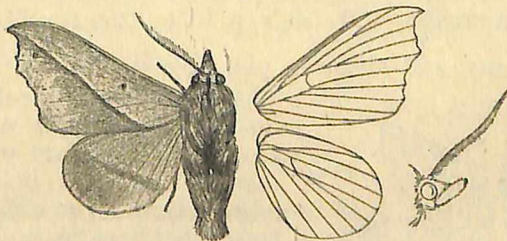


Fig. 286.—*Bharetta cinnamomea*, ♂. 1.

♂. Palpi and antennæ dark red-brown; head, thorax, and abdomen pale ochreous brown; thorax with a dark stripe on the

vertex, continued in a less defined way on the proximal segments of abdomen. Fore wing pale ochreous brown, irrorated with fuscous scales; a dark speck at end of cell; an oblique line from apex to near base of inner margin, which is ochreous inwardly, red-brown outwardly; the margins narrowly red-brown. Hind wing pale ochreous brown; an indistinct line from apex to near centre of inner margin. Underside of hind wing with an oblique ochreous line from apex.

Hab. Sikkim. *Exp.* 54 millim.

SECT. II. Hind wing with the apex and outer margin excised.

925. *Bharetta flammans*, n. sp.

♂. Bright brick-red. Fore wing with the margins dark; straight oblique ante- and postmedial dark lines, which approach each other towards inner margin; traces of a submarginal lunulate line; cilia tipped with white on each side of the angle. Hind wing with the apical excised part of the outer margin crenulate and the cilia white-tipped; the apex purplish grey; traces of a medial line.

Hab. Manipur, 6000 feet (*Doherty*). *Exp.* 40 millim. Type in coll. Elwes.

Genus **CHILENA.**

Chilena, *Wlk. Cat.* v, p. 1070 (1855).

Type, *C. similis*, *Wlk.*

Range. Nepal; Punjab; Central India; Ceylon.

Palpi short and slight. Antennæ with the branches of nearly equal length in both sexes. Abdomen tufted at extremity in male. Mid and hind tibiæ with minute terminal pairs of spurs. Fore wing broad, the outer margin oblique; veins 6 and 7 stalked; the stalk of veins 9 and 10 rather long. Hind wing with veins 4 and 5 stalked; 8 almost touching 7; slight accessory costal veinlets.

926. *Chilena similis*, *Wlk. Cat.* v, p. 1071; *C. & S.* no. 1334.

Head, thorax, and abdomen pale brownish white. Fore wing very pale brown, suffused with fuscous; an oblique white streak on the discocellulars with a faint fuscous line from it to base of inner margin; two oblique fuscous postmedial lines from near apex to inner margin. Hind wing pale brownish white.

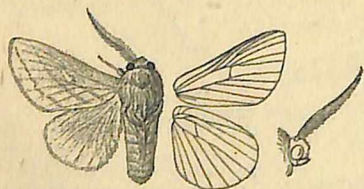


Fig. 287.

Chilena similis, ♂. 1.

Hab. Nepal; Punjab. *Exp.*, ♂ 38, ♀ 38-40 millim.



- Differs from *similis* in having the abdomen and hind wings pure white.

Larva black and yellow; a lateral tuft of long black hair tipped with white on each segment; short black and orange hair on the dorsum; dorsal tufts of long hair on the 2nd and 3rd somites and one on terminal somite.

Cocoon formed of strong silk attached by long threads at each end to a twig; the lower end open.

Hab. Mhow; Campbellpur; Ceylon. *Exp.*, ♂ 34, ♀ 50 millim.

Genus **CLISIOCAMPA.**

Clisiocampa, Steph. *Ill. Brit. Ent., Haust.* ii, p. 48 (1829).

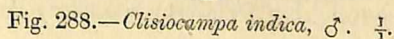
Type, *C. castrensis*, Linn., from Europe.

Range. N. America; Europe; Japan; N.W. Himalayas.

Palpi long and porrect. Antennæ with the branches long. Mid and hind tibiae without spurs. Fore wing with veins 6 and 7 stalked; 8 from angle of cell. Hind wing with the costa highly arched near the base; veins 4 and 5 stalked, the discocellulars slender; no accessory costal veinlets.

928. *Clisiocampa indica*, *Wlk. Cat.* vi, p. 1489; *C. & S.* no. 1333.

♂. Head, thorax, and abdomen pale red-brown. Fore wing



greyish, with red-brown patches at base and centre of costal area; the outer area red-brown; ante- and postmedial oblique lines. Hind wing uniform red-brown.

Hab. Dehra Dún; Simla. *Exp.* 34 millim.

Genus **ALOMPRA.**

Alompura, *Moore*, *P. Z. S.* 1872, p. 579.

Type, *A. ferruginea*, Moore.

Range. Sikhim.

Palpi slight and porrect. Antennæ with the branches long. Mid and hind tibiæ with the spurs very minute. Fore wing broad

and elongate; vein 6 stalked with 7 and 8; the stalk of veins 9 and 10 long. Hind wing with veins 4 and 5 stalked; 8 nearly touching 7; two prominent accessory costal veinlets.

929. *Alompra ferruginea*, Moore, P. Z. S. 1872, p. 580, pl. 33, fig. 8;
 C. & S. no. 1337.

Bright ferruginous red; fore wing duller in colour except the

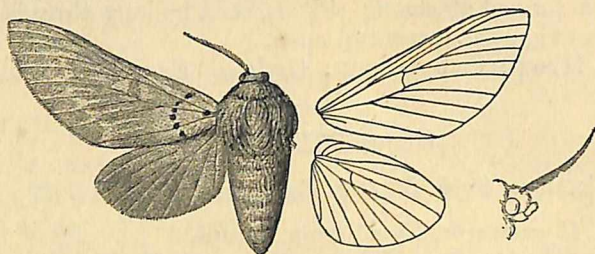


Fig. 289.—*Alompra ferruginea*, ♂. 1.

basal area and an indistinct submarginal line; a black speck at base and a curved subbasal maculate black line.

Hab. Sikkim. *Exp.*, ♂ 66, ♀ 90 millim.

Genus **KOSALA**.

Kosala, Moore, P. Z. S. 1879, p. 407.

Type, *K. sanguinea*, Moore.

Range. Sikkim; Khásis; Nágas; Burma.

Palpi long and broad; antennæ with the branches of moderate length; mid and hind tibiæ with minute terminal pairs of spurs. Fore wing broad and rounded; vein 6 not stalked with 7 and 8; the stalk of veins 9 and 10 short. Hind wing with veins 4 and 5 stalked; 8 almost touching 7; slight accessory costal veinlets.

SECT. I. Hind wing with the outer margin angulate at vein 7, the costa arched.

930. *Kosala sanguinea*, Moore, P. Z. S. 1879, p. 408, pl. 33, fig. 8;
 C. & S. no. 1485.

♀. Head and thorax fiery red; abdomen brown. Fore wing fiery red, with antemedial and medial dark slightly curved lines; a submarginal series of indistinct lunulate marks; apex speckled with grey; a pale spot on the discocellulars. Hind wing brown; the costal area red with traces of a medial line. Underside brown; both wings with a curved postmedial dark line.

Hab. Sikkim; Khásis. *Exp.* 60 millim.

931. *Kosala modulata*, *Swinh. Trans. Ent. Soc.* 1890, p. 197, pl. vi, fig. 18.

♂. Ochreous red-brown; antennæ and tips of palpi rather

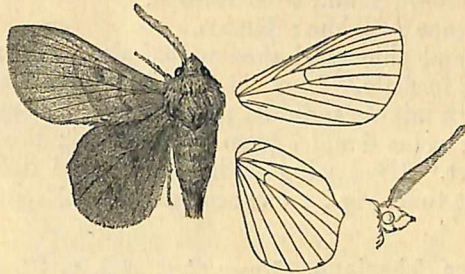


Fig. 290.—*Kosala modulata*, ♂. †.

darker. Fore wing with a dark spot at end of cell; a curved dark line just beyond the middle; the outer area rather darker. Hind wing with traces of a medial dark line.

Hab. Bhamo, Burma. *Exp.* 50 millim.

SECT. II. Hind wing with the outer margin evenly rounded; the costa arched.

932. *Kosala rufa*, n. sp.

♂. Antennæ with the shaft ochreous, the branches brown; head and thorax rufous. Fore wing rufous, suffused with ferruginous red near the base; two white spots at end of cell; a nearly straight dark medial line; an indistinct series of submarginal ferruginous spots. Abdomen and hind wing vinous brown. Underside paler and duller; both wings with a dark line just beyond the middle.

Hab. Naga Hills (*Doherty*). *Exp.* 62 millim. Type in coll. Elwes.

SECT. III. Hind wing with the costa straight.

933. *Kosala flavosignata*, *Moore, Lep. Atk.* p. 77, pl. iii, fig. 17; *C. & S.* no. 1487.

♂. Antennæ brown; head and thorax bright dark brick-red. Fore wing bright red-brown; a waved antemedial dark line, with yellow on each side of it towards inner margin; a small whitish-yellow spot at end of cell; a waved postmedial line; an irregular lunulate dark submarginal band outwardly edged with orange-red. Abdomen and hind wing vinous brown.

Hab. Sikkim. *Exp.* 44 millim.

Genus **TRICHIURA**.

Trichiura, Steph. Ill. Brit. Ent., Haust. ii. p. 42 (1828).

Type, *T. cratægi*, Linn., from Europe.

Range. Europe; Sikhim; Khâsis.

Palpi long and thickly clothed with hair. Antennæ with the branches long in male. Legs thickly clothed with hair; mid and hind tibiæ with minute terminal pairs of spurs. Fore wing broad and rounded; veins 6 and 7 from angle of cell; the stalk of veins 9 and 10 short. Hind wing with veins 4 and 5 from angle of cell; 8 almost touching 7; one accessory costal veinlet.

934. *Trichiura khasiana*, Moore, *Lep. Atk.* p. 82, pl. 3, fig. 21; C. & S. no. 1480.

♂. Head and thorax very dark red-brown; tips of antennal branches and the vertex of thorax reddish; abdomen duller brown. Fore wing black-brown, irrorated with grey scales; the

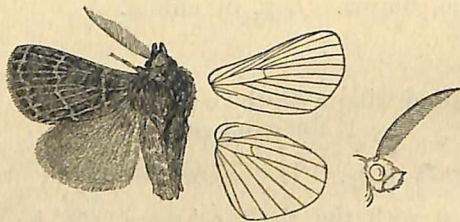


Fig. 291.—*Trichiura khasiana*, ♂. 1.

veins bright red-brown; a straight grey antemedial line; a curved postmedial line; a waved submarginal red-brown line. Hind wing umber-brown.

Hab. Sikhim; Khâsis. Exp. 38–48 millim.

Genus **CRINOCRASPEDA**, nov.

Type, *C. torrida*, Moore.

Range. Sikhim; Khâsis; Manipur.

Palpi slight and porrect. Antennæ with the branches of moderate length. Mid and hind tibiæ with minute terminal pairs of spurs. Fore wing short and broad; the outer margin crenulate; veins 6 and 7 stalked, 9 and 10 on a long stalk. Hind wing rounded, the outer margin crenulate; the cell open; no accessory costal veinlets.

935. *Crinocraspeda torrida*, Moore, *Lep. Atk.* p. 76; C. & S. no. 1450.

♂. Olive-brown with an ochreous tinge. Antennæ with the shaft ochreous, the branches black. Fore wing with an ante-

medial slightly curved dark line; at centre of cell a triangular apple-green spot, which may be reduced to a speck or altogether absent; a large quadrangular apple-green spot at end of cell; a curved dark postmedial line. Hind wing with an indistinct medial

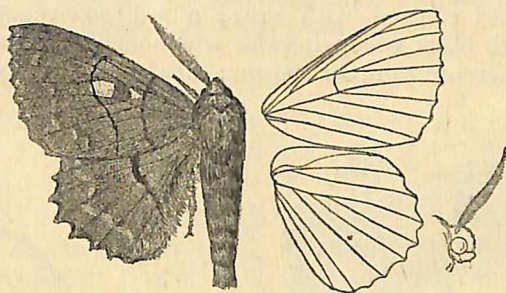


Fig. 292.—*Crinocraspeda torrida*, ♂. 1.

line. Both wings with an indistinct purplish-grey submarginal lunulate line, more distinct on the underside. Both wings may be largely suffused with ochreous, especially the inner margin of fore wing and costa of hind wing.

Hab. Sikkim; Khásis; Manipur. *Exp.* 48–52 millim.

Genus **TRABALA**.

Trabala, *Wlk. Cat.* vii, p. 1785 (1856).

Amydona, *Wlk. Cat.* vi, p. 1413 (1855, *præocc.*).

Type, *T. vishnu*, Lef.

[*Range.* China; throughout India, Ceylon, and Burma; Java.

Palpi somewhat short and slight. Antennæ with branches shorter in female than in male; mid and hind tibiæ with a minute terminal pair of spurs. Fore wing broad, the outer margin rounded, the cell open; the stalk of veins 9 and 10 very long. Hind wing with the cell open; veins 6 and 7 arising very near the base; no accessory costal veinlets.

936. *Trabala vishnu*, Lef. *Zool. Journ.* iii, p. 207; *C. & S.* no. 1456;

Moore, Lep. E. I. Co. pl. xxii, figs. 3, 3b (larva).

Gastropacha sulphurea, *Koll. Hügel's Kaschmir*, iv, p. 471; *C. & S.* no. 1449.

Trabala mahananda, *Moore, P. Z. S.* 1865, p. 821; *C. & S.* no. 1454.

Amydona basalis, *Wlk. Cat.* vi, p. 1415.

Amydona prasina, *Wlk. Cat.* vi, p. 1417.

Amydona pallida, *Wlk. Cat.* vi, p. 1417.

♂. Pale apple-green; antennæ ochreous brown, the disk of fore wing and inner margin of hind wing whitish; fore wing with a faint pale antemedial line curved below the costa; a dark speck at end of cell; a pale straight oblique postmedial line,

which becomes medial on the hind wing ; both wings with a series of small submarginal dark spots.

♀. Yellowish-green, which fades to ochreous ; the lines and spots of both wings enlarged and blackish ; the spot at end of cell of fore wing large, conspicuous, and irrorated with black scales, and sometimes centred with grey ; a red-brown patch thickly irrorated with black occupying the whole medial inner area from the median nervure to inner margin ; cilia of both wings blackish.

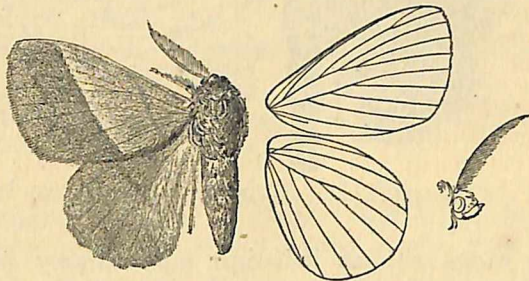


Fig. 293.—*Trabala vishnu*, ♂. †.

Larva. Head yellow, spotted with red ; the colour brownish grey, with long lateral tufts on each somite ; that on the first black and grey, the others grey ; paired dorsal and lateral black spots on each somite, from which spring long black hairs, the spots on the thoracic somites coalescing. Another form of the larva is blackish with a broad white dorsal stripe, the anterior tufts red-brown ; a third form is reddish with the lateral spots blue.

Cocoon ochreous, with short black hairs projecting from it, which are intensely irritating.

Hab. China ; throughout India, Ceylon, and Burma ; Java. *Exp.*, ♂ 50–60, ♀ 80–90 millim.

937. *Trabala irrorata*, Moore, *Trans. Ent. Soc.* 1884, p. 375 ; C. & S. no. 1452.

♀. Bright yellow. Fore wing irrorated with black scales on inner and outer areas ; an indistinct dark antemedial dentate line. Hind wing with the inner part of the disk thickly suffused with fuscous scales ; the outer area with blackish. Both wings with an irregular submarginal series of grey spots irrorated with black scales ; the cilia yellow. Underside of hind wing with a waved medial line.

Hab. Tavoy ; Mergui ; Borneo ; Java. *Exp.* 76 millim.

Genus **LENODORA**.

Lenodora, Moore, *Lep. Ceyl.* ii, p. 144 (1883).

Type, *L. vittata*, Wlk.

Range. Throughout India, Ceylon, and Burma.

Palpi rather short and thickly clothed with hair. Antennæ with the branches long in male, short in female. Legs thickly clothed with hair; minute terminal pairs of spurs to mid and hind tibiæ. Fore wing broad and rounded; veins 6 and 7 stalked; the stalk of veins 8 and 9 rather short. Hind wing with veins 4 and 5 from angle of cell; 8 curved and met by a bar from 7; the accessory costal veinlets numerous and prominent.

938. *Lenodora vittata*, *Wlk. Cat.* vi, p. 1440; *C. & S.* no. 1444.
Miresa subcostalis, *Wlk. Cat.* xxxii, p. 476; *C. & S.* no. 1443;
Moore, Lep. Ceyl. ii, pl. 137, figs. 3, 3a, b (larva).

♂. Bright red-brown; fore wing with a white streak below the costa from the base to near outer margin below the apex.

♀. Pale ochreous brown, with only a slight red tinge.

Some Ceylon specimens are much duller in colour than typical males.

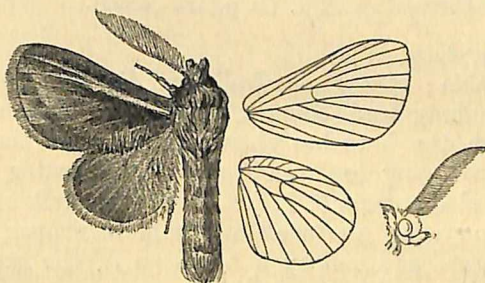


Fig. 294.—*Lenodora vittata*, ♂. 1.

Larva. Purplish black above, pale brown below; a sublateral series of black streaks and dots; anterior somites dorsally divided by pale bands; subdorsal tufts of white hair on 5th to 11th somites.

Hab. Almorah; throughout S. India and Ceylon. *Exp.*, ♂ 43–48, ♀ 50–54 millim.

939. *Lenodora signata*, *Moore, Trans. Ent. Soc.* 1884, p. 374; *C. & S.* no. 1442.
Lenodora fasciata, *Moore, Trans. Ent. Soc.* 1884, p. 374; *C. & S.* no. 1440; *Hmps. Ill. Het.* viii, pl. 142, fig. 6.
Lenodora fusca, *Moore, Trans. Ent. Soc.* 1884, p. 374; *C. & S.* no. 1441.

♂. Bright red-brown; fore wing with an indistinct darker postmedial curved band.

♀. Umber-brown; fore wing with a pale indistinct postmedial band.

The form *signata* has a pale spot at end of cell of fore wing;

only the female is known, and it may be a distinct species from *fusca* = *fasciata*.

Hab. Dehra Dún; Bombay; Nilgiri Plateau. *Exp.*, ♂ 54, ♀ 56 millim.

940. *Lenodora semihyalina*, *Swinh. Trans. Ent. Soc.* 1890, p. 196, pl. vi, figs. 10, 16.

♂. Reddish brown with a yellow tinge; fore wing with an indistinct ochreous band from the outer margin below the apex to inner margin before middle; hind wing with a large pale subapical patch.

♀. Ochreous grey, with faint traces of the oblique band of the fore wing.

Hab. Nágas; Rangoon; E. Pegu; Bassein. *Exp.*, ♂ 40, ♀ 48 millim.

Genus **ESTIGENA**.

Estigena, *Moore, Lep. E. I. Co.* p. 426 (1859).

Type, *E. pardalis*, *Wlk.*

Range. Arabia; throughout India and Ceylon; Burma; Java.

Palpi very long and slender, varying somewhat in length. Antennæ with the branches short. Legs with the spurs very minute. Fore wing long and narrow, the outer margin very obliquely rounded; veins 6, 7, 8 stalked; the stalk of veins 9 and 10 long. Hind wing produced and oval in shape; veins 3, 4, 5 stalked; 8 curved and met by a bar from 7; the accessory costal veinlets numerous and prominent.

941. *Estigena pardalis*, *Wlk. Cat.* vi, p. 1453; *C. & S.* no. 1499 A.

Estigena nandina, *Moore, Lep. E. I. Co.* p. 427; *id. Lep. Ceyl.* ii, pl. 142, figs. 1, 1 a; *C. & S.* no. 1499.

♂. Palpi blackish; head and thorax red-brown, with a dark stripe on the vertex; abdomen paler. Fore wing red-brown, or

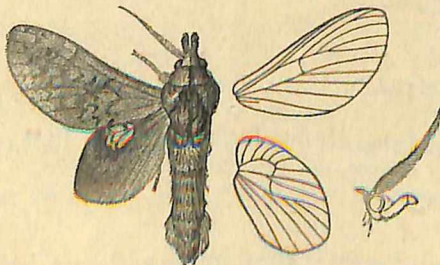


Fig. 295.—*Estigena pardalis*, ♂. 1.

pale ochreous-brown, suffused with fuscous and crossed by four indistinct waved dark lines; a black speck at end of cell. Hind

wing ochreous or red-brown; the inner area paler; three indistinct waved lines, which are obsolete on inner half; a large ochreous patch may be present below the costa.

♀ apparently never has the ochreous patch on the hind wing.

Hab. Arabia; throughout India and Ceylon; Nágas; Mergui; Andamans; Java. *Exp.*, ♂ 38-48, ♀ 70-76 millim.

Genus ODONESTIS.

Odonestis, *Germer*, *Prod.* p. 49 (1811).

Type, *O. potatoria*, Fabr., from Europe.

Range. Palearctic and Oriental regions; Australia.

Palpi very long and slender. Antennæ with branches shorter in female than male. Legs with the spurs very minute. Fore wing long, the apex acute; the outer margin obliquely rounded; veins 6 and 7 stalked; the stalk of veins 9 and 10 short. Hind wing with veins 4 and 5 from cell or stalked; 8 curved, and met by a bar from 7; the accessory costal veinlets numerous and prominent.

SECT. I. Fore wing with vein 8 from the angle of cell in both sexes.

942. *Odonestis læta*, *Wlk. Cat.* vi, p. 1416; *C. & S.* no. 1453; *Moore, Lep. E. I. Co.* pl. xii a, figs. 7, 7 a.

Lasiocampa decisa, *Wlk. Cat.* vi, p. 1441; *C. & S.* no. 1489.

Lasiocampa inobtrusa, *Wlk. Trans. Ent. Soc.* (3) i, 1862, p. 85; *C. & S.* no. 1494.

Head, thorax, and abdomen rather pale red-brown. Wings red-brown; fore wing with an indistinct antemedial waved line; a large whitish patch at lower end of cell suffused with reddish

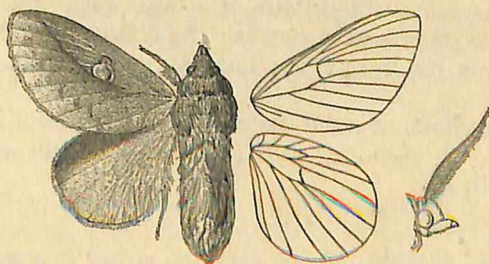


Fig. 296.—*Odonestis læta*, ♂. †.

brown and with a small spot above it; a very oblique dark line from near the apex, curved downwards to centre of inner margin; a waved submarginal line; hind wing with the costal area darker.

In the male the ground-colour of the whole insect may be dusky brown, with the head and collar darker. In the form of the male

decisa = *inobtrusa* the colour is much duller with hardly any red tinge, the line less oblique, and the spots at end of cell of fore wing are reduced to fuscous marks. The female may have these same spots reduced to a single white speck; the distance between the oblique line and the end of the cell varies much.

Larva. Dark brown, with dusky strigæ; lateral grey and black tufts of hair, the pair on 1st somite longest; a long dorsal black tuft on 1st somite and a grey tuft on 2nd; V-shaped short black tufts on 3rd–10th somites; a long dorsal tuft on 11th somite; some reddish lateral spots.

Cocoon whitish, closely woven and papery in substance.

Hab. N.W. Himalayas; Sikkim; Sylhet; Burma; Sumatra;
Java. *Exp.*, ♂ 44–54, ♀ 80 millim.

943. *Odonestis divisa*, Moore, *Lep. Ceyl.* ii, p. 150, pl. 141, fig. 2;
C. & S. no. 1493.

Estigena purpurascens, *Hmps.* *Ill. Het.* ix, ined., pl. 160, fig. 10.

♂. Head and thorax purplish red-brown. Fore wing purplish red-brown; a large chestnut or whitish spot at end of cell of fore wing; an indistinct dark oblique line from the apex to centre of inner margin. Hind wing with the costal area purplish red-brown, the remainder flesh-colour. Cilia of both wings chestnut.

♀ with the ground-colour of the thorax and fore wing red-brown.

The Sikkim specimen differs in having the inner area of fore wing suffused with yellow.

Hab. Sikkim; Kelani Valley, Ceylon. *Exp.*, ♂ 52, ♀ 76 millim.

944. *Odonestis castanea*, n. sp.

♂. Differs from *læta* in having the head, thorax, abdomen, and fore wing chestnut-yellow; the last with the discal spots reduced to two minute grey specks; the oblique grey line straight, not curved near inner margin; hind wing dull brown; the cilia ochreous.

♀. Redder chestnut; the costa of hind wing reddish brown.

Hab. Sikkim. *Exp.*, ♂ 40, ♀ 60 millim. Type, ♂ in coll. Druce, ♀ in B. M.

945. *Odonestis signata*, Moore, *Lep. Ath.* p. 76; *C. & S.* no. 1498.

♂. Differs from the *decisa* form of *læta* in the thorax and basal part of abdomen being dark red-brown. Fore wing with the tuft of hair on inner margin long; the lower whitish spot narrow and elongate; the postmedial line narrow and highly waved. Hind wing with an indistinct medial line.

Hab. Sikkim, 4000 feet. *Exp.* 51 millim.

946. *Odonestis isocyma*, n. sp.

♂. Dull red-brown. Fore wing with an indistinct waved antemedial line; a dark speck at end of cell; an evenly curved dark line from the apex to inner margin, this being the main distinguishing point. Hind wing flesh-colour, with the costa darker.

Hab. Nāga Hills, 6000 feet (*Doherty*). *Exp.* 41 millim. Type in coll. Elwes.

947. *Odonestis pyriformis*, *Moore*, *P. Z. S.* 1879, p. 408, pl. 34, fig. 7; *C. & S.* no. 1496.

♂. Differs from *lata* in being darker red-brown; the lower whitish spot of the fore wing smaller and usually pyriform; the oblique line greyer and far from the cell. Hind wing uniform red-brown, usually with an indistinct dark transverse line.

Larva. Dorsum black; lateral area brown; a scarlet lateral line and strigæ, grey and black subdorsal tufts on 2nd-11th somites; dorsal red-brown tufts on 1st somite and lateral tufts on each somite.

Hab. N.W. Himalayas; Sikhim. *Exp.* 50 millim.

SECT. II. Fore wing with vein 8 stalked with 6 and 7 in the male.

948. *Odonestis plagifera*, *Wlk. Cat.* vi, p. 1459; *C. & S.* no. 1468; *Bull. Ill. Het.* v, pl. 99, fig. 5.

♂. Dark red-brown. Fore wing with an indistinct antemedial line; a pale line from the middle of inner margin curving up obliquely to near the costa, then bent down with a curve to near outer angle, and enclosing in its upper half a chocolate patch, which extends beyond it to the apex and outer margin; some purplish suffusion beyond it towards the apex. Hind wing paler red-brown, with traces of a medial line; outer margin of both wings dark.

♀. Paler red-brown; fore wing with a dark spot at outer angle.

Hab. Simla; Nepal; Sikhim; Java. *Exp.*, ♂ 68-72, ♀ 100-116 millim.

SECT. III. Fore wing with vein 8 stalked with 6 and 7 in the female; veins 4 and 5 stalked. Hind wing with veins 4 and 5 stalked.

949. *Odonestis lineata*, *Moore, Lep. Atk.* p. 81; *C. & S.* no. 1462.

♂. Ochreous chestnut-brown; palpi and antennæ blackish; fore wing with the costal edge dark; a longitudinal blackish line from base to outer margin below apex; numerous basal and discal indistinct dark waved lines; a submarginal series of black spots.

Hind wing rather paler. Underside with two postmedial indistinct dark lines on both wings.

Hab. Sikkim. *Exp.* 80 millim.

Genus **GASTROPACHA.**

Gastropacha, *Ochs. Schmett. Eur.* iii, p. 239 (1810).

Type, *G. quercifolia*, Linn., from Europe.

Range. Europe; Japan; China; Himalayas.

Palpi very long, the 3rd joint slender. Antennæ with the branches short, especially in female; mid and hind tibiæ with minute terminal pairs of spurs. Fore wing long, the apex acute, outer margin crenulate; veins 6 and 7 stalked; the stalk of veins 9 and 10 long. Hind wing with part of the costa and outer margin crenulate; veins 4 and 5 from cell; 8 curved and met by a bar from cell; accessory costal veinlets numerous and prominent.

950. *Gastropacha undulifera*, *Wlk. Cat.* vi, p. 1395; *C. & S.* no. 1451.

♀. Head, thorax, and abdomen very pale brownish grey. Wings pale brownish grey, slightly irrorated with fuscous; an indistinct dark antemedial waved line; a dark streak on disco-

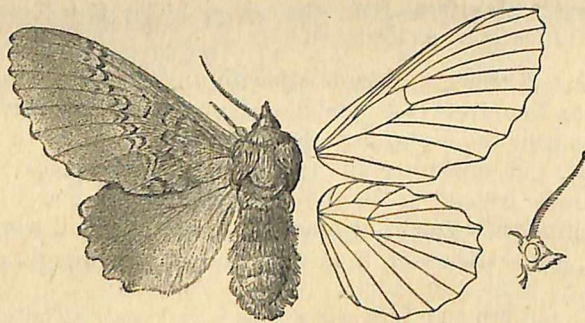


Fig. 297.—*Gastropacha undulifera*, ♀. 1.

cellulars; two indistinct waved oblique postmedial lines close together; the crenulations of both wings dark at the projections, pale at excisions.

Cocoon formed of pale silk loosely woven.

Hab. Dharmasāla. *Exp.* 70 millim.

951. *Gastropacha sinuata*, *Moore, Lep. Atk.* p. 76; *C. & S.* no. 1448.

♂. Pale reddish ochreous; antennæ black. Fore wing with two indistinct antemedial waved lines; a black spot at end of cell; two postmedial and one submarginal indistinct waved lines; a series of

marginal indistinct marks. Hind wing with three waved post-medial lines, not reaching the inner margin.

Hab. Sikkim. *Exp.* 58 millim.

952. *Gastropacha divaricata*, Moore, *Trans. Ent. Soc.* 1884, p. 374; *C. & S.* no. 1446.

♀. Dark red-brown. Fore wing with the outer margin more irregular than in the preceding species; dark irregularly curved ante- and postmedial lines which nearly meet on inner margin: between these are two less prominent lines which meet and end at vein 2; an indistinct series of submarginal grey spots.

Hab. Sikkim. *Exp.* 88 millim.

Genus **STENOPHYLLOIDES**, nov.

Type, *S. sikkima*, Moore.

Range. Sikkim.

Palpi very long and slender. Antennæ with the branches rather short and decreasing rapidly to apex. Legs with the spurs very minute. Fore wing very long and narrow, the outer margin very oblique, angulated and crenulate; veins 6, 7, 8 stalked; the stalk of veins 9 and 10 long. Hind wing with veins 4 and 5 stalked; 8 curved and met by a bar from 7; the accessory costal veinlets very numerous and prominent, the outer margin crenulate.

953. *Stenophylloides sikkima*, Moore, *Lep. Atk.* p. 75; *C. & S.* no. 1447.

♂. Palpi blackish; head, thorax, and abdomen red-brown; a

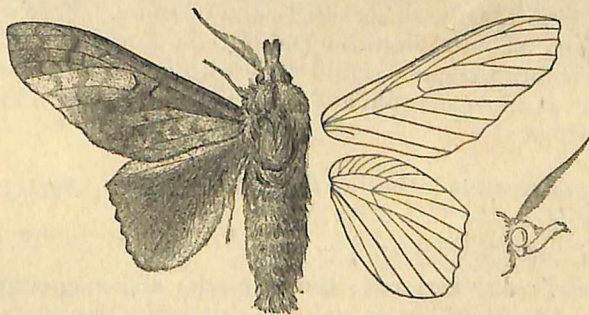


Fig. 298.—*Stenophylloides sikkima*, ♂. $\frac{1}{2}$.

dark stripe on vertex of head and thorax; metathorax with a yellow tinge. Fore wing purplish red-brown; the inner and apical areas with a yellow tinge; about seven very indistinct waved lines.

Hind wing dark red-brown, the costal area ochreous; traces of three or four waved medial lines.

♀ paler and yellower in tone.

Hab. Sikkim. *Exp.*, ♂ 66, ♀ 96 millim.

Species formerly recorded as Indian which are omitted.

Trabala varia, Wlk., C. & S. no. 1455, belongs to the genus *Lechriolepis*, Butl., and is from W. Africa.

Trisula variegata, Moore, C. & S. no. 1331, is a *Noctua*.

Family PTEROTHYSANIDÆ.

A family consisting of a single genus of day-flying moths.

Palpi upturned, proboscis present. Antennæ simple. Mid and hind tibiæ with terminal pairs of spurs. Fore wing with veins 1 *a* and *c* absent; 5 from the lower angle of cell. Hind wing with veins 1 *a* and *c* absent; 5 from lower angle of cell, 8 with a precostal spur, and bent down and touching 7 at middle of cell. Frenulum absent.

Larva unknown.

Genus PTEROTHYSANUS.

Pterothysanus, Wlk. *Cat.* ii. p. 401 (1854).

Type, *P. laticilia*, Wlk.

Range. ? China; Sikkim; Assam; Burma.

Palpi upturned, reaching above vertex of head. Antennæ simple. Mid and hind tibiæ with terminal pairs of spurs. Fore wing with vein 7 given off just before the end of cell; 8 and 9 stalked, and from far before the end. Hind wing with a double fringe of very long hair on inner margin, and scattered long hairs on inner area of both wings.

954. *Pterothysanus laticilia*, Wlk. *Cat.* ii, p. 401; *Butl. Ill. Het.* i, pl. 14, fig. 2; C. & S. no. 475.

Pterothysanus lanaris, *Butl. A. M. N. H.* (5) xiv, p. 406.

Head and collar fiery red; thorax black; abdomen orange, with a series of black dorsal spots and paired lateral white spots; all the segments with black bands below slightly spotted with white, the first two banded also above. Fore wing black; a large white spot on inner margin before the middle; one at end of cell; medial, postmedial, and submarginal series of spots, those towards inner margin coalescing, the first two series irregular; some small marginal spots towards outer angle. Hind wing white, with a

black medial band ; a postmedial lunulate band not reaching inner margin, sending spurs along the veins to the submarginal series of spots ; a marginal series of spots which more or less coalesce with the submarginal series.

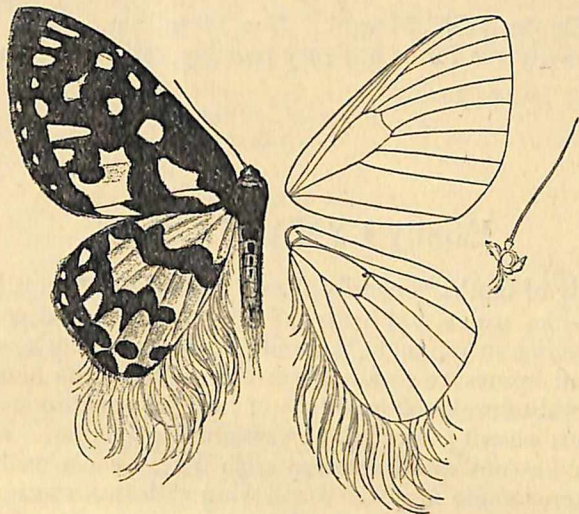


Fig. 299.—*Pterothysanus laticilia*, ♂. 1.

The form *lunaris* from ? China has the postmedial band of the hind wing much reduced.

Hab. ? China ; Sikkim ; Bhutan ; Assam. *Exp.*, ♂ 64, ♀ 75 millim.

955. *Pterothysanus atratus*, *Butl. A. M. N. H.* (5) xvi, p. 346, pl. viii, fig. 3 ; *C. & S.* no. 474.

♂. Differs from *laticilia* in having a series of marginal pink spots to both wings ; the white markings are considerably reduced, especially those towards outer margin. Abdomen with paired white spots on the ventral band.

Hab. Assam. *Exp.* 75 millim.

956. *Pterothysanus noblei*, *Swinh. P. Z. S.* 1889, p. 401, pl. 44. fig. 3.

Differs from *atratus* in the marginal pink spots of both wings being larger and brighter ; the wings otherwise marked as in *laticilia*. Abdomen with the white spots on ventral black bands elongate.

Hab. Burma. *Exp.*, ♂ 54, ♀ 58 millim.

957. *Pterothysanus pictus*, *Butl. A. M. N. H.* (5) xiv, p. 407 ; *C. & S.* no. 476.

♂. Differs from *noblei* in the marginal pink spots of both wings

being small and pale; the white area much more extensive; the black markings small and only conjoined along the costa of fore wing, towards the margin of both wings being reduced to small round spots; the postmedial series placed further from the margin.

Hab. Elephant Isl., Mergui. *Exp.* 60 millim.

These last three forms are very possibly varieties of one species.

Family LYMANTRIIDÆ.

A family of moths generally of nocturnal flight*, mostly clothed with hair-like scales and with very highly developed pectinations to the antennæ in the male, the branches often having long terminal spines, and spines to retain them in position; the females often have a largely developed anal tuft of hair for covering the eggs.

Proboscis absent; legs hairy; frenulum present†. Fore wing with vein 1*a* not anastomosing with 1*b*; 1*c* absent‡; 5 from close to lower angle of cell. Hind wing with two internal veins†; 5 from close to lower angle of cell‡; 8 nearly touching 7 at middle of cell and connected with it by a bar.

Larva hairy; generally clothed with very thick hair or with thick tufts of hair and forming a cocoon into which these hairs are woven, they being often of a very poisonous nature.

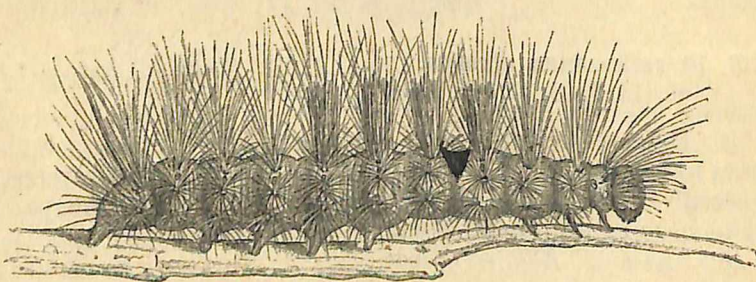


Fig. 300.—Larva of *Dasychira horsfieldi*. †.

Key to the Genera.

A. Frenulum present.

- a. Fore wing with vein 9 given off from 10 and anastomosing with 8 to form an areole.

* Except *Orgyia* and *Aroa*.

† Except in the lowly genus *Ratarada*.

‡ Except in *Gazalina* and *Porthesia*.

- a'*. Palpi porrect.
- a*². Palpi slight and not projecting beyond the frons; head, thorax, and abdomen clothed with long hair.
- a*³. Mid and hind tibiæ without spurs 1. VARMINA, p. 434.
- b*³. Mid and hind tibiæ with a terminal pair of spurs 2. LACHANA, p. 435.
- b*². Palpi extending beyond the frons; head, thorax, and abdomen smoothly scaled.
- a*³. Fore tarsi with lateral tufts of hair to the joints.
- a*⁴. Hind tibiæ with one pair of spurs * 3. ORGYIA p. 436.
- b*⁴. Hind tibiæ with two pairs of spurs.
- a*⁵. Fore wing short and broad, the outer margin nearly erect 8. CIFUNA, p. 446.
- b*⁵. Fore wing more produced, the outer margin oblique . . . 9. DASYPHORA, p. 447.
- b*³. Fore tarsi without lateral tufts of hair to the joints.
- a*⁴. Fore wing short and broad.
- a*⁵. Hind tibiæ with two pairs of spurs 4. AROA, p. 437.
- b*⁵. Hind tibiæ with one pair of spurs 6. PANTANA, p. 443.
- b*⁴. Fore wing more produced.
- a*⁵. Hind wing with veins 6 and 7 stalked 5. LÆLIA, p. 440.
- b*⁵. Hind wing with veins 6 and 7 from cell 7. THIACIDAS, p. 445.
- b'*. Palpi upturned.
- a*². Palpi slight, closely approximated to frons, and not reaching the vertex of head 13. DAPLASA, p. 458.
- b*². Palpi reaching vertex of head . . . 11. NUMENES, p. 455.
- c*². Palpi reaching above vertex of head 12. PIDA, p. 457.
- b*. Fore wing with veins 9 and 10 anastomosing with 8 to form the areole . . . 10. MARDARA, p. 454.
- c*. Fore wing with no areole, or rarely vein 10 arising from 11 and anastomosing with 8 and 9 or giving off 9 to anastomose with 8 and form an areole.
- a'*. Fore wing with veins 7, 8, 9, 10 stalked.
- a*². Palpi upturned.
- a*³. Fore wing with the apex rounded.
- a*⁴. Fore wing with vein 10 given off near apex 14. HERACULA, p. 458.
- b*⁴. Fore wing with vein 10 given off nearer the cell than 7 . . . 15. LYMANTRIA, p. 459.
- b*³. Fore wing with the apex acute. 19. TOPOMESA, p. 469.

- b*². Palpi porrect. Hind wing with vein 5 from near lower angle of cell, or absent.
- a*³. Hind tibiæ with two pairs of spurs.
- a*⁴. Palpi short.
- a*⁵. Hind wing with vein 5 absent 22. PORTHESIA, p. 484.
- b*⁵. Hind wing with vein 5 present.
- a*⁶. Fore wing with vein 10 given off near the apex... 21. EUPROCTIS, p. 470.
- b*⁶. Fore wing with vein 10 given off nearer the cell than, or from the same point as, 7 27. CISPIA, p. 492.
- b*⁴. Palpi long 16. IMAUS, p. 466.
- b*³. Hind tibiæ with one pair of spurs 23. PERINA, p. 486.
- b*¹. Fore wing with veins 8, 9, 10 stalked, 7 from cell.
- a*². Hind wing with vein 5 from near lower angle of cell; palpi very long 20. DACTYLORHYNCHA, [p. 470.]
- b*². Hind wing with vein 5 from near upper angle of cell; fore wing with veins 3 and 4 coincident; palpi minute..... 18. GAZALINA, p. 468.
- c*¹. Fore wing with vein 10 from the cell or rarely stalked with 11.
- a*². Palpi porrect.
- a*³. Palpi long; hind tibiæ with two pairs of spurs 17. HIMALA, p. 467.
- b*³. Palpi short; hind tibiæ with one pair of spurs.
- a*⁴. Hind wing with veinlets between vein 1 *a* and inner margin 26. DENDROPHLEPS, [p. 491.]
- b*⁴. Hind wing with no veinlets between vein 1 *a* and inner margin 25. CAVIRIA, p. 489.
- b*². Palpi upturned 24. LEUCOMA, p. 487.
- B. Frenulum absent 28. RATARDA, p. 493.

Genus VARMINA.

Varmina, Moore, P. Z. S. 1888, p. 405.

Type, *V. indica*, Wlk.

Range. N.W. Himalayas.

Palpi short, slender, and porrect; antennæ of male with short branches, dilated distally; legs hairy and without spurs. Head small and hairy; abdomen of female with a large anal tuft. Fore wing with vein 9 arising from 10 and anastomosing with 8 to form a long areole. Hind wing with veins 3 and 4 from angle of cell; 5 from above the angle; 6 and 7 from upper angle.

958. *Varmina indica*, *Wlk. Cat. v*, p. 1039; *C. & S. no.* 1177

♂. Head and thorax black, clothed with grey and brown hair; abdomen black. Fore wing blackish, thickly sprinkled with orange spots; black spots on a grey ground at middle and end of cell; an irregular marginal grey area with a submarginal series of black spots. Hind wing black.

♀. Head clothed with white hair; collar and abdominal tuft ochreous white; the wings paler.

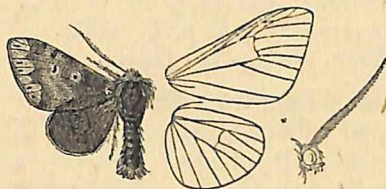


Fig. 301.—*Varmina indica*, ♂. 1.

Larva black, speckled with white and with dorsal and lateral tufts of hair arising from fulvous tubercles; the thoracic and anal somites with reddish tufts, the medial with grey; 4th and 11th somites with long dorsal black tufts.

Hab. N.W. Himalayas. *Exp.*, ♂ 32, ♀ 42 millim.

Genus **LACHANA.**

Lachana, *Moore, P. Z. S.* 1888, p. 397.

Type, *L. ladacensis*, *Moore.*

Range. Kashmir; Ladak.

Palpi short, hairy, porrect and hidden by the long hair from the frons; antennæ with the branches short; thorax and abdomen hairy; mid and hind tibiæ with minute terminal pairs of spurs. Fore wing with vein 9 arising from 10 and anastomosing with 8 to form a short areole. Hind wing with veins 3 and 4 stalked; 5 from above angle of cell; 6 and 7 from upper angle.

959. *Lachana ladacensis*, *Moore, P. Z. S.* 1888, p. 398; *Butl. Ill. Het. vii*, pl. 121, fig. 6; *C. & S. no.* 1071 A.

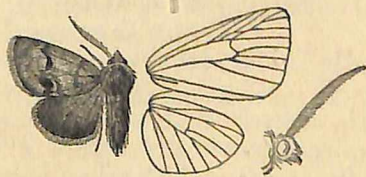


Fig. 302.—*Lachana ladacensis*, ♂. 1.

♂. Head clothed with grey hair; thorax and abdomen with brown and black hair. Fore wing pale brown irrorated with dark

scales ; an indistinct antemedial line and postmedial band excurved beyond end of cell ; an ill-defined marginal fuscous band. Hind wing fuscous brown ; the marginal area black-brown ; cilia greyish.

Hab. Kashmir ; Ladak. *Exp.* 28 millim.

Genus ORGYIA.

Orgyia, *Ochs. Schmett. Eur.* iii, p. 208 (1810).

Notolophus, *Germa, Prod.* ii, p. 35 (1812).

Gynæphora, *Hüb. Verz.* p. 161 (1818).

Type, *O. antiqua*, Linn., from Europe.

Range. Universally distributed, except the Neotropical region.

♂. Flight diurnal. Palpi short, porrect, and heavily fringed with hair ; antennæ with the branches long and with long spines at extremities ; legs heavily fringed with hair ; abdomen with a dorsal tuft on 2nd segment. Fore wing with vein 9 arising from 10 and anastomosing with 8 to form an areole. Hind wing with veins 3 and 4 from angle of cell ; 5 from just above angle ; 6 and 7 stalked.

♀ with the palpi and legs less hairy ; antennæ serrate ; wings aborted, scale-like, and covered with hair ; abdomen covered with hair and immensely dilated when full of eggs.

960. *Orgyia postica*, *Wlk. Cat.* iv, p. 803 ; *Moore, Lep. Ceyl.* ii, pl. 109, figs. 1, 1 a, b (larva) ; *C. & S.* no. 875.

Orgyia ceylanica, *Nietn. Ed. New Phil. Jour.* xv, 1862, p. 34 ; *C. & S.* no. 874.

Orgyia ocularis, *Moore, Lep. Atl.* p. 44 ; *C. & S.* no. 868.

♂. Head, thorax, and abdomen brown. Fore wing brown, with an indistinct oblique subbasal line ; waved antemedial and postmedial lines which approach each other at lower angle of cell, the area between them slightly tinged with bluish grey and with a waved dark line edged with white on each side of the discocellulars ; two indistinct waved submarginal lines ; the apex slightly tinged with grey and with some subapical dark streaks.

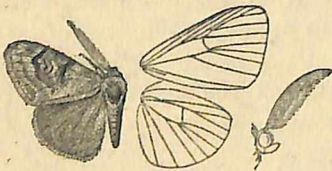


Fig. 303.—*Orgyia postica*, ♂. 1. Hind wing dark brown.

♀ with aborted wings.

Larva. Yellowish, sparsely clothed with brown hair ; one dorsal and two lateral brown bands ; paired tufts of long brown hair on 1st and 11th somites projecting forward and backward ; lateral tufts of grey hair from 4th and 5th somites ; dorsal tufts of yellow hair on 4th–7th somites ; the head red.

Hab. Sikkim ; Nágas ; Formosa ; Nilgiris ; Ceylon ; Burma ; Borneo ; Java ; New Guinea. *Exp.* 24–28 millim.

961. *Orgyia viridescens*, *Wlk. Cat. iv*, p. 798; *C. & S.* no. 878.

♂. Differs from *postica* in the vertex of thorax and base of fore wing being pale-spotted; the ante- and postmedial lines widely separated below the cell, and the space between them much more shot with bluish green and purple; the submarginal line with a white lunule on it near outer angle. Hind wing paler, with traces of a postmedial curved line.

Hab. Ceylon. *Exp.* 30 millim.

962. *Orgyia turbata*, *Butl. Trans. Linn. Soc. (2) i*, 1879, p. 560.

♂. Head, thorax, and abdomen brown and grey. Fore wing brown suffused with orange; indistinct dark waved subbasal, ante-medial, and postmedial lines, which approach each other towards inner margin; an indistinct dark patch at end of cell; orange patches at middle of cell, apex, and outer angle. Hind wing red-brown.

Hab. Karen Hills; Malacca. *Exp.* 24 millim.

Genus AROA.

Aroa, *Wlk. Cat. iv*, p. 791 (1855).

Baziza, *Wlk. Cat. xxxii*, p. 398 (1865).

Type, *A. discalis*, *Wlk.*, from S. Africa.

Range. S. Africa; China; throughout India, Ceylon, and Burma; Java.

Flight diurnal: differs from *Orgyia* in the palpi being much longer and not so heavily fringed with hair, the 3rd joint prominent; legs not so hairy. Female with fully developed wings; the branches of antennæ shorter than in the male.

963. *Aroa maxima*, *Hmps. Ill. Het. ix*, ined., pl. 159, fig. 9.

♂. Head, thorax, and abdomen dark brown; antennæ with the shaft pale at sides. Fore wing black-brown; the cell pale with a black speck on a pale patch at the end of it; traces of a curved submarginal line; cilia chequered dark and lighter brown. Hind wing smoky black, with a white fascia from the base to beyond end of cell; the cilia pale. Underside of both wings with a prominent cell-spot and the discal area pale.

Hab. Ceylon. *Exp.* 52 millim.

964. *Aroa major*, *Hmps. Ill. Het. ix*, ined., pl. 159, figs. 3, 5.

♂. Differs from *maxima* in the head, thorax, and fore wing being ochreous brown. Fore wing with no pale fascia in the cell; the black speck on a white patch much more prominent, as also is the submarginal line which is incurved between veins 2 and 3. Hind wing greyish fuscous, except the costal black area. Underside whitish.

♀. Ochreous, the wings irrorated with dark scales. Fore wing with a dark speck at end of cell; a submarginal series of indistinct dark specks. Hind wing paler, except the cilia.

Hab. Ceylon. *Exp.*, ♂ 42, ♀ 50 millim.

965. *Aroa plana*, *Wlk. Cat.* iv, p. 786; *Moore, Lep. Ceyl.* ii, pl. 110, figs. 1, 1 a; *C. & S.* no. 882.

Charnidas junctifera, *Wlk. Cat.* xxxii, p. 334.

Charnidas ochracea, *Moore, Lep. Atk.* p. 44; *C. & S.* no. 881.

♂. Differs from *major* in its small size, usually bright ochreous ground-colour, and better marked postmedial band to fore wing.

The colour may be either ochreous or reddish irrorated with dark scales or almost wholly fuscous.

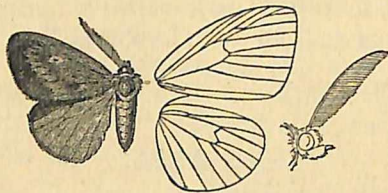


Fig. 304.—*Aroa plana*, ♂. 1.

♀. As in *major*, but with a prominent or obsolescent postmedial band to fore wing; the amount of fuscous irroration varies much and the cell-spot may be prominent or obsolescent on both wings.

Hab. Kangra; Calcutta; Nilgiris; Ceylon. *Exp.*, ♂ 28–34, ♀ 36–42 millim.

966. *Aroa subnotata*, *Wlk. Cat.* iv, p. 803; *C. & S.* no. 884.

♂. Dark red-brown. Fore wing with the lines indistinct; the cell-spot on a small orange patch. Hind wing darker, with an orange discal fascia from the origin of vein 2 widening towards outer margin. Underside with the basal and inner areas of both wings suffused with orange.

Hab. Ceylon. *Exp.* 26 millim.

967. *Aroa sienna*, *Hmps. Ill. Het.* viii, p. 55, pl. 140, figs. 2, 9.

♂. Differs from *subnotata* in having the hind wing uniform dark red-brown without any orange fascia. Underside without orange suffusion.

♀. Differs from *plana* in having a reddish tinge.

Hab. Nilgiris; Ceylon. *Exp.*, ♂ 30, ♀ 36 millim.

968. *Aroa simplex*, *Wlk. Cat.* xxxii, p. 325; *Hmps. Ill. Het.* viii, pl. 143, fig. 17; *C. & S.* no. 876.

♂. Head, thorax, and abdomen brown. Fore wing yellowish

brown, with a postmedial line excurved at middle and with its inner edge pale. Hind wing orange, with a more or less pronounced brown margin.

Hab. Nilgiris. *Exp.* 30 millim.

969. *Aroa cinnamomea*, *Moore, Lep. Atk.* p. 44; *C. & S.* no. 879.

Charnidas aurantiaca, *Warr. P. Z. S.* 1888, p. 296; *C. & S.* no. 878 A.

♂. Differs from *simplex* in being rather paler. Fore wing with the discocellulars slightly darkened; no postmedial line; the cilia ochreous. Hind wing orange suffused with brown.

Hab. N.W. Himalayas; Attock, Punjab. *Exp.* 34 millim.

970. *Aroa socrus*, *Geyer, Hübn. Zutr.* v, p. 12, figs. 837, 838; *C. & S.* no. 869.

Aroa substrigosa, *Wlk. Cat.* iv, p. 794; *Butl. Ill. Het.* v, pl. 90, fig. 5.

♂. Head, thorax, and abdomen fulvous orange, the branches of antennæ blackish. Fore wing fulvous orange; the costal area and interspaces, especially towards outer margin, slightly streaked with fuscous. Hind wing brighter orange; cilia of both wings fuscous.

Hab. China; Assam; Khási, Nága, and Karen Hills; Java. *Exp.* 32–38 millim.

971. *Aroa pyrrhochroma*, *Wlk. Cat.* xxxii, p. 329; *C. & S.* no. 1033.

Aroa clara, *Swinh. P. Z. S.* 1885, p. 299, pl. 20, figs. 9, 10; *C. & S.* no. 1032.

Baziza detecta, *Wlk. Cat.* xxxii, p. 399; *C. & S.* no. 1071.

♂. Differs from *socrus* in the fore wing being slightly suffused with fuscous instead of streaked. Hind wing orange, with a broad marginal black border.

♀. Uniform greyish pink with an ochreous tinge.

The Bombay form *clara* is small, the female uniform pale orange.

Hab. N.W. Himalayas; Sikhim; Khásis; Nágas; Bombay. *Exp.*, ♂ 26–34, ♀ 34–44 millim.

972. *Aroa sagrara*, *Swinh. P. Z. S.* 1885, p. 299, pl. 20, fig. 13; *C. & S.* no. 1034.

♂. Uniform orange-brown; the cilia and underside brighter orange.

Hab. Belgaum. *Exp.* 32 millim.

973. *Aroa atrella*, n. sp.

♂. Head and legs fulvous; thorax, abdomen, and wings black-brown. Fore wing with a black spot at end of cell and very



indistinct ante- and postmedial curved pale lines, which somewhat approach each other below the median nervure.

Hab. Sikkim (*Möller*); Margharita (*Doherty*). *Exp.* 20 millim. Type in coll. Elwes.

974. *Aroa aurantifascia*, n. sp.

♂. Head, thorax, and abdomen black-brown. Fore wing brown suffused with dark green; traces of subbasal and antemedial lines; an indistinct waved postmedial and two submarginal lines. Hind wing black; a bright orange fascia from the base through the cell to near outer margin, interrupted by a broad black band on discocellulars; two orange fasciæ irrorated with black scales on inner area; cilia orange. Underside orange, the margins broadly black; a black band on discocellulars and fasciæ on median nervure of both wings, in hind wing continued to the marginal band.

Hab. Nāga Hills, 6000 ft. (*Doherty*). *Exp.* 44 millim. Type in coll. Elwes.

975. *Aroa xerampelina*, *Swinh. P. Z. S.* 1885, p. 299, pl. 21, figs. 8, 9; *C. & S.* no. 870.

♂. Yellowish or greyish brown; fore wing with an indistinct dark spot at end of cell, and broad irregular marginal band; hind wing slightly darker towards outer margin.

♀ with a greyer tone.

Hab. Poona; Nilgiris. *Exp.* 32 millim.

Genus *LÆLIA*.

Lælia, *Steph. Syst. Cat. Brit. Ins.* ii, p. 52 (1829).

Procodeca, *Wlk. Cat.* iv, p. 812 (1855).

Ricine, *Wlk. Cat.* iv, p. 824 (1855).

Charnidas, *Wlk. Cat.* iv, p. 797 (1855).

Repena, *Wlk. Cat.* iv, p. 799 (1855).

Lælioides, *Moore, Lep. Ceyl.* ii, p. 83 (1883).

Hondella, *Moore, Lep. Ceyl.* ii, p. 144 (1883).

Harapa, *Moore, Lep. Atk.* p. 47 (1879).

Odagra, *Wlk. Cat.* xxxii, p. 401 (1865).

Type, *L. cænosa*, Hübn., from Europe.

Range. Europe; Japan; China; throughout India, Ceylon, and Burma; Java.

Flight nocturnal. Palpi long and porrect, the 2nd joint heavily fringed with hair, the 3rd long; antennæ with the branches long in male, short in female. Fore wing more produced than in *Aroa*, the wing-membrane forming a slight concavity on underside beyond the upper angle of cell; neuration similar.

SECT. I. Female with fully formed wings.

976. *Lælia suffusa*, *Wlk. Cat. iv*, p. 824.

Lælia angulifera, *Wlk. Cat. iv*, p. 919; *Moore, Lep. Ceyl. ii*, pl. 110, figs. 5, 5a; *C. & S. nos. 889, 1068*.

Lælia prolata, *Swinh. Cat. Het. Mus. Oxon.* p. 195.

♂. Palpi and legs ochreous; head, thorax, abdomen, and fore wing white with a slight reddish tinge; the last with a submarginal series of seven black spots bent round to the middle of interno-median interspace. Hind wing pale, suffused with fuscous towards outer margin.

♀. Head, thorax, and fore wing uniform pale ochreous; abdomen and hind wing white.

Hab. Assam; Ceylon; Burma; Mergui; Java. *Exp.*, ♂ 34, ♀ 38 millim.

977. *Lælia devestita*, *Wlk. Cat. xxxii*, p. 402; *C. & S. no. 1061*.

Lælia pallida, *Moore, Trans. Ent. Soc. 1884*, p. 358; *C. & S. no. 891*.

Lælioides lactea, *Moore, Trans. Ent. Soc. 1884*, p. 358; *C. & S. no. 887*.

♂. Head, collar, and legs bright ochreous; thorax, abdomen, and wings white with a very slight ochreous tinge; some specimens with slight traces of a submarginal curved series of black specks to the fore wing.

Hab. Punjab; Bombay; Burma. *Exp.*, ♂ 36, ♀ 42 millim.

978. *Lælia lilacina*, *Moore, Trans. Ent. Soc. 1884*, p. 357; *C. & S. no. 890*.

♂. Head, thorax, and fore wing pale with a violet tinge; the submarginal spots prominent. Hind wing suffused with dark fuscous.

♀. Head, thorax, and fore wing pale ochreous; abdomen and hind wing white.

Hab. Nilgiris. *Exp.*, ♂ 34, ♀ 38 millim.

979. *Lælia rubripennis*, *Moore, Trans. Ent. Soc. 1884*, p. 358; *C. & S. no. 888*.

Lælioides fasciata, *Moore, Lep. Ceyl. ii*, p. 84, pl. 110, fig. 6; *C. & S. no. 886*.

Procodeca testacea, *Moore, P. Z. S. 1872*, p. 574 (nom. præocc.); *C. & S. no. 1069*.

♂. Head, thorax, and fore wing reddish chestnut, the last irrorated with grey scales; the interno-median interspace and outer area suffused with grey; the black spot between veins 3 and 4 displaced towards outer margin. Abdomen and hind wing paler.

♀ with the fore wing less suffused with grey.

In the form *rubripennis*, from Burma, the spots are indistinct and the hind wing nearly white; in *fasciata*, from Ceylon, the spots are more prominent and the hind wing fuscous.

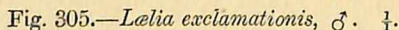
Hab. Ganjam; Burma; Ceylon. *Exp.*, ♂ 36, ♀ 40 millim.

- Hab.* Kulu. *Exp.* 39 millim.

- Hab.* Ceylon. *Exp.* 32–38 millim.

- Répena cervina*, *Wlk. Cat.* iv, p. 800; *C. & S.* nos. 871, 1075.

♀ rather paler and redder.



Hab. N.W. Himalayas; Sikhim; throughout India and Ceylon.
Exp., ♂ 36, ♀ 44 millim.

- Laelia uniformis* (♀), *Hmps. Ill. Het.* viii, p. 56, pl. 140, fig. 2.

♀ of an ochreous tinge instead of red.



The typical form *testacea* is very pale, the female with scarcely a trace of dark irroration; the form *juvenis* has the fore wings longer in the male.

Hab. Sind; Bombay; Mhow; Nilgiris; Ceylon. *Exp.*, ♂ 40–42, ♀ 40–48 millim.

984. *Lælia litura*, *Wlk. Cat.* iv, p. 797; *C. & S.* no. 880.

♂. Differs from *exclamationis* in being dark fuscous brown; the head, collar, and legs ochreous.

Hab. Kulu; Nepal; Sikhim; Tenasserim. *Exp.* 30–36 millim.

985. *Lælia venosa*, *Moore, P. Z. S.* 1877, p. 601, pl. lix, fig. 1; *C. & S.* no. 892.

♂. Pale brown; abdomen with an orange tinge; fore wing with the veins paler.

♀ paler.

Hab. Sikhim; S. Andamans. *Exp.*, ♂ 40, ♀ 54 millim.

986. *Lælia atestacea*.

Harapa testacea, *Moore, Lep. Atk.* p. 47, pl. 2, fig. 15 (nom. præocc.); *C. & S.* no. 1077.

♂. Fore wing rather more produced than in that sex of the preceding species. Head and thorax pale yellowish brown; abdomen brownish yellow. Fore wing uniform pale yellowish brown; hind wing paler.

Hab. Sikhim. *Exp.* 56 millim.

SECT. II. Female with aborted wings.

987. *Lælia heterogyna*, n. sp.

♂. Dull brown; clothed with long hair-like scales; fore wing with the discocellulars smoky black; some smoky suffusion between the bases of veins 2 to 4, and an indistinct patch beyond upper angle of cell.

♀. Ochreous, with aborted wings.

A development of *L. testacea*.

Hab. Dras, Kashmir (*Leech*). *Exp.* ♂ 44 millim. Type in coll. *Leech*.

Genus PANTANA.

Pantana, *Wlk. Cat.* iv, p. 819 (1855).

Birnara, *Butl. Trans. Linn. Soc.* (2) i, 1879, p. 560.

Type, *P. visum*, Hübn.

Range. China; N.E. India; Burma; Malacca; Java.

Differs from *Orgyia* in the palpi being slender and naked; the legs not so hairy; the female with fully developed wings and bipectinated antennæ with short branches.

988. *Pantana bicolor*, *Wlk. Cat.* iv, p. 787; *C. & S.* no. 873.
Genusa delineata, *Wlk. Cat.* iv, p. 818; *Butl. Ill. Het.* v, pl. 89,
 fig. 8; *C. & S.* no. 896.
Genusa circumdata, *Wlk. Cat.* iv, p. 819; *C. & S.* no. 894.
Genusa comparata, *Wlk. Cat.* xxxii, p. 340.
Stilpnotia sordida, *Wlk. Cat.* vii, p. 1732; *C. & S.* no. 1074.

♂. Head, collar, and palpi orange; thorax and basal segments of abdomen white, the terminal segments orange. Wings yellowish white; fore wing with a slight fuscous suffusion in the interspaces; hind wing with the outer area broadly and irregularly suffused with fuscous, leaving the veins white. Underside with the greater part of fore wing and a patch on disk of hind wing suffused with fuscous.

♀ with hardly a trace of fuscous suffusion.

The Burmese form of the male is pure white, with no black suffusion on hind wing; the female pure white.

Hab. Throughout N.E. India; Burma. *Exp.* 48 millim.

989. *Pantana visum*, *Hüb. Zutr.* iii, p. 33.
Pantana dispar, *Wlk. Cat.* iv, p. 820; *C. & S.* no. 1076.

♂. Head orange-yellow; thorax pale brown; abdomen whitish. Fore wing yellowish white; the costal half of wing suffused with pale red and brown, leaving the centre of costa and discocellulars

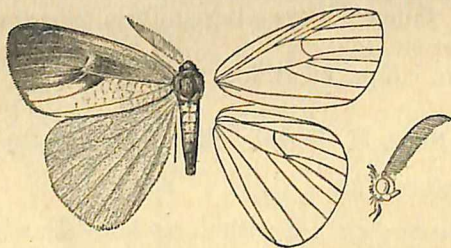


Fig. 306.—*Pantana visum*, ♂. 1.

pale; two dark patches below the angle of cell. Hind wing pure white. Underside with the costal half of fore wing orange except the apical black area.

Hab. Throughout Burma. *Exp.* 44 millim.

990. *Pantana terminata*, *Wlk. Cat.* xxxii, p. 340; *C. & S.* no. 898.

♂. Head, thorax, and abdomen pale fuscous. Fore wing with the basal area white or suffused with fuscous; the apical area smoky black; the oblique medial white band with three black spots below the median nervure. Hind wing pure white or whitish, with the apical area black; the inner area suffused with brown.

Hab. Karen Hills; Beeling; E. Pegu. *Exp.* 40 millim.

991. *Pantana interjecta*, *Swinh. Trans. Ent. Soc.* 1891, p. 478, pl. xix, fig. 2.

♂. Differs from *terminata* in being darker, the head, palpi, and coxæ of fore legs bright fulvous. Fore wing with the basal area much darker; the apical area blacker; no black spots below median nervure. Hind wing either wholly suffused with fuscous, except a white patch on the outer half of costa, the black patch being placed below the apex, or white with the apical area black.

Hab. Sikkim; Khâsis. *Exp.* 46 millim.

992. *Pantana albifascia*, *Wlk. Cat.* xxxii, p. 325; *C. & S.* no. 872.
Orgyia subfascia, *Moore, P. Z. S.* 1865, p. 803.

♂. Differs from *interjecta* in the whole hind wing being dark brown. In the form *subfascia* the band of the fore wing is more or less suffused with fuscous.

Hab. Sikkim. *Exp.* 42 millim.

Genus THIACIDAS.

Thiacidas, *Wlk. Cat.* v, p. 1027 (1855).

Casama, *Wlk. Cat.* xxxii, p. 611 (1865).

Type, *T. postica*, *Wlk.*

Range. Throughout India, Ceylon, and Burma.

Palpi porrect and slender, the 2nd joint fringed with hair. Legs naked, the spurs rather short. Fore wing longer and narrower than in the preceding genera; the neururation similar. Hind wing with veins 3 and 4 usually stalked and 6 and 7 usually from cell.

SECT. I. (*Thiacidas*). Male with the proximal two-thirds of antennæ pectinated, the distal part serrate.

993. *Thiacidas postica*, *Wlk. Cat.* v, p. 1028; *Swinh. P. Z. S.* 1885, pl. 21, figs. 1, 1 a, 2; *C. & S.* no. 1060.

Drymonia denotata, *Wlk. Cat.* xxxii, p. 414; *C. & S.* no. 1165.

Heterocampa nigroscripta, *Wlk. Cat.* xxxii, p. 423.

Cnethocampa curvata, *Wlk. Cat.* xxxii, p. 429; *C. & S.* no. 1046.

Cnethocampa basifurca, *Wlk. Cat.* xxxii, p. 430; *C. & S.* no. 1044.

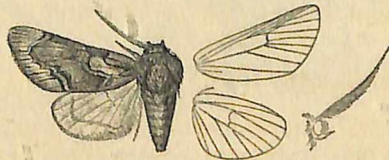


Fig. 307.—*Thiacidas postica*, ♂.

Head, thorax, and abdomen greyish brown. Fore wing greyish brown, with obliquely curved subbasal and antemedial black double lines angled below median nervure; a double postmedial line

excurved round end of cell and bent inwards below the cell with some streaks from it to outer margin. Hind wing with an indistinct curved postmedial line; a brown patch at anal angle with a dark streak on it; some strigæ on margin.

Hab. Throughout India and Burma. *Exp.*, ♂ 38, ♀ 44 millim.

SECT. II. (*Casama*). Male with antennæ bipectinated to tips, the branches long.

994. *Thiacidas vilis*, *Wlk. Cat.* xxxii, p. 348; *Hmps. Ill. Het.* viii, pl. 143, figs. 2, 9; *C. & S.* no. 956.

Casama indeterminata, *Wlk. Cat.* xxxii, p. 611; *C. & S.* no. 1779.

Head, thorax, abdomen, and fore wing grey, irrorated with brown scales; the last with an indistinct dark mark on the discocellulars and a series of marginal dark specks. Hind wing white.

Hab. Nilgiris; Ceylon. *Exp.*, ♂ 26, ♀ 32 millim.

Genus CIFUNA.

Cifuna, *Wlk. Cat.* v. p. 1172 (1855).

Baryaza, *Moore, Lep. Atk.* p. 45 (1879).

Type, *C. locuples*, *Wlk.*

Range. Japan; Sikhim; Khási and Nága Hills.

Palpi long, stout, and obliquely porrect. Antennæ bipectinated, the median branches long in male. Legs hairy. Fore wing rather short, the outer margin nearly straight; neuration as in preceding genera. Hind wing with veins 3 and 4 from angle of cell or stalked; 5 from above the angle; 6 and 7 from upper angle.

995. *Cifuna locuples*, *Wlk. Cat.* v, p. 1173; *Butl. Ill. Het.* ii, pl. 27, fig. 6; *C. & S.* no. 1330.

♂. Head, thorax, and fore wing reddish chestnut, the last with an indistinct broad irregular antemedial band; a waved line on each side of the discocellulars; a broad irregular postmedial band;

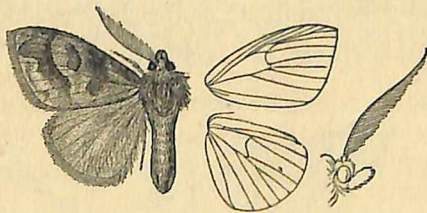


Fig. 308.—*Cifuna locuples*, ♂. †.

a series of irregular marginal marks; all these markings with slight purplish edging. Abdomen and hind wing ochreous.

♀ uniformly much darker.

Hab. Japan; Khásis; Nágas. *Exp.*, ♂ 40, ♀ 52 millim.



996. *Cifuna cervina*, Moore, *Lep. Atk.* p. 45, pl. 3, fig. 1; *C. & S.* no. 1062.

♂. Differs from *locuples* in being dull dark brown; fore wing with a purplish tinge; a black lunule at end of cell; the line inwardly edging the postmedial band nearly straight; no marginal marks or purplish edging to the markings. Palpi and legs blackish. *Hab.* Sikhim. *Exp.* 54 millim.

Genus DASYCHIRA.

Dasychira, Steph. *Ill. Brit. Ent., Haust.* ii, p. 58 (1829).

Olene, *Hübner. Zutr.* 2, p. 19, non descr. (1823).

Nioda, *Wlk. Cat.* v, p. 1069 (1855).

Rilia, *Wlk. Cat.* v, p. 1075 (1855).

Psalis, *Hübner. Zutr.* 2, p. 19, non descr. (1827).

Arestha, *Wlk. Cat.* iv, p. 805 (1855).

Anchyneura, *Feld. Sitzungsab. Akad. Wiss. Wien*, xliii, p. 331 (1861).

Cadusia, Moore, *Lep. Atk.* p. 54 (1879).

Type, *D. pudibunda*, Linn., from Europe.

Range. Europe; Africa; Madagascar; Japan; China; throughout India, Ceylon, and Burma; Java; Australia.

Palpi porrect, the 2nd joint heavily fringed with hair; antennæ with the branches long in male, short in female; legs hairy. Fore wing with the outer margin oblique; neuration as in preceding genera. Hind wing with veins 3, 4, 5 from close to angle of cell; 6 and 7 stalked.

SECT. I. (*Dasychira*). Fore wing of female not produced at apex, the outer margin evenly curved.

A. Abdomen clothed with long hair and without dorsal crests.

997. *Dasychira complicata*, *Wlk. Cat.* xxxii, p. 362; *Butl. Ill. Het.* v, pl. 91, figs. 4, 5; *C. & S.* no. 998.

Trisula pustulifera, *Wlk. Cat.* xxxii, p. 576.

♂. Head and collar whitish; palpi black at sides; the branches of antennæ red-brown; thorax brown, with black spots behind the collar; abdomen orange, the vertex black, the anal tuft and lateral fringe white. Fore wing red-brown; a subbasal waved black line with a maculate band between it and the double antemedial lines; reniform spot edged with black; a waved and curved postmedial line with a maculate band beyond it; a waved submarginal line; all these markings slightly outlined with white; cilia chequered pale and black. Hind wing yellowish white; the basal inner area tinged with orange; a dark spot at end of cell and postmedial band; cilia spotted with black.

♀ paler.

Hab. Sikhim. *Exp.*, ♂ 58, ♀ 86 millim.

B. *Abdomen smoothly scaled.*

a. *Female with the branches of antennæ long; abdomen without dorsal crests.*

998. *Dasychira lineata*, *Wlk. Cat. iv*, p. 875; *Butl. Ill. Het. v*, pl. 91, fig. 3; *C. & S. no.* 1023.

♀. White. Fore wing with a fine antemedial black line angled on median nervure; indistinct dentate postmedial and submarginal lines, the postmedial line dividing and outlining the discocellulars; a marginal series of specks to both wings.

Hab. Sikkim; Sylhet; E. Pegu. *Exp.* 85 millim.

b. *Female with the branches of antennæ short; abdomen with dorsal crests on anterior segments.*

999. *Dasychira horsfieldi*, *Saund. Trans. Ent. Soc. n. s. i*, 1851, p. 162; *Moore, Lep. E. I. Co. pl. xiv*, figs. 13, 13 a (larva).
Dasychira grotei, *Moore, Lep. E. I. Co. p.* 338; *C. & S. no.* 982.
Dasychira kausalia, *Moore, P. Z. S. 1879*, p. 401; *C. & S. no.* 983.
Dasychira arga, *Moore, Lep. E. I. Co. p.* 339.
Dasychira nilgirica, *Hmps. Ill. Het. viii*, p. 58, pl. 141, figs. 13, 14.

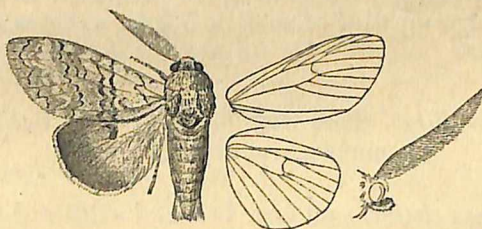


Fig. 309.—*Dasychira horsfieldi*, ♂. 1.

♂. Head and thorax whitish grey, the branches of antennæ red-brown; abdomen orange with the anal tuft grey; legs spotted with black. Fore wing greyish white, irrorated with dark scales and slightly suffused with brown; a dentate subbasal black line; two medial lines, the inner nearly straight, the outer waved; the reniform spot with dark outline; a waved postmedial line, bent outwards near inner margin; an irregularly dentate submarginal line. Hind wing pale; the inner area orange; a more or less prominent dark spot at end of cell; the outer area generally suffused with fuscous. Underside with prominent cell-spots to both wings.

♀. Head, thorax, and fore wing white, slightly powdered with grey; the last with indistinct diffused antemedial, postmedial, and submarginal lines. Abdomen and hind wing pure white.

Larva yellow, with tufts of long yellow hairs; 4th to 7th and 11th



somites with thick dorsal shorter tufts; a black dorsal patch between 4th and 5th somites.

Hab. Throughout India, Ceylon and Burma; Java. *Exp.*, ♂ 46, ♀ 70–86 millim.

1000. *Dasychira thwaitesi*, *Moore, Lep. Ceyl.* ii, p. 98, pl. 116, figs. 1, 1 a, b (larva); *C. & S.* no. 991.

Dasychira pudica, *Moore, Lep. Ceyl.* iii, p. 538.

♂. Differs from *horsfieldi* in the head and thorax being whiter. Fore wing pure white; the two postmedial lines nearer the margin; the submarginal line absent; abdomen and hind wing pale brown without any orange.

♀. White, very slightly irrorated with black; medial and postmedial dark streaks from the costa of fore wing; the lines very faint; hind wing pure white.

Hab. Ceylon. *Exp.*, ♂ 40, ♀ 50 millim.

1001. *Dasychira albescens*, *Moore, Lep. Atk.* p. 59, pl. iii, fig. 2; *C. & S.* no. 975.

♂. Palpi black at sides; branches of antennæ red-brown; head, thorax, and abdomen white, slightly irrorated with grey. Fore wing silky white, slightly irrorated with grey; a tuft of raised scales at end of cell; almost obsolete ante- and postmedial waved lines. Hind wing white, with an almost obsolete dark spot at end of cell and curved submarginal band forming a patch near anal angle.

♀ with the palpi white; the fore wing thickly irrorated with fuscous, and with better defined antemedial, postmedial, and submarginal lines.

Hab. Sikkim. *Exp.*, ♂ 58, ♀ 68 millim.

1002. *Dasychira cinctata*, *Moore, Lep. Atk.* p. 59; *C. & S.* no. 978.

♂. Differs from *albescens* in the thorax being tinged with brown, the abdomen ringed with black. Fore wing with antemedial and postmedial black patches on the costa; the antemedial, postmedial, and submarginal waved lines more prominent. Hind wing with a dark mark at end of cell, a submarginal band, and marginal line.

♀. The thorax not tinged with brown; fore wing more irrorated with fuscous.

Hab. Sikkim. *Exp.*, ♂ 62, ♀ 82 millim.

1003. *Dasychira strigata*, *Moore, Lep. Atk.* p. 58; *C. & S.* no. 989.

Dasychira niveosparsa, *Butl. Ill. Het.* v, p. 59, pl. 91, fig. 7; *C. & S.* no. 987.

Head and thorax iron-grey; abdomen slightly tinged with yellow. Fore wing dark iron-grey, slightly tinged with brown; an indistinct angulated subbasal line; a double antemedial waved line; the reniform with dark outline; a double waved postmedial line

and single submarginal line. Hind wing fuscous, the inner area tinged with orange; an indistinct dark spot at end of cell; a post-medial band and marginal line.

Hab. Simla; Sikhim. *Exp.*, ♂ 62, ♀ 73 millim.

1004. *Dasychira varia*, *Wlk. Cat.* iv, p. 868; *C. & S.* no. 992.

Dasychira maruta, *Moore, Lep. E. I. Co.* p. 339; *Butl. Ill. Het.* v, pl. 91, fig. 6; *C. & S.* no. 984.

♀. Head, thorax, and abdomen brownish grey; palpi black at sides. Fore wing brownish grey, with a nearly erect subbasal dark line; an indistinct dark forked antemedial line; a dark mark on discocellulars; a doubly curved postmedial black line; a submarginal lunulate line. Hind wing pale fuscous; traces of a dark mark on discocellulars and postmedial band; a marginal dark line.

Hab. Sikhim. *Exp.* 70 millim.

*1005. *Dasychira perdix*, *Moore, Lep. Atk.* p. 58, pl. iii, fig. 3; *C. & S.* no. 988.

♂. Grey; thorax speckled with brown; antennæ, sides of palpi, and legs pale ferruginous. Both wings with the veins and interspaces irrorated with prominent black-brown scales, forming on the fore wing indistinct sinuous bands and patches; a suffused brown patch at end of cell, and a patch on centre of inner margin; a submarginal line; hind wing with the inner margin ferruginous grey; a submarginal band.

Hab. Sikhim. *Exp.* 62 millim.

*1006. *Dasychira brunnescens*, *Moore, Lep. Atk.* p. 57; *C. & S.* no. 977.

♂. Head, thorax, and legs grey irrorated with brown; branches of antennæ red-brown; abdomen pale brown. Fore wing greyish white irrorated with brown scales; a waved basal, two subbasal, and one medial line; a submarginal lunulate pale-bordered line; a line on discocellulars. Hind wing greyish brown, the outer area palest; the veins and a submarginal band darker.

♀ with the hind wing much paler.

Hab. Sikhim. *Exp.*, ♂ 60, ♀ 70 millim.

1007. *Dasychira chloroptera*, n. sp.

♂. Head and thorax dark green; abdomen black-brown; the first three segments with black crests; anal tuft fulvous yellow. Fore wing dark green, with indistinct waved medial, postmedial, submarginal, and marginal lines. Hind wing black, with broad irregular bright yellow marginal band. Underside ochreous, the basal area suffused with black; a black spot at end of cell and waved postmedial line.

Hab. Khásis. *Exp.* 56 millim. Type in coll. Elwes.



1008. *Dasychira virescens*, Moore, *Lep. Atk.* p. 54, pl. iii, fig. 16; *C. & S.* no. 1079.

♀. Head, thorax, and fore wing paler green; abdomen orange, sometimes greenish above. Fore wing with the reniform spot more prominent and filled in with grey. Hind wing orange; a large black spot at end of cell and submarginal spots towards apex and anal angle; a sinuous marginal line. Underside without black suffusion.

Hab. Sikkim. *Exp.* 76 millim.

1009. *Dasychira flavimacula*, Moore, *P. Z. S.* 1865, p. 804; *C. & S.* no. 981.

♂. Head and thorax dark brown; abdomen paler, with the dark dorsal tuft large. Fore wing dark purplish brown; a waved sub-basal black line with some dark and red-brown marks beyond it; a waved antemedial black line; a dark lunule on discocellulars bordering a brown patch; a waved postmedial line bent inwards below the angle of cell, and with a series of dark and red-brown spots beyond it; a short oblique white line near outer angle. Hind wing fuscous. Underside with a cell-spot and postmedial line to both wings.

♀ paler, with the markings more prominent.

Hab. Sikkim. *Exp.*, ♂ 48, ♀ 60 millim.

1110. *Dasychira olearia*, Swinh. *P. Z. S.* 1885, p. 297, pl. 20, figs. 14, 15; *C. & S.* no. 1038.

♂. Head, thorax, and abdomen smoky black; collar tinged with chestnut. Fore wing dark purplish brown, with some ochreous suffusion at base, near inner margin, and towards apex; dark streaks on the veins and interspaces of the apical area; the reniform spot ochreous with dark outline; cilia with pale streaks at the veins.

♀. Collar dark. Fore wing with a well-marked submarginal red-brown band not reaching the costa and outwardly edged with ochreous; a waved submarginal line.

Hab. Poona; Nilgiri plateau. *Exp.*, ♂ 36, ♀ 43 millim.

1011. *Dasychira bhana*, Moore, *P. Z. S.* 1865, p. 804; *C. & S.* no. 976.

Dasychira nigrifula, *Wlk. Cat.* xxxii, p. 360; *C. & S.* no. 986.

Dasychira tenebrosa, *Wlk. Cat.* xxxii, p. 361; *C. & S.* no. 990.

Mardara feminula, *Hmps. Ill. Het.* viii, p. 58, pl. 141, figs. 1, 7.

♂. Head, thorax, and abdomen dark brown. Fore wing dark brown, with about six very indistinct waved dark lines slightly outlined with purplish grey; a submarginal series of dark lunules; an indistinct dark lunule at end of cell, in some specimens with a fulvous spot beyond it. Hind wing fuscous brown.

♀ similar but paler.

In the Nilgiri race *feminula* the male has an ochreous tinge on fore wing, and no purplish-grey edging to the lines; the female is

wholly purplish grey; the fore wing irrorated with dark specks with waved ante- and postmedial brown lines which meet at inner margin; a brown spot at end of cell and an irregular submarginal brown band; the hind wing pale grey.

Hab. Sikhim; Nilgiri plateau. *Exp.*, ♂ 43-52, ♀ 47-52 millim.

1012. **Dasychira mœrens**, *Feld. Reis. Nov.* pl. 99, fig. 4 (♀); *Hmps.* *Ill. Het.* ix, pl. 160, fig. 1 (♂), pl. 176, fig. 1 (larva); *C. & S.* no. 985.

♂. Head, thorax, abdomen, and fore wing dark olive-brown; the last with double subbasal, antemedial, and postmedial waved and angulated lines; submarginal and marginal series of indistinct lunulate marks; the reniform with indistinct dark outline. Hind wing black-brown, the cilia red-brown. Underside red-brown variegated with dark brown.

♀ much paler, the lines of the fore wing outlined with purplish grey.

Larva dark brown with a reddish lateral line; two long dark brown dorsal tufts on 4th and 11th somites, and two shorter pale brown tufts on 5th, 6th, and 7th somites.

Hab. Ceylon. *Exp.*, ♂ 42, ♀ 60 millim.

SECT. II. (*Olene*). Fore wing of female produced at apex, the outer margin excised; abdomen with dorsal crests.

1013. **Dasychira mendosa**, *Hüb. Zutr.* ii, p. 19, figs. 293, 294; *Moore, Lep. Ceyl.* ii, pl. 115, figs. 4, 4 a, b (larva); *C. & S.* no. 1037.
Olene basivitta, *Wlk. Cat.* xxxii, p. 436; *C. & S.* no. 1035.
Nioda fusiformis, *Wlk. Cat.* v, p. 1070; *C. & S.* no. 1036.
Rilia lanceolata, *Wlk. Cat.* v, p. 1075.
Antipha basalis, *Wlk. Cat.* iv, p. 806; *C. & S.* no. 1040.
Dasychira sawanta, *Moore, Lep. E. I. Co.* p. 340.
Dasychira divisa, *Wlk. Cat.* xxxii, p. 363.

♂. Head, thorax, and abdomen pale brown, the abdominal tuft dark. Fore wing with a subbasal incurved dark line; waved ante- and postmedial lines, the latter recurved beyond end of cell and incurved below the end; a waved submarginal line. Hind wing pale, the outer area slightly suffused with brown.

In the form *mendosa* = *fusiformis* the fore wing is nearly uniform brown with a pale round patch outside the subbasal line: in *divisa* the whole costal half of the fore wing is suffused with white except a patch on the costa before the apex: in *basalis* the subbasal patch is dark brown and elongate; there is a pale line before the antemedial line and on each side of the discocellulars, and some grey near apex and outer angle.

♀. The subbasal line of fore wing almost obsolete; the waved dark lines prominent; the reniform pale brown with dark outline; a diffused dark fascia from the base to outer margin, leaving the costa and inner margin pale, in some specimens interrupted by the area between the ante- and postmedial lines being pale.

Larva blackish; the head striped with red; the 1st somite with a white band crossed by red stripes and with tufts of long black hair; a series of red lateral spots with a white line below them; dorsal tufts of bright yellow hair rising from a dark patch on 4th to 7th somites; a lateral tuft of black hair from 5th somite; 8th to 11th somites with subdorsal red spots; 11th somite with a dorsal tuft of long black hair; legs scarlet; prolegs spotted with scarlet.

Another form is paler, with the whole head and a dorsal blotch on 1st somite scarlet; the dorsal tufts on 4th to 7th somites grey.

Hab. Throughout India, Ceylon, and Burma; Java; Australia.
Exp., ♂ 34-42, ♀ 46-54 millim.

1014. *Dasychira inclusa*, *Wlk. Cat.* vii, p. 1737; *Moore, Lep. E. I. Co.* pl. xv, figs. 2, 2 a (larva).

Dasychira dalbergiae, *Moore, P. Z. S.* 1888, p. 399; *Butl. Ill. Het.* vii, pl. 123, figs. 9, 10, 11, pl. 138, fig. 12 (larva); *C. & S.* no. 979 A.

♂. Differs from *mendosa* in the head, thorax, and abdomen being darker brown. Fore wing rather broader and shorter and more uniform dull brown; the lines very indistinct, and with an indistinct waved brown band beyond the postmedial line. Hind wing brownish fuscous.

One specimen has the fore wing slightly irrorated with white and a large white subbasal round spot.

♀. The fore wing with a pale brown subbasal mark; some pale brown along inner margin, on discocellulars, and beyond the postmedial line. Hind wing paler.

Larva of male dark brown, with lateral tufts of long hair; head red-brown; two white dorsal lines on 4th somite and dorsal tufts of silky reddish hair on 4th to 7th somites.

Larva of female with the dorsal tufts dark brown; a subdorsal white stripe and crimson dorsal spots on 9th and 10th somites.

Hab. N.W. Himalayas; Poona; Java. *Exp.*, ♂ 40, ♀ 52 millim.

SECT. III. (*Psalis*). Fore wing of male produced and falcate at apex; abdomen with no dorsal crests.

1015. *Dasychira securis*, *Hübner, Zutr.* ii, p. 19, figs. 291, 292; *Moore, Lep. Ceyl.* ii, pl. 115, figs. 1, 1 a (larva); *C. & S.* no. 1090.

Arestha antica, *Wlk. Cat.* iv, p. 805.

Rigema falcata, *Wlk. Cat.* xxxii, p. 437.

Rigema tacta, *Wlk. Cat.* xxxii, p. 438.

Anticyra approximata, *Wlk. Cat.* xxxii, p. 440.

♂. Head and thorax brownish ochreous; abdomen ochreous white. Fore wing ochreous, the inner half irrorated with dark scales; the central area from base to outer margin brownish suffused with white. Hind wing ochreous white.

Larva black, with ochreous dorsal and black lateral hairs; long anterior and posterior tufts; thick dorsal tufts of rufous hair on 4th to 7th somites, and smaller tufts on 9th and 10th somites; subdorsal and lateral series of greenish spots and lateral greenish line; head and legs crimson.

Hab. Throughout India, Ceylon, and Burma; Java; Australia.
Exp., ♂ 34, ♀ 50 millim.

Genus **MARDARA**.

Mardara, *Wlk. Cat.* xxxii, p. 402 (1865).

Mahoba, *Moore, Lep. Atk.* p. 52 (1879).

Type, *M. caligramma*, Wlk.

Range. Simla; Sikhim; Nāgas; Manipur.

Palpi porrect and rather slender; antennæ with the branches long in male, shorter in female; legs with the spurs long. Shape and neurulation as in *Dasychira*, except that the fore wing is more rounded and vein 10 anastomoses with 7, 8, 9 to form the areole; hind wing with veins 6 and 7 from cell.

SECT. I. Palpi reaching beyond the frons; fore wing with vein 10 given off shortly after areole.

1016. *Mardara plagidotata*, *Wlk. Cat.* xxv, p. 1483; *Moore, Lep. Atk.* pl. iii, fig. 6; *C. & S.* no. 1058.

Head and collar black powdered with white; palpi orange; antennæ black; thorax and abdomen white powdered with fuscous; abdomen with the terminal segments orange. Fore wing white

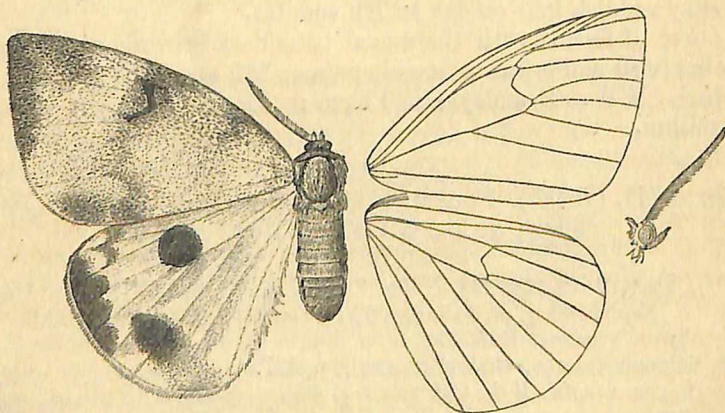


Fig. 310.—*Mardara plagidotata*, ♀. 1.

thickly irrorated with fuscous; a brown lunule at end of cell; brown patches on the costa before the middle, at middle, and near apex; a brown band on outer margin from apex narrowing to vein 2.



Hind wing white, with a round black spot at end of cell; a sub-marginal patch on veins 2 and 3; a patch on costa before the apex and on outer margin below it; outer area slightly irrorated with black.

Hab. Sikkim; Nágas. *Exp.*, ♂ 66, ♀ 72 millim.

*1017. *Mardara irrorata*, *Moore, Lep. Atk.* p. 52; *C. & S.* no. 1057.

♂. Head and thorax pale ochreous; abdomen brighter; antennæ brown; legs speckled with brown. Fore wing ochreous white, sparsely irrorated with red-brown scales; a pale spot at end of cell enclosing a brown line on discocellulars which is flecked with yellow. Hind wing ochreous white, the outer area sparsely irrorated with red-brown scales.

Hab. Sikkim. *Exp.* 57 millim.

1018. *Mardara caligramma*, *Wlk. Cat.* xxxii, p. 204; *C. & S.* no. 997.

♂. Head and thorax clothed with dark brown and yellow hairs; fulvous-yellow tufts on metathorax; abdomen fuscous, the segments fringed with yellow; the anal tuft orange. Fore wing dark brown; the veins yellowish; a subbasal oblique yellow line; an antemedial highly angled line conjoined to a doubly angled post-medial line which touches a waved submarginal line, thus forming large reticulations; a yellow spot on discocellulars. Hind wing smoky black; cilia of both wings ochreous.

Hab. Simla; Sikkim; Nágas. *Exp.*, ♂ 50, ♀ 58 millim.

SECT. II. Palpi not reaching beyond the frons; fore wing with vein 10 given off towards apex.

1019. *Mardara albostrata*, n. sp.

♂. Head and thorax red-brown; abdomen black, the segments fringed with white, the anal tuft orange. Fore wing red-brown; the veins streaked with white; a basal white patch with a dark spot on it; a subbasal white line; an angulated antemedial line with a streak in the interno-median interspace from it to an excurved postmedial line which nearly touches an incurved sub-marginal line. Hind wing white, with some black spots near apex and on margin; two large spots near anal angle. Undersides of both wings white, with the apices brown.

Hab. Manipur; Nágas (*Doherty*). *Exp.* 60 millim. Type in coll. Elwes.

Genus NUMENES.

Numenes, *Wlk. Cat.* iii, p. 662 (1855).

Pseudomesa, *Wlk. Cat.* iv, p. 923 (1855).

Type, *N. siletti*, *Wlk.*

Range. Sikkim; Bhutan; Assam; Burma; Java.

Palpi obliquely upturned, the first two joints thickly fringed with hair. Antennæ bipectinate in both sexes, the branches long. Fore wing with the apex more produced and acute in the male than the female; neuration as in *Dasychira*; hind wing with veins 6 and 7 from cell.

1020. *Numenes siletti*, *Wlk. Cat. iii*, p. 663; *C. & S. no.* 964.

Pseudomesa quadriplagiata, *Wlk. Cat. iv*, p. 923; *Bull. Ill. Het. v*, pl. 90, fig. 6; *C. & S. no.* 1031.

♂. Head, thorax, and abdomen dark brown, the last with the segments fringed with white. Wings dark brown; fore wing with an oblique white band from the centre of costa to near outer angle. Hind wing with a pale orange fascia from beyond the middle of cell to near outer margin.

♀. Head and thorax black; abdomen orange, with paired dorsal and ventral brown spots. Fore wing yellowish white; a broad black

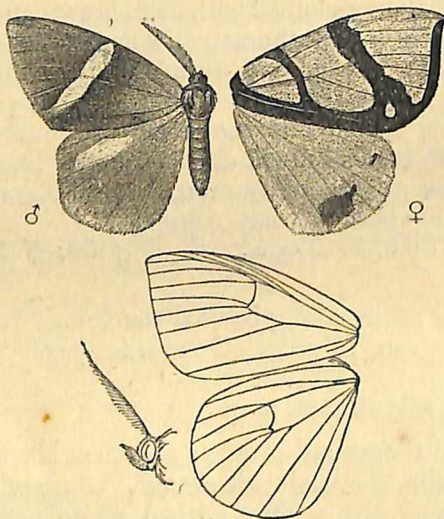


Fig. 311.—*Numenes siletti*. †.

fascia along inner margin met by oblique ante- and postmedial chocolate bands, the latter sometimes enclosing some white spots; cilia chocolate. Hind wing pale orange, with a black-brown spot towards apex and another towards anal angle, the former sometimes absent.

Hab. Sikkim; Assam; Burma. *Exp.*, ♂ 50, ♀ 53 millim.

1021. *Numenes patrana*, *Moore, Lep. E. I. Co. p.* 367; *C. & S. no.* 963.

Numenes partita, *Wlk. Cat. xxxi*, p. 290; *C. & S. no.* 962.

♂. Head and thorax red-brown; abdomen ochreous. Fore wing white; a basal dark red-brown patch with a spot on the costa beyond it; a broad medial Y-shaped band, with an oblique

stripe from the same point on the costa to centre of outer margin. Hind wing pale yellow, with a large fuscous spot towards outer angle.

♀. Fore wing pale pinkish brown; antemedial, medial, and subapical dark spots on the costa, and a Y-shaped or rounded spot on inner margin and one or two small spots at outer angle.

Hab. Sikkim; Bhutan; Bernardmyo. *Exp.*, ♂ 50, ♀ 76 millim.

Genus PIDA.

Pida, *Wlk. Cat.* xxxii, p. 399 (1865).

Locharna, *Moore, Lep. Atk.* p. 53 (1879).

Type, *P. apicalis*, Wlk.

Range. Sikkim; Khásis.

Palpi upturned, reaching above vertex of head; antennæ of male with the branches long, short in female; legs heavily fringed with hair. Shape and neurulation as in *Dasychira*.

1022. *Pida apicalis*, *Wlk. Cat.* xxxii, p. 400; *Butl. Ill. Het.* v, pl. 89, fig. 15; *C. & S.* no. 960.

♂. Palpi black, fringed with orange. Head and thorax pale brown; abdomen blackish, with orange anal tuft. Fore wing

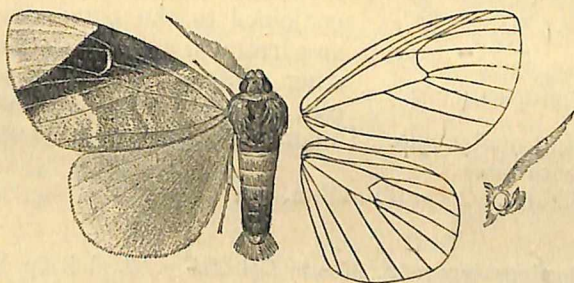


Fig. 312.—*Pida apicalis*, ♂. †.

pale brown irrorated with dark scales, which are thickly disposed towards the large apical yellow patch. Hind wing pale yellow, the inner area clothed with long brown hairs. Underside yellow.

Hab. Sikkim. *Exp.* 64 millim.

1023. *Pida strigipennis*, *Moore, Lep. Atk.* p. 53, pl. iii, fig. 11; *C. & S.* no. 1065.

Head and thorax dark and red-brown; antennæ black, with the sides of the shaft white; metathorax with a black tuft. Fore wing yellowish white, closely striated with black, the least striated area being the postmedial costal area; a black spot at end of cell.

Abdomen and hind wing orange-yellow, the latter with a few black striæ at apex. Some specimens are much paler than others.

Hab. Sikhim; Khâsis. *Exp.*, ♂ 46, ♀ 55 millim.

Genus **DAPLASA.**

Daplasa, Moore, *Lep. Atk.* p. 51 (1879).

Type, *D. irrorata*, Moore.

Range. Sikhim.

Palpi very slender, short, and closely appressed to the frons; antennæ bipectinated in male. Fore wing with vein 6 from upper angle of cell; 9 arising from 10 and anastomosing with 7 and 8 to form the areole. Hind wing with veins 6 and 7 from angle of cell or stalked.

1024. *Daplasa variegata*, Moore, *Lep. Atk.* p. 48, pl. ii, fig. 24; *C. & S.* no. 955.

♂. Head, thorax, and abdomen white and olive-yellow. Fore

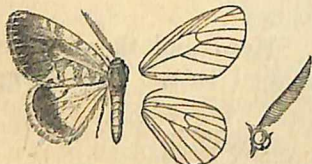


Fig. 313.

Daplasa variegata, ♂. †.

wing with the basal area white, irrorated with black and olive-yellow scales forming ill-defined subbasal, antemedial, and medial bands; an indistinct forked postmedial band conjoined to the outer olive-yellow area irrorated with black scales. Hind wing white, a dark speck at end of cell, and broad marginal fuscous band not reaching anal angle. Underside of fore wing almost wholly suffused with black.

Hab. Sikhim. *Exp.* 30 millim.

*1025. *Daplasa irrorata*, Moore, *Lep. Atk.* p. 52, pl. ii, fig. 17; *C. & S.* no. 1086.

♂. White; thorax brown-speckled; palpi and legs above bright yellow. Fore wing irrorated with minute brown scales, forming four indistinct oblique bands most distinct towards inner margin, the outer band extending to the apex. Abdomen and hind wing pale yellow.

Hab. Sikhim. *Exp.* 28 millim.

Genus **HERACULA.**

Heracula, Moore, *P. Z. S.* 1865, p. 804.

Type, *H. discivitta*, Moore.

Range. Sikhim.

Palpi upturned, reaching vertex of head, and heavily fringed

with hair; antennæ minutely ciliated in female. Fore wing broad, the apex rounded; vein 3 from before angle of cell; 5 from above angle; 6 from below upper angle; 7, 8, 9, 10 stalked, 10 being given off near the apex. Hind wing with veins 3, 4, 5 from near angle of cell; 6 and 7 from upper angle.

1026. *Heracula discivitta*, Moore, *P. Z. S.* 1865, p. 804, pl. 43, fig. 2; *C. & S.* no. 1063.

Head, collar, and prothorax dark brown; meso-, metathorax,

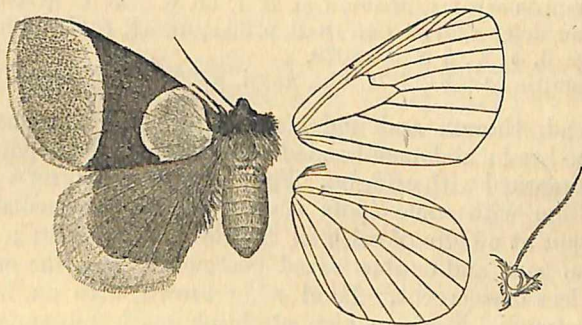


Fig. 314.—*Heracula discivitta*, ♀. †.

and abdomen fulvous. Fore wing with a small basal dark brown mark on the costa; a large rounded basal fulvous patch with white edge; the medial area dark brown; the outer area fulvous, irrorated with black scales and edged inwardly by a curved white line. Hind wing fuscous brown; a broad marginal fulvous band with slightly waved inner edge.

Hab. Sikkim. *Exp.* 64 millim.

Genus LYMANTRIA.

Lymantria, *Hüb. Verz.* p. 160 (1818).

Liparis, *Ochs. Schm. Eur.* iii, p. 186 (1810, præocc.).

Porthetria, *Hüb. Verz.* p. 160 (1818).

Enome, *Wlk. Cat.* iv, p. 883 (1855).

Nagunda, *Moore, Lep. Atk.* p. 53 (1879).

Barhona, *Moore, Lep. Atk.* p. 55 (1879).

Pegella, *Wlk. Cat.* xxxv, p. 1922 (1866).

Type, *L. monacha*, Linn., from Europe.

Range. Europe; Japan, and throughout India, Ceylon, and Burma; Java; Amboina; Celebes.

♂. Palpi porrect and hairy; antennæ with the branches long. Fore wing with veins 3, 4, 5 from close to angle of cell; 6 from below upper angle; 7, 8, 9, 10 stalked, 7 being given off further

from the cell than 10. Hind wing with veins 3, 4, 5 from close to angle of cell; 6 and 7 from upper angle.

♀. Antennæ serrate; wings either fully developed, or partially aborted, or reduced to scales.

SECT. I. (*Enome*). Female with scale-like wings; hind wing of male with the inner margin long; hind tibiæ with a minute terminal pair of spurs.

1027. *Lymantria incerta*, *Wlk. Cat.* iv, p. 880; *C. & S.* no. 1030.

Lymantria aryama, *Moore, Lep. E. I. Co.* p. 345; *C. & S.* no. 1000.

Enome detersa, *Wlk. Cat.* xxxii, p. 365; *Swinh. P. Z. S.* 1885, pl. 21, figs. 3, 4; *C. & S.* no. 1029.

Lymantria costalis, *Wlk. Cat.* xxxii, p. 365; *C. & S.* no. 1006.

♂. Head, thorax, and abdomen red-brown; a crimson line behind the head; abdomen banded with crimson; legs spotted with black and marked with crimson. Fore wing greyish brown; a black subbasal line with some spots beyond it; an antemedial waved line; a spot at middle of cell and lunule at end of it; a diffused postmedial band and double waved postmedial line, the outer line more or less obsolescent. Hind wing brown, with an indistinct waved postmedial line; an elongate black mark near anal angle; cilia of both wings spotted with black.

The form *detersa* is pale and small (36 millim.).

♀. Head, thorax, and aborted wings whitish, the last with traces of markings; abdomen very large and brown.

Hab. Throughout S. India and Ceylon. *Exp.*, ♂ 36–54 millim.

1028. *Lymantria ampla*, *Wlk. Cat.* iv, p. 883; *Moore, Lep. E. I. Co.* pl. 9 a, fig. 4, and pl. 15, figs. 7, 7 a, 8, 8 a (larva); *C. & S.* no. 1028.

♂. Differs from *incerta* in being much yellower brown, and without crimson on head, abdomen, or legs.

♀. Head, thorax, and aborted wings white, spotted with black; abdomen blackish.

Larva brown, clothed with tufts of short hair and long hair from the anterior and posterior somites; male with a pale subdorsal line and dorsal and sublateral white spots; female with black dorsal spots and a white spot on 9th somite. Head and legs ochreous.

Hab. Throughout India, Ceylon, and Burma. *Exp.* 40 millim.

SECT. II. Female with less aborted wings; hind wings of male with inner margin short.

1029. *Lymantria obfuscata*, *Wlk. Cat.* xxxii, p. 367; *C. & S.* no. 1013.

♂. Differs from *ampla* in being greyish brown; fore wing with

the postmedial double lines more regular; hind wing with a dark lunule at end of cell and dark marginal band.

♀. Pale ochreous; a dark mark at end of cell of fore wing.

Larva pale brown, with short dorsal tufts of hair and long lateral tufts; a dark brown dorsal band, with pale lines down the centre and on each side.

Hab. N.W. Himalayas. *Exp.* ♂ 32 millim.

SECT. III. (*Lymantria*). Female with fully developed wings; hind tibiae with two pairs of spurs.

1030. *Lymantria rhodina*, *Wlk. Cat.* xxxii, p. 366; *C. & S.* no. 1016.

♂. Head and thorax black, with a crimson line behind the head; abdomen crimson above. Fore wing smoky black; an indistinct black spot near end of cell and lunule on discocellulars; an indistinct postmedial waved line; cilia chequered brown and black. Hind wing whitish; the inner area tinged with crimson; a marginal fuscous band.

Hab. Sikhim; Khásis. *Exp.* 40 millim.

1031. *Lymantria obsoleta*, *Wlk. Cat.* iv, p. 880; *C. & S.* no. 1014.

Lymantria bhascara, *Moore, Lep. E. I. Co.* p. 345.

Lymantria vinacea, *Moore, P. Z. S.* 1879, p. 402.

Lymantria albolunulata, *Moore, P. Z. S.* 1879, p. 403; *C. & S.* no. 999.

Lymantria sobrina, *Moore, P. Z. S.* 1879, p. 402, pl. 33, fig. 5.

♂. Differs from *rhodina* in being brown; the abdomen slightly tinged with crimson. Fore wing irrorated with dark scales; indistinct double lunulate antemedial, medial, and postmedial lines; a black lunule at end of cell, but no spot in the cell. Hind wing pale brownish fuscous.

♀. Abdomen crimson, with a dark line on vertex and series of lateral black spots, the extremity brown; hind wing with the inner area suffused with crimson.

The form *albolunulata* from the N.W. Himalayas has the fore wing more irrorated with black; the postmedial lines with whitish lunules between them. A form from the Khásis has the ground-colour of fore wing paler; the hind wing nearly pure white, with a fuscous lunule at end of cell and irregular submarginal band; the cilia of both wings chequered black and pinkish.

In the form *sobrina* the lines of the fore wing are better defined; the hind wing with the inner margin tinged with pink; female with the abdomen yellowish.

Hab. China; Formosa; throughout India and Ceylon. *Exp.*, ♂ 42, ♀ 72 millim.

1032. *Lymantria ascetria*, *Hübner. Samml. exot. Schmett.* ii, *Phal. ver.* figs. 1-4; *C. & S.* no. 1001.

Lymantria pramestra, *Moore, Lep. E. I. Co.* p. 344, pl. ix a, fig. 3.

♂. Head and thorax white; antennæ black; a crimson line behind the head; tegulæ with a black spot; abdomen crimson, with fuscous spots on vertex and fringe to the segments. Fore wing white; two black spots at base and curved subbasal series; an antemedial waved fuscous line arising from a black spot on costa; a black speck near end of cell and lunule at end; two postmedial and one submarginal lunulate fuscous lines arising from black spots on the costa, the two former approaching each other towards inner margin; a series of marginal black spots. Hind wing white, with submarginal fuscous band and marginal series of spots.

♀. Head, thorax, and abdomen suffused with brown. Fore wing wholly suffused with brown, except the costal area and some white diffused along the lines; the markings considerably obscured. Hind wing often suffused with pale fuscous.

Hab. Moulmein; Tavoy; Java. *Exp.*, ♂ 46, ♀ 52-70 millim.

1033. *Lymantria concolor*, *Wlk. Cat.* iv, p. 876; *Butl. Ill. Het.* v, pl. 90, figs. 9, 10; *C. & S.* no. 1005.

Lymantria superans, *Wlk. Cat.* iv, p. 876; *C. & S.* no. 1019.

Lymantria carneicolor, *Moore, P. Z. S.* 1888, p. 399; *C. & S.* no. 1004 A.

Lymantria micans, *Feld. Reis. Nov.* pl. 99, fig. 2; *C. & S.* no. 1011.

♂. Differs from *ascetria* in the head and thorax being marked with black. Fore wing with the markings black; the antemedial line much more irregularly waved, and with a black streak in the cell beyond it; the two postmedial lines more lunulate and more or less connected by black blotches; the submarginal line also more irregular. Hind wing whitish or suffused with black, and with traces of a submarginal band.

♀ with the line behind the head yellow, and the ground-colour of abdomen yellow.

Some specimens have the head, thorax, and wings yellowish.

Larva brown, with tufts of brown and black hair; speckled and the back blotched with black; a conspicuous blotch on 2nd somite.

Hab. N.W. Himalayas; Sikhim; Sylhet; Nágas; Burma. *Exp.*, ♂ 56, ♀ 88 millim.

1034. *Lymantria similis*, *Moore, P. Z. S.* 1879, p. 402; *C. & S.* no. 1017.

Lymantria cara, *Butl. Ill. Het.* v, p. 56, pl. 90, fig. 13; *C. & S.* no. 1004.

♂. Differs from *ascetria* in the tegulæ being without black spots. Fore wing with the black patches on costa, from which

the waved lines arise, absent or large; a patch on inner margin at junction of the postmedial lines.

♀. With the tuft from basal joint of antennæ and line behind the head yellow; the abdomen crimson. Fore wing with the waved lines obsolescent; the black patches on costa and inner margin large, the first three on costa crossing the cell; a patch on centre of outer margin. Hind wing whitish, with fuscous submarginal band and marginal spots.

Hab. Sikkim; Bhutan; Assam; Calcutta; Borneo; Sumatra.
Exp., ♂ 52-58, ♀ 80 millim.

1035. *Lymantria todara*, Moore, *P. Z. S.* 1879, p. 402, pl. 33, fig. 6;
Hmps. Ill. Het. viii, pl. 141, fig. 15 (♀); *C. & S.* no. 1020.

♂. Differs from *ascetria* in the line behind the head being yellow; two black spots on collar, and four on vertex of thorax; abdomen yellow. Fore wing with the postmedial waved lines single towards inner margin. Hind wing pale yellow, with a fuscous marginal band.

♀. Abdomen yellow and black. Fore wing as in *similis*, the black patches better defined, and the one on inner margin Y-shaped. Hind wing fuscous white, slightly tinged with yellow; the submarginal band almost obsolete.

Hab. Nilgiris; Ceylon. *Exp.*, ♂ 54, ♀ 88 millim.

1036. *Lymantria beatrix*, Stoll, *Cram. Pap. Exot.* v, p. 173, pl. 40, fig. 2; *C. & S.* no. 1003.

Lymantria marginata, *Wlk. Cat.* iv, p. 877.

Lymantria fuliginosa, Moore, *P. Z. S.* 1883, p. 17; *C. & S.* no. 1007.

Lymantria pusilla, *Feld. Reis. Nov.* pl. 99, fig. 3; *C. & S.* no. 1015.

Lymantria nigra, Moore, *P. Z. S.* 1888, p. 399; *C. & S.* no. 1012 A.

Porhetria umbrina, Moore, *Lep. Ath.* p. 55; *C. & S.* no. 1027.

♂. Head and thorax pale fuscous, marked and spotted with black; the line behind the head yellow; 3rd joint of palpus orange; two orange spots on mesothorax; abdomen orange, with a black line on vertex or short segmental bands; anal tuft black. Fore wing pale fuscous; an orange speck and three black spots at base; a broad subbasal black band; an antemedial line; a spot near end of cell and lunule on discocellulars; a medial band; two postmedial and one submarginal lunulate line; a marginal series of spots. Hind wing black, with yellow streaks on median and submedian nervures, or on the veins towards outer margin. Underside more or less suffused with yellow.

♀. Head and thorax white; collar outlined with black; thorax marked with black; the line behind the head and two spots on thorax yellow; abdomen yellow, with dorsal and lateral series of black spots. Fore wing white, with the black markings broad and more or less conjoined into blotches. Hind wing white, with a broad marginal black band, some specimens having white spots on it at centre; cilia white.

Hab. Throughout India and Ceylon; Java. *Exp.*, ♂ 54, ♀ 68 millim.

1037. *Lymantria grisea*, *Moore, Lep. Atk.* p. 55, pl. iii, fig. 5; *C. & S.* no. 1009.

♂. Head and thorax pale brown; abdomen whitish. Fore wing pale brown, with numerous indistinct dark lunulate lines, the most distinct being two irregular submarginal lines with white lunules between them; a dark mark on discocellulars. Hind wing yellowish white, with an indistinct marginal fuscous band.

Hab. Sikkim. *Exp.* 42 millim.

1038. *Lymantria mathura*, *Moore, P. Z. S.* 1865, p. 805; *C. & S.* no. 1026.

Lymantria aurora, *Butl. A. M. N. H.* (4) xx, p. 403.

♂. Differs from *beatrice* in the black spots on vertex of abdomen being small; the ground-colour of fore wing paler; the hind wing

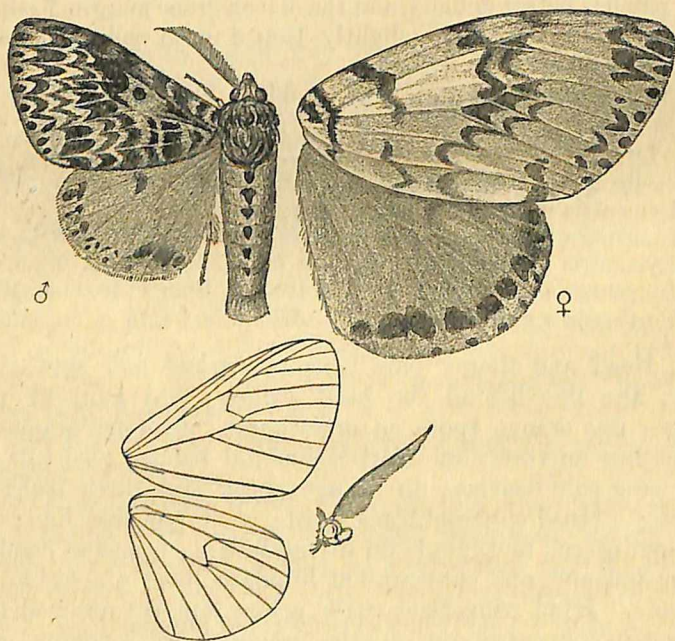


Fig. 315.—*Lymantria mathura*. ♂.

orange, with a black spot at end of cell and conjoined series of submarginal spots forming a curved band; some spots on centre of outer margin.

♀. Head and thorax white; frons fuscous; two black spots each on collar, meso- and metathorax; palpi, antennal tuft, and two spots on mesothorax crimson; abdomen crimson, with small black spots

on vertex, the terminal segments whitish ; legs black and crimson. Fore wing white ; some crimson and black basal spots ; a subbasal line ; an antemedial waved line joining at inner margin two post-medial lunulate lines, the space between which is often completely filled in with fuscous ; a fuscous spot towards end of cell ; some lunulate submarginal marks forming a more or less complete band ; a marginal series of spots ; costa and cilia crimson. Hind wing crimson, with a fuscous spot at end of cell ; a submarginal maculate band and some spots on centre of margin.

The variety *aurora*, from Japan, where the typical form also occurs, is suffused with fuscous in both sexes.

Hab. Japan ; N.W. Himalayas ; Sikkim. *Exp.*, ♂ 40-54, ♀ 96-112 millim.

1039. *Lymantria viola*, *Swinh. P. Z. S.* 1889, p. 406.

♂. Differs from *mathura* in having the orange markings replaced by crimson, except that the abdomen is somewhat orange towards extremity. Fore wing with the ground-colour greyish.

♀. Differs from *mathura* in the black markings being somewhat reduced ; the collar without spots, and the mesothorax with one black spot between the two crimson spots, and none behind them.

Hab. Bombay. *Exp.*, ♂ 50, ♀ 90 millim.

1040. *Lymantria grandis*, *Wlk. Cat.* iv, p. 874 ; *C. & S.* no. 1008.

Lymantria maculosa, *Wlk. Cat.* iv, p. 881.

Lymantria metarhoda, *Wlk. Trans. Ent. Soc.* (3) i, 1862, p. 78.

♂. Differs from *viola* in the shaft of antennæ and ground-colour of thorax and fore wing being pure white. Fore wing with all the bands reduced to well-separated spots ; collar and thorax spotted as in *mathura*.

♀. Differs from *mathura* in the frons being black, the 2nd joint of palpus with a black spot.

Hab. Ceylon. *Exp.*, ♂ 58, ♀ 110 millim.

1041. *Lymantria rosea*, *Hmps. Ill. Het.* ix, ined., pl. 158, fig. 28.

♂. Differs from *grandis* in the palpi, head, thorax, and legs being black and white without any crimson. Fore wing with a prominent black lunule at end of cell ; the antemedial and two postmedial lunulate lines not reduced to spots. Hind wing with a broad marginal smoky black band. Underside suffused with fuscous.

Hab. Margharita, near Sadiya, Assam ; Ceylon. *Exp.* 54 millim.

1042. *Lymantria lepcha*, *Moore, Lep. Atk.* p. 54 ; *C. & S.* no. 1025.

Barhona carneola, *Moore, Lep. Atk.* p. 56 ; *C. & S.* no. 1038.

♂. Head and thorax white ; the line behind the head crimson ;

thorax with black spots; abdomen white, with a slight crimson tinge. Fore wing ochreous white; a crimson speck at base of costa; four lunulate equidistant lines; a small black spot in the cell and lunule on discocellulars. Hind wing whitish; the basal and inner areas tinged with crimson; a faint submarginal fuscous band.

♀. Pale pink; antennæ, palpi, and legs black; the 1st joint of antennæ and line behind the head crimson. Fore wing with a black lunule from costa to costal nervure at middle of cell; a lunule on discocellulars and line from vein 1 to centre of inner margin.

Hab. Sikkim. *Exp.*, ♂ 62, ♀ 92–98 millim.

1043. *Lymantria bivittata*, *Moore, Lep. Atk.* p. 57; *C. & S.* no. 1022.

♀. Head and thorax white; palpi and antennæ black; frons tinged with crimson; basal joints of antennæ and line behind the head crimson; abdomen crimson, the basal and terminal segments white. Fore wing silvery white; two black basal marks; an outwardly oblique antemedial line with waved edges, joined at inner margin by an inwardly oblique postmedial line; a series of marginal spots. Hind wing white.

Hab. Sikkim; Sylhet. *Exp.* 100 millim.

1044. *Lymantria semicincta*, *Wlk. Cat.* iii, p. 620; *Butl. Ill. Het.* v, pl. 90, fig. 7; *C. & S.* no. 1047.

Palpi, antennæ, and legs black; head yellowish white, with a black spot behind it; the basal joints of antennæ orange; thorax yellowish white, with a large black patch on vertex and spot on tegulæ; abdomen crimson. Fore wing black; a yellowish-white spot at base of inner margin and one in end of cell; three conjoined postmedial spots from costa and three from inner margin. Hind wing crimson, with a broad marginal black border decreasing to anal angle; cilia of both wings chequered yellow and black.

Hab. Simla; Sikkim. *Exp.* 60 millim.

Genus **IMAU**S.

Imaus, *Moore, Lep. Atk.* p. 54 (1879).

Dura, *Moore, Lep. Atk.* p. 56 (1879).

Type, *I. mundus*, *Wlk.*

Range. N.E. India; Java; Celebes.

Palpi rather long, slender, and porrect. Antennæ with the branches long in both sexes. Fore wing with veins 3, 4, 5 from near angle of cell; 6 from below upper angle; 7, 8, 9, 10 stalked, 7 being given off further from the cell or from the same point as 10. Hind wing with veins 3, 4, 5 from near angle of cell; 6 and 7 from upper angle; the outer margin produced at vein 3.

SECT. I. (*Imaus*). Fore wing with vein 11 not anastomosing with 12. Hind wing with outer margin slightly produced.

1045. *Imaus mundus*, *Wlk. Cat. iv*, p. 875; *C. & S.* no. 1012.

Pale brown; legs spotted with black. Fore wing with prominent subbasal and antemedial series of spots; a prominent spot in the cell and line on each side of discocellulars; a prominent very highly dentate postmedial line; well-marked series of submarginal lunules and marginal spots. Hind wing with indistinct submarginal band and marginal series of specks.

Hab. Throughout N.E. India; Java. *Exp.* 80 millim.

SECT. II. (*Dura*). Fore wing with vein 11 anastomosing with 12. Hind wing produced and angled at vein 3.

1046. *Imaus albus*, *Moore, Lep. Atk.* p. 56; *C. & S.* no. 1084.

White, with a slight brownish tinge; palpi black at sides; branches of antennæ red-brown. Fore wing with about seven

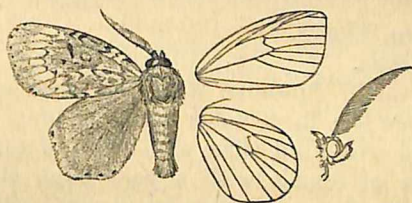


Fig. 316.—*Imaus albus*, ♂. $\frac{1}{2}$.

indistinct brownish waved lines; orbicular and reniform stigmas with brownish outline; a marginal series of black spots to both wings.

Hab. Sikhim. *Exp.*, ♂ 38, ♀ 58 millim.

Genus **HIMALA.**

Himala, *Moore, Lep. Atk.* p. 57 (1879).

Type, *H. argentea*, *Wlk.*

Range. Himalayas; Assam.

Palpi slender, porrect, and reaching beyond the frons; antennæ with tufts of long hair from the basal joint, the branches long. Hind tibiæ with two pairs of spurs. Fore wing with veins 3, 4, 5 from near angle of cell; 6 from upper angle; 7, 8, 9 stalked. Hind wing with veins 3, 4, 5 from near lower angle of cell; 6 and 7 stalked.

1047. **Himala argentea**, *Wlk. Cat. iv*, p. 827; *C. & S.* no. 1056.
Dasychira ilita, *Moore, Lep. E. I. Co.* p. 341.

Head, thorax, and abdomen white. Fore wing silvery white,

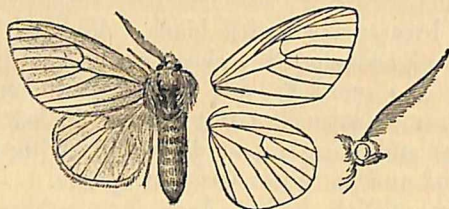


Fig. 317.—*Himala argentea*, ♂. †.

the veins black; outer margin fuscous. Hind wing white; the veins black towards outer margin; a marginal black line.

Hab. N.W. Himalayas; Dehra Dún; Sikkim; Assam. *Exp.*,
♂ 44, ♀ 54 millim.

Genus **GAZALINA**.

Gazalina, *Wlk. Cat. xxxii*, p. 398 (1865).

Oligoclona, *Feld. Reis. Nov.* pl. 94, fig. 10, *Erk.* p. 7 (1874).

Type, *G. apsara*, Moore.

Range. Himalayas.

Palpi very minute. Antennæ with the branches of moderate length in male, serrate in female; tufts of long hair from the basal joint. Mid and hind tibiæ with minute terminal pairs of spurs. Abdomen of female with a very large anal tuft. Fore wing with veins 3 and 4 coincident or rarely forking just before the margin; 5 from lower angle of cell; 6 from just above middle of discocellulars; 7 from upper angle; 8, 9, 10 stalked. Hind wing with veins 3 and 4 from near angle of cell; 5 from near upper angle; 6 and 7 stalked.

1048. **Gazalina apsara**, *Moore, Lep. E. I. Co.* p. 341; *C. & S.* no. 993.

Gazalina venosata, *Wlk. Cat. xxxii*, p. 398; *Butl. Ill. Het.* v, pl. 89, fig. 5; *C. & S.* no. 996.

Oligoclona nervosa, *Feld. Reis. Nov.* pl. 95, fig. 8.

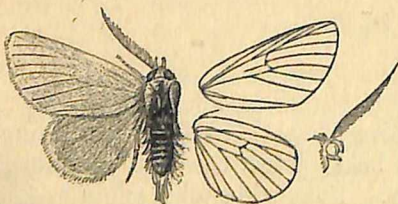


Fig. 318.—*Gazalina apsara*, ♂. †.

♂. Head and thorax white; frons, legs, and shafts of antennæ black, the branches of the last brown; collar sometimes tinged with fulvous; abdomen black, the segments fringed with white and with a lateral white fringe. Fore wing white, the veins black towards outer margin. Hind wing white.

♀. The segments of abdomen less fringed with white, and with a very large fulvous anal tuft.



The form *venosata*, from Sikhim, has the costa and the whole of the veins of fore wing black, and the veins of hind wing black towards outer margin; the segmental white fringes of abdomen narrower in both sexes.

Hab. N.W. Himalayas; Sikhim. *Exp.*, ♂ 44, ♀ 50 millim.

1049. *Gazalina chrysolopha*, *Koll. Hügel's Kaschmir*, iv, p. 470; *C. & S.* no. 994.

Dasychira antica, *Wlk. Cat.* iv, p. 867; *Butl. Ill. Het.* v, pl. 89, fig. 4.

Oligoclona chordigera, *Feld. Reis. Nov.* pl. 94, fig. 10.

Differs from *apsara* in the fore wing having an indistinct sub-basal black line; a streak along median nervure; two slightly waved medial oblique lines, beyond which the veins are black; the thorax and collar sometimes tinged with fulvous.

Larva brown, with tufts of long pale brown hair; a dorsal series of short fulvous tufts. Head and legs fulvous; 5 pairs of prolegs.

Hab. N.W. Himalayas; Sikhim. *Exp.*, ♂ 46, ♀ 54 millim.

1050. *Gazalina transversa*, *Moore, Lep. Atk.* p. 47, pl. ii, fig. 22; *C. & S.* no. 995.

♂. Head, thorax, and abdomen pure white; the anal tuft white. Wings pure white; fore wing with the antemedial line represented by a line from vein 1 to inner margin; the postmedial line nearly straight and not reaching the costa; no black marks at base or streaks on the veins.

Hab. Sikhim. *Exp.* 30 millim.

Genus **TOPOMESA.**

Topomesa, *Wlk. Cat.* xxxv, p. 1921 (1866).

Type, *T. subinanis*, *Wlk.*

Range. Burma; Borneo; Java.

♀. Palpi obliquely upturned; antennæ with the branches long; mid tibiæ with one pair of spurs, hind tibiæ with two pairs. Fore wing with the apex somewhat acute, the outer margin excised below the apex; vein 3 from before angle of cell; 4 and 5 from close to angle; 6 from below upper angle; 7, 8, 9, 10 stalked. Hind wing with veins 3, 4, 5 from near lower angle of cell; 6 and 7 from upper angle.

1051. *Topomesa subinanis*, *Wlk. Cat.* xxxv, p. 1921.

♀. Head, thorax, and abdomen sulphur-yellow; frons and palpi red-brown; antennæ with the branches brown. Wings sulphur-yellow; fore wing with a red-brown spot beyond the lower angle

of cell, and some marks on outer margin; hind wing with a red-brown mark on outer margin towards anal angle.

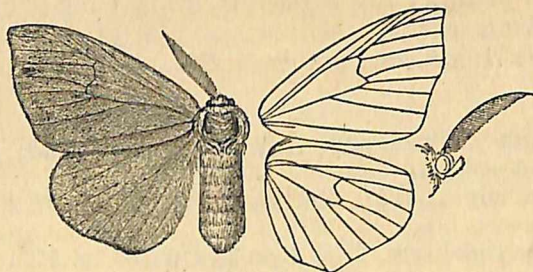


Fig. 319.—*Topomesa subinanis*, ♀. †.

Hab. Tenasserim; Borneo; Java. *Exp.* 42–56 millim.

Genus **DACTYLORHYNCHA**, nov.

Type, *D. pallida*, Hmps. n.

Range. Nilgiris.

Palpi porrect and very long, the 3rd joint short; antennæ long and with the branches long; legs with the spurs long. Fore wing with veins 3, 4, 5 from near lower angle of cell; 6 from below upper angle; 7 from angle; 8, 9, 10 stalked. Hind wing with veins 3 and 4 from angle of cell; 5 from above angle; 6 and 7 stalked.

1052. *Dactylorhyncha pallida*, Hmps. n. *Ill. Het.* viii, p. 56, pl. 140, fig. 10.

♂. Uniform pale silky grey-brown; fore wing with some dark marginal marks below the apex; branches of antennæ dark.

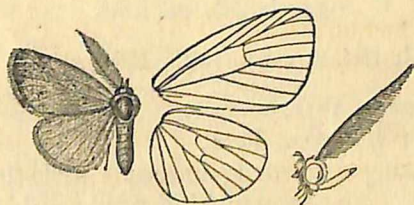


Fig. 320.—*Dactylorhyncha pallida*, ♂. †.

Hab. Nilgiris. *Exp.* 28 millim.

Genus **EUPROCTIS**.

Euproctis, Hübn. *Verz.* p. 159 (1818).

Artaxa, Wlk. *Cat.* iii, p. 794 (1855).

Adullia, Wlk. *Cat.* xxxii, p. 392 (1865).

Chærotricha, Feld. *Reis. Nov.* pl. 98, *Erk.* p. 3 (1874).

Themaca, Wlk. *Cat.* xxxii, p. 394 (1865).

Bembina, Wlk. *Cat.* xxxii, p. 505 (1865).



- Somena, *Wlk. Cat.* vii, p. 1734 (1855).
Orvasca, *Wlk. Cat.* xxxii, p. 502 (1865).
Lopera, *Wlk. Cat.* iv, p. 919 (1855).
Gogana, *Wlk. Cat.* xxxv, p. 1920 (1866).
Antipha, *Wlk. Cat.* iv, p. 806 (1855).
Utidava, *Wlk. Cat.* xxvi, p. 1689 (1862).
Arna, *Wlk. Cat.* v, p. 1176 (1855).

Type, *E. chrysorrhœa*, Linn., from Europe.

Range. Palæarctic, African, Oriental and Australian regions.

Palpi obliquely porrect, reaching beyond the frons; antennæ bipectinated in both sexes, the branches long in male, each with a spine to keep it in position with regard to the contiguous branch. Mid tibiæ with one pair of long spurs, hind tibiæ with two pairs; female with a large anal tuft. Fore wing with veins 3, 4, 5 from near angle of cell; 6 from or from below upper angle; 7, 8, 9, 10 stalked, 10 being given off towards apex. Hind wing with veins 3 and 4 stalked or from angle of cell; 5 from above angle; 6 and 7 stalked.

A. Fore wing white, pale ochreous, yellow, grey, or black, without, or with hardly a trace of, lines or bands.

1053. **Euproctis negrita**, n. sp.

♂. Head, thorax, and abdomen black, the anal tuft orange; legs whitish. Wings black, with the bases white, in some specimens slightly, in others to the middle, except the costa of fore wing; cilia sometimes white-tipped.

♀. White, suffused with black, especially on outer area.

Hab. Sikkim (Möller). *Exp.*, ♂ 33, ♀ 40 millim. Type in coll. Elwes.

1054. **Euproctis renominata**.

Charnidas uniformis, *Hmps. Ill. Het.* viii, p. 56, pl. 140, fig. 4 (præocc.).

♂. Head, thorax, and fore wing smoky grey-brown; the last with the costa and cilia paler. Abdomen and hind wing pale.

Hab. Nilgiris. *Exp.* 36 millim.

1055. **Euproctis divisa**, *Wlk. Cat.* iv, p. 836; *C. & S.* no. 938.

Euproctis melanophila, *Wlk. Cat.* xxxii, p. 349; *C. & S.* no. 945 (part.).

Euproctis metamelana, *Wlk. Cat.* xxxii, p. 349; *C. & S.* no. 949.

Head and thorax pure white; the branches of antennæ and in some specimens the collar tinged with fulvous; abdomen deep black, with orange anal tuft. Wings pure shining white, some specimens with scattered black scales on inner area of fore wing.

Hab. Sikkim; Nágas. *Exp.*, ♂ 34, ♀ 42-50 millim.

1056. **Euproctis latifascia**, *Wlk. Cat.* iv, p. 831; *C. & S.* no. 945 (part.).
Euproctis antica, *Wlk. Cat.* iv, p. 835; *C. & S.* no. 933.
Euproctis postica, *Wlk. Cat.* xxxii, p. 348; *C. & S.* no. 950.
Euproctis abdominalis, *Moore, P. Z. S.* 1888, p. 398; *Butl. Ill. Het.* vii, pl. 123, figs. 4, 5.

Differs from *divisa* in the head, thorax, and wings being dull white or tinged with ochreous, the abdomen fuscous black; anal tuft brownish orange.

Some specimens have the base of costa of fore wing black and a black mark at outer angle.

Hab. Kashmir; Dharmasāla; Nepal; Manipur. *Exp.*, ♂ 32, ♀ 48 millim.

1057. **Euproctis subfasciata**, *Wlk. Cat.* xxxii, p. 332; *C. & S.* no. 918.
Artaxa trifasciata, *Moore, Lep. Atk.* p. 51; *C. & S.* no. 919.

Differs from *latifascia* in the abdominal tuft being whitish, very slightly tinged with orange in male; some specimens with very slight traces of a medial band of dark scales on fore wing from lower angle of cell to inner margin.

In the form *trifasciata* the head, thorax, and fore wing are suffused with pale brownish ochreous, the pale lines being better defined.

Hab. Sikhim; Cachar; Assam; Calcutta; Nilgiris. *Exp.*, ♂ 36, ♀ 48 millim.

1058. **Euproctis bimaculata**, *Wlk. Cat.* iv, p. 836; *Moore, Lep. Ceyl.* ii, pl. 112, figs. 6, 6 a, b (larva); *C. & S.* no. 936.

Euproctis bigutta, *Wlk. Cat.* iv, p. 837; *C. & S.* no. 935.

Euproctis lutescens, *Wlk. Cat.* iv, p. 837; *C. & S.* no. 947.

Euproctis immaculata, *Moore, Trans. Ent. Soc.* 1884, p. 358; *C. & S.* no. 942.

Euproctis celsa, *Wlk. Cat.* xxxv, p. 1915.

♂ Pure white, or in the form *lutescens* the head, thorax, and fore wing slightly tinged with ochreous; a black spot at end of cell of fore wing, which is very large in the form *bimaculata*, smaller in *bigutta*, and entirely absent in the form *immaculata*.

♀ with the anal tuft golden orange.

Larva purplish brown, with dorsal and lateral series of white-speckled tubercles bearing tufts of short brown hair.

Hab. Philippines; Sikhim; Canara; Ceylon; Burma; Mergui; Andamans; Java. *Exp.*, ♂ 38-48, ♀ 28-66 millim.

1059. **Euproctis lunata**, *Wlk. Cat.* iv, p. 837; *Butl. Ill. Het.* v, pl. 89, fig. 9; *Forsayeth, Trans. Ent. Soc.* 1884, pl. 14, figs. 5 a-c (larva); *C. & S.* no. 946.

♂. Pale bright ochreous; fore wing with a large black lunule on discocellulars.

♀. Fore wing whitish ochreous; the anal tuft brownish ochreous.



Larva brown, with anterior, posterior, and lateral tufts of long hair; thoracic somites with dorsal quadrate white marks; the third somite with paired dorsal tubercles; fifth to anal somites with paired dorsal quadrate white marks. Spins a hairy cocoon on twigs.

Hab. N.W. Himalayas; Bengal; throughout S. India and Ceylon. *Exp.*, ♂ 34, ♀ 38 millim.

1060. **Euproctis semisignata**, *Wlk. Cat.* xxxii, p. 356; *C. & S.* no. 927. *Artaxa leithiana*, *Moore, P. Z. S.* 1879, p. 399, pl. 32, fig. 9; *C. & S.* no. 968.

Artaxa citrina, *Moore, A. M. N. H.* (4) xx, p. 344; *C. & S.* no. 907.

Artaxa brevivitta, *Moore, P. Z. S.* 1879, p. 400, pl. 32, fig. 10; *C. & S.* no. 905.

Artaxa erecta, *Moore, P. Z. S.* 1879, p. 400, pl. 32, fig. 6; *C. & S.* no. 910.

Euproctis illanta, *Swinh. Trans. Ent. Soc.* 1891, p. 138.

Artaxa howra, *Moore, Lep. Atk.* p. 51; *C. & S.* no. 912.

♂. Yellowish white or pale bright ochreous; fore wing with a smoky black spot at end of cell and a series of four spots from the lower angle to inner margin, any or all of which may be absent, or be conjoined into a band.

♀ with the band slight and often ferruginous.

Hab. Throughout the plains of India and Ceylon. *Exp.*, ♂ 33-40, ♀ 40-52 millim.

*1061. **Euproctis venosa**, *Moore, Lep. Atk.* p. 50, pl. ii, fig. 5; *C. & S.* no. 922.

White; the antennæ, frons, palpi, fore legs, and anal tuft pale ochreous. Fore wing with subbasal, medial, and marginal yellow bands crossed by the white veins; an interrupted ill-defined band of brown scales from the upper angle of cell to inner margin and a narrower submarginal band.

Hab. Sikhim. *Exp.* 38 millim.

1062. **Euproctis rhoda**, *Swinh. Trans. Ent. Soc.* 1891, p. 138.

Artaxa obsoleta, *Hmps. Ill. Het.* viii, p. 57, pl. 140, fig. 12.

♂. Head, thorax, and fore wing bright orange-yellow; the last with some dark scales on inner basal area; traces of an oblique antemedial line and more prominent postmedial band of scales excurved beyond end of cell, sometimes reduced to two conjoined spots below the angle of cell.

The more heavily-marked and brighter form *rhoda* has a black spot at end of cell of fore wing, which is absent in the paler *obsoleta*, though present in another pale form.

Hab. N. Kanara; Nilgiris; Ceylon. *Exp.* 26-32 millim.

1063. **Euproctis inconcisa**, *Wlk. Cat.* xxxii, p. 332; *C. & S.* no. 913.
Artaxa dispersa, *Moore, Lep. Atk.* p. 50, pl. ii, fig. 6; *C. & S.* no. 909.

Head and thorax pale yellow; abdomen black, the anal tuft orange. Fore wing pale lemon-yellow, irrorated with black scales forming very indistinct antemedial, medial, and postmedial bands. Hind wing white, the cilia ochreous.

Hab. Sikkim. *Exp.*, ♂ 36, ♀ 48 millim.

1064. **Euproctis sulphurescens**, *Moore, P. Z. S.* 1888, p. 399; *Butl. Ill. Het.* vii, p. 35, pl. 123, figs. 6, 7.

♂. Ochreous white or bright ochreous; abdomen black, the anal tuft orange; fore wing with very slight traces of a medial band towards inner margin; hind wing paler.

♀ with the abdomen ochreous.

Hab. Kángra. *Exp.*, ♂ 38-45, ♀ 48 millim.

1065. **Euproctis fulvipuncta**, *Hmps. Ill. Het.* ix, ined., pl. 159, figs. 2, 8, pl. 175, fig. 14 (larva).

♂. Pure white, the branches of antennæ pale brown; fore wing with an orange spot at end of cell and one or two subapical orange spots.

♀ with orange anal tuft.

Larva deep blue-black; a narrow grey spiracular stripe; the 1st somite with paired small lateral tubercles, each with a tuft of black hairs; 2nd to 11th somites with lateral tufts of white hairs; the 2nd, 3rd, and 10th somites with paired dorsal white bristles; 4th to 9th somites each with four short brownish dorsal tufts; 8th to 11th with four orange tufts; the 11th with four mouse-brown tufts; 8th and 9th with a small yellow dorsal tubercle.

Hab. Ceylon. *Exp.*, ♂ 26, ♀ 32 millim.

B. *Fore wing white, with well-defined lines.*

1066. **Euproctis postincisa**, *Moore, P. Z. S.* 1879, p. 400, pl. 32, fig. 5; *C. & S.* no. 951.

♂. Pure white; fore legs and tarsi of mid legs blackish. Fore wing with a nearly straight black medial line not reaching the costa and a black streak beyond it above vein 1.

Hab. Sikkim. *Exp.* 34 millim.

- *1067. **Euproctis semivitta**, *Moore, Lep. Atk.* p. 48, pl. ii, fig. 25; *C. & S.* no. 953.

♂. White; thorax pale ochreous; abdomen ochreous white, slightly banded with black; anal tuft bright ochreous; antennæ pale brown; second joint of palpi black; fore legs ochreous in front. Fore wing with a medial band of black scales from the subcostal nervure to inner margin; a few black scales on inner margin on each side of the band.

Hab. Khásis. *Exp.* 30 millim.



1068. **Euproctis bifascia**, *Hmps. Ill. Het.* viii, p. 58, pl. 141, fig. 8.

♀. Pure white; fore wing with antemedial and submarginal slightly waved lines composed of short orange streaks.

Hab. Nilgiri plateau. *Exp.* 42 millim.

C. Fore wing orange-yellow (rarely brownish), with ante- and post-medial pale lines which may be almost obsolete.

a. Fore wing with no submarginal black spots.

1069. **Euproctis flavinata**, *Wlk. Cat.* xxxii, p. 331.

♂. Head, thorax, and fore wing bright orange-yellow; the last with an orange spot at end of cell, and indistinct ante- and post-medial pale curved lines, furthest apart towards costa, the area between them powdered with dark scales—these markings being always very indistinct and often almost obsolete. Abdomen and hind wing paler.

♀ with the anal tuft brown.

Hab. China; throughout India, Ceylon, and Burma; Borneo. *Exp.*, ♂ 28, ♀ 38–44 millim.

1070. **Euproctis varians**, *Wlk. Cat.* iii, p. 796; C. & S. no. 921.

Artaxa pusilla, *Moore, Lep. Ceyl.* ii, p. 86, pl. 112, fig. 4; C. & S. no. 917.

Euproctis pygmæa, *Moore, Lep. Atk.* p. 48 (nec *Wlk.*).

♂. Differs from *flavinata* in its small size; the two pale lines of the fore wing more prominent, but with no dark powdering between them; the orange cell-spot generally absent.

♀. Paler and without markings.

Hab. China; Formosa; throughout India, Ceylon, and Burma. *Exp.*, ♂ 18–22, ♀ 18–29 millim.

1071. **Euproctis subfuscata**, *Hmps. Ill. Het.* viii, p. 56, pl. 140, figs. 5, 11.

Differs from *flavinata* in being more or less suffused with brown, or generally uniform reddish brown; fore wing with the cell-spot and lines indistinct; hind wing not paler. Underside of fore wing with the costa tinged with fuscous in male.

Hab. Nilgiris. *Exp.*, ♂ 38, ♀ 46 millim.

1072. **Euproctis cervina**, *Moore, A. M. N. H.* (4) xx, p. 345; *id. Lep. Ceyl.* ii, pl. 112, fig. 3; *Hmps. Ill. Het.* ix, pl. 158, fig. 16 (♀); C. & S. no. 906.

♂. Head, thorax, and fore wing brownish fulvous, the last

with medial and postmedial pale lines, the former excurved at discocellulars, the latter evenly curved. Abdomen and hind wing fuscous; cilia of both wings yellow.

♀. Head orange-yellow; thorax, abdomen, and wings pale ochreous white, with a slight fuscous tinge, the margin of wings yellow; fore wing without pale lines.

The Kashmir form in the male has the fore wing darker, with the pale lines less prominent; the hind wing dark fuscous as compared with the typical Ceylon form.

Hab. Kashmir; Ceylon. *Exp.*, ♂ 26, ♀ 30 millim.

1073. *Euproctis anguligera*, *Butl. P. Z. S.* 1886, p. 385.

♂. Head and thorax bright yellow; abdomen slightly tinged with fuscous, the anal tuft orange. Fore wing bright canary-yellow; a broad medial dark-speckled band with pale edges, its outer edge angled at vein 3; dark spots beyond it near outer angle and above vein 3. Hind wing paler.

Hab. Murree; Burma; Andamans. *Exp.* 28–32 millim.

1074. *Euproctis arenacea*, n. sp.

♂. Head, thorax, and abdomen brownish ochreous. Fore wing pale yellow, irrorated with dark scales; the ante- and postmedial pale lines indistinct, the former with a broad diffused dark band preceding it; the latter with a large dark patch beyond it on the costa and slightly outlined with dark scales. Hind wing pale yellow.

Hab. Sikhim (*Möller*). *Exp.* 22 millim. Type in coll. Elwes.

b. *Fore wing with submarginal black spots.*

1075. *Euproctis vitellina*, *Koll. Hügel's Kaschmir*, iv, p. 471; *Butl.*

Ill. Het. vii, pl. 138, fig. 13 (larva); *C. & S.* no. 957.

Euproctis gamma, *Wlk. Cat.* vii, p. 1731; *C. & S.* no. 940.

Artaxa princeps, *Wlk. Cat.* xxxii, p. 331; *C. & S.* no. 916.

Themaca comparata, *Wlk. Cat.* xxxii, p. 395; *C. & S.* no. 901.

♂. Bright orange-yellow; fore wing with a medial pale-edged band of dark scales, which bifurcates at the lower angle of cell and does not reach the costa; one or two submarginal black spots towards apex, which are almost obsolete in some specimens. Hind wing paler.

♀ with the anal tuft ochreous.

Larva dull black; an imperfect dorsal series of white dots, and a few scattered lateral dots; each somite with eight small rust-red tubercles bearing white hairs.

Hab. N.W. Himalayas. *Exp.*, ♂ 38, ♀ 54 millim.

1076. **Euproctis digramma**, Guér., Cuv. Icon. R. Anim., Ins. p. 508, pl. 86, fig. 4; C. & S. no. 908 (part.).
Artaxa unimacula, Moore, P. Z. S. 1879, p. 399; C. & S. no. 920.

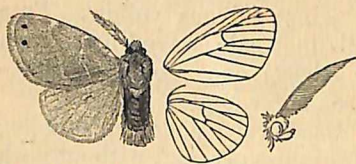


Fig. 321.—*Euproctis digramma*, ♂. †.

Head, thorax, and fore wings bright orange-yellow; abdomen more or less tinged with fuscous, the anal tuft orange; fore wing with ante- and postmedial curved pale lines, the space between them being slightly powdered with dark scales towards inner margin; two prominent subapical black spots. Hind wing paler.

The form *unimacula* has only one subapical spot to fore wing.

Hab. Throughout India, Ceylon, and Burma; Java. *Exp.*, ♂ 25–34, ♀ 40 millim.

1077. **Euproctis guttata**, Wlk. Cat. iv, p. 795.
Artaxa digramma, Moore, Lep. Ceyl. ii, pl. 112, figs. 1, 1a; C. & S. no. 908 (part.), nec Bombyx digramma, Guér.
Artaxa pelona, Swinh. Trans. Ent. Soc. 1891, p. 138.

Differs from *digramma* in having no fuscous on abdomen; the fore wing with an orange spot at end of cell, and an additional black spot towards outer angle.

Some specimens have the two pale lines of the fore wing more or less outlined with red-brown or fuscous, and the space between them filled in with fuscous. The submarginal black spots are occasionally almost or completely obsolete.

Larva black, the head chestnut; long anterior and short lateral tufts of grey hair; the thoracic somites with dorsal grey tufts; the others with dorsal tufts of short brown hair.

Hab. Throughout India, Ceylon, and Burma *Exp.*, ♂ 30, ♀ 40 millim.

1078. **Euproctis fraterna**, Moore, Lep. Ceyl. ii, p. 85; Hmps. Ill. Het. ix, pl. 176, fig. 2 (larva); C. & S. no. 911.

♂. Differs from *guttata* in its smaller size, and the fore wing being shorter and squarer.

♀ sometimes with an almost complete submarginal series of black spots to fore wing.

Larva. Head crimson; body black; the 1st somite with long lateral tufts of black hair rising from prominent tubercles; the other somites with dorsal and lateral tufts of white hair; subdorsal pale lines; 9th and 10th somites with white dorsal spots; 11th somite with a dorsal black tuft.

Hab. Throughout India, Ceylon, and Burma. *Exp.*, ♂ 24, ♀ 30–38 millim.

1079. *Euproctis apicalis*, *Wlk. Cat.* xxxii, p. 505; *Moore, Lep. Ceyl.* ii, pl. 111, fig. 5, ♀; *Hmps. Ill. Het.* ix, pl. 159, fig. 1, ♂, pl. 175, fig. 11 (larva); *C. & S.* no. 1087.

♂. Head, thorax, abdomen, and wings fulvous yellow. Fore wing with ante- and postmedial indistinct pale waved lines, with diffused red-brown scales on their edges; one subapical white-ringed black spot, and another towards outer angle.

♀. Head, thorax, and anal tuft dirty grey; abdomen orange; fore wing bright orange-red, the lines indistinct and without dark edges; two black specks towards apex and two near anal angle; hind wing orange.

Larva black; the head scarlet; long anterior and posterior tufts of black hair; each somite with lateral tufts of white hair curved upwards over the back; white bands on 1st and 2nd somites, and dorsal spots on 9th and 10th.

Hab. Newera Ellia, Ceylon. *Exp.*, ♂ 40, ♀ 33 millim.

1080. *Euproctis antiphates*, n. sp.

♂. Head, thorax, and abdomen brown, the anal tuft yellow. Fore wing brownish grey, more or less suffused with brown; the ante- and postmedial pale lines outlined with brown; a dark spot at end of cell sometimes nearly obsolete; the outer area from the postmedial line deeply suffused with brown; a submarginal series of dark lunules outlined with grey. Hind wing brownish white, the veins darker, a dark spot at end of cell and diffused postmedial band.

Hab. Nāga Hills, 2000 feet (*Doherty*). *Exp.* 24 millim. Type in coll. Elwes.

1081. *Euproctis costalis*, *Wlk. Cat.* iv, p. 806; *Moore, Lep. Ceyl.* ii, pl. 110, figs. 2, 2 a, b (larva); *C. & S.* no. 1041.

Lacida complens, *Wlk. Cat.* xxxii, p. 336.

Rilia illepada, *Wlk. Cat.* xxxii, p. 436.

Utidava incomptaria, *Wlk. Cat.* xxvi, p. 1689; *C. & S.* no. 3690.

♂. Head, thorax, and abdomen fuscous. Fore wing whitish, with the basal and costal areas suffused with dark brown; a large diffused brown patch with three dark spots on it at end of cell, joined by an oblique diffused streak from the apex; an indistinct submarginal series of dark spots. Hind wing pale fuscous.

♀. The base and costa of fore wing not suffused with brown, the three spots at end of cell not on a brown patch, and separated from the oblique streak.

Larva blackish brown, tufted with short hair; a pink line between 5th and 6th somites.

Hab. Ceylon. *Exp.*, ♂ 24, ♀ 30 millim.

1082. *Euproctis antica*, *Wlk. Cat. iv*, p. 802; *Moore, Lep. Ceyl. ii*, pl. 110, fig. 3; *C. & S. no. 1039*.
Anaxila notata, *Wlk. Cat. iv*, p. 919.

♂. Differs from *costalis* in its larger size; the fore wing wholly suffused with brown; the oblique stripe less prominent, the submarginal series of spots more so.

♀ like *costalis*, but larger.

Hab. Ceylon. *Exp.*, ♂ 34, ♀ 38 millim.

- D. *Fore wing with diffused red-brown or vinous-brown bands, which may occupy the whole wing except a discal patch.*

a. *Fore wing with no submarginal black spots.*

1083. *Euproctis plana*, *Wlk. Cat. vii*, p. 1731; *Butl. Ill. Het. v*, pl. 89, fig. 13; *id. Ill. Het. vii*, pl. 138, fig. 5 (larva); *C. & S. no. 971*.
Euproctis discinota, *Moore, P. Z. S. 1877*, p. 601; *C. & S. no. 937*.
Chærotricha immaculata, *Butl. Ill. Het. v*, pl. 89, fig. 14; *C. & S. no. 967*.

Euproctis muelleri, *Snell. Tijd. v. Ent. xx*, 1877, p. 13.

♂. Head, thorax, and abdomen fulvous. Fore wing bright orange-yellow, usually slightly powdered with black scales; a ferruginous band from near base of costa to middle of median nervure, then straight to inner margin; a postmedial band excurved beyond end of cell; a black spot at end of cell; long black hairs on inner margin. Hind wing paler.

♀ with the bands nearly obsolete, the black spot being also absent in the specimen named *immaculata*.

Larva dark brown, marbled with red-brown; a series of deep red lateral tubercles bearing short white processes and tufts of white hair; small dorsal tubercles on thoracic somites bearing tufts of white hair; fourth to anal somite with dorsal tubercles bearing short silky-brown tufts.

Hab. Kāngra; Sikhim; Burma; Andamans. *Exp.*, ♂ 44-54, ♀ 60-72 millim.

1084. *Euproctis icilia*, *Stoll, Cram. Pap. Exot. v*, p. 158, pl. 35, fig. 5; *C. & S. no. 941*.

Chærotricha decussata, *Moore, A. M. N. H. (4) xx*, p. 345; *id. Lep. Ceyl. ii*, pl. 113, figs. 2, 2b (larva); *C. & S. no. 966*.

Differs from *plana* in the whole base of the fore wing being purplish brown, and often conjoined to the broad postmedial band below the cell.

Larva purplish brown, tufted with short grey hair, and marked with numerous irregular reddish lines; pale speckled dorsal tubercles on 4th, 5th, and 11th somites connected by a chain-like band; thoracic somites with a black dorsal line.

Hab. N.W. Himalayas and throughout S. India and Ceylon. *Exp.*, ♂ 38-48, ♀ 54 millim.



1085. *Euproctis plagiata*, *Wlk. Cat. iv*, p. 858; *C. & S. no. 970*.

♀. Differs from *icilia* in the basal purple-brown area of the fore wing being joined to the postmedial band at the costal as well as inner area, leaving a patch at lower angle of cell and the outer margin yellow; no black spot at end of cell.

Hab. Nepal. *Exp.* 60 millim.

1086. *Euproctis madana*, *Moore, Lep. E. I. Co.* p. 348; *C. & S. no. 948*.

♀. Head, thorax, and abdomen yellow. Fore wing yellow, with the basal area brown, running out to a point on the median nervure; a black spot at end of cell; a postmedial band excurved beyond cell, widest at costa, and sending a spur to outer margin between veins 5 and 6. Hind wing pale.

Hab. Sikhim. *Exp.* 64 millim.

1087. *Euproctis varia*, *Wlk. Cat. iv*, p. 840; *Moore, Lep. E. I. Co.* pl. 9 a, fig. 5; *C. & S. no. 974*.

Differs from *plana* in the abdomen being black above, the anal tuft orange. Fore wing with a red-brown spot near base; a black spot at end of cell; an irregular oblique postmedial red-brown band irrorated with dark scales, becoming very much wider from lower angle of cell to inner margin.

A variety from Sikhim has the whole outer area of the fore wing red-brown, and the hind wing tinged with rufous.

Hab. Simla; Sikhim; Nāgas; Mergui. *Exp.*, ♂ 46, ♀ 58 millim.

1088. *Euproctis flavimaculata*, n. sp.

♀. Head and thorax reddish brown; abdomen fuscous, the anal segment orange. Fore wing uniform vinous brown, irrorated with dark scales; a yellow patch at end of cell with a black spot on it. Hind wing greyish white, the central marginal area irrorated with brown scales.

Hab. Sikhim. *Exp.* 64 millim. Type in coll. Knyvett.

b. *Fore wing with black submarginal spots.*

1089. *Euproctis marginata*, *Moore, Lep. Atk.* p. 49; *C. & S. no. 969*.
Chærotricha quadrangularis, *Moore, Lep. Atk.* p. 50, pl. ii, fig. 23;
C. & S. no. 972.

Differs from *plagiata* in having the abdomen black above, except the anal segment and tuft which are orange. Fore wing with the red-brown suffusion darker and better defined from the yellow marginal area, which bears a series of eight black spots.

The form *quadrangularis* has one subapical and two medial spots of the series absent; the hind wing paler.

Hab. Sikhim. *Exp.*, ♂ 46, ♀ 60 millim.



E. *Fore wing suffused with vinous or olive-brown and with two pale lines.*

a. *Fore wing without submarginal black spots.*

1090. *Euproctis albopunctata*, n. sp.

♀. Head, thorax, and abdomen rufous brown, the anal tuft yellow. Fore wing vinous brown, irrorated with dark scales; an antemedial, curved, pale line and postmedial line much excurved beyond end of cell; a broken series of marginal white spots; cilia white and brown. Hind wing pale fuscous, with an irregular pale margin and brown marginal line; cilia whitish.

Hab. Sikkim. *Exp.* 52 millim. Type in coll. Elwes.

1091. *Euproctis albodentata*, Moore, P. Z. S. 1879, p. 401; C. & S. no. 959.

Differs from *albopunctata* in the head, thorax, and abdomen being brownish white. Fore wing suffused with olive-brown, the veins and margins pale; the pale lines more angled and approaching each other towards inner margin; a complete marginal series of triangular white marks. Hind wing pale ochreous fuscous, the marginal area whitish.

Hab. N.W. Himalayas; Burma. *Exp.* 45 millim.

1092. *Euproctis lativitta*, Moore, *Lep. Atk.* p. 49, pl. ii, fig. 18; C. & S. no. 961.

♀. Head and thorax whitish, the branches of antennæ brown; abdomen blackish, the anal tuft ochreous. Fore wing with the outer margin slightly angled at vein 5; whitish, slightly irrorated with ochreous and dark scales, especially between the white bands which approach each other towards inner margin, and near centre of outer margin; a black lunule at end of cell. Hind wing white, slightly irrorated with dark scales, especially on the disk.

Hab. Sikkim; Nāga Hills. *Exp.* 52 millim.

1093. *Euproctis variegata*, Hmps. *Ill. Het.* viii, p. 56, pl. 140, fig. 6.

♀. Head, thorax, and abdomen pale ochreous. Fore wing ochreous white, irrorated with dark brown scales; the pale ante- and postmedial lines indistinct; a conspicuous orange spot at end of cell edged with dark scales some whitish marks beyond the postmedial line. Hind wing pale ochreous.

Hab. Nilgiris. *Exp.* 38 millim.

1094. *Euproctis nigripennis*, n. sp.

♂. Head and thorax fulvous; abdomen black, with orange anal tuft. Fore wing fulvous yellow, irrorated with black scales the

ante- and postmedial pale lines waved, the latter excurved beyond the cell, the space between them and the apical area suffused with black, except the veins; a submarginal, pale, waved line. Hind wing deep black, with a broad, marginal, fulvous-yellow band.

♀ paler; abdomen with a large fulvous anal tuft; hind wing with broad pale fawn border.

Hab. Sikhim. *Exp.*, ♂ 42, ♀ 55 millim. Type in coll. Elwes.

1095. *Euproctis abjecta*, *Swinh. P. Z. S.* 1889, p. 405, pl. 43, fig. 13.

Head, thorax, and abdomen fuscous brown, the anal tuft orange. Fore wing vinous brown, irrorated with dark scales; the ante-medial line angled on the median nervure, the postmedial line excurved beyond end of cell. Hind wing brownish ochreous.

Hab. Lower Sind. *Exp.*, ♂ 24, ♀ 30 millim.

*1096. *Euproctis rana*, *Moore, P. Z. S.* 1865, p. 806; *C. & S.* no. 952.

♂. Yellow; antennæ and abdomen brown. Fore wing with the basal two-thirds irrorated with dark scales and sending an elbowed spur to the centre of outer margin, below which the wing is whitish; ante- and postmedial pale lines. Hind wing with the inner area suffused with brown.

Hab. Sylhet. *Exp.* 63 millim.

b. *Fore wing with submarginal black spots.*

1097. *Euproctis bipartita*, *Moore, Lep. Atk.* p. 49, pl. ii, fig. 4; *C. & S.* no. 965.

♀. Head, thorax, and abdomen fulvous brown, the anal tuft fulvous. Fore wing reddish brown, irrorated with dark scales; the ante- and postmedial lines excurved in and beyond the cell; some specimens with a black speck in the cell; the apex and a narrow marginal line yellow; one subapical black spot. Hind wing yellow, often slightly suffused with brown, except the marginal area.

Hab. Sikhim. *Exp.* 52 millim.

F. *Fore wing uniform brown or purplish brown, irrorated with dark scales, the outer margin yellow, but no yellow on disk.*

a. *Fore wing without submarginal black spots.*

1098. *Euproctis sagroides*, *Hmps. Ill. Het.* viii, p. 57, pl. 140, fig. 14.

♂. Uniform yellowish brown; the cilia yellow.

Hab. Nilgiris. *Exp.* 22 millim.

1099. *Euproctis uniformis*, Moore, *Lep. Atk.* p. 49; *C. & S.* no. 973.

♀. Head, thorax, and abdomen brown; anal tuft orange. Fore wing vinous brown, irrorated with dark scales; the cilia yellow. Hind wing fuscous brown, with a broad, marginal, yellow band.

Hab. Sikkim; E. Pegu. *Exp.* 57 millim.

1100. *Euproctis luteifascia*, Hmps. *Ill. Het.* viii, p. 57, pl. 141, fig. 2.

♂. Head yellow; thorax brownish ochreous. Fore wing vinous brown, irrorated with dark scales; an antemedial, orange-red, maculate line; cilia yellow. Abdomen, hind wing, and underside yellow.

Hab. Nilgiris. *Exp.* 36 millim.

1101. *Euproctis scintillans*, Wlk. *Cat.* vii, p. 1734; *Butl. Ill. Het.* v, pl. 90, fig. 1; *C. & S.* no. 924.

Orvasca subnotata, Wlk. *Cat.* xxxii, p. 502; *C. & S.* no. 925.

Artaxa limbata, *Butl. Ill. Het.* v, p. 53, pl. 90, fig. 3; *C. & S.* no. 915.

Somena irrorata, Moore, *Lep. Ceyl.* ii, p. 87; *C. & S.* no. 923.

Artaxa justiciae, Moore, *Lep. E. I. Co.* p. 352; *C. & S.* no. 914.

Head yellow; thorax brown; abdomen black or yellow, the anal tuft orange. Fore wing vinous brown, irrorated with dark scales, which colour extends as two spurs across the yellow marginal area below the apex and to centre of margin, but sometimes not reaching the margin; costa often yellow. Hind wing yellow, or in some specimens fuscous brown, with a broad yellow margin.

Larva dark brown, with a series of crimson lateral tubercles on a yellow line bearing tufts of grey hair; the 3rd somite banded with yellow; dorsal tufts of short brown hair on 4th, 5th, and 11th somites; 5th to 10th somites with a broad, dorsal, yellow stripe; a yellow spot on anal somite.

Another form of the larva has the anterior and posterior somites slate-colour, whilst a third form has the dorsal tufts black; a series of subdorsal, white-speckled, black spots, and no red tubercles on the lateral line.

Hab. Throughout India and Ceylon; Burma; Andamans. *Exp.*, ♂ 20-26, ♀ 32-38 millim.

*1102. *Euproctis basalis*, Moore, *Lep. Atk.* p. 51, pl. ii, fig. 16; *C. & S.* no. 904.

♂. Head, thorax, and palpi yellow; abdomen and legs whitish. Fore wing with the basal two-thirds red-brown, its outer edge oblique and angled outwards at the middle, and with a spot beyond the angle on the marginal yellow area. Hind wing and underside whitish.

Hab. Sikkim. *Exp.* 32 millim.

b. *Fore wing with submarginal black spots.*

1103. *Euproctis bipunctapex*, *Hmps.* *Ill. Het.* viii, p. 57, pl. 140, fig. 13.

Head, thorax, and abdomen red-brown, the anal tuft brownish yellow. Fore wing red-brown, irrorated with dark scales; the marginal area yellow, with a spur from the brown area to the centre of outer margin; two subapical black spots. Hind wing brown, with a broad, marginal, yellow band.

In some specimens a brown spot at the end of the cell of the fore wing is visible, and a male from the Nága Hills has only one subapical spot.

Hab. China; Kángra; Nágas; Nilgiris; Burma. *Exp.*, ♂ 24, ♀ 26–40 millim.

1104. *Euproctis atomaria*, *Wlk.* *Cat.* iv, p. 796; *Butl. Ill. Het.* v, pl. 90, fig. 2; *C. & S.* no. 903.

Arma apicalis, *Wlk.* *Cat.* v, p. 1177; *C. & S.* no. 902.

Differs from *bipunctapex* in being deeper red-brown, with the marginal yellow band of fore wing narrower, and in the hind wing reduced to a fine line.

Larva olive-green, sparsely clothed with fine hair; a broad, dorsal, reddish band with a fine black line on it; black dorsal tubercles on 4th, 5th, and 11th somites.

Hab. Moulmein; Ceylon. *Exp.*, ♂ 28–30, ♀ 38 millim.

1105. *Euproctis magna*, *Swinh. Trans. Ent. Soc.* 1891, p. 479.

♀. Head and thorax greyish fuscous; abdomen brownish, the anal tuft brownish ochreous. Wings purplish grey; fore wing irrorated with dark scales; one subapical black spot; the margin and cilia yellow. Hind wing with the outer margin paler.

A specimen from Burma has two subapical black spots and only the cilia yellow.

Hab. Khásis; Bernardmyo. *Exp.* 64 millim.

Genus **PORTHESIA.**

Porthesia, *Steph. Ill. Brit. Ent., Haust.* ii, p. 65 (1829).

Type, *P. auriflua*, Hübner, from Europe.

Range. Europe; Africa; Madagascar; throughout India, Ceylon, and Burma; Java; Australia; Tasmania; Christmas Island.

Palpi long, slender, and obliquely pointed; antennæ with the branches long in male. Fore wing with veins 3, 4, 5 from angle

of cell; 6 from upper angle; 7, 8, 9, 10 stalked, 10 and often 7 also being given off towards apex. Hind wing with veins 3 and 4 from angle of cell; 5 absent; 6 and 7 stalked.

1106. *Porthesia xanthorrhæa*, Koll. *Hügel's Kaschmir*, iv, p. 470; *C. & S.* no. 958.
Euproctis subdita, Moore, *P. Z. S.* 1879, p. 400; *id. Lep. Ceyl.* ii, pl. 112, figs. 5, 5a; *C. & S.* no. 930.
Euproctis virguncula, Wlk. *Cat.* iv, p. 836; Moore, *Lep. E. I. Co.* pl. 16, figs. 3, 3a (larva); *C. & S.* no. 932.
Euproctis marginalis, Wlk. *Cat.* vii, p. 1731; *Butl. Ill. Het.* v, pl. 89, fig. 12; *C. & S.* no. 929.
Euproctis subnigra, Moore, *Lep. Atk.* p. 48; *C. & S.* no. 931.
Euproctis flavonigra, Moore, *P. Z. S.* 1879, p. 400, pl. 32, fig. 11; *C. & S.* no. 939.

♂. White, with a very slight fuscous tinge; the branches of antennæ brownish; anal tuft orange; the whole apical and outer areas of hind wing on upper-side, and the underside of both wings, except the outer margin, suffused with black.

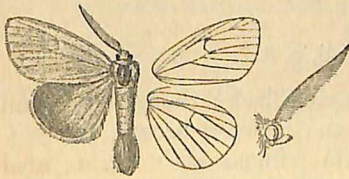


Fig. 322.
Porthesia xanthorrhæa, ♂. †.

In the form *virguncula* the only trace of black suffusion on either wing is on the underside of costa of fore wing; in *flavonigra* the fore wing is bright ochreous,

the hind wing black with the base white, the cilia ochreous; all the intermediate stages occurring.

♀ without any black suffusion.

Larva black; head striped with white; 1st somite with a crimson band; a dorsal series of yellow spots with a crimson line through them on 2nd, 3rd, and 6th to 10th somites; 1st somite with long forwardly-projecting tufts of black hair; the other somites with shorter tufts.

Hab. Throughout India, Ceylon, and Burma; Java. *Exp.*, ♂ 28, ♀ 37 millim.

1107. *Porthesia aurantiaca*, n. sp.

♂. Head and legs orange; thorax dark red-brown; abdomen blackish. Fore wing with the basal two-thirds bright orange; the outer third dark red-brown. Hind wing bright orange; the cilia tinged with red-brown, especially towards apex.

Hab. Sikkim. *Exp.* 24 millim. Type in coll. Moore.

Genus **PERINA.**

Perina, *Wlk. Cat.* iv, p. 966 (1855).

Type, *P. nuda*, Fabr.

Range. China; and throughout India and Ceylon.

♂. Palpi extremely minute; antennæ with the branches long. Mid and hind tibiæ with minute terminal pairs of spurs. Fore wing with the outer margin extremely oblique; vein 3 from before angle of cell; 4 and 5 on a short stalk; 6 from upper angle; 7, 8, 9, 10 stalked, 7 and 10 being given off towards apex. Hind wing with vein 3 from before angle of cell; 4 and 5 stalked; 6 absent.

♀. Antennæ with the branches shorter; fore wing with the outer margin not so oblique. Hind wing with veins 4 and 5 from angle of cell; 6 present and stalked with 7.

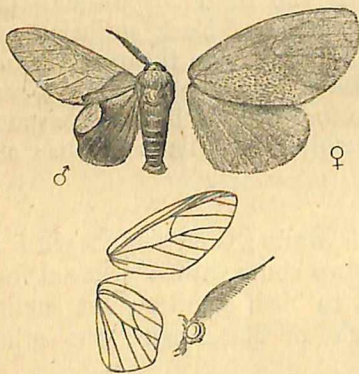
1108. *Perina nuda*, *Fabr. Mant. Ins.* ii, p. 117; *Moore, Lep. Ceyl.* ii, pl. 114, figs. 1, 1a, b (larva); *C. & S.* no. 867.

Stilpnotia subincta, *Wlk. Cat.* iv, p. 843.

Perina basalis, *Wlk. Cat.* iv, p. 966.

Euproctis combinata, *Wlk. Cat.* xxxii, p. 347.

♂. Head and legs orange; antennæ black; thorax grey and brown; abdomen brown, the segments fringed with white; anal tuft orange. Fore wing hyaline, with a patch of brown scales on inner basal area. Hind wing dark brown, with the apical area hyaline.



♀. Pale ochreous; the anal tuft orange; fore wing irrorated with brown scales below the cell.

Larva greyish green, with short dorsal tufts of black hair and long anterior and posterior tufts; lateral tufts of grey and black hair; a dark sap-green dorsal band broken by a white line on

Fig. 323.—*Perina nuda*. 1.

thoracic somites and with red spots on its edge; 5th to 11th somites with subdorsal blue tubercles.

Pupa greenish; all the somites, except the two medial, red-brown below with paired black spots.

Hab. China and throughout India and Ceylon. *Exp.*, ♂ 38, ♀ 50 millim.

1109. *Perina pura*, *Wlk. Char. undeser. Het.* p. 17.

♂. Differs from *nuda* in the head, thorax, and abdomen being whitish; the scaled areas of wings white, suffused with fuscous.

♀. Much whiter than in *nuda*.

Hab. "N. India." *Exp.*, ♂ 30, ♀ 40 millim.

Genus **LEUCOMA.**

Leucoma, *Steph. Ill. Brit. Ent., Haust.* ii, p. 64 (1829).

Redoa, *Wlk. Cat.* iv, p. 826 (1855).

Kanchia, *Moore, Lep. Ceyl.* ii, p. 92 (1883).

Type, *L. vau-nigra*, Linn., from Europe.

Range. Palæarctic, Ethiopian, and Oriental regions; New Britian; New Ireland.

Palpi upturned, reaching vertex of head. Antennæ bipectinated in both sexes, the branches longer in male than female. Hind tibiæ with two pairs of spurs. Fore wing with vein 3 from before angle of cell; 4 and 5 from angle; 6 from upper angle; 7, 8, 9 stalked. Hind wing with vein 3 from before angle of cell; 5 from above angle; 6 and 7 stalked or from cell.

SECT. I. (*Leucoma*). Fore wing with vein 10 from the cell.

1110. *Leucoma comma*, *Hutton, Trans. Ent. Soc.* (3) ii, 1864, p. 330; *C. & S.* no. 1108.

Redoa cygna, *Moore, P. Z. S.* 1879, p. 401; *C. & S.* no. 1049.

♂. Pure glistening white; frons, palpi, and coxæ of fore legs

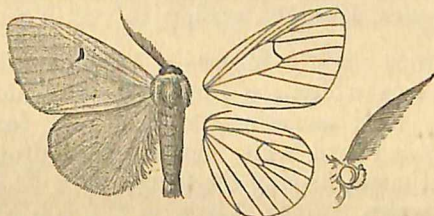


Fig. 324.—*Leucoma comma*, ♂. †.

orange; fore and mid tibiæ with a black spot. Fore wing with a black lunule on discocellulars; branches of antennæ brownish.

Hab. Dehra Dún; Nilgiris. *Exp.* 42 millim.

SECT. II. (*Redoa*). Fore wing with vein 10 anastomosing slightly with 8 and 9 to form an areole.

1111. *Leucoma submarginata*, *Wlk. Cat.* iv, p. 826; *Butl. Ill. Het.* v, pl. 89, fig. 3; *Moore, Lep. E. I. Co.* pl. 14, figs. 11, 11 a (larva); *C. & S.* no. 1055.

Pure white; palpi brownish; two brown spots on frons, and a brown band between the antennæ, which have the branches brownish; legs spotted with black. Fore wing irrorated with silvery scales; a black speck at end of cell; costa ochreous towards apex; the wing-membrane slightly corrugated on outer area; cilia of both wings more or less tinged with fuscous.

Larva pale fuscous, with long, scattered, simple, and spatulate hairs; a dorsal tuft of long black hairs from the second somite;

subdorsal and sublateral black lines; the first and second somites banded with black in front; the second somite with a yellow band also.

Hab. Throughout India, Ceylon, Burma, and Java. *Exp.*, ♂ 42, ♀ 50 millim.

1112. *Leucoma flavescens*, Moore, *P. Z. S.* 1877, p. 600; *C. & S.* no. 1052.

Redoa sericea, Moore, *P. Z. S.* 1877, p. 600; *C. & S.* no. 1054.

♂. Differs from *submarginata* in the whole frons being dark; the wings whiter and evenly irrorated with silvery scales; the outer area of fore wing with slight indications of corrugations.

The form *flavescens* is yellowish, whilst *sericea* is pure white, with the costa of fore wing yellowish.

Hab. Andamans. *Exp.* 34 millim.

1113. *Leucoma divisa*, Wlk. *Cat.* iv, p. 836; *C. & S.* no. 938.

Redoa perfecta, Wlk. *Journ. Linn. Soc.* vi, p. 128.

Redoa lactea, Moore, *Lep. Atl.* p. 46; *C. & S.* no. 1053.

Redoa cymbicornis, Butl. *Ill. Het.* v, p. 48, pl. 89, fig. 2; *C. & S.* no. 1050.

Redoa nigricilia, Swinh. *Trans. Ent. Soc.* 1891, p. 478.

Penora silhetica, Wlk. *Cat.* xxxii, p. 341; *C. & S.* no. 1066.

Palpi and frons slightly fuscous. Antennæ with the branches pale ochreous; legs white, the fore legs sometimes spotted with black, and the tarsi sometimes ringed with fuscous. Wings clothed with silvery and white scales, which drop off, except in quite fresh specimens, leaving the wings quite hyaline, except for a few hair-like scales.

Hab. Sikhim; Borneo. *Exp.*, ♂ 40-50, ♀ 50-70 millim.

1114. *Leucoma diaphana*, Moore, *Lep. Atl.* p. 46; *C. & S.* no. 1051.

♂. Differs from *divisa* in the frons and costa of fore wing being orange; the branches of antennæ and legs tinged with orange. Wings diaphanous, with a few hair-like scales.

In the specimen from Burma patches of scales remain at the upper and lower angles of cell of both wings.

Hab. Sikhim; Bernardmyo, Burma. *Exp.* 44 millim.

1115. *Leucoma thyridophora*, n. sp.

♀. Head, thorax, and abdomen yellowish white. Fore wing wholly occupied by an extremely irregular hyaline patch, except the margins; two antemedial ridges of scales and a band on the discocellulars, which are ochreous white, with numerous slight ridges of raised scales; a few dark scales at upper angle of cell and centre of inner margin; an indistinct submarginal line with a dark striga on it near outer angle. Hind wing ochreous white,



with an extremely irregular hyaline patch in and beyond the end of cell.

Hab. Sikkim. *Exp.* 50 millim. Type in coll. Elwes.

1116. *Leucoma fenestrata*, *Hmps.* *Ill. Het.* ix, ined., pl. 160, fig. 16.

♀. Pale reddish white. Fore wing with a large irregular hyaline patch in and beyond the end of cell and a hyaline sub-apical spot; a chestnut spot at end of cell and numerous indistinct ridges of raised scales. Hind wing with a smaller hyaline patch in and beyond the end of cell.

Hab. Ceylon. *Exp.* 38 millim.

SECT. III. (*Kanchia*). Fore wing with vein 10 arising from 11 and anastomosing slightly with 8 and 9 to form an areole.

1117. *Leucoma subvitrea*, *Wlk. Cat.* xxxii, p. 344; *Moore, Lep. Ceyl.* ii, pl. 113, fig. 5; *C. & S.* no. 1088.

♀. Head, thorax, and abdomen pure white. Wings almost without scales, the few there are being hair-like; the membrane iridescent; veins apple-green during life.

Hab. Hongkong; Bengal; Nilgiris; Ceylon. *Exp.* 38–42 millim.

Genus CAVIRIA.

Caviria, *Wlk. Cat.* iv, p. 824 (1855).

Caragola, *Moore, Lep. Atk.* p. 46 (1879).

Type, *C. substrigosa*, *Wlk.*, from Brazil.

Range. S. America; N.E. India; Ceylon; Burma; Andamans; Java.

Palpi minute and porrect. Antennæ bipectinated, the branches longer in male than female. Hind tibiæ with one pair of spurs. Fore wing with vein 3 from before angle of cell; 4 and 5 from angle; 6 from upper angle; 7, 8, 9 stalked. Hind wing with vein 3 from before angle of cell; 4 and 5 from angle; 6 and 7 from upper angle.

SECT. I. (*American*). Fore wing with vein 10 rising from 11 and giving off 9 to anastomose with 8 and form the areole.

SECT. II. Fore wing with veins 7, 8, 9 stalked; 10 and 11 free from cell.

1118. *Caviria cygna*, *Moore, P. Z. S.* 1877, p. 601; *Hmps.* *Ill. Het.* ix, ined., pl. 159, fig. 6; *C. & S.* no. 1064.

♂. Head and thorax pure white; antennæ brown; abdomen fulvous; fore legs bright orange. Fore wing with the basal area white from the costa before middle to outer angle, the rest of the

wing hyaline, with traces of a postmedial band of silvery scales. Hind wing pure white.

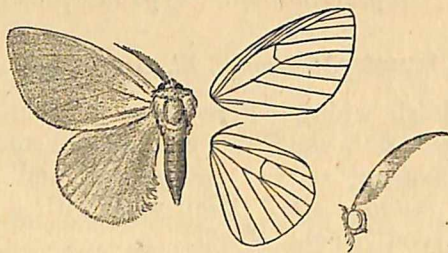


Fig. 325.—*Caviria cygna*, ♂. †.

♀. The whole fore wing pure white; three raised bands of silvery-white scales on outer half of wing.

Hab. Ceylon; Andamans. *Exp.*, ♂ 42, ♀ 44 millim.

1119. *Caviria clara*, *Wlk. Cat.* xxxii, p. 343; *C. & S.* no. 1048.

Head, thorax, and abdomen pure white; palpi and legs orange; branches of antennæ pale brown. Wings silvery white. Fore wing with two very obliquely curved raised bands of silvery-white scales beyond the cell.

Hab. Sikkim. *Exp.*, ♂ 36, ♀ 48 millim.

1120. *Caviria sericea*, *Moore, Lep. Atk.* p. 45; *C. & S.* no. 1073.

♂. Pure silvery white; palpi and inner sides of fore legs black. Fore wing without raised bands of scales.

Hab. Sikkim. *Exp.* 38 millim.

1121. *Caviria ochripes*, *Moore, Lep. Atk.* p. 45; *C. & S.* no. 1072.

♂. Pure white; the palpi, fore legs, and tarsi of mid and hind legs bright orange.

♀. The frons, costa, and apex of fore wing tinged with fuscous in some specimens.

Hab. Sikkim; Nāga Hills; Momeit, Burma. *Exp.*, ♂ 40, ♀ 50 millim.

1122. *Caviria rinaria*, *Moore, Lep. E. I. Co.* p. 336.

Redoa dica, *Swinh. Trans. Ent. Soc.* 1891, p. 478.

♂. Head, thorax, and abdomen white; shaft of antennæ chequered brown and white, the branches brownish; legs marked with brown. Fore wing silvery white, with three very oblique crenulated bands on outer half of wing, the middle band with an indistinct brown line on it; two indistinct subapical specks; costa brown; tips of cilia brown. Hind wing white; the tips of cilia brown at middle.

♀ with the antennæ white.

Hab. Khásis; Java. *Exp.*, ♂ 42, ♀ 60 millim.

SECT. III. Fore wing with veins 4 and 5 stalked.

*1123. *Caviria costalis*, Moore, *Lep. Atk.* p. 46, pl. ii, fig. 21; C. & S. no. 1078.

♂. Pure silky white. Fore wing with the costal edge black and folded over near apex; the base slightly tinged with ochreous; the veins raised above the surface. Body ochreous white; antennæ with the branches ochreous; palpi at sides and head below, black; fore legs black above.

Hab. Sikkim. *Exp.* 50 millim.

Genus **DENDROPHLEPS**, nov.

Type, *D. semihyalina*, Hmps. n.

Range. Khásis.

Palpi short and porrect. Antennæ with the branches of moderate length. Hind tibiae with one pair of spurs. Fore wing with vein 3 from before angle of cell; 4 and 5 stalked; 6 from upper angle; 7, 8, 9 stalked. Hind wing with vein 3 from close to angle of cell; 4 and 5 stalked; 6 and 7 stalked and bent; the cell long; three or four veinlets between vein 1 α and inner margin.

1124. *Dendrophleps semihyalina*, n. sp.

♂. Head, thorax, and abdomen white; branches of antennæ

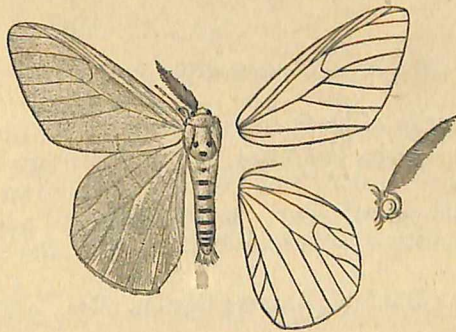


Fig. 326.—*Dendrophleps semihyalina*, ♂. $\frac{1}{2}$.

black; vertex of thorax with three black spots; abdomen with dorsal black bands. Fore wing hyaline; a white patch on basal inner area. Hind wing with the costal half hyaline; the inner half white.

Hab. Khási Hills (Hamilton). *Exp.* 52 millim. Type in coll. Swinhoe.

Genus **CISPIA**.

Cispia, *Wlk. Cat. iv*, p. 857 (1855).
Caltura, *Moore, P. Z. S.* 1879, p. 401.

Type, *C. punctifascia*, *Wlk.*

Range. Sikhim; Bhutan; Assam; Nilgiris; Ceylon.

Palpi porrect, the 2nd joint long and fringed with hair, the 3rd minute; or the palpi rarely minute. Antennæ bipectinate in both sexes, the branches long. Fore wing with veins 3, 4, 5 from close to angle of cell; 6 from upper angle; 7, 8, 9, 10 stalked, 10 being given off from nearer the cell or from the same point as 7. Hind wing with vein 3 from before angle, 5 from above it.

SECT. I. Hind tibiæ with two pairs of spurs. Hind wing with veins 6 and 7 from cell.

1125. *Cispia punctifascia*, *Wlk. Cat. iv*, p. 857; *Moore, Lep. Ceyl. ii*, pl. 113, fig. 3; *C. & S.* no. 926.

Head, thorax, and abdomen orange. Antennæ black, the shaft white at sides; collar, thorax, and tegulæ black spotted; abdomen

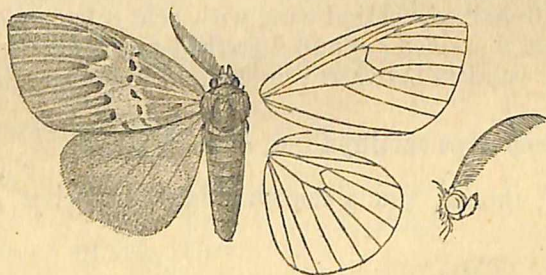


Fig. 327.—*Cispia punctifascia*, ♂. 1.

with a lateral series of black spots; legs marked with black. Fore wing brownish orange, the veins pale yellow; two black subbasal spots; an orange medial band edged by red-brown strigæ in the interspaces, with a pale line outside them. Hind wing orange, with a curved postmedial maculate band from the costa to vein 2 on underside.

Hab. Sikhim; Bhutan; Assam; Ceylon. *Exp.*, ♂ 50, ♀ 70 millim.

1126. *Cispia venosa*, *Wlk. Trans. Ent. Soc. (3) i*, 1862, p. 264; *C. & S.* no. 928.

Differs from *punctifascia* in being bright orange. Fore wing bright orange, the band broader and the strigæ edging it only slightly darker than the ground-colour. Underside of both wings with a fuscous maculate band, the apex of fore wing fuscous.

Hab. Sikhim. *Exp.* 70 millim.

1127. *Cispia alba*, Moore, *P. Z. S.* 1879, p. 401; *id. Lep. Ceyl.* ii, pl. 114, figs. 2, 2 a, b (larva); *C. & S.* no. 1085.

White; tegulæ and thorax spotted with black. Abdomen with dorsal and lateral series of black spots. Wings semidiaphanous. Fore wing with three black basal spots; an angled antemedial line; a black striga at upper angle of cell; an oblique line from near apex to centre of inner margin; both wings with a marginal series of black spots.

Larva pale green, sparsely clothed with black and brown hair, the anterior and posterior tufts of hair long; the lateral tufts arising from three series of red tubercles; some slender dorsal and lateral white lines; a whitish spot in front of each dorsal tuft.

Pupa bluish grey and hairy, with black lines on head and front, and strigæ on the somites.

Hab. Ceylon. *Exp.*, ♂ 44, ♀ 66 millim.

SECT. II. Hind tibiæ with one pair of spurs. Hind wing with veins 6 and 7 from cell.

1128. *Cispia puncticilia*, Moore, *P. Z. S.* 1872, p. 575; *C. & S.* no. 3745.

White; the branches of antennæ brownish; legs streaked with black. Wings semidiaphanous. Fore wing with a black line along the basal half of costa; a spot at middle of cell, and six spots on cilia. Hind wing with a black apical spot on cilia.

Hab. Nilgiris. *Exp.*, ♂ 30, ♀ 34 millim.

SECT. III. Hind tibiæ without spurs. Hind wing with veins 6 and 7 on a long stalk; palpi minute.

1129. *Cispia flavipes*, n. sp.

♀. Head, thorax, and abdomen white; legs orange-yellow. Wings semidiaphanous white. Fore wing with the basal three-fourths of costa black, the apical portion spotted with black; both wings with a black spot on discocellulars and marginal series of spots.

Hab. Sikhim. *Exp.* 52 millim. Type in coll. Elwes.

Genus RATARDA.

Ratarda, Moore, *P. Z. S.* 1879, p. 392.

Type, *R. marmorata*, Moore.

Range. Sikhim.

Palpi minute and porrect; antennæ bipectinate in male, serrate in female. Frenulum absent. Wings long and narrow. Fore wing with vein 1c present; the veins bent; 3 from before angle of cell; 5 from above angle; 6 from middle of discocellulars; 7

absent; 8, 9, 10 stalked. Hind wing with three internal veins; 3 from before angle of cell, 5 from above angle; 6 from below upper angle; a veinlet in the cell of both wings.

1130. *Ratarda marmorata*, Moore, P. Z. S. 1879, p. 393, pl. 32, fig. 1; C. & S. no. 365.

Head, thorax, and abdomen smoky black; the legs yellowish. Fore wing black-brown, irrorated with white scales, and with a

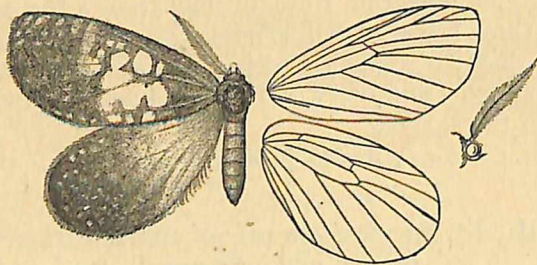


Fig. 328.—*Ratarda marmorata*, ♂. †.

number of white spots on the medial area, many of which are conjoined. Hind wing with the basal area white, slightly irrorated with black scales; the outer area black-brown, irrorated with white scales.

Hab. Sikhim. *Exp.* 54 millim.

Species formerly recorded as Indian which are omitted.

Euproctis atomaria, Wlk., C. & S. no. 934, is from Java.

Euproctis kargalica, Moore, C. & S. no. 943, is from Turkestan.

Euproctis lactea, Moore, C. & S. no. 944, is from Turkestan.

Euproctis tinctifera, Wlk., C. & S. no. 954. Type lost; description not recognizable.

Genusa bigutta, Wlk., C. & S. no. 893, is a Geometer.

Penora venosa, Wlk., C. & S. no. 1067, is from America.

Trisuloides catocalina, Moore, C. & S. no. 1081 = *sericea*, Butl., C. & S. no. 1082, is a Noctua.

Trisuloides cærulea, Butl. Ill. Het. vii, p. 35, is a Noctua.

Porthetria brotea, Cram., C. & S. no. 1024, is from Amboina.

Lymantria lunata, Cram., C. & S. no. 1010, is from China and Amboina.

Antipha promittens, Wlk., C. & S. no. 1042. Type lost; description not recognizable.

Antipha strigulifera, Wlk., C. & S. no. 1043. Type lost; description not recognizable.

Trichia exigua, Nietn., C. & S. no. 1080. Description not recognizable.

Family HYPSIDÆ.

Proboscis present. Palpi smoothly scaled; the third joint long and naked. Legs smooth; mid tibiæ with one pair of spurs, hind tibiæ with two pairs. Frenulum present. Fore wing with vein 1 *a* separate from 1 *b*; 1 *c* absent; 5 from near the lower angle of cell. Both sexes with the membrane above inner margin forming a cavity with a ridge above it, probably for producing stridulation by friction against a ridge of membrane below the costa of hind wing. Hind wing with veins 1 *a* and *b* present, 1 *c* absent; 5 from near lower angle of cell; 8 free from the base and connected by a bar with 7 at middle of cell.

Larva with all the fore legs present, and sparsely covered with long hairs.

Cocoon slight.

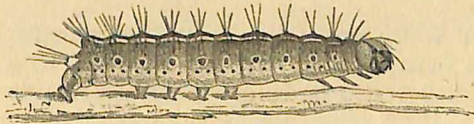


Fig. 329.—Larva of *Hypsa alciphron*. $\frac{1}{2}$. (From Moore, Lep. Ceyl. ii, p. 102, fig. 1 *b*.)

Key to the Genera.

- a*. Fore wing with no areole, veins 6 and 7 stalked . 1. EUPLOCIA, p. 495.
- b*. Fore wing with vein 7 from an areole.
 - a'*. Palpi with the 2nd joint reaching above vertex of head [p. 496.
 - b'*. Palpi with the 2nd joint reaching vertex of head.
 - a*². Hind wing with veins 6 and 7 from angle of cell 3. HYPSE, p. 498.
 - b*². Hind wing with veins 6 and 7 stalked 4. DIGAMA, p. 504.

Genus EUPLOCIA.

Euplocia, Hübn. Verz. p. 172 (1818).

Type, *E. membliaria*, Cram.

Range. Burma; Siam; Andamans; Java; Philippines.

Palpi upturned; the second joint reaching vertex of head, the third long and slender. Antennæ minutely ciliated. Fore wing with a costal fold on upperside in male usually containing a glandular tuft of long hairs; veins 6 and 7 stalked; 8 and 9 stalked; no areole. Hind wing with veins 6 and 7 from the angle of cell.

1131. *Euplocia memblaria*, *Cram. Pap. Exot.* iii, pl. 269 c, d;
C. & S. no. 513.

Aganais renigera, *Feld. Reis. Nov., Lep.* pl. 106, fig. 2.

Euplocia moderata, *Butl. Trans. Ent. Soc.* 1875, p. 327.

Euplocia inconspicua, *Butl. Trans. Ent. Soc.* 1875, p. 328.

♂. Head black and grey; thorax and abdomen orange; tegulæ each with a black spot; abdomen with a dorsal series of black

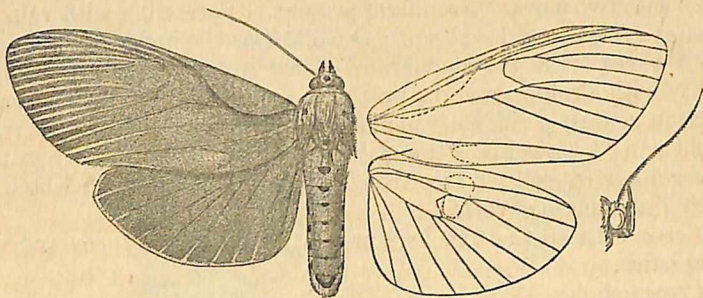


Fig. 330.—*Euplocia memblaria*, ♂. 1.

spots, some of which are often absent, the extremity white. Fore wing greyish fuscous; discocellulars streaked with orange; the veins and interspaces towards outer margin streaked with white; cilia fuscous. Hind wing fuscous, the veins and interspaces with short white streaks towards outer margin; cilia white.

♀ with the base of costa white, with five black strigæ; cell orange, with a black spot at centre and a large subquadrate fuscous spot towards extremity.

The form *renigera*, from Java, has the yellow band of female on discocellulars of fore wing small. In *moderata*, also from Java, the costal fold of the male is smaller, the discocellular band of female separated from the orange patch in cell; *inconspicua*, again from Java, has in the male the costal fold very slight, the tuft of hair absent; in the female the discocellular band absent.

Hab. Moulmein; Siam; Andamans; Java; Philippines. *Exp.*, ♂ 74, ♀ 77 millim.

Genus PERIDROME.

Peridrome, *Wlk. Cat.* ii, p. 444 (1854).

Anagnia, *Wlk. Cat.* ii, p. 446 (1854).

Aganopsis, *Herr.-Schäffer, Samml. ausser. Schm.* i, pp. 12, 70 (1855).

Eriocrypta, *Herr.-Schäffer, t. c.* pp. 12, 70 (1855).

Type, *P. orbicularis*, *Wlk.*

Range. N. India; Burma; Andamans.

Palpi upturned and long, the second joint reaching above vertex of head. Antennæ ciliated in male, almost simple in female. Fore wing with vein 6 from the angle of cell, 7 and 10 from the areole which is formed by the anastomosis of veins 8 and 9. Hind wing with veins 6 and 7 from the angle of cell.

SECT. I. (*Peridrome*). Fore wing of male broad, the whole area except the base covered with downy scales, which are very long near the costa.

1132. *Peridrome orbicularis*, *Wlk. Cat.* ii, p. 445; *Moore, Lep.*

E. I. Co. pl. xiii, fig. 10 (larva); *C. & S.* no. 512.

Aganopsis subquadrata, *Herr.-Schäffer, Samml. aussereur. Schmett.* i, p. 12, fig. 501.

Eriocrypta longipennis, *Herr.-Schäffer, t. c.* p. 12.

♂. Head black and white; thorax and abdomen orange; collar and tegulae with paired black spots; metathorax fringed with white; abdomen with three black dorsal spots and the extremity black. Fore wing with the basal area orange; three black and white spots below the costa; three black spots below median nervure and two black and white spots on inner margin; the outer two-thirds of wing brown covered with mouse-coloured hair, the veins and interspaces slightly streaked with white. Hind wing with the inner area orange; a black patch in the cell; the apical area yellowish white; a fuscous patch and spot at anal angle. Underside: body white marked with black; the outer area of fore wing white.

♀. Abdomen with a black dorsal spot on each segment. Fore wing with the basal orange patch large, irregular, and outlined with white; two black spots in the cell, four below it, and two on inner margin; the basal half of costa spotted with black and white; the white streaks on veins and in interspaces more prominent. Hind wing orange, with two black spots in cell, one beyond and two towards anal angle; a broad marginal black band with the veins crossing it white. Underside with the outer area of fore wing not white.

Larva. Head and first somite reddish, the others black with sparse blue-black hairs; broad yellowish-white intersomital bands which join a lateral line; legs and pro-legs yellowish.

Hab. Sikkim; Assam; Burma; Andamans. *Eap.*, ♂ 74, ♀ 78 millim.

SECT. II. (*Anagnia*). Antennae of male with a tuft of scales at middle; fore wing narrower, with the apex not covered with down. Hind wing with a large glandular patch beyond the end of cell, which is short.

1133. *Peridrome subfascia*, *Wlk. Cat.* ii, p. 446; *C. & S.* no. 539.

♂. Differs from *orbicularis* in the fore wing having only one black spot on the orange patch; the downy scales chestnut colour, the apex and outer margin fuscous; the veins crossing it white. Hind wing with a black patch in the cell, the glandular tuft beyond brown; the marginal area blackish crossed by the white veins; no black spot towards anal angle. Underside with the outer area of fore wing not white.

♀ with the orange patch of fore wing not extending so far along inner margin.

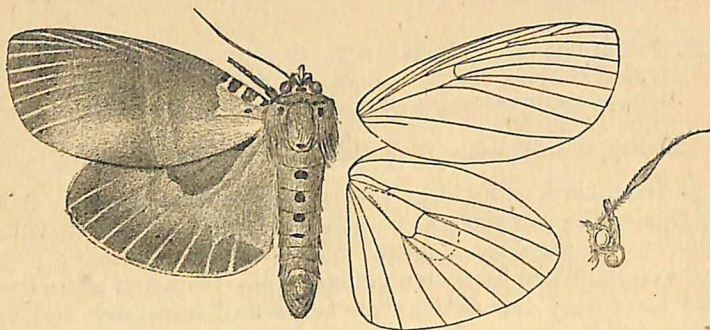


Fig. 331.—*Peridrome subfascia*, ♂. †.

Hab. Moulmein; Tenasserim. *Exp.*, ♂ 74, ♀ 80 millim.

Genus **HYPSA**.

Hypsa, *Hüb. Verz.* p. 172 (1818).

Neochera, *Hüb. Verz.* p. 173 (1818).

Damalis, *Hüb. Verz.* p. 172 (1818).

Lacides, *Wlk. Cat.* ii, p. 456 (1854).

Philona, *Wlk. Cat.* ii, p. 456 (1854).

Agape, *Feld. Reis. Nov. pl.* cvi, fig. 4, *Erkl.* p. i (1874).

Type. *H. monycha*, Cram.

Range. Africa; throughout India, Ceylon, and Burma; Malayan and tropical portions of Australian region.

Palpi upturned, the second joint reaching vertex of head, the third slender and variable in length. Antennæ fasciculated in male, ciliated in female. Fore wing with vein 5 from the lower angle of cell or just above it; 6 from the upper angle or below it; the areole short. Hind wing with vein 5 from just above lower angle of cell; 6 and 7 from the upper angle.

SECT. I. (*Hypsa*). Antennæ of male with the fasciculated cilia short.

A. *Palpi with the 3rd joint of moderate length.*

1134. *Hypsa marmorea*, *Wlk. Cat.* vii, p. 1674; *Butl. Ill. Het.* v, pl. 87, figs. 10, 11; *C. & S.* no. 515.

♂. Head black and grey; thorax orange; collar banded with black; two black spots on each tegula and two on vertex; abdomen orange-yellow, with one dorsal and two paired lateral series of black spots. Fore wing fuscous with a blue-green sheen; the veins white; an orange patch at base with two black spots on its



edge. Hind wing fuscous with a blue-green sheen; the veins and inner area white; a patch of black scales at end of cell.

Hab. Throughout N.E. India and Burma; Java. *Exp.* 71–82 millim.

1135. *Hypsa butleri*, *Swinh. Lep. Het. Mus. Oxon.* p. 84.

Differs from *marmorea* in the head and thorax being more or less suffused with white; one black spot on each tegula and only one on vertex of thorax. Fore wing with the ground-colour much paler. Hind wing white, with a black spot at end of cell, and a marginal series of detached blue-black spots. Underside with blue-green fasciæ and bands.

Hab. Moulmein; Penang. *Exp.* 70 millim.

1136. *Hypsa dominia*, *Cram. Pap. Exot.* iii, pl. 263 A, B; *C. & S.* no. 514.

Noctua chione, *Fabr. Spec. Ins.* ii, p. 213.

Differs from *butleri* in the head, thorax, and base of abdomen being pure white. Fore wing pure white; the basal black spots present, but no orange patch. Hind wing with the blue-green spots produced towards the base in the interspaces below the cell.

Hab. Sikkim; Assam; S. India; Burma; Java. *Exp.* 76 millim.

B. *Palpi with the 3rd joint very long.*

1137. *Hypsa monycha*, *Cram. Pap. Exot.* ii, pl. 131 c (1779); *C. & S.* no. 521.

Noctua dama, *Fabr. Spec. Ins.* ii, p. 216 (1781).

Bombyx silvandra, *Cram. Pap. Exot.* iv, pl. 369 D; *C. & S.* no. 525.

Hypsa intacta, *Wlk. Cat.* ii, p. 451.

Hypsa dicta, *Butl. Trans. Ent. Soc.* 1875, p. 316.

Hypsa zebrina, *Butl. P. Z. S.* 1877, p. 815.

Aganais vitessoides, *Snell. Tijd. v. Ent.* xxii, 1879, p. 78.

Hypsa nicobarica, *Swinh. Lep. Mus. Oxon.* p. 87.

Hypsa venalba, *Moore, P. Z. S.* 1877, p. 598; *C. & S.* no. 527.

Hypsa semifusca, *Butl. A. M. N. H.* (5) xix, p. 220.

Hypsa leuconeura, *Butl. P. Z. S.* 1879, p. 161.

Head, thorax, and abdomen orange; palpi with a black lateral stripe on second joint and the third joint black; a black spot on tegulæ; a dorsal series of black spots on abdomen often expanding into bands. Fore wing fuscous; an indistinct basal orange patch often suffused with fuscous, with two basal black spots and three on its outer edge; a broad white fascia from base to lower angle of cell; subcostal, median, and submedian nervures sometimes slightly streaked with white. Hind wing white, with a fuscous spot at end of cell; a broad fuscous marginal band with irregular inner edge.

The form *silvandra* has the white fascia of fore wing represented by a white spot at lower angle of cell and the marginal band of hind wing broad. In *intacta* from Java the fascia is narrow, in

vitessoides from Java absent; *venalba*, from the Andamans, has the fascia very broad and extending along vein 2 nearly to outer margin, a smaller spot at upper angle of cell; *dama*, from Australia and the Solomons, has the fascia slight or absent, the spot at lower

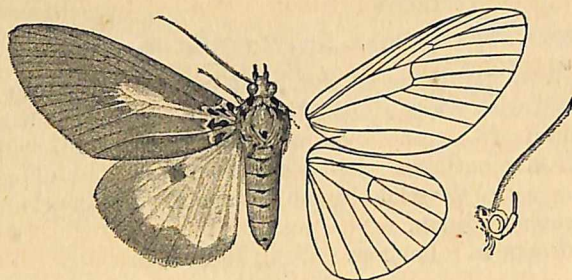


Fig. 332.—*Hypsa monycha*, ♂. †.

angle of cell large; *semifusca* = *leuconeura*, from the Solomons, has the marginal band of hind wing very broad.

Hab. China; Formosa; N.E. India; Burma; Nicobars; Java; Amboina; Australia; Solomons. *Exp.* 60 millim.

1138. *Hypsa clavata*, *Butl. Trans. Ent. Soc.* 1875, p. 317; *C. & S.* no. 518.

♂. Differs from *monycha* in the palpi having a black lateral stripe. Fore wing with the veins below the costa streaked with white. Hind wing with a black spot in end of cell and two post-medial spots.

Hab. Hongkong; Cachar; Sylhet. *Exp.* 66 millim.

1139. *Hypsa canaraica*, *Moore, P. Z. S.* 1878, p. 3; *C. & S.* no. 517.

♀. Differs from *clavata* in being paler; the middle black basal costal spot absent; the white patch at end of cell large; no fascia along median nervure. Hind wing with a black band connecting the postmedial spots.

Hab. Canara; Nilgiris. *Exp.* 75 millim.

1140. *Hypsa complana*, *Wlk. Cat.* xxxi, p. 213.

Hypsa persecta, *Butl. Trans. Ent. Soc.* 1875, p. 317; *Moore, Lep. Ceyl.* ii, pl. 100, figs. 1, 1 a (larva); *C. & S.* no. 523.

Hypsa lacteata, *Butl. Ill. Het.* v, p. 43, pl. 87, fig. 9; *C. & S.* no. 520.

Differs from *clavata* in the fore wing having a large white patch filling the lower half of cell and the whole area below except inner margin, and extending to near outer margin, its upper edge with two dentitions, its outer edge irregular; a large white spot at upper angle of cell. Hind wing with the marginal band narrow; an extra spot towards anal angle.

Larva. Head large; sparsely hairy; dark purple-brown, the thoracic somites pale red; a narrow transverse yellow band on 4th to terminal somites.

Hab. China; Sikhim; Assam; Orissa; Nilgiris; Ceylon; Rangoon; Singapore; Bouru; Timor. *Exp.*, ♂ 60–70, ♀ 74 millim.

1141. *Hypsa tortuosa*, Moore, *P. Z. S.* 1872, p. 570, pl. 33, fig. 2; *C. & S.* no. 516.

♂. Differs from *complana* in the head and thorax being deeper orange; collar outlined with black; tegulae with a black streak. Fore wing with the basal orange patch larger and deeper in colour with more black spots on it; an exceedingly irregular white band from the costa to inner margin. Hind wing white, with a black spot at end of cell, a submarginal spot, and two towards anal angle; a marginal series of eight spots.

Hab. Sikhim. *Exp.* 72 millim.

1142. *Hypsa heliconia*, Linn. *Syst. Nat.* i, 2, p. 839; *C. & S.* no. 519. *Noctua paphos*, Fabr. *Ent. Syst.* iii, 2, p. 18; *C. & S.* no. 522.

Differs from *monycha* in the basal orange patch of the fore wing being prominent but not extending to the costa, the black spots edged with white; the veins streaked with white; a white stripe along inner margin. Hind wing white, with a large black spot at end of cell, one beyond, and one below vein 2; a marginal black band, broad at apex and bent inwards between veins 1 b and 2, leaving a white spot on the margin.

Hab. Sikhim; Assam; Burma; Siam; Singapore; Borneo; Ceram; New Guinea. *Exp.* 68 millim.

1143. *Hypsa subsimilis*, Wlk. *Cat.* xxxi, p. 212; *C. & S.* no. 526.

Differs from *monycha* in having the ground-colour of the hind wing yellow.

Hab. Tenasserim; Malacca; Singapore. *Exp.* 64 millim.

1144. *Hypsa egens*, Wlk. *Cat.* ii, p. 453; *Butl. Ill. Het.* v, pl. 87, fig. 8; Moore, *Lep. E. I. Co.* pl. xiii, fig. 7 (larva); *C. & S.* no. 531.

Hypsa nebulosa, Butl. *Tr. Ent. Soc.* 1875, p. 322; *C. & S.* no. 533.

Orange-yellow; the head, thorax, and abdomen marked as in *monycha*. Fore wing with five black spots near the base; the veins streaked with yellow.

Larva brown; numerous small dorsal warts from which arise sparse hairs; large prominences on 4th and 11th somites; a sub-lateral dark line and lateral series of dark spots; head reddish.

Hab. Formosa; throughout N.E. India and Burma; Siam; Singapore; Philippines; Borneo; Java; Celebes. *Exp.*, ♂ 46–64, ♀ 74 millim.

1145. *Hypsa andamana*, Moore, *P. Z. S.* 1877, p. 598, pl. 59, fig. 5;
C. & S. no. 529.

♂. Differs from *egens* in having an extra black spot at middle of cell of fore wing; the interspaces beyond and below streaked with fuscous.

Hab. Andamans. *Exp.* 67 millim.

1146. *Hypsa concana*, Moore, *P. Z. S.* 1878, p. 4; *Waterh. Aid.* ii, pl. 132, fig. 7; *C. & S.* no. 530.

♀. Differs from *egens* in having a black spot on the metathorax. Fore wing with a waved antemedial white line, with an extra black spot inside it near inner margin; two white spots at end of cell. Hind wing with a black spot at end of cell; an elongate spot below vein 2; a postmedial series from beyond the cell to near anal angle, with a series of whitish lunules beyond them. Cilia of both wings white.

Hab. Canara; Nilgiris. *Exp.* 76 millim.

1147. *Hypsa javana*, Cram. *Pap. Exot.* iii, pl. 274 c; *C. & S.* no. 532.

♂. Head and thorax yellow with the usual black spots; abdomen black above, the extremity orange-yellow, the ventral surface yellow with paired sublateral series of black spots. Fore wing yellow; a brown patch occupying the whole wing except the base, which is spotted with black, and the costa and outer area; a large round white spot in centre of cell; an oval spot at end. Hind wing brown; a broad marginal yellow band.

Hab. Moulmein; Java. *Exp.* 66 millim.

1148. *Hypsa alciphron*, Cram. *Pap. Exot.* ii, p. 133 E; Moore, *Lep. Ceyl.* ii, pl. 102, figs. 1, 1 a, b (larva); *C. & S.* no. 528.

Noctua caricæ, Fabr. *Ent. Syst.* iii, 2, p. 27.

Hypsa plaginota, Butl. *Trans. Ent. Soc.* 1875, p. 320; *C. & S.* no. 534.

Head, thorax, and abdomen marked as in *monycha*; palpi with black spots on 1st and 2nd joints. Fore wing brownish fuscous; a basal orange patch with two subbasal black spots and a series of three on its outer edge; the veins streaked with white; a white spot at lower angle of cell. Hind wing orange-yellow; a black spot at end of cell, one beyond, one below vein 2, and a submarginal irregular series which sometimes becomes a nearly complete marginal band, the veins crossing it yellow.

The variety *plaginota* has the white spot at end of cell of fore wing large. The form from New Guinea and the neighbouring groups of islands is darker and brighter.

Larva black above, brown below; two dorsal white bands, a

subdorsal black spot on each somite; a series of lateral black specks; sparse black hairs; the head red.

Hab. Throughout India, Ceylon, and Burma; Penang; Java; Amboina; Ceram; New Guinea; New Hebrides; Solomons; New Ireland. *Exp.*, ♂ 62-67, ♀ 72-76 millim.

1149. *Hypsa sericea*, Moore, *P. Z. S.* 1878, p. 3; *C. & S.* no. 536.

♂. Differs from *alciphron* in having a black spot on inner margin at edge of the orange patch. Hind wing with broad black fasciæ in and below cell from the base to the postmedial spots; the marginal black band complete; the veins crossing it yellow.

Hab. Bombay; Poona; Canara; Nilgiris. *Exp.* 60 millim.

1150. *Hypsa producta*, Butl. *Trans. Ent. Soc.* 1875, p. 320; Moore, *Lep. Ceyl.* ii, pl. 101, figs. 1, 1 a, b (larva); *C. & S.* no. 535.

Hypsa strigivenata, Butl. *Trans. Ent. Soc.* 1875, p. 321; *C. & S.* no. 537.

Differs from *alciphron* in the basal orange patch of fore wing extending further along the costa, with an extra black spot on the costa.

The form *strigivenata* has the orange and brown colours darker.

Larva. Head large; a series of dorsal tubercles from 4th to terminal somite; purplish brown with sparse hairs, the thoracic somites pale above; some pale lateral spots; a dorsal black line; oblique dorsal streaks on somites seven to ten.

Hab. Sikhim; Assam; S. India; Ceylon; Burma; Penang; Sumatra. *Exp.*, ♂ 56, ♀ 80 millim.

C. (Philona). *Palpi with the 3rd joint very short.*

1151. *Hypsa inops*, Wlk. *Cat.* ii, p. 457; *Bull. Ill. Het.* v, pl. 87, fig. 6; *C. & S.* no. 541.

Head, thorax, and abdomen orange-yellow; the third joint of palpi black; tegulae and metathorax each with a black spot; abdomen with a series of dorsal black spots, some of which are often obsolete. Fore wing pale fuscous, the veins white; a basal yellow patch spotted with black. Hind wing yellow with an apical black band; cilia of both wings tipped with white.

Hab. Sikhim; Sylhet; Cachar; Nagas; Burma; Philippines. *Exp.* 56 millim.

1152. *Hypsa privata*, Wlk. *Journ. Linn. Soc.* vi, p. 100.

Philona cinerascens, Moore, *P. Z. S.* 1877, p. 598, pl. 59, fig. 6; *C. & S.* no. 540.

Differs from *inops* in the hind wing being white with a marginal black band.

Hab. Burma; Andamans, Borneo, Nias; Flores; Philippines. *Exp.* 52 millim.

SECT. II. (*Lacides*). Male with the fasciculated cilia of antennæ long; 3rd joint of palpi long.

1153. *Hypsa ficus*, *Fabr. Ent. Syst.* iii, 2, p. 27; *Moore, Lep. Ceyl.* ii, pl. 100, fig. 2; *Forsayeth, Trans. Ent. Soc.* 1884, p. 397 (larva); *C. & S.* no. 538.

Head, thorax, and abdomen marked as in *monycha*, except that the third joint of palpi is grey tipped with black; the base of tegulæ yellow with a black spot; dorsal spots of abdomen often almost obsolete. Fore wing with a yellow basal patch which extends along costa and in cell to two thirds length of cell, with an orange spot outlined with black on the costa, and streaks in the cell and on inner margin, two black spots on costa, two in cell, one on inner margin, and two lines across interno-median interspace; the rest of wing pale red-brown, the veins streaked with yellow. Hind wing bright orange-yellow; a black spot at end of cell and a submarginal irregular series.

Larva. Head black; somites dark velvety brown, with slight white hairs arising from red papillæ; lateral yellow patches on 4th to 11th somites.

Hab. Throughout India and Ceylon. *Exp.*, ♂ 58, ♀ 64 millim.

Genus DIGAMA.

Digama, *Moore, Lep. E. I. Co.* p. 297 (1859).

Sommeria, *Hübner, Zutr.* iii, p. 13 (1825, *gen. non descr.*).

Homœognatha, *Feld. Reis. Nov., Lep.* pl. cvi, figs. 20, 21, *Erkl.* p. 5 (1874).

Type, *D. hearseyana*, *Moore*.

Range. S. Africa; China; throughout India, Ceylon, and Burma; Australia.

Palpi upturned, the second joint reaching vertex of head, the third long. Fore wing rather short and square; vein 5 from just above lower angle of cell; 6 from just below the upper angle; 7 and 10 from a short areole. Hind wing with vein 5 from above lower angle of cell; 6 and 7 stalked.

SECT. I. Antennæ of male slightly ciliated; hind wing with tufts of modified scales on median nervure and vein 1 b.

1154. *Digama burmana*, n. sp.

Head and thorax brownish fuscous; palpi with a black spot at end of each of the three joints; collar with paired black spots. Abdomen orange-yellow, with dorsal and lateral series of black spots. Fore wing fuscous; the basal half streaked with vinous brown in the interspaces; a highly dentate submarginal band; a marginal series of specks; black spots at base and middle, and two

at end of cell. Hind wing orange-yellow, the apex suffused with fuscous; some specks on apical half of outer margin.

Hab. Myingyan, Burma (*Watson*). *Exp.*, ♂ 30, ♀ 32 millim. Type in B. M.

SECT. II. (*Digama*). Antennæ of male with fasciculated cilia.

1155. *Digama hearseyana*, *Moore, Lep. E. I. Co.* p. 298, pl. 7 a, figs. 3, 3 a; *C. & S.* no. 549.

Digama similis, *Moore, P. Z. S.* 1878, p. 5; *C. & S.* no. 553.

Head, thorax, and abdomen marked as in *burmana*. Fore wing pale fuscous clouded with duller fuscous; the basal half of wing spotted with black, four spots on costa, three in cell, three in interno-median interspace, and two on inner margin; very irregular dentate submarginal and marginal fuscous bands. Hind wing orange-yellow, with fuscous marginal patches at apex and vein 2 in the form *similis*; the underside of some specimens with a black spot at end of cell.

Hab. Throughout India and Ceylon. *Exp.* 36 millim.

SECT. III. (*Sommeria*). Antennæ of male bipectinated, the terminal one-fifth ciliated. Fore wing with a fold on inner margin on upperside.

1156. *Digama insulana*, *Feld. Verh. zool.-bot. Ges. Wien*, 1868, p. 285; *C. & S.* no. 550.

Differs from *hearseyana* in the collar being without spots. Fore wing without the fuscous suffusion or bands; the third costal black spot from base, and the second in the interno-median interspace, absent. Hind wing with some fuscous on outer margin at veins 2 and 3.

Hab. Ganjam; Nilgiris; Ceylon. *Exp.* 32 millim.

1157. *Digama fasciata*, *Butl. Trans. Ent. Soc.* 1877, p. 362; *Moore, Lep. Ceyl.* ii, pl. 100, fig. 4; *C. & S.* no. 547.

♀. Head, thorax, and abdomen as in *insulana*, except that the patagia have each a black streak. Fore wing greyish fuscous; three black strigæ on the costa; two spots in the cell; the discocellulars black; three spots in interno-median interspace; a large subbasal spot above inner margin and two small spots beyond it; a spot beyond lower angle of cell; a curved irregular submarginal band. Hind wing orange-yellow.

Hab. Ceylon. *Exp.* 34 millim.

1158. *Digama marchali*, *Guér. Voy. Deless., Hist. Nat.* p. 91, pl. 26, fig. 2; *C. & S.* no. 551.

Digama nebulosa, *Wlk. Cat.* xxxi, p. 233; *C. & S.* no. 552.

Digama marchalii, var. *intermedia*, *Hmps. Ill. Het.* viii, p. 47.

Digama figurata, *Moore, P. Z. S.* 1878, p. 5; *C. & S.* no. 548.

Head, thorax, and fore wing greyish white; the collar, tegulæ, and thorax spotted with fuscous; abdomen orange-yellow, with dorsal and lateral series of black spots. Fore wing with some

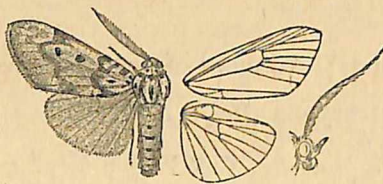


Fig. 333.—*Digama marchali*, ♂. 1.

short fuscous streaks near the base; an irregular antemedial band; a black spot at centre of cell and one on discocellulars; a postmedial fuscous band excurved round end of cell; traces of a submarginal band. Hind wing orange-yellow.

The form *intermedia* has submarginal and marginal prominent bands to fore wing; hind wing with a dark marginal speck at vein 2. *Figurata* has nearly the whole fore wing suffused with fuscous, leaving some grey at base and end of cell, a postmedial band, and slight submarginal streaks. Hind wing with irregular fuscous marks on outer margin.

Hab. Bombay; throughout S. India and Burma. *Exp.* 38 millim.

Species formerly recorded as Indian which is omitted.

Hypsa plana, Wlk., C. & S. no. 524, is from Java only.

ERRATUM.

Page 12, line 10, for "divided into three plumes" read "divided into six plumes."

ALPHABETICAL INDEX.

- abdominalis (Euproctis), 472.
 abjecta (Euproctis), 482.
 aboë (Phassus), 318.
 abruptus (Cossus), 314.
 acaciualis (Rhodoneura), 356.
 Acanthopsyche, 293.
 Acherontia, 67.
 Acherontiinae, 66.
 acinea (Messata), 61.
 aconyta (Metanastria), 408.
 Acozmeryx, 81.
 acronyctoides (Cossus), 305.
 actea (Syntomis), 222.
 actea (Theretra), 100.
 Actias, 13.
 acuta (Turnaca), 137.
 acuta (Zonilia), 91.
 acutipennis (Caustoloma), 367.
 adala (Altha), 397.
 adalifa (Chalcosia), 265.
 Addæa, 353.
 Adixoa, 198.
 Adlullia, 470.
 adolphæi (Bombyx), 59.
 ædea (Heterusia), 262.
 Ægeria, 196.
 ægrota (Pergesa), 91.
 ænescens (Eupterote), 62.
 æsculi (Zeuzera), 310.
 affictitia (Macroglossa), 113.
 affinis (Bombyx), 37.
 affinis (Chalcosia), 266.
 affinis (Eupterote), 54.
 affinis (Syntomis), 223.
 afghana (Zygæna), 231.
 Agalope, 282.
 Aganopis, 496.
 Agape, 498.
 Agaristidæ, 11.
 aglea (Danais), 277.
 Agnidra, 333.
 Akesina, 286.
 alba (Cispia), 493.
 alba (Teldenia), 332.
 Albara, 333.
 albapex (Syntomis), 214.
 albat (Chalcosia), 265.
 albatialis (Dixoa), 355.
 albescens (Dasychira), 449.
 albescens (Rasicota), 304.
 albescens (Stauropus), 149.
 albibasis (Polyploca), 184.
 albicans (Megasoma), 405.
 albicans (Triptogon), 69.
 albicinctum (Piarosoma), 243.
 albicollis (Naprepa), 35.
 albicosta (Polyploca), 184.
 albidisca (Polyploca), 183.
 albifascia (Notodonta), 162.
 albifascia (Pantana), 445.
 albifascia (Pidorus), 255.
 albifasciata (Spatalia), 170.
 albifrons (Syntomis), 216.
 albifurca (Dysodia), 369.
 albifusum (Ceratoneura), 394.
 albigutta (Arguda), 414.
 albimacula (Gargetta), 136.
 albimacula (Histia), 280.
 albipars (Sangatissa), 63.
 albipes (Psyche), 298.
 albipuncta (Miresa), 386.
 albipuncta (Oreta), 349.
 albipuncta (Parasa), 390.
 albipuncta (Macrotarsipus), 194.
 albistriga (Ramesa), 143.
 albivertex (Stauropus), 152.
 albobdentata (Euproctis), 481.
 albobfasciata (Azygophleps), 309.
 albobfasciatus (Phassus), 321.
 albolunulata (Lymantria), 461.
 albonotata (Drepana), 340.
 albopunctata (Euproctis), 481.
 albobstriata (Mardara), 455.
 albus (Imaus), 467.
 alciphron (Hypsa), 502.
 alecto (Chærocampa), 85.
 aliris (Amesia), 272.
 Allata, 168.
 Alompra, 417.
 alompra (Heterusia), 260.
 Alophogaster, 287.
 alterata (Eupterote), 56.
 alterna (Adixoa), 198.
 alternata (Nemacerota), 185.
 alternata (Rhodoneura), 362.
 alternus (Stauropus), 149.
 Altha, 396.
 Alucitidæ, 12.
 Amatissa, 292.
 Ambadra, 136.
 amboinae (Acrosema), 134.
 Ambalyceina, 75.
 Ambulyx, 77.
 Amesia, 272.
 Amicta, 297.
 amena (Euchromia), 228.
 Ampelophaga, 83.
 ampla (Lymantria), 460.
 ampla (Metanastria), 410.

- ampla* (Suana), 406.
Amydona, 421.
anachoreta (Ichthyura), 172.
anada (Dreata), 60.
Anagnia, 496
anastomosis (Ichthyura), 172.
ancea (Acosmeryx), 81.
anceoides (Acosmeryx), 82.
anchora (Pterodecta), 325.
Anchyneura, 447.
ancilla (Nacia), 226.
andamana (Antheræa), 20.
andamana (Hypsa), 502.
andamana (Mahasena), 301.
andamana (Triptogon), 69.
andamanus (Daphnis), 96.
Andraca, 40.
Angonyx, 101.
angulalis (Hypolampus), 366.
angulifera (Lælia), 441.
anguligera (Euproctis), 476.
anguligera (Polyploca), 183.
anna (Saturnia), 22.
annulata (Hyperæschra), 176.
Anomæotes, 286.
Antheræa, 18.
anthereata (Tagora), 57.
Antheua, 145.
Anthrenoptera, 190.
antica (Arestha), 453.
antica (Dasychira), 469.
antica (Euproctis), 472, 479.
anticalis (Rhodoneura), 357.
Anticyra, 144.
Antipha, 471, 494.
antiphates (Euproctis), 478.
antiqua (Orgyia), 436.
Anzabe, 377.
Apela, 168.
aperiens (Syntomis), 221.
aperiens (Thosea), 378.
aperta (Hyperthyris), 370.
Apha, 51.
Aphendala, 377.
apicale (Idonauton), 392.
apicalis (Arna), 484.
apicalis (Euproctis), 478.
apicalis (Fentonina), 148.
apicalis (Gunda), 36.
apicalis (Ocina), 35.
apicalis (Pida), 457.
apicalis (Sphetta), 176.
apicalis (Stauropus), 151.
apicata (Belippa), 400.
apiforme (Trochilium), 188.
Apocalypsis, 107.
apollinaria (Argyris), 352.
Apona, 52.
Aprata, 303.
approximata (Anticyra), 453.
approximata (Syntomis), 210.
apsara (Gazalina), 468.
apus (Macroglossa), 120.
aquila (Macroglossa), 119.
Arachotia, 245.
Aræocera, 244.
Aræogyia, 394.
Arbela, 314.
Arbelidæ, 314.
Arbudæ, 257.
Arctiidæ, 11.
ardens (Microscia), 359.
arenacea (Euproctis), 476.
arenosa (Phalera), 134.
Arestha, 447.
arga (Dasychira), 448.
Argema, 13.
argentata (Chalcusia), 265.
argentata (Spatalia), 170.
argentea (Himala), 468.
argentea (Ichthyura), 176.
argenteipuncta (Habrosyne), 179.
argenteola (Drepana), 338.
argentifera (Callidrepana), 339.
argentifera (Fentonina), 147.
argentifera (Miresa), 386.
argentifera (Spatalia), 169.
argentina (Drepana), 339.
argentina (Parasa), 389.
argentina (Spatalia), 166.
Arguda, 412.
argyrosigna (Oræsia), 176.
argyrosipila (Oræsia), 176.
argyrosipila (Trypanophora), 249.
ariel (Ephemeroidea), 242.
Aristhala, 36.
armata (Habrosyne), 179.
Arna, 471.
Aroa, 437.
arracanensis (Bombyx), 32.
Arrundi moth, 17.
Artaxa, 470.
artina (Syntomis), 210.
Artona, 234.
arundinis (Bombyx), 313.
aryama (Lymantria), 460.
ascetria (Lymantria), 462.
Aschistophleps, 200.
asclepiades (Sphingognatha), 47.
asiaticus (Hyloicus), 123.
asiliformis (Sphinx), 123.
asiliformis (Thyris), 206.
asoka (Zygæna), 230.
aspersata (Chærocampa), 93.
assama (Antheræa), 20.
assamensis (Chærocampa), 90.
assimilis (Eupterote), 55.
assimilis (Macroglossum), 113.
astaroth (Lenyra), 205.
astarte (Melittia), 202.
asylas (Zeuzera), 314.
aterea (Syntomis), 223.
atestacea (Lælia), 443.
atkinsoni (Campylotes), 275.
atkinsoni (Herimba), 325.
atkinsoni (Sciapteron), 192.
atkinsoni (Syntomis), 212.
atkinsoni (Trypanophora), 249.
Atkinsonia, 207.
atlas (Attacus), 15.

atomaria (Euproctis), 484, 494.
atratus (Pidorus), 255.
atratus (Pterothysanus), 431.
atrella (Aroa), 439.
atripunctalis (Rhodoneura), 360.
atrofusa (Lophopteryx), 166.
atropos (Acherontia), 67.
atrostriatus (Hypolampus), 365.
Attacus, 15.
attenuata (Callidula), 324.
aurantiaca (Charnidas), 439.
aurantiaca (Euproctis), 485.
aurantifascia (Aroa), 440.
aurata (Pydna), 141.
auratus (Phassus), 321.
auricincta (Callizygæna), 249.
auricollum (Adixoa), 198.
aurifera (Pergesa), 91.
auriflua (Eupterote), 56.
auriflua (Porthesia), 484.
auripennis (Ambulyx), 77.
auripes (Ichneumeno-
ptera), 194.
auritratata (Spatalia), 170.
aurodisca (Thyrassia), 238.
aurofasciata (Gaurena), 181.
aurogrisea (Scopelodes), 374.
aurora (Lymantria), 464.
austeni (Syntomis), 218.
australinda (Cyclosia), 270.
automedon (Chærocampa), 90.
Auzata, 331.
avicula (Macroglossa), 116.
Azygophleps, 309.

Babula, 296.
baisea (Syntomis), 222.
Balatæa, 234.
Bambalina, 292.
bandura (Cania), 396.
Banisia, 355.
Baradesa, 131.
Barandra, 300.

Barhona, 459.
Baryaza, 446.
basalis (Agalope), 282.
basalis (Amydona), 421.
basalis (Anomæotes), 286.
basalis (Antipha), 452.
basalis (Euproctis), 483.
basalis (Heterocampa), 143.
basalis (Hyperæschra), 164.
basalis (Nataða), 402.
basalis (Perina), 486.
basalis (Pheosia), 159.
basalis (Risoba), 186.
basiflava (Chelura), 284.
basifurca (Cnethocampa), 445.
basimaculata (Philopator), 282.
basiniger (Stauropus), 153.
basistriga (Hyperæschra), 164.
basistriga (Pydna), 142.
basivitta (Olene), 452.
bastialis (Rhodoneura), 357.
batis (Thyatira), 180.
Baziza, 437.
beatrice (Lymantria), 463.
Belgoræa, 396.
belia (Macroglossa), 114.
Belippa, 399.
belis (Macroglossa), 113.
Bembina, 470.
bengalensis (Bombyx), 37.
bengalensis (Macroglossa), 115.
berberisæ (Stauropus), 150.
berinda (Syntomis), 219.
Besaia, 171.
bhaga (Daphnis), 96.
bhana (Dasychira), 451.
Bharetta, 415.
bhascara (Lymantria), 461.
bheroba (Arguda), 413.
Bhima, 404.
bhira (Lasiocampa), 410.
bicarinated (Aspidiotus), 395.
biecincta (Syntomis), 213.
bicolor (Arbudus), 257.
bicolor (Calpe), 176.
bicolor (Leucophlebia), 75.

bicolor (Pantana), 444.
bicolor (Parasa), 390.
bifascia (Euproctis), 475.
bifasciata (Calpe), 176.
bifasciata (Chelura), 283.
bifasciata (Rhopalopsycha), 112.
bigutta (Euproctis), 472.
bigutta (Genusa), 494.
bilinea (Cania), 395.
bilineata (Ambulyx), 80.
bilineata (Drapetodes), 352.
bimaculata (Euproctis), 472.
bimaculata (Lebeda), 406.
binghami (Isbarta), 276.
Bintha, 234.
biocellata (Sphetta), 176.
biocularis (Drepana), 338.
bipars (Acanthopsyche), 293.
bipars (Chadisra), 159.
bipars (Tasema), 236.
bipartita (Euproctis), 482.
bipuncta (Rhodoneura), 360.
bipunctapex (Euproctis), 484.
bipunctata (Andraca), 40.
Bireta, 138.
Birnara, 443.
Birthama, 384.
Birtina, 256.
bisecta (Chærocampa), 88.
bivittata (Lymantria), 466.
bivittata (Strigina), 354.
bivittata (Zeuzera), 310.
blanchardi (Syntomis), 221.
bobi (Phalera), 134.
boerhavia (Sphinx), 86.
boisduvali (Saturnia), 23.
Bombycidae, 31.
bombylans (Macroglossa), 116.
bombylifformis (Melittia), 204.
Bombyx, 32.
Boradia, 286.
Brachartona, 233.
Brachycyrtus, 295.
Brachylia, 305.

- brachypecten (Syntomoides), 211.
 Brachytera, 54.
 bracteata (Drepana), 338.
 bracteata (Miresa), 387.
 bracteata (Rhodoneura), 363.
 brahma (Bombyx), 410.
 Brahmæa, 29.
 Brahmaidæ, 29.
 brevilinea (Tetraphleps), 383.
 brevivitta (Artaxa), 473.
 brotea (Porthetria), 494.
 brunnea (Fentonina), 148.
 brunnescens (Dasychira), 450.
 bubastus (Sphinx), 123.
 bubo (Zenzer), 307.
 bucephala (Phalera), 133.
 buddha (Bombyx), 410.
 burmana (Cricula), 28.
 burmana (Digama), 504.
 busiris (Chærocampa), 89.
 butleri (Hypsa), 499.
 butus (Chærocampa), 93.
 cachara (Saturnia), 24.
 cadambæ (Cossus), 306.
 Cadphises, 275.
 Cadrusia, 447.
 cænosa (Lælia), 440.
 cærulea (Trisuloides), 494.
 cæruleimicans (Sciapteron), 192.
 caliginosa (Eupterote), 54.
 caligramma (Mardara), 455.
 Caligula, 21.
 Callamesia, 277.
 Callartona, 233.
 Callidrepana, 333.
 Callidula, 323.
 Callidulidæ, 322.
 Callitomis, 224.
 Callizygæna, 248.
 Caltura, 492.
 Calymnia, 76.
 Camadena, 366.
 camelaria (Lophopteryx), 166.
 Camptochilus, 351.
 Campylotes, 274.
 cana (Acanthopsyche), 294.
 cana (Thosea), 378.
 canaraica (Eupterote), 58.
 canaraica (Hypsa), 500.
 Candyba, 397.
 Canephorinæ, 302.
 Canerces, 281.
 Canerkes, 281.
 canescens (Lymantria), 152.
 Cania, 395.
 canities (Phineca), 149.
 canningii (Attacus), 16.
 capensis (Duomitius), 314.
 cara (Lymantria), 462.
 Caragola, 489.
 cardinalis (Lælia), 442.
 cardinalis (Milleria), 264.
 carica (Noctua), 502.
 carnecolor (Lymantria), 462.
 carneola (Barhona), 465.
 carneola (Boradia), 286.
 Casama, 445.
 Caschara, 168.
 cashmirensis (Apona), 52.
 cashmirensis (Cossus), 305.
 cashmirensis (Zygæna), 230.
 castanea (Aræogyia), 395.
 castanea (Chærocampa), 92.
 castanea (Mustilia), 38.
 castanea (Odonestis), 426.
 castanea (Oreta), 350.
 castaneæ (Phragmatacia), 313.
 castaneiceps (Spatulifimbria), 391.
 castaneipars (Altha), 396.
 castanoptera (Eupterote), 54.
 castanoptera (Taragama), 405.
 Castniidæ, 10.
 Castorura, 208.
 castrensis (Clisiocampa), 417.
 catamita (Cleosiris), 322.
 catapyrrha (Macroglossa), 117.
 catocalina (Trisuloides), 494.
 catoxantha (Bracharctona), 233.
 caudatus (Himantopterus), 288.
 Caviria, 489.
 Ceira, 138, 140.
 Celeia, 168.
 celerio (Chærocampa), 87.
 celsa (Euproctis), 472.
 cephica (Natada), 381.
 Cephonodes, 120.
 ceramicus (Duomitius), 307.
 Ceratocampidæ, 9.
 Ceratocorema, 200.
 Ceratonema, 393.
 cerbera (Syntomis), 228.
 certhia (Brahmæa), 29, 31.
 Cerura, 155.
 cervina (Basiana), 80.
 cervina (Cifuna), 447.
 cervina (Euproctis), 475.
 cervina (Naprepa), 35.
 cervina (Palirisa), 46.
 cervina (Repena), 442.
 cervina (Saana), 406.
 cervina (Thosea), 379.
 cervinaria (Erosia), 343.
 ceylanica (Orgyia), 436.
 ceylanica (Triptogon), 69.
 Chadisra, 159.
 Chærocampa, 84.
 Chærocampinæ, 81.
 Chærotricha, 470.
 Chalcidica, 307.
 chalciformis (Melittia), 204.
 Chalcoecelis, 392.
 Chalcosia, 264.
 Chalcosiinæ, 246.
 Chalia, 301.
 Chaliinæ, 300.
 Chalioides, 299.
 chalybea (Sura), 206.
 chalybeatus (Phassus), 320.
 champa (Moma), 177.
 Charnidas, 440.
 Chatamla, 289.
 Chatra, 408.
 Chazena, 34.
 cheela (Cnethocampa), 64.
 cheela (Eutricha), 409.
 Chelura, 283.
 Cheromettia, 399.
 cherra (Syntomis), 220.
 Chilena, 416.
 chione (Noctua), 499.
 chiron (Sphinx), 108.
 chlorocera (Syntomis), 218.
 chloroptera (Dasychira), 450.

- chordigera (Oligoclona), 469.
 chortoclora (Cyphanta), 175.
 Chrysartona, 232.
 chrysolopha (Gazalina), 469.
 chrysorrhæa (Euproctis), 471.
 ciada (Beterusia), 252.
 cidosa (Saturnia), 23.
 Cifuna, 446.
 Cilix, 347.
 cinctata (Dasychira), 449.
 cinerascens (Philona), 503.
 cinerea (Acosmeryx), 82.
 cinerea (Argyris), 352.
 cinerea (Nemacerota), 185.
 cingala (Heterusia), 262.
 cingalesa (Antheræa), 18.
 cinnamomea (Aroa), 439.
 cinnamomea (Bharetta), 415.
 cinnamomea (Eupterote), 54.
 circe (Pidorus), 255.
 circinata (Soritia), 253.
 circumdata (Genusa), 444.
 circumdatus (Pidorus), 254.
 Cispia, 492.
 citrina (Artaxa), 473.
 citrina (Eupterote), 62.
 citrinula (Dreata), 64.
 Clania, 291.
 Clanis, 77.
 clara (Aroa), 439.
 clara (Caviria), 490.
 claralis (Letchena), 357.
 clavata (Hypsa), 500.
 Cleapa, 171.
 Clelea, 239.
 Cleosiris, 322.
 clerodendronella (Edematopoda), 207.
 Clisiocampa, 417.
 clotho (Sphinx), 93.
 Cnethocampa, 64.
 Cobanilla, 347.
 coccinea (Snellenia), 207.
 Codane, 268.
 coffea (Zeuzera), 312.
 cognata (Thyatira), 180.
 collaris (Bombyx), 59.
 colon (Charnidas), 442.
 columbaris (Mustilia), 39.
 combinata (Euproctis), 486.
 combusta (Anticyra), 145.
 cometaris (Histia), 280.
 comma (Leucoma), 487.
 comparata (Genusa), 444.
 comparata (Themaca), 476.
 complana (Hypsa), 500.
 complens (Lacida), 478.
 complicata (Dasychira), 447.
 compressa (Bombyx), 347.
 concana (Hypsa), 502.
 conchifera (Brahmtea), 30.
 concolor (Lymantria), 462.
 concolor (Pseudosphinx), 106.
 concolor (Suana), 406.
 conferta (Zeuzera), 310.
 confinis (Syntomis), 223.
 confluens (Risoba), 186.
 confusa (Artona), 236.
 congruens (Melittia), 205.
 conjuncta (Natada), 381.
 consanguis (Ambulyx), 77.
 consimilis (Eupterote), 55.
 consorta (Amatissa), 292.
 conspersa (Aphendala), 402.
 conspersa (Narosa), 398.
 contaminata (Altha), 398.
 contaminata (Eupterote), 58.
 contermina (Syntomis), 219.
 Contheyla, 384.
 contracta (Anthrenoptera), 190.
 contracta (Scopelodes), 375.
 convergens (Natada), 381.
 convolvul (Protoparce), 103.
 Corma, 268.
 cornucopia (Ingura), 176.
 corticalis (Hupodonta), 161.
 corusca (Chalcosia), 266.
 corythus (Macroglossa), 115.
 cosmiana (Susica), 381.
 Cossidæ, 304.
 cossoides (Phalera), 134.
 Cossus, 305.
 costalis (Caviria), 491.
 costalis (Euproctis), 478.
 costalis (Lymantria), 460.
 costalis (Spatalia), 170.
 costicomma (Ichthyura), 173.
 costigera (Gargetta), 135.
 cotesi (Thosea), 380.
 crameri (Clania), 291.
 cratægi (Trichiura), 420.
 cretica (Sphinx), 85.
 creusa (Euchromia), 228.
 creusa (Syntomis), 219.
 Cricula, 28.
 Crinocraspeda, 420.
 crispa (Tetraphleps), 383.
 cristata (Triptogon), 69.
 cristatrix (Ingura), 176.
 crocea (Danais), 276.
 cræsi (Bombyx), 32.
 Cryptothoea, 291.
 cunninghami (Macroglossa), 120.
 cuprea (Amatissa), 292.
 cuprea (Isbarta), 277.
 cuprea (Miresa), 381.
 cuprea (Tascia), 237.
 cuprealis (Rhodoneura), 361.
 cupreata (Ichthyura), 173.
 cupreatus (Heteropan), 256.
 cupreipennis (Eupterote), 54.
 cupreipennis (Syntomis), 210.
 cupreipennis (Tinithia), 199.
 cuprevitta (Sciapteron), 193.
 cupreum (Lophosoma), 237.
 cuprina (Polyploca), 184.
 curvaria (Gargetta), 136.
 curvata (Cnethocampa), 445.
 cyanea (Pintia), 259.
 cyanescens (Aræocera), 244.
 cyaniris (Cephonodes), 123.
 cyanivena (Mulleria), 263.
 cyanocera (Phacusa), 241.
 Cyclidia, 327.
 Cyclosia, 269.
 cygna (Caviria), 489.
 cygna (Redoa), 487.
 Cymatophoridae, 177.

- cymbicorinis* (Redoa), 488.
cynniris (Cephonodes), 123.
cynthia (Attacus), 16.
Cypa, 71.
Cyphanta, 174.
cyrtolophia (Pseudo-sphinx), 105.
cyssea (Syntomis), 213.
cysseoides (Syntomis), 213.

Dactylorhyncha, 470.
Dahira, 77.
dablii (Dilephila), 99.
dalbergiæ (Dasychira), 453.
dama (Noctua), 499.
Damalis, 498.
damascena (Leucophlebia), 75.
Damata, 156.
damodara (Cerura), 155.
damor (Phassus), 319.
daos (Idiopsis), 277.
Daphnis, 94.
Daphnusa, 72.
Daplasa, 458.
Dappula, 290.
Dasaratha, 294.
Dasychira, 447.
Datanga, 323.
dea (Arbela), 315.
decedens (Miresa), 387.
decemvena (Psyche), 300.
decisa (Lasiocampa), 425.
decolor (Cypa), 71.
decorata (Cypa), 71.
decorata (Eupterote), 55.
decorata (Thyatira), 180.
decurrens (Pydna), 139.
decurtata (Arguda), 414.
decussata (Chærotricha), 479.
decur-sata (Striglina), 354.
Deilephila, 97.
deliaria (Argyris), 351.
delineata (Genusa), 444.
delphitaria (Argyris), 352.
Dendrocera, 231.
Dendrophleps, 491.
denotata (Drymonia), 176, 445.
dentata (Cetola), 176.
dentata (Hyperæschra), 165.
dentata (Parasa), 391.

dentatus (Polyptychus), 69.
denticulata (Triæna), 176.
denticulosa (Rhodoneura), 357.
dentilinea (Stauropus), 150.
derasa (Habrosyne), 178.
Deroca, 344.
desgodinsi (Campylotes), 275.
desgodinsi, var. *splendida* (Campylotes), 275.
detecta (Baziza), 439.
detersa (Enome), 460.
deucalion (Ambulyx), 80.
Devanica, 259.
devestita (Lælia), 441.
dharmā (Gangarides), 42.
dharmā (Parasa), 388.
Diabasis, 303.
diabolica (Eupterote), 54.
diana (Chalcosia), 265.
dianæ (Plectropteron), 13.
diaphana (Ectrocta), 33.
diaphana (Goë), 242.
diaphana (Leucoma), 488.
diaphana (Ocinara), 34.
diaphana (Syntomis), 216.
dica (Redoa), 490.
Dicranura, 157.
dicta (Hypsa), 499.
dictæa (Pheosia), 160.
didyma (Sphinx), 108.
diffusa (Eupterote), 59.
Digama, 504.
digramma (Artaxa), 477.
digramma (Euproctis), 477.
dilectula (Ocinara), 34.
Dilephila, 97.
Diludia, 104.
diminuta (Procotes), 239.
Dinara, 144.
diptera (Syntomis), 228.
discalis (Antheua), 145.
discalis (Aroa), 437.
discinota (Euproctis), 479.
discinota (Paravetta), 176.

discinota (Syntomis), 216.
discipilaria (Drepana), 336.
discistriga (Pseudo-sphinx), 105.
discivitta (Artona), 234.
discivitta (Heracula), 459.
discordans (Eupterote), 56.
discrepans (Tagora), 58.
discriminis (Clelea), 240.
disjuncta (Lymantria), 442.
dispar (Pantana), 444.
disparalis (Rhodoneura), 360.
dispersa (Artaxa), 474.
disrupta (Metaschalis), 158.
disrupta (Syntomis), 215.
dissimilis (Eupterote), 55.
distincta (Chalcosia), 267.
Ditrigona, 331.
divaricata (Aphendala), 380.
divaricata (Gastropacha), 429.
divergens (Macroglossa), 117.
divergens (Thosea), 380.
diversipennis (Risoba), 186.
divisa (Apela), 168.
divisa (Dasychira), 452.
divisa (Euproctis), 471.
divisa (Hyboma), 176.
divisa (Leucoma), 488.
divisa (Odonestis), 426.
divisa (Ramesa), 143.
divisa (Syntomis), 215.
Dixoa, 355.
dœnia (Narosa), 399.
dohertyi (Eleysma), 285.
dohertyi (Himantopterus), 288.
dolichoides (Ampelophaga), 84.
dolichus (Elibia), 100.
dolosa (Pandala), 43.
dolosa (Phacusa), 240.
dominia (Hypsa), 499.
dorsalis (Taragama), 405.
dorsatiformis (Melittia), 205.

- doubledayi (Chalia), 301.
drancus (Chærocampa), 87.
Drapetodes, 346.
drataraja (Heterusia), 262.
Dreata, 44.
Drepana, 333.
drepanoides (Cricula), 29.
Drepanulidæ, 326.
dromedarius (Noto-donta), 162.
dubia (Polyploca), 183.
Dudusa, 128.
dulcis (Heterusia), 261.
Duomitus, 307.
duplex (Drepana), 339.
duplexa (Thosea), 379.
Dura, 466.
Durdara, 355.
duvauceli (Psychotoë), 226.
dyras (Polyptychus), 69.
Dysauxes, 226.
Dysodia, 368.
Ectrocta, 33.
edocla (Heterusia), 261.
edwardsi (Attacus), 16.
egens (Hypsa), 501.
ejecta (Notodonta), 176.
Eleysma, 284.
elegans (Chærocampa), 85.
Elibia, 100.
ella (Panacra), 101.
elongata (Callania), 176.
elpenor (Chærocampa), 84.
elwesi (Acanthopsyche), 294.
elwesi (Ambulyx), 79.
emarginata (Oræsia), 176.
emblicalis (Rhodoneura), 360.
emilia (Angonyx), 101.
emittens (Leucophlebia), 75.
emma (Syntomis), 220.
Encaumaptera, 315.
Endoclyta, 318.
Endromiidæ, 10.
Enome, 459.
Ephemeroidea, 242.
Epicopiidæ, 9.
Epiplemidæ, 9.
equestris (Sphinx), 99.
era (Syntomis), 222.
Erasmia, 273.
erebina (Lophura), 110.
erecta (Artaxa), 473.
Eremocossus, 313.
Eressa, 212, 221.
Eretmocera, 208.
Eriocrypta, 496.
ernestina (Corma), 137.
ernestinus (Daphnis), 96.
Ernolatia, 34.
eronioides (Chelura), 284.
erossoides (Syntomis), 220.
erotoides (Gnathothli-bus), 94.
erotus (Chærocampa), 94.
erotus, var. andama-nensis (Chærocampa), 94.
erycinoides (Callidula), 324.
erythrosoma (Syntomis), 223.
erythrosoma (Zygæna), 231.
eson (Chærocampa), 85.
Estigena, 424.
Eterusia, 259.
Euchera, 327.
Euchromia, 226.
Euclea, 347.
Eumeta, 291.
eupatagia (Pydna), 141.
euphorbiæ (Dilephila), 98.
Euphranor, 28.
Euplocia, 495.
Euplœa, 278.
Euproctis, 470.
Eupterote, 54.
Eupterotidæ, 41.
Eurycyrtarus, 299.
eurytion (Melittia), 203.
Euschema, 281.
euschemoides (Canerces), 281.
eusemoides (Erasmia), 254.
Eutricha, 408.
exanthemata (Anthea), 146.
excellens (Odonestis), 410.
exocsa (Drepana), 338.
exocsa (Phalacra), 345.
exclamationis (Lælia), 442.
excurvata (Pheosia), 161.
exigua (Trichia), 494.
Exodomorpha, 208.
extensa (Oreta), 348.
extensa (Rinaca), 22.
extensa (Syntomis), 214.
extrusata (Argyris), 352.
exusta (Ambulyx), 80.
exusta (Rhodoneura), 359.
exusta, var. erecta (Mi-crosca), 359.
fabia (Eupterote), 56.
fagi (Stauropus), 149.
falcata (Rigema), 453.
falcataria (Drepana), 333.
falcipectus (Mustilia), 38.
faro (Macroglossa), 118.
fasciata (Antheræa), 18.
fasciata (Calpe), 176.
fasciata (Digama), 505.
fasciata (Drepana), 335.
fasciata (Eterusia), 253, 260.
fasciata (Eupterote), 56.
fasciata (Lælioides), 441.
fasciata (Lazanda), 186.
fasciata (Lebeda), 409.
fasciata (Lenodora), 423.
fasciata (Pheosia), 160.
fasciata (Pydna), 141.
fasciata (Rhodoneura), 361.
fasciata (Thosea), 379.
fasciatum (Ceratoneura), 394.
fasciatus (Stauropus), 152.
fasciosa (Ampelophaga), 83.
feminula (Mardara), 451.
fenestra (Attacus), 29.
fenestraria (Drepana), 337.
fenestraria (Macrauzata), 330.
fenestrata (Apha), 52.
fenestrata (Durdara), 358.
fenestrata (Leucoma), 489.
fenestrata (Thyridiphora), 371.
fenestrata (Varnia), 368.
fenestrina (Thermesia), 358.
Fentonia, 147.
ferrea (Drepana), 341.
ferrea (Pintia), 258.
ferrifera (Pydna), 142.

- ferrofusa (Rhodoneura), 362.
 ferruginea (Alompra), 418.
 ferruginea (Cheromettia), 399.
 ferruginea (Cypa), 72.
 ferruginea (Ichthyura), 174.
 ferruginea (Lebeda), 410.
 ferruginosa (Lophopteryx), 167.
 fervens (Macroglossa), 112.
 fervida (Syntomis), 217.
 ficus (Hypsa), 594.
 figurata (Digama), 505.
 filipendulae (Zygana), 230.
 fimbriares (Phlossa), 381.
 flabellicornis (Histia), 280.
 flammans (Bharetta), 416.
 flammans (Phauda), 287.
 flammans (Sciapteron), 191.
 flava (Apha), 57.
 flava (Drepana), 340.
 flava (Sesia), 197.
 flavalis (Trypanophora), 250.
 flavescens (Leucoma), 488.
 flavia (Eupterote), 58.
 flavicaudata (Sesia), 197.
 flavicincta (Ichneumeno-
 ptera), 195.
 flavicollis (Eupterote), 59.
 flavicollis (Spheco-
 ptera), 190.
 flavicosta (Phlebohecta), 251.
 flavida (Eupterote), 61.
 flavifrons (Syntomis), 215.
 flavimacula (Dasychira), 451.
 flavimacula (Heteropan), 256.
 flavimaculata (Euproctis), 480.
 flavinata (Euproctis), 475.
 flavipalpus (Ichneume-
 noptera), 195.
 flavipes (Cispia), 493.
 flavipes (Sesia), 198.
 flaviplaga (Arachotia), 245.
 flavistigma (Lophopte-
 ryx), 167.
 flavocincta (Epheme-
 roidea), 242.
 flavomaculata (Heteru-
 sia), 252.
 flavonigra (Euproctis), 485.
 flavosignata (Kosala), 419.
 flavovittata (Arguda), 412.
 floralis (Apha), 52.
 floralis (Cypa), 72.
 florens (Gaurena), 181.
 florescens (Gaurena), 182.
 fo (Pseudosphinx), 104.
 foedus (Eremocossus), 314.
 fola (Proneca), 402.
 formosae (Syntomis), 220.
 fortunatus (Bombyx), 32.
 fratercula (Drapetodes), 346.
 fraterna (Antheraea), 18.
 fraterna (Chaerocampa), 84.
 fraterna (Euchromia), 227.
 fraterna (Euproctis), 477.
 fraterna (Eupterote), 55.
 fraterna (Habrosyne), 178.
 fraterna (Histia), 279.
 fraterna (Murlida), 60.
 fraterna (Susica), 382.
 frena (Panacra), 90.
 fringilla (Macroglossa), 123.
 frithi (Antheraea), 21.
 frontalis (Rabila), 402.
 frontirufa (Arsacia), 176.
 fuciformis (Hemaris), 119.
 fulgens (Metanastria), 409.
 fulgurifera (Tarsolepis), 127.
 fulgurita (Ichthyura), 172.
 fuliginosa (Cyclosia), 263.
 fuliginosa (Lymantria), 463.
 fuliginosa (Tasema), 236.
 fulva (Drepana), 342.
 fulvida (Artona), 235.
 fulvipuncta (Euproctis), 474.
 fumata (Psyche), 300.
 fumifera (Chalcocelis), 392.
 fumosa (Parasa), 390.
 furcula (Cerura), 155.
 fusca (Lenodora), 423.
 fusca (Psyche), 298.
 fuscalis (Phauda), 288.
 fuscescens (Gaurena), 182.
 fuscescens (Phlebohecta), 251.
 fuscescens (Triptogon), 69.
 fuscinervis (Himanto-
 pterus), 288.
 fuscipars (Duomitus), 309.
 fuscipennis (Eretmocera), 208.
 fuscipennis (Ramesa), 143.
 fusiformis (Nioda), 452.
 fusiformis (Syntomis), 210.
 fytchei (Syntomis), 210.
 galbana (Pydna), 140.
 galii (Dilephila), 98.
 gamma (Euproctis), 476.
 gana (Callizygana), 249.
 ganesa (Bombyx), 405.
 Gangarides, 42.
 Ganisa, 49.
 Gargetta, 135.
 Gastropacha, 428.
 Gaugamela, 172.
 Gaurena, 181.
 Gazalina, 468.
 gelatina (Syntomis), 214.
 geminata (Eupterote), 60.
 geminus (Pidorus), 254.
 gemmifera (Spatalia), 169.
 Geometridae, 9.
 georgina (Syntomis), 213.
 gibbosa (Nadata), 130.
 gigantea (Melittia), 204.
 gigantea (Notodonta), 162.
 gigas (Triptogon), 69.
 gilia (Macroglossa), 117.
 glacialis (Agalope), 282.
 glacialis (Chelura), 284.
 Glanycus, 369.
 glaphyralis (Rhodo-
 neura), 359.
 glauca (Isbarta), 276.
 glaucata (Cilix), 347.
 glaucescens (Ganisa), 50.
 glaucopis (Pidorus), 255.
 glaucopoides (Syntomis), 249.
 glaucoptera (Macro-
 glossa), 115.
 gloriosa (Chaerocampa), 91.

ALPHABETICAL INDEX.

515

- Gnathothlibus, 84.
 godartii (Syntomoides), 210.
 Goe, 242.
 Gogana, 471.
 goniatus (Pteroxys), 302.
 gonograpta (Chærocampa), 93.
 gortys (Xylophanes), 87.
 gracile (Sciapteron), 193.
 gracilis (Chærocampa), 85.
 graciosa (Limacodes), 388.
 grandis (Diludia), 105.
 grandis (Lymantria), 465.
 grandis (Melittia), 203.
 grisea (Chatra), 409.
 grisea (Limacodes), 402.
 grisea (Lymantria), 464.
 grisea (Pheosia), 161.
 grisea (Pseudosphinx), 104.
 griseata (Netria), 151.
 griseata (Psyche), 298.
 griseifusa (Chalcusia), 264.
 griseipennis (Eupterote), 55.
 griseotincta (Oreta), 350.
 griseus (Stauropus), 152.
 grotei (Dasychira), 448.
 grotei (Phalera), 134.
 grotei (Saturnia), 22.
 grotei (Sciapteron), 192.
 grotei (Syntomis), 218.
 guerini (Attacus), 17.
 Gunda, 36.
 Gurelca, 109.
 guttata (Euproctis), 477.
 guttifera (Miresa), 386.
 Gynæphora, 436.
 Gynautocera, 278.
 gyra (Eupterote), 56.
 gyrans (Macroglossa), 113.
 Habrosyne, 178.
 hades (Dreata), 45.
 hamifera (Pharambara), 359.
 hamiltoni (Milleria), 264.
 Hanisa, 40.
 Hapigia, 129.
 Harapa, 440.
 Harpyia, 155.
 Hathia, 84.
 hearseyana (Digama), 505.
 hearseyi (Brahmæa), 31.
 helferi (Antheræa), 20.
 helicinoides (Diabasis), 303.
 heliconia (Hypsa), 501.
 heliopsamma (Meso-
 pempta), 353.
 helops (Chærocampa), 92.
 Hemaris, 119.
 hemichroma (Macro-
 glossa), 118.
 hepatica (Mustilia), 39.
 Hepialidæ, 316.
 Hepialiscus, 317.
 Heracula, 458.
 herbifera (Parasa), 390.
 Herdonia, 367.
 Herimba, 325.
 Herpa, 257.
 hespera (Nephele), 108.
 heterogyna (Lælia), 443.
 Heterogynidæ, 10.
 Heteropan, 256.
 Heterusia, 259.
 Heylaertsia, 298.
 hilaris (Parasa), 389.
 himachala (Lophura), 110.
 Himala, 467.
 himalayana (Acantho-
 psyche), 294.
 himalayana (Dasaratha), 294.
 himalayana (Dieranura), 158.
 Himantopterus, 288.
 Hinnaya, 307.
 Hippotion, 84.
 hirsuta (Eupterote), 54.
 Histria, 279.
 histrionicus (Campylotes), 274.
 histrionicus, var. altis-
 sima (Campylotes), 274.
 hockingi (Mahasena), 302.
 hockingii (Parasa), 389.
 hockingii (Saturnia), 23.
 Homœognatha, 504.
 Hondella, 440.
 Hoplitis, 160.
 Horanpella, 54.
 hormenia (Epyrgis), 278.
 horrida (Belippa), 399.
 horsfieldi (Dasychira), 448.
 howra (Artaxa), 473.
 hübneri (Phassus), 318.
 huebneri (Syntomis), 219.
 humeralis (Syntomis), 249.
 Hupodonta, 160.
 huttoni (Saturnia), 24.
 huttoni (Theophila), 37.
 hyala (Amesia), 273.
 hyalina (Agalope), 282.
 hyalina (Deroca), 344.
 hyalina (Drepana), 334.
 hyalina (Syntomoides), 211.
 hyalinata (Drepana), 342.
 hyas (Gurelca), 110.
 hydatina (Syntomoides), 210.
 Hydrusa, 212, 220.
 hylas (Cephonodes), 120.
 Hyloicus, 103.
 hypargyra (Rhodoneura), 357.
 Hyperæschra, 163.
 hyperantheræ (Tara-
 gama), 405.
 Hyperthyris, 370.
 Hyperthyris, 370.
 Hyphorma, 375.
 Hypolamprus, 364.
 hypothous (Daphnis), 95.
 hypoxantha (Rhodo-
 neura), 364.
 Hypsa, 498.
 Hypsidæ, 495.
 hyrtaca (Metanastria), 410.
 Ichneumenoptera, 194.
 Ichthyura, 172.
 icilia (Euproctis), 479.
 icterica (Dabarita), 176.
 idæoides (Chalcusia), 265.
 idæoides (Leucodrepana), 333.
 idalialis (Pyrallis), 357.
 Idonauton, 391.
 ignavus (Eupterote), 55.
 ignescens (Actias), 14.
 ignicauda (Trilochana), 191.
 ignicolle (Trochilium), 189.
 ignifera (Ichneumeno-
 ptera), 195.
 igniflua (Taragama), 405.
 ignita (Dysodia), 368.
 ilita (Dasychira), 468.
 illanta (Euproctis), 473.
 illepidia (Rilia), 478.
 imacon (Syntomoides), 210.
 Imaus, 466.
 imbecilis (Dreata), 55.
 imitans (Isbarta), 277.
 immaculata (Chæro-
 tricha), 479.
 immaculata (Euproctis), 472.

immutata (Eupterote), 56.
 impactella (Eretmocera), 208.
 imperator (MacroGLOSSa), 118.
 impura (Phragmataecia), 313.
 inaequalis (Varnia), 368.
 incandescens (Pseudojana), 48.
 incerta (Lymantria), 460.
 incipiens (Syntomoides), 211.
 incitans (Gadera), 176.
 inclusa (Dasychira), 453.
 incomptaria (Utidava), 478.
 inconcisa (Euproctis), 474.
 inconclusa (Deroca), 344.
 incongruens (Cypa), 71.
 inconspicua (Euplocia), 496.
 increta (Anceryx), 105.
 indecisa (Culasta), 176.
 indeterminata (Casama), 446.
 indica (Clisiocampa), 417.
 indica (Gonophora), 178.
 indica (Ichthyura), 174.
 indica (Melittia), 203.
 indica (Pydna), 137.
 indica (Varmina), 435.
 indica (Zeuzera), 311.
 indicus (Hepialus), 317.
 indicus (Smerinthus), 69.
 indicus (Stauropus), 149.
 inexacta (Pseudosphinx), 104.
 inextricata (Euscotia), 176.
 inferma (Triplophleps), 393.
 infernalis (Sataspes), 121.
 ingens (Gargetta), 136.
 innotata (Drepana), 335.
 innotata (Zeuzera), 313.
 inobtrusa (Lasiocampa), 425.
 inops (Hypsa), 503.
 inordinata (Sybrida), 176.
 inornata (Amatissa), 292.
 inornata (Miresa), 386.
 inquilinus (Phalæna), 87.
 inquinata (Æceticoides), 293.
 insignata (Argyris), 330.
 insignis (Chærocampa), 89.

insipida (MacroGLOSSa), 117.
 insolitus (Glanycus), 369.
 insueta (Syntomis), 213.
 insulana (Digama), 505.
 intacta (Hypsa), 499.
 intensa (Taragama), 405.
 interjecta (Pantana), 445.
 interrupta (MacroGLOSSa), 119.
 intimalis (Pharambara), 365.
 invalida (Eupterote), 54.
 iole (Saturnia), 17.
 iratus (Debos), 289.
 irius (Bombyx), 29.
 irrorata (Daplasa), 458.
 irrorata (Heterocampa), 163.
 irrorata (Mardara), 455.
 irrorata (Somena), 483.
 irrorata (Trabala), 422.
 isabella (Parasa), 390.
 Isbarta, 276.
 isocyma (Odonestis), 427.
 Isoples, 84.
 javana (Hypsa), 502.
 javana (Ichthyura), 172.
 javanica (Gunda), 36.
 javanica (Triptogon), 69.
 jucunda (Sciapteron), 192.
 junctifera (Charnidas), 438.
 junctura (Birthama), 384.
 junctura (Ceira), 142.
 Junonia (Ambulyx), 79.
 justiciæ (Artaxa), 483.
 juvenis (Pulomacra), 442.
 kamadena (Menapia), 139.
 Kanchia, 487.
 kandyia (Harpyia), 155.
 kargalica (Euproctis), 494.
 kashghara (Ptilophora), 177.
 katinka (Loepa), 25.
 kausalia (Dasychira), 448.
 khasiana (Langia), 73.
 khasiana (Phacusa), 241.
 khasiana (Sphingognatha), 46.
 khasiana (Syntomis), 214.
 khasiana (Trichiura), 420.

kindermanii (Smerinthus), 123.
 kingii (MacroGLOSSum), 120.
 kirbyi (Æceticus), 290.
 Klaboana, 269.
 knyveti (Antheræa), 19.
 kœchlini (Sphinx), 97.
 komarovi (Deilephila), 123.
 Kophene, 292.
 Kosala, 418.
 kuluana (Melittia), 204.
 Lachana, 435.
 lachesis (Acherontia), 67.
 Lacides, 498.
 lactea (Euproctis), 494.
 lactea (Lælioides), 441.
 lactea (Ocinara), 34.
 lactea (Redoa), 488.
 lacteata (Hypsa), 500.
 lacteola (Altha), 397.
 ladacensis (Lachana), 435.
 Lælia, 440.
 Lælioides, 440.
 læta (Odonestis), 425.
 læta (Parasa), 389.
 lævis (Fentonia), 148.
 lahora (Ambulyx), 78.
 lalæana (Belippa), 399.
 lamprolepis (Megerceramis), 167.
 lampropoda (Aschistophleps), 200.
 lanaris (Pterothysanus), 430.
 lanceolata (Rilia), 452.
 Langia, 73.
 Lansdownia, 291.
 lanuginosa (Apha), 65.
 Lasiocampidæ, 402.
 Latagia, 310.
 lathyrus (Deilephila), 98.
 laticilia (Pterothysanus), 430.
 latifascia (Cleapa), 172.
 latifascia (Euproctis), 472.
 latifascia (Nyssia), 388.
 latipennis (Metanastria), 409.
 latipennis (Pintia), 259.
 lativitta (Euproctis), 481.
 lativitta (Heterusia), 260.
 lativittata (Eupterote), 58.
 latreillii (Syntomis), 228.
 laura (Euchromia), 228.
 Laurion, 254.
 layardi (Daphnis), 96.

- layardii (Eumeta), 291.
 Lebeda, 407.
 leithiana (Artaxa), 473.
 Lenodora, 422.
 Lenyra, 205.
 leopardina (Abraxas), 284.
 lepcha (Lymantria), 465.
 lepcha (Macroglossa), 116.
 lepcha (Syntomis), 217.
 lepida (Parasa), 388.
 leptalina (Soritia), 252.
 Leptojana, 54.
 Letchena, 355.
 lethe (Acherontia), 67.
 leto (Saturnia), 14.
 Leucodrepana, 333.
 Leucoma, 487.
 leucomelas (Codane), 268, 289.
 leuconeura (Hypsa), 499.
 leuconotus (Duomitus), 308.
 Leucophlebia, 74.
 leucosoma (Callitomis), 225.
 leucotrigona (Melanothrix), 44.
 levis (Anomceotes), 286.
 lewini (Clania), 291.
 lewisii (Chærocampa), 84.
 libera (Syntomis), 223.
 lichas (Empyreuma), 123.
 lichenea (Gaurena), 182.
 lida (Ocina), 35.
 lidderdalii (Metanastria), 410.
 lignaria (Panacra), 88.
 ligneus (Duomitus), 307.
 ligniperda (Cossus), 305.
 lignosa (Zana), 144.
 lilacina (Drepana), 336.
 lilacina (Lælia), 441.
 Limacodidæ, 371.
 limbata (Artaxa), 483.
 limulus (Fumea), 304.
 lindia (Saturnia), 23.
 lineata (Dasychiris), 448.
 lineata (Dreata), 60.
 lineata (Leucophlebia), 74.
 lineata (Odonestis), 427.
 lineola (Strigina), 354.
 lineolata (Dinara), 145.
 lineosa (Chærocampa), 93.
 lineosa (Eupterote), 60.
 lineosa (Palirisa), 45.
 Liparis, 459.
 Liparopsis, 154.
 literata (Risoba), 186.
 Lithosiina, 11.
 lithosioides (Baradesa), 131.
 litura (Lælia), 443.
 liturata (Ambulyx), 77.
 liturata (Cerura), 155.
 livornica (Dilephila), 97.
 lobata (Durdara), 358.
 lobulatus (Hypolamprus), 365.
 loceusalis (Rhodoneura), 358.
 Locharna, 457.
 locuples (Cifuna), 446.
 Loepa, 25.
 loesa (Parasa), 379.
 lohor (Belippa), 400.
 lola (Salassa), 27.
 longicauda (Acanthopsyche), 294.
 longipennis (Damata), 157.
 longipennis (Eriocrypta), 497.
 longipennis (Norraca), 137.
 longipennis (Tasema), 236.
 longipennis (Toxoides), 186.
 longivitta (Pydna), 139.
 Lopera, 471.
 Lophopteryx, 166.
 Lophosoma, 237.
 lucasi (Chærocampa), 92.
 lucia (Eupterote), 56.
 lucina (Syntomis), 214.
 lugubris (Theophila), 38.
 luna (Actias), 13.
 lunata (Euproctis), 472.
 lunata (Lymantria), 494.
 lunula (Attacus), 17.
 luridivitta (Ramesa), 143.
 lusca (Lebeda), 410.
 luteata (Macroglossa), 114.
 luteifascia (Euproctis), 483.
 luteifascia (Syntomis), 218.
 luteola (Spica), 343.
 lutescens (Euproctis), 472.
 lycetus (Chærocampa), 87.
 lydia (Syntomis), 221.
 Lymantria, 459.
 Lymantriidæ, 432.
 mackwoodi (Aprata), 304.
 Macrauzata, 330.
 Macrocoilix, 329.
 Macroglossa, 112.
 Macroglossina, 109.
 macroglossoides (Gurelca), 110.
 Macroglossum, 112.
 macromera (Chærocampa), 84.
 macromera (Diludia), 105.
 Macropectra, 376.
 Macrotaresipus, 194.
 maculata (Cadphises), 275.
 maculata (Corma), 268.
 maculata (Deroca), 344.
 maculatus (Stauropus), 149.
 maculifera (Ambulyx), 77.
 maculosa (Lymantria), 465.
 manas (Actias), 14.
 magna (Euchromia), 227.
 magna (Euproctis), 484.
 magnifica (Heterusia), 261.
 mahananda (Trabala), 421.
 Mahanta, 401.
 Mahasena, 301.
 Mahoba, 454.
 major (Aroa), 437.
 major (Chærocampa), 93.
 major (Cleosiris), 322.
 malabarius (Phassus), 321.
 malaccana (Nyssia), 395.
 Manatha, 298.
 mandana (Euproctis), 480.
 marchali (Digama), 505.
 marchalii, var. intermedia (Digama), 505.
 marcidus (Hepialus), 317.
 Mardara, 454.
 marginalis (Euproctis), 485.
 marginata (Euproctis), 480.
 marginata (Lymantria), 463.
 marginata (Oreta), 351.
 marginata (Pompelon), 271.

- marginipunctalis* (*Microsca*), 359.
marmorata (*Ratarda*), 494.
marmorea (*Hypsa*), 498.
marmorea (*Oxicesta*), 176.
marmorealis (*Rhodoneura*), 357.
marsdeni (*Syntomis*), 219.
Marumba, 68.
maruta (*Dasychira*), 450.
masoni (*Syntomis*), 215.
massurensis (*Triptogon*), 69.
masuriensis (*Gurelca*), 110.
mathura (*Lymantria*), 464.
maxima (*Aroa*), 437.
media (*Neera*), 388.
medusa (*Acherontia*), 67.
Megaceramis, 167.
melæra (*Syntomis*), 216.
melanomera (*Diludia*), 105.
melanophila (*Euproctis*), 471.
melanosticta (*Contheyla*), 385.
Melanothrix, 44.
melissoides (*Aschistophleps*), 201.
Melittia, 202.
memblaria (*Euplocia*), 496.
Menapia, 138.
mendosa (*Dasychira*), 452.
mesankooria (*Antheræa*), 20.
Mesopempta, 353.
Messata, 54.
metachloros (*Pintia*), 258.
metagonaria (*Phalacra*), 345.
metallica (*Chærocampa*), 89.
metallica (*Laurion*), 255.
metallicum (*Sciapteron*), 193.
metamelana (*Euproctis*), 471.
Metanastria, 408.
metaphæa (*Pydna*), 140.
metarhoda (*Lymantria*), 465.
Metaschalis, 158.
Metusa, 296.
micacea (*Nyssia*), 375.
micacealis (*Rhodoneura*), 362.
micans (*Lymantria*), 462.
microchilus (*Syntomoides*), 212.
Microlophia, 101.
Micropterygida, 10.
Microsca, 355.
mirosticta (*Damata*), 157.
midama (*Callamesia*), 278.
miles (*Pidorus*), 255.
Milleria, 262.
minax (*Bethura*), 375.
minax (*Hyphorma*), 375.
mineus (*Duomitus*), 309.
minima (*Phragmataecia*), 313.
minimus (*Daphnis*), 97.
minor (*Acanthopsyche*), 294.
minor (*Callidula*), 323.
minor (*Chærocampa*), 93.
minor (*Eupterote*), 60.
minor (*Phragmataecia*), 313.
minor (*Syntomis*), 213.
minor (*Syrastrena*), 415.
minus (*Sphinx*), 123.
minuta (*Sesia*), 196.
minuticornis (*Calpe*), 176.
minutissima (*Macroplectra*), 376.
mirabilis (*Chærocampa*), 93.
miranda (*Loepa*), 25.
Miresa, 385.
mirza (*Parasa*), 389.
mitaria (*Drapetodes*), 346.
moderata (*Euplocia*), 496.
modesta (*Geometra*), 347.
modesta (*Nisaga*), 63.
modesta (*Sphinx*), 69.
modulata (*Kosala*), 419.
mœrens (*Dasychira*), 452.
Moffatia, 302.
möller (*Platyzygæna*), 243.
mollifera (*Eupterote*), 57.
mollis (*Eupterote*), 58.
mollis (*Miresa*), 395.
monacha (*Lymantria*), 459.
Monoschalis, 238.
montana (*Syntomis*), 219.
monycha (*Hypsa*), 499.
moorei (*Acanthopsyche*), 296.
moorei (*Cadphises*), 276.
moorei (*Notodonta*), 163.
moorei (*Ocinara*), 35.
moorei (*Sphetta*), 176.
moorei (*Trianeura*), 221.
mori (*Bombyx*), 32.
morpheus (*Sphinx*), 108.
morta (*Acherontia*), 67.
mota (*Syntomis*), 210.
muelleri (*Euproctis*), 479.
Muga, 20.
multifasciata (*Callitomis*), 225.
multigutta (*Syntomis*), 220.
multipunctata (*Rhodoneura*), 356.
multistrigata (*Zeuzera*), 311.
munda (*Rhodoneura*), 364.
mundus (*Imaus*), 467.
muricolaria (*Cyclidia*), 328.
murina (*Tagora*), 48.
murinus (*Hepialus*), 317.
Murlida, 54.
musa (*Syntomis*), 222.
muscosa (*Labanda*), 186.
muscularia (*Drepana*), 336.
Mustilia, 38.
mutans (*Eupterote*), 56.
mydon (*Chærocampa*), 90.
mylitta (*Antheræa*), 18.
myrrhina (*Chalcusia*), 265.
myrsusalis (*Rhodoneura*), 357.
myrtæa (*Rhodoneura*), 358.
mysticata (*Macrocilix*), 329.
Nacila, 226.
Nadata, 130.
nævina (*Rhodoneura*), 357.
naga (*Acosmeryx*), 83.
nagaensis (*Gargetta*), 135.
Nagoda, 400.
Nagunda, 459.
nana (*Pydna*), 140.
nanda (*Metanastria*), 409.

- nandina (*Estigena*), 424.
 Naprepa, 34.
 nararia (*Natada*), 381.
 Narosa, 398.
 Natada, 380.
 navigatorum (*Azasia*), 354.
 Neæra, 387.
 nebulosa (*Antheræa*), 18.
 nebulosa (*Digama*), 505.
 nebulosa (*Hypsa*), 501.
 negrita (*Euproctis*), 471.
 nelcinna (*Atossa*), 289.
 Nemacerota, 185.
 Neochera, 498.
 Neoris, 21.
 neoterica (*Codane*), 268.
 nepalensis (*Hepialiscus*), 317.
 nepcha (*Melittia*), 205.
 Nephela, 108.
 nerii (*Daphnis*), 94.
 nervosa (*Oligoclona*), 468.
 nessus (*Theretra*), 99.
 nessus, var. *rubicundus* (*Chærocampa*), 99.
 Netria, 149.
 neutra (*Natada*), 381.
 newara (*Loepa*), 26.
 newara (*Melittia*), 203.
 newara (*Syntomis*), 217.
 nicobarica (*Hypsa*), 499.
 nicobariensis (*Clanis*), 79.
 Niganda, 138.
 niger (*Duomitus*), 307.
 nigra (*Lymantria*), 463.
 nigra (*Psyche*), 299.
 nigra (*Syntomis*), 221.
 nigra (*Tasema*), 237.
 nigralba (*Oligophlebia*), 201.
 nigrescens (*Artona*), 235.
 nigrescens (*Cyclosia*), 269.
 nigribasalis (*Soritia*), 253.
 nigribasis (*Hyperæschra*), 165.
 nigricans (*Eupterote*), 54.
 nigricans (*Nagoda*), 401.
 nigriceps (*Tagora*), 48.
 nigricilia (*Redoa*), 488.
 nigrifasciata (*Macroglossa*), 115.
 nigripennis (*Euproctis*), 481.
 nigrivula (*Dasychira*), 451.
 nigrofasciata (*Pydna*), 142.
 nigrogrisea (*Sydiva*), 186.
 nigromaculatus (*Cossus*), 305.
 nigropuncta (*Pydna*), 142.
 nigroscripta (*Heterocampa*), 445.
 nigroviridis (*Clelea*), 240.
 nilgira (*Histia*), 280.
 nilgirensis (*Diabasis*), 303.
 nilgirica (*Dasychira*), 448.
 nilgirica (*Eupterote*), 58.
 nilgirica (*Tetraphleps*), 383.
 Nioda, 447.
 Nisaga, 62.
 nitens (*Rhodoneura*), 359.
 nivalia (*Miresa*), 387.
 nivea (*Altha*), 397.
 nivea (*Leucodrepana*), 333.
 niveiceps (*Nadata*), 130.
 niveosparsa (*Dasychira*), 449.
 nivimacula (*Callizygæna*), 248.
 nobilis (*Dudusa*), 128.
 nobilis (*Lebeda*), 407.
 noblei (*Pterothysanus*), 431.
 noblei (*Sciapteron*), 192.
 Noctuidæ, 11.
 nodicornis (*Hapigia*), 129.
 Nolina, 11.
 Norasuma, 36.
 Norraca, 137.
 notabilis (*Melittia*), 204.
 notata (*Anaxila*), 479.
 notata (*Aphendala*), 402.
 notata (*Pydna*), 140.
 Notioptera, 240.
 Notodonta, 162.
 Notodontidæ, 124.
 Notolophus, 436.
 nuda (*Perina*), 486.
 nudilineata (*Psyche*), 298.
 Numenes, 455.
 Nycteolina, 11.
 nycteris (*Rhopalopsyche*), 111.
 nyctiphanes (*Pseudosphinx*), 105.
 nymphaliaris (*Melanothrix*), 44.
 obfuscata (*Lymantria*), 460.
 obliqua (*Birithama*), 384.
 obliqua (*Hapigia*), 129.
 obliqua (*Macrosila*), 105.
 obliqua (*Tyracona*), 186.
 obliquialis (*Rhodoneura*), 355.
 obliquaria (*Soritia*), 254.
 obliquifascia (*Birithama*), 384.
 obliquifascia (*Metanastria*), 412.
 obliquilinea (*Leucodrepana*), 333.
 obliquilinea (*Oreta*), 349.
 obliquiplaga (*Fentonia*), 148.
 oblita (*Zeuzera*), 312.
 obliterans (*Perigonia*), 108.
 obscura (*Macroglossa*), 114.
 obscuralis (*Hypolampus*), 365.
 obscurata (*Corma*), 268.
 obscuripennis (*Macroglossa*), 116.
 obscurus (*Attacus*), 17.
 obsoleta (*Artaxa*), 473.
 obsoleta (*Lymantria*), 461.
 obstructa (*Risoba*), 186.
 obtusa (*Oreta*), 349.
 ocellaris (*Daphnusa*), 72.
 ocellata (*Argyris*), 352.
 ocellata (*Natada*), 382.
 ochracea (*Charnidas*), 438.
 ochracea (*Gunda*), 36.
 ochracea (*Oxyplax*), 376.
 ochracea (*Pydna*), 140.
 ochrea (*Callidrepana*), 340.
 ochreipennis (*Drepana*), 335.
 ochreipuncta (*Syntomis*), 222.
 ochreus (*Heteropan*), 256.
 ochripes (*Caviria*), 490.
 ochripicta (*Antheræa*), 18.
 ochripicta (*Eupterote*), 56.
 ochsenheimeri (*Syntomis*), 228.
 Ocinar, 34.
 octopunctata (*Heterusia*), 252.

- octopunctata (Sphinx), 86.
ocularis (Orgyia), 436.
ocypete (Fentonia), 148.
ocys (Hippotion), 87.
Odagra, 440.
Odonestis, 425.
Æceticinæ, 290.
Æceticoides, 293.
Æceticus, 290.
Ædematopoda, 207.
œnone (Syntomis), 216.
Æona, 408.
Oiketicoides, 293.
Oiketicus, 290.
oldenlandiæ (Chærocampa), 87.
olearia (Dasychira), 451.
Olene, 447.
Oligoclona, 468.
Oligophlebia, 201.
oligosticha (Rhodoneura), 362.
olivacea (Chærocampa), 91.
olivacea (Cilix), 352.
olivascens (Soritia), 252.
olivescens (Antheræa), 18.
ommatiæforme (Trochilium), 188.
ophideroides (Calpe), 176.
opis (Macroglossa), 113.
opponens (Arunda), 176.
opponens (Lebeda), 408.
orbicularis (Peridrome), 497.
orbicularis (Polyploca), 183.
orbifer (Stauropus), 152.
orbifera (Daphnusa), 72.
orbiferata (Macrocilix), 330.
Oreta, 347.
Orgyia, 436.
oriens (Triptogon), 69.
orientalis (Euchromia), 227.
orientalis (Macroglossa), 115.
orientalis (Philampelus), 92.
orientalis (Protoparce), 103.
ornata (Bomochroa), 58.
ornea (Ambulyx), 80.
orphanina (Drepana), 337.
Orthocraspeda, 393.
orthograptæ (Calpe), 176.
Orvasca, 471.
osacesalis (Herdonia), 367.
Osca, 355.
ovifera (Durdara), 358.
Oxyplax, 376.
Pachyjana, 54.
Pachythyris, 368.
pagana (Ambulyx), 80.
Palimpsestes, 182.
Palirisa, 45.
pallicosta (Chærocampa), 94.
pallida (Amydona), 421.
pallida (Apona), 52.
pallida (Dactylorhyncha), 470.
pallida (Drepana), 334.
pallida (Ganisa), 50.
pallida (Hyperæschra), 164.
pallida (Lælia), 441.
pallida (Nerice), 172.
pallida (Pydna), 140.
pallida (Rhodoneura), 359.
pallida (Susica), 377.
pallida (Tagora), 47.
pallidalæ (Cossus), 306.
pallidifascia (Stauropus), 151.
pallidum (Megasoma), 405.
palpalis (Scopelodes), 375.
Palpifer, 316.
Panacra, 84.
Pandala, 43.
pandya (Ganisa), 50.
pannosa (Zaranga), 146.
panopus (Calymnia), 76.
Pantana, 443.
panthona (Cyclosia), 270.
paphia (Antheræa), 18.
paphos (Noctua), 501.
papilionaria (Gynaotocera), 279.
papilionaris (Cyclosia), 269.
Parasa, 387.
pardalis (Estigena), 424.
pardicolor (Zenzeræ), 315.
parivala (Phalera), 133.
partita (Numenes), 456.
parvipunctus (Cossus), 306.
parvula (Cyclosia), 269.
passalis (Syntomis), 219.
pastoralis (Parasa), 389.
patrana (Drepana), 338.
patrana (Numenes), 456.
patula (Tagora), 46.
patulata (Cyclidia), 328.
paucipunctata (Zeuzera), 311.
pauperatus (Hepialus), 317.
pavaca (Oreta), 350.
Pavonia, 21.
pavonica (Calymnia), 76.
pectinicornis (Chalcusia), 265, 266.
pectoralis (Syntomis), 224.
Pegella, 459.
pellecta (Melittia), 202.
pelona (Artaxa), 477.
perdica (Dioptis), 289.
perdix (Dasychira), 450.
perfecta (Panacra), 89.
perfecta (Redoa), 488.
perhamata (Drepana), 336.
Peridea, 162.
Peridrepana, 333.
Peridrome, 496.
Perina, 486.
permutata (Eupterote), 56.
pernyi (Antheræa), 29.
perotteti (Saturnia), 20.
persecta (Hypsa), 500.
persimilis (Eupterote), 54.
perspicua (Attacus), 29.
petosiris (Phalæna), 60.
Phacusa, 240.
Phalaora, 345.
phalanaria (Brachytera), 60.
phalaris (Ambulyx), 79.
Phalera, 133.
Pharambara, 355.
Phassus, 318.
Phauda, 237.
Phaudinæ, 285.
phegea (Syntomis), 212.
Pheosia, 160.
Philona, 498.
Philopator, 281.
Phlebohecta, 251.
Phlossa, 380.
Phocoderma, 380.
phenyx (Sphinx), 88.
phorcus (Melittia), 204.
Phragmataecia, 312.
pyrrhula (Macroglossa), 113.

Piarosoma, 243.
piceipennis (Treptogon), 69.
pictus (Pterothysanus), 431.
picus (Sphinx), 120.
Pida, 457.
Pidorus, 254.
pieridoides (Isbarta), 277.
pileata (Psyche), 299.
pinastri (Anceryx), 105.
pinastri (Hyloicus), 123.
pinastrina (Sphinx), 86.
pinastrina (Xylophanes), 88.
pini (Saturnia), 21.
Pintia, 258.
pitmani (Euchera), 328.
placida (Ambulyx), 77.
placida (Horanpella), 60.
placida (Lebeda), 409.
plagiata (Euproctis), 480.
plagiata (Lebeda), 410.
plagidotata (Mardara), 454.
plagifera (Microsca), 358.
plagifera (Odonestis), 427.
plaginota (Hypsa), 502.
plagiophleps (Acanthopsyche), 296.
plagiosa (Habrosyne), 179.
plagiviridis (Stauropus), 153.
plana (Acanthopsyche), 296.
plana (Aroa), 438.
plana (Bombyx), 35.
plana (Euproctis), 479.
plana (Ganisa), 49.
plana (Hypsa), 506.
platycerata (Anisodes), 346.
Platythyris, 368.
Platyzygæna, 243.
Plectropteron, 13.
plumbeola (Clelea), 240.
plumicauda (Moffatia), 303.
plumipes (Eupterote), 61.
plumosa (Apona), 53.
plumosa (Rachia), 132.
plusiata (Celeia), 169.
plusioides (Spatalia), 170.
pluto (Sphinx), 86.
politula (Eressa), 222.
polymena (Euchromia), 227.
Polyploca, 182.
Polyptychus, 68.

Pompelon, 271.
porphyria (Daphnusa), 73.
Porsica, 135.
Porthesia, 484.
Porthetria, 459.
postalba (Artona), 234.
postalbida (Liparopsis), 154.
postcristatum (Cerato-corema), 200.
postexcisa (Zeuzera), 311.
posthyalina (Aræocera), 244.
postica (Ceira), 142.
postica (Drepana), 337.
postica (Euproctis), 472.
postica (Ganisa), 49.
postica (Orgyia), 436.
postica (Thiacidas), 445.
postincisa (Euproctis), 474.
postvitta (Artona), 234.
potatoria (Odonestis), 425.
pramestra (Lymantria), 462.
Pranila, 191.
prasana (Cerura), 156.
prasina (Amydona), 421.
pretiosa (Chalcosia), 267.
pretiosa, var. albina (Chalcosia), 267.
primularis (Agalope), 282.
primularis (Eupterote), 59.
primulina (Herpa), 257.
princeps (Artaxa), 476.
princeps (Edematopoda), 207.
Prismosticta, 51.
privata (Hypsa), 503.
procera (Phalera), 134.
processionea (Cnethocampa), 64.
Procodeca, 440.
Procotes, 239.
producta (Hypsa), 503.
prominens (Risoba), 186.
promittens (Antipha), 494.
properta (Phacusa), 241.
propexa (Contheyla), 385.
Protoparce, 103.
provocans (Oræsia), 176.
proxima (Macroglossa), 114.
prunicolor (Drepana), 337.

prunosa (Chærocampa), 87.
pryeri (Attacus), 16.
pryeri (Eumeta), 291.
Psalis, 447.
Pseudojana, 48.
Pseudomesa, 455.
pseudonaga (Acosmeryx), 82.
Pseudosesia, 191.
Pseudosphinx, 104.
Psyche, 297.
Psychidæ, 289.
Psychinæ, 292.
Psychoidinæ, 303.
Psichotoë, 225.
Pterodecta, 324.
Pteroma, 296.
Pterophoridae, 12.
Pterothysanidæ, 430.
Pterothysanus, 430.
Pteroxys, 302.
pudibunda (Dasychira), 447.
pudica (Dasychira), 449.
pudicula (Rhodoneura), 355.
pudorinus (Smerinthus), 80.
puellaris (Chærocampa), 87.
pulchella (Erasmia), 273.
pulchella (Heterusia), 252.
pulcherrima (Drepana), 339.
pulcherrima (Pheosia), 161.
pulehra (Antheræa), 18.
pullata (Callænia), 176.
pulligonis (Cania), 396.
pumilio (Lophura), 111.
punctata (Candyba), 397.
punctata (Nacila), 226.
puncticilia (Cispia), 493.
punctifascia (Cispia), 492.
punctimargo (Phassus), 319.
punctivenata (Chærocampa), 93.
punica (Parasa), 389.
pura (Perina), 486.
purpurascens (Callar-tona), 233.
purpurascens (Estigena), 426.
purpurascens (Phassus), 319.
pusilla (Artaxa), 475.
pusilla (Azygophleps), 310.
pusilla (Gurelca), 111.

- pusilla (Lymantria), 463.
 pustulifera (Trisula), 447.
 Pydna, 138.
 pygmæa (Euproctis), 475.
 pyraliata (Durdara), 358.
 Pyralidæ, 11.
 pyraliformis (Danaka), 176.
 pyretorum (Saturnia), 23.
 pyriformis (Odonestis), 427.
 pyrianiata (Anisodes), 354.
 pyrrhochroma (Aroa), 439.
 quadrangularis (Amicta), 297.
 quadrangularis (Chærotricha), 480.
 quadricincta (Bombyx), 408.
 quadricolor (Lophosoma), 237.
 quadrifascia (Syntomis), 215.
 quadrifasciata (Chalcossia), 266.
 quadrifasciata (Messata), 61.
 quadrilinea (Mahanta), 401.
 quadrimaculata (Bracharctona), 233.
 quadrinotata (Arbela), 314.
 quadriplagiata (Pseudomesa), 456.
 quadripunctata (Dendrocera), 231.
 quadripunctata (Drepana), 341.
 quaterna (Sphinx), 108.
 quercifolia (Gastropacha), 428.
 quinarina (Drepana), 335.
 quinquecincta (Sesia), 196.
 Rachia, 131.
 Radhica, 412.
 rafflesii (Chærocampa), 85.
 raja (Heterusia), 259.
 rajah (Pachythyrus), 368.
 Ramesa, 142.
 rana (Euproctis), 482.
 rangoonensis (Sciapteron), 192.
 rara (Gynautocera), 279.
 rara (Thosea), 380.
 Ratarda, 493.
 raya (Phalera), 134.
 recta (Metanastria), 411.
 recta (Thosea), 378.
 rectifascia (Eupterote), 58.
 rectifascia (Macroglossa), 118.
 rectificata (Euchera), 328.
 rectilinea (Arguda), 414.
 rectilinea (Triptogon), 69.
 rectistria (Oræsia), 176.
 Redoa, 487.
 refulgens (Chrysartona), 232.
 regulus (Macroglossa), 112.
 religiosæ (Bombyx), 37.
 remicauda (Tarsolepis), 127.
 renalis (Polyploca), 183.
 renigera (Aganais), 496.
 renominata (Euproctis), 471.
 repanda (Metanastria), 411.
 repanda (Parasa), 388.
 repanda (Sphécodoptera), 189.
 Repena, 440.
 repugnans (Risoba), 186.
 restitura (Ichthyura), 174.
 reticulalis (Rhodoneura), 356.
 reticulata (Lagina), 354.
 reticulata (Pharambara), 361.
 reticulata (Thermesia), 354.
 reticulatum (Camptochilus), 351.
 Retina, 251.
 retractatum (Ceratonema), 394.
 rhabdophora (Acanthopsyche), 297.
 Rhamphoschisma, 112.
 Rhaphidognatha, 234.
 rhebus (Euchromia), 228.
 rhesus (Chærocampa), 92.
 rhoda (Euproctis), 473.
 Rhodia, 25.
 rhodina (Lymantria), 461.
 Rhodoneura, 355.
 rhodope (Papilio), 280.
 rhodoptera (Ambulyx), 77.
 Rhodosoma, 122.
 Rhopalopsyche, 111.
 Ricine, 440.
 ricini (Attacus), 17.
 ridens (Polyploca), 182.
 Rilia, 447.
 Rinaca, 21.
 rinaria (Caviria), 490.
 rivularis (Chærocampa), 84.
 robertsi (Deilephila), 99.
 romanovi (Ampelophaga), 83.
 roricyanea (Zeuzera), 312.
 rosacea (Leucophlebia), 74.
 Rosama, 168.
 rosea (Arguda), 413.
 rosea (Lymantria), 465.
 roseus (Gangarides), 42.
 rosina (Chærocampa), 87.
 rotunda (Psyche), 299.
 rotundapex (Oreta), 350.
 rotundata (Lacida), 442.
 royi (Salassa), 27.
 roylei (Antheræa), 18.
 rubescens (Ambulyx), 78.
 rubescens (Diludia), 105.
 rubida (Cycnia), 442.
 rubiginea (Besia), 171.
 rubiginosa (Ambulyx), 78.
 rubiginosa (Ampelophaga), 83.
 rubiginosa (Messata), 61.
 rubra (Hemaris), 120.
 rubribasis (Alophogaster), 287.
 rubricosa (Ambulyx), 79.
 rubripennis (Lælia), 441.
 rubrivitta (Soritia), 252.
 rufa (Kosala), 419.
 rufa (Notodonta), 163.
 rufareta (Rhodoneura), 363.
 rufescens (Brahmæa), 30.
 rufescens (Natada), 380.
 ruffa (Bombyx), 347.
 rufficincta (Trichocerota), 199.
 rufodisca (Eupterote), 58.
 rufofasciata (Drepana), 334.
 rufotessellata (Altha), 398.
 rugosa (Natada), 382.
 rustica (Protaparcæ), 103.

- saccharum (Phragmataecia), 313.
sadana (Drepana), 341.
sagrara (Aroa), 439.
sagroides (Euproctis), 482.
Salassa, 26.
salsettensis (Phassus), 318.
sangana (Phalera), 134.
Sangatissa, 63.
sanguiflua (Amesia), 272.
sanguinea (Habrosyne), 179.
sanguinea (Kosala), 418.
sanguinea (Oreta), 348.
sanguinosa (Sphinx), 123.
sapphirina (Clelea), 239.
sargania (Syntomis), 210.
Saronaga, 182.
satanas (Acherontia), 67.
Sataspes, 121.
saturalis (Arsacia), 176.
saturata (Lophopteryx), 166.
Saturnia, 21.
Saturniidae, 12.
saturnus (Bombyx), 29.
satyriniformis (Melittia), 202.
saundersi (Hemaris), 119.
sawanta (Dasychira), 452.
scabiosae (Hemaris), 119.
scalaris (Azygophleps), 310.
scapularis (Panacra), 90.
schauffelbergii (Ambulyx), 77.
schoenerrhi (Syntomis), 213.
Sciapteron, 191.
scintillans (Eterusia), 260.
scintillans (Euproctis), 483.
scintillans (Heteropan), 256.
scitaria (Striglina), 354.
scolioides (Trilochana), 191.
Scopelodes, 373.
sculpta (Angonyx), 102.
securis (Dasychira), 453.
selene (Actias), 13.
selene (Chalcusia), 279.
selene (Histia), 280.
semicineta (Lymantria), 466.
semifasciata (Macroglossa), 115.
semifervens (Ambulyx), 78.
semifusca (Hypsa), 499.
semihyalina (Dendrophleps), 491.
semihyalina (Lenodora), 424.
semihyalina (Trypanophora), 249.
semipavonaria (Auzata), 331.
semisignata (Euproctis), 473.
semitessclalis (Rhodoneura), 358.
semivitta (Euproctis), 474.
Sephisa, 259.
sericea (Cania), 395.
sericea (Caviria), 490.
sericea (Hypsa), 503.
sericea (Natada), 382.
sericea (Redoa), 488.
sericea (Scopelodes), 374.
sericea (Trisuloides), 494.
sericeipennis (Ambulyx), 77.
sericeus (Philampelus), 81.
serrata (Syntomis), 221.
servula (Antheua), 145.
Sesia, 196.
Sesiidae, 187.
sexnotatus (Palpifer), 317.
sexpunctata (Soritia), 252.
shadulla (Neoris), 24.
shahama (Soritia), 253.
shervillei (Acosmeryx), 82.
sherwilli (Bombyx), 37.
shevaroyensis (Apona), 53.
siamensis (Euchromia), 228.
siamica (Syntomis), 228.
siculoides (Pachythyris), 368.
sienna (Aroa), 438.
signata (Heterusia), 261.
signata (Lenodora), 423.
signata (Ocinara), 35.
signata (Odonestis), 426.
signata (Susica), 382.
signata (Zeuzera), 307.
signifer (Phassus), 320.
signifera (Ocinara), 34.
sikhima (Notodonta), 163.
sikkima (Celeia), 169.
sikkima (Eumeta), 291.
sikkima (Gunda), 36.
sikkima (Loepa), 25.
sikkima (Notodonta), 163.
sikkima (Paravetta), 176.
sikkima (Pheosia), 162.
sikkima (Pydna), 141.
sikkima (Sciapteron), 193.
sikkima (Stenophylloides), 429.
sikkimensis (Artona), 235.
sikkimensis (Campylotes), 274.
sikkimensis (Stauropus), 150.
siletti (Numenes), 456.
silhetensis (Chaerocampa), 88.
silhetensis (Triptogon), 69.
silhetica (Penora), 488.
silhetica (Saturnia), 15.
silvandra (Bombyx), 499.
similata (Chalcusia), 266.
similis (Chilena), 416.
similis (Digama), 505.
similis (Endoclyta), 319.
similis (Eupterote), 54.
similis (Ganisa), 49.
similis (Lymantria), 462.
similis (Messata), 61.
similis (Parasa), 389.
simillima (Drepana), 336.
simillima (Hemaris), 119.
simla (Saturnia), 23.
simplex (Aroa), 438.
simplex (Nisaga), 63.
simplicia (Loepa), 26.
sinensis (Bombyx), 32.
sinensis (Tadema), 377.
sinensis (Thosea), 379.
sinensis (Triptogon), 69.
sinuata (Eupterote), 54.
sinuata (Gastropacha), 428.
sinuata (Gluphisia), 176.
sitene (Macroglossa), 115.
siva (Taragama), 405.
sivalica (Antheraea), 18.

- sladeni (Syntomis), 217.
 Smerinthinae, 68.
 snelleni (Acanthopsyche), 296.
 Snellenia, 206.
 sobrina (Lymantria), 461.
 socrus (Aroa), 439.
 Somena, 471.
 Somera, 153.
 Sommeria, 504.
 Sonagara, 353.
 sordida (Stilpnotia), 444.
 Soritia, 251.
 Spalyria, 54.
 Spatalia, 168.
 spatulata (Aræogyia), 395.
 Spatulicraspeda, 391.
 Spatulifimbria, 391.
 spectabilis (Bombya), 30.
 spectabilis (Polyptychus), 71.
 specularia (Drepana), 335.
 specularis (Drepana), 340.
 sperchia (Euchromia), 226.
 sperchius (Smerinthus), 69.
 Sphecia, 188.
 Sphecodoptera, 189.
 Sphingidæ, 65.
 sphingiformis (Dudusa), 128.
 sphingiformis (Mustilia), 39.
 Sphinginae, 102.
 Sphingognatha, 46.
 sphoraria (Phambara), 360.
 Spica, 342.
 splendida (Rhodoneura), 363.
 spoliata (Corma), 268.
 Staintonia, 208.
 staudingeri (Melittia), 203.
 Stauropus, 149.
 stellatarum (Macroglossa), 113.
 stelligera (Amesia), 278.
 Stenophylloides, 429.
 stigmata (Encaumaptera), 316.
 stigmata (Lebeda), 410.
 stigmaticus (Cossus), 306.
 stigmigera (Phalera), 134.
 stipata (Chrysartona), 232.
 stoliczkana (Saturnia), 24.
 striata (Rachia), 132.
 striatalis (Hypolamprus), 365.
 striativena (Rhodeneura), 363.
 strigata (Dasychira), 449.
 strigata (Pheosia), 161.
 strigatula (Siculodes), 356.
 strigifascia (Niganda), 138.
 strigipennis (Melittia), 203.
 strigipennis (Pida), 457.
 strigipennis (Sonagara), 354.
 strigivenata (Hypsa), 503.
 Strigina, 353.
 strigosa (Sonagara), 354.
 strigula (Chilena), 417.
 strigulifera (Antipha), 494.
 strix (Duomitius), 307.
 styx (Acherontia), 67.
 Suana, 406.
 subapicalis (Ingura), 176.
 subaurata (Syntomis), 223.
 subcordata (Thyrassia), 238.
 subcostalis (Miresa), 423.
 subcostalis (Rhodoneura), 362.
 subcurvifera (Sangatissa), 63.
 subcyanea (Pompelon), 271.
 subcyanescens (Cyclosia), 263.
 subdita (Euproctis), 485.
 subdita (Eupterote), 54.
 subdives (Apha), 51.
 subfascia (Orgyia), 445.
 subfascia (Peridrome), 497.
 subfasciata (Euproctis), 472.
 subfuscula (Euproctis), 475.
 subhyalina, var. primulina (Herpa), 258.
 subinanis (Topomesa), 469.
 sublutea (Eterusia), 260.
 submarginalis (Devanica), 260.
 submarginalis (Ichthyura), 176.
 submarginalis (Syntomis), 218.
 submarginata (Leucoma), 487.
 subnigra (Euproctis), 485.
 subnotata (Aroa), 438.
 subnotata (Belgoræa), 397.
 subnotata (Hanisa), 40.
 subnotata (Orvasca), 483.
 subocellata (Ambulyx), 78.
 subparallela (Lasio-campa), 408.
 subquadrata (Aganopsis), 497.
 subrosealis (Hypolamprus), 366.
 subsimilis (Hypsa), 501.
 substigmata (Euchera), 327.
 substrigilis (Ambulyx), 77.
 substrigosa (Aroa), 439.
 substrigosa (Caviria), 489.
 substrigosa (Lasio-campa), 408.
 subteralbata (Acanthopsyche), 295.
 subtessellata (Addæa), 353.
 subtineta (Stilpnotia), 486.
 subvitrea (Leucoma), 489.
 suffusa (Eupterote), 55.
 suffusa (Lælia), 441.
 suffusa (Oreta), 348.
 suffusa (Susica), 382.
 sulphurea (Gastropacha), 421.
 sulphurescens (Euproctis), 474.
 superans (Lymantria), 462.
 superior (Sonagara), 354.
 Susica, 377.
 Syntomidæ, 209.
 Syntomis, 212.
 Syntomoides, 209.
 syntomoides (Callitomis), 224.
 Syrastrena, 414.

- tabaniforme (Sciapteron), 191.
tacta (Rigema), 453.
Tadema, 377.
tagalica (Sataspes), 122.
Tagora, 46.
taoensis (Dreata), 54.
taprobana (Varnia), 368.
taprobanes (Trypanophora), 250.
taprobanis (Attacus), 15.
taprobanus (Hepialus), 317.
Taragama, 404.
tarsella (Snellenia), 207.
Tarsolepis, 126.
Tascia, 237.
Tasema, 236.
tavoyanus (Palpifer), 317.
taxicolor (Macroglossa), 115.
Teldenia, 332.
templetonii (Oiketicus), 290.
tenebrosa (Chærocampa), 92.
tenebrosa (Dasychira), 451.
tenebrosa (Fentonia), 149.
tenebrosa (Hyperæschra), 164.
tenebrosa (Phacusa), 241.
teneiformis (Trichæta), 225.
tenuimarginatum (Sciapteron), 193.
terminata (Pantana), 444.
tertius (Eceticus), 290.
tesselatus (Cossus), 315.
testacea (Angonyx), 101.
testacea (Eupterote), 61.
testacea (Harapa), 443.
testacea (Lælia), 442.
testacea (Procodeca), 441.
testacea (Pydna), 139.
testacea (Scopelodes), 374.
teta (Nisaga), 64.
Tetragonus, 322.
tetraonalis (Rhodoneura), 357.
tetraonis (Arbela), 315.
Tetraphleps, 383.
tetrico (Pseudosphinx), 104.
textor (Bombyx), 32.
Tineida, 12.
Thacona, 135.
thallo (Chalcusia), 266.
thelebas (Euchromia), 228.
Themaca, 470.
Theophila, 37.
Theretra, 99.
thermesiodes (Homodes), 354.
theylia (Chærocampa), 85.
Thiacidæ, 445.
thibeta (Saturnia), 22.
thoracica (Belippa), 400.
thoracica (Syntomis), 224.
Thosea, 377.
thwaitesi (Aprata), 304.
thwaitesi (Dasychira), 449.
thwaitesii (Ambulyx), 78.
thwaitesii (Aristhala), 36.
Thyatira, 180.
Thymara, 288.
Thymistada, 343.
thyralis (Pyrælis), 358.
Thyrassia, 238.
Thyrididæ, 352.
thyridophora (Leucoma), 488.
tiberina (Chalcusia), 266.
tigrina (Syntomis), 218.
timesius (Sphinx), 69.
Tinægeriida, 206.
tinctifera (Euproctis), 494.
Tinthis, 199.
tipuliformis (Sesia), 196.
tisiphone (Sphinx), 87.
todara (Eupterote), 58.
todara (Lymantria), 463.
Topomesa, 469.
Torona, 138.
torpida (Phalera), 134.
torrida (Crinocraspeda), 420.
tortuosa (Hypsa), 501.
tosta (Ramesa), 143.
Toxoides, 185.
Trabala, 421.
translata (Eupterote), 61.
transversa (Elydna), 176.
transversa (Eterusia), 254.
transversa (Gazalina), 469.
transversa (Tyræconia), 186.
transversata (Aphendala), 378.
Trianeura, 212.
triangularia (Ditrigona), 332.
Trichæta, 225.
Trichiura, 420.
Trichocerota, 199.
tricincta (Sesia), 197.
tricolor (Glanycus), 370.
tricolor (Heterusia), 260.
trifascia (Lasiocampa), 408.
trifascialis (Hypolamprus), 366.
trifasciata (Artaxa), 472.
trifeneistrata (Cricula), 28.
trilineararia (Drepana), 338.
trilineatus (Polyptychus), 69.
triliturata (Eterusia), 252.
Trilocha, 34.
Trilochana, 190.
trilochoides (Andraca), 40.
trima (Orthocraspeda), 393.
trimacula (Heterusia), 260.
trimeronalis (Addæa), 353.
triopus (Rhodosoma), 122.
tripartita (Thosea), 378.
Triphophleps, 392.
tripunctata (Thymistada), 343.
triseriata (Dreata), 64.
tristis (Messata), 65.
tristis (Rhodoneura), 364.
Trisuloides, 494.
Trochilium, 188.
troglodytus (Macroglossa), 113.
Tropæa, 13.
truncata (Panacra), 90.
Trypanophora, 249.
turbata (Ambulyx), 78.
turbata (Orgyia), 437.
Turnaca, 136.
Tussur moth, 19.
umbrifera (Hyboma), 176.
umbrina (Lælia), 442.
umbrina (Lymantria), 463.
undans (Eupterote), 61.

- undans (Metanastria), 410.
undata (Eupterote), 54.
undifera (Dreata), 54.
undulata (Ichthyura), 174.
undulata (Osica), 186.
undulifer (Phassus), 320.
undulifera (Gastropacha), 428.
undulosa (Bhima), 404.
undulosa (Tagora), 46.
unicincta (Sesia), 196.
unicolor (Eupterote), 62.
unicolor (Natada), 382.
unicolor (Scopelodes), 375.
unifascia (Syntomis), 212.
unifascia (Thosea), 379.
uniformis (Charnidas), 471.
uniformis (Euproctis), 483.
uniformis (Lælia), 442.
uniformis (Protoparce), 104.
uniformis (Pteroxys), 302.
uniformis (Rhodoneura), 362.
uniformis (Sataspes), 121.
unimacula (Artaxa), 477.
urania (Eterusia), 260.
Uraniidæ, 9.
ursina (Scopelodes), 374.
usta (Agnidra), 336.
Utidava, 471.
Uxela, 172.
vagabunda (Oræsia), 176.
vagens (Panacra), 89.
valentula (Pompelon), 271.
vampyrus (Pergesa), 86.
varia (Antheua), 145.
varia (Dasychira), 450.
varia (Euproctis), 480.
varia (Trabala), 430.
varians (Euproctis), 475.
varians (Ocinara), 35.
variegata (Clania), 291.
variegata (Daplasa), 458.
variegata (Euproctis), 481.
variegata (Eupterote), 54.
variegata (Hyperæschra), 165.
variegata (Lebeda), 409.
variegata (Norasuma), 36.
variegata (Pitrassa), 186.
variegata (Trisula), 430.
variolosa (Chærocampa), 89.
varipes (Tinthia), 199.
Varmina, 434.
Varnia, 368.
vatama (Oreta), 349.
vates (Diludia), 105.
vau-nigra (Leucoma), 487.
velata (Chærocampa), 91.
velata (Chazena), 35.
velox (Apocalypsis), 107.
velox (Sphinx), 93.
velutina (Narosa), 398.
velutina (Natada), 382.
venalba (Hypsa), 499.
venaria (Phalæna), 269.
venosa (Cispia), 492.
venosa (Euproctis), 473.
venosa (Herpa), 257.
venosa (Lælia), 443.
venosa (Penora), 494.
venosa (Scopelodes), 374.
venosata (Gazalina), 468.
venosia (Chalcosia), 266.
ventralis (Sataspes), 122.
venusta (Cyclosia), 278.
venustum (Megasoma), 405.
versicolor (Antheræa), 18.
vespertilionis (Camadæna), 367.
vespoides (Arachotia), 245.
vesta (Attacus), 16.
vestigiata (Teldenia), 332.
vestita (Contheyla), 385.
vialis (Eupterote), 62.
vialis (Macroglossa), 112.
vialis (Risoba), 186.
vialis (Sonagaris), 354.
vicina (Thyatira), 180.
vidhisara (Phalacra), 345.
vigil (Chærocampa), 88.
vilis (Gorgopis), 321.
vilis (Thiacidas), 446.
vinacea (Chærocampa), 86.
vinacea (Drepana), 337.
vinacea (Lymantria), 461.
vinaceus (Stauropus), 153.
vinata (Arguda), 413.
vinosa (Eupterote), 54.
vinosa (Rhodoneura), 361.
vinula (Dicranura), 157.
viola (Lymantria), 465.
violacea (Drepana), 336.
violacea (Oreta), 349.
vira (Drepana), 342.
virescens (Dasychira), 451.
virescens (Heterusia), 262.
virescens (Monoschalis), 238.
virescens (Stauropus), 151.
virginalis (Milleria), 263.
virguncula (Euproctis), 485.
viridatrix (Dysodia), 369.
viridescens (Orgyia), 437.
viridescens (Stauropus), 151.
viridifusca (Somera), 154.
viridis (Parasa), 390.
viridis (Phassus), 321.
viridivena (Soritia), 253.
vishnu (Trabala), 421.
visum (Pantana), 444.
vitellina (Euproctis), 476.
vitellina (Pitrassa), 186.
viteissoides (Aganais), 499.
vitrea (Psyche), 299.
vitrea (Syntomis), 218.
vitrina (Dysodia), 368.
vittata (Lenodora), 423.
vittipalpis (Lonomia), 42.
volans (Syntomoides), 211.
volatilis (Melittia), 202.
volucris (Macroglossa), 111.
vulgaris (Problepsis), 352.
vulpina (Lebeda), 409.
vulpina (Scopelodes), 375.
walkeri (Attacus), 16.
walkeri (Macroglossa), 116.
wallichii (Brahmæa), 30.
westwoodi (Eleysma), 284.
White Borer, 312.
whitei (Brahmæa), 31.



- wimberleyi (Syntomis),
219.
wisei (Harpyia), 155.
- xanthochlora (Cyphanta),
175.
xanthomela (Syntomis),
219.
xanthophila (Menapia),
139.
xanthoptera (Drepana),
341.
xanthorrhœa (Porthesia),
485.
- xanthosoma (Ichneu-
menoptera), 195.
xanthosticta (Sesia), 197.
xerampelina (Aroa), 440.
Xyleutes, 307.
Xylophanes, 84.
- zaida (Himantopterus),
289.
Zana, 144.
Zaranga, 146.
zebra (Artona), 235.
zebraica (Artona), 235.
zebrina (Hypsa), 499.
- zehma (Mulleria), 266.
zelica (Corma), 268.
zena (Macroglossa), 113.
zenotea (Corma), 268.
Zenzero, 310.
zenzeroides (Langia), 73.
Zeuzera, 310.
zonula (Durdara), 358.
zuleika (Chalcocia), 266.
zuleika (Saturnia), 21.
Zygæna, 230.
Zygænidæ, 228.
Zygæninæ, 229.