

THE MOTHS OF INDIA.

SUPPLEMENTARY PAPER TO THE VOLUMES IN
"THE FAUNA OF BRITISH INDIA."
SERIES IV, PART III.

BY

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(Continued from page 446 of this Volume.)

Genus MONODES.

Type.

<i>Monodes</i> , Guen. Noct., i., p. 240 (1852)	<i>nucicolora</i> .
<i>Alpesa</i> , Wlk., xv., 1662 (1856)	..	..	<i>villicosta</i> .

Proboscis fully developed; palpi upturned, rather slender, the 2nd joint reaching to vertex of head, the 3rd moderate; frons smooth; eyes large, round; antennæ of male typically ciliated; build slender; thorax chiefly clothed with scales, the pro and metathorax with typically slight spreading crests; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and hardly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Forewing with ochreous costal fascia and apical mark.

a. Forewing with the reniform with white annulus defined by black *conjugata*.

b. Forewing with the reniform almost obsolete *fissistigma*.

B. Forewing with the costal fascia grey, the apical mark ochreous *trifissa*.

2537. MONODES CONJUGATA.

Hydrelia conjugata, Moore, P. Z. S. 1881, p. 369; Hmps., Cat. Lep. Phal. B. M., viii, p. 473, pl. 134, f. 9.

Eurois albicostata, Hmps., Moths Ind. ii, p. 228 (1894).

2049 a. MONODES FISSISTIGMA.

1777 a. MONODES TRIFISSA.

Monodes trifissa, Hmps., Cat. Lep. Phal. B. M., viii, p. 475, pl. 134, f. 12, (1909).

♀. Head and thorax ochreous white tinged with rufous, the extremities of patagia with some black scales and the metathoracic crest blackish; pectus and legs suffused with fuscous brown; abdomen ochreous suffused with brown, the basal crest fuscous. Forewing with the base and costal

area to just beyond postmedial line grey slightly irrorated with black, the inner area and a broad curved fascia from end of cell to apex ochreous, the cell and area beyond its lower extremity rufous and the medial part of terminal area grey with slight dark streaks on the veins and in interspaces; subbasal line represented by a slight oblique black striga from costa; antemedial line absent; orbicular white with an ochreous tinge in centre and slightly defined by brown at sides, narrow, very oblique, its lower extremity produced to three oblique white streaks with a bar across their extremities below the reniform which is represented by a very slight ochreous lunule; an oblique ochreous streak from below the orbicular to submedian fold at postmedial line, which is very indistinct and double from costa to vein 3, strongly bent outwards below costa, bent inwards at vein 3 and sinuous to inner margin; a terminal series of black points. Hindwing greyish wholly suffused with fuscous brown; the underside ochreous irrorated with fuscous, a blackish discoidal spot, curved waved postmedial line, and terminal series of striæ.

Habitat.—PUNJAB, Simla. *Exp.* 24 mill.

Genus NEOMILICHIA.

Type.

Neomilichia., Hmps., Cat. Lep. Phal. B. M., viii, p. 518

(1909) *hylea*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd moderate; frons with slight rounded prominence with corneous plate below it; eyes large, round; antennæ of male ciliated; build slender; head and thorax clothed chiefly with scales, the pro and metathorax with spreading crests; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rectangular, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

2048. NEOMILICHIA VEPRECOLA.

Genus PERIGEODES.

Type.

Perigeodes, Hmps., Cat. Lep. Phal. B. M., vii, p. 287 (1908). *rectivitta*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to vertex of head and moderately scaled in front, the 3rd rather long; frons smooth; eyes large, round; antennæ of male ciliated: head and thorax smoothly clothed with scales, the pro and metathorax with spreading crests, tibiæ moderately fringed with hair; abdomen with small dorsal

crests on basal segments. Forewing with the apex rectangular, the termen evenly curved and slightly crenulate, the cilia strongly dentate especially towards tornus; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

- A. Forewing with large white patch on inner medial area extending almost to cell *poliomera*.
- B. Forewing without white patch on inner medial area extending almost to cell.
 - a. Forewing with the lower part of reniform very large and extending to well below cell *tracycla*.
 - b. Forewing with the lower part of reniform moderate and extending to slightly below cell.
 - a¹. Forewing with bifid black spot beyond lower part of reniform.
 - a². Forewing yellow, the antemedial line almost obsolete, the stigmata defined by black points. *magna*.
 - b². Forewing ochreous suffused with rufus, the antemedial line double, the stigmata with pale annuli *malayica*.
 - b¹. Forewing without bifid black spot beyond lower part of reniform *rectivitta*.

2051. b. PERIGEODES POLIOMERA.

Perigeodes poliomera, Hmps., Cat. Lep. Phal. B. M., vii., p. 287., pl. 115. f. 11 (1908).

Head, tegulae and patagia ochreous tinged with rufous, the tegulae with darker edges; palpi black above, white below; frons with black bar; vertex of thorax, pectus and legs white, the forelegs tinged with brown, the tarsi fuscous ringed with white; abdomen white tinged with brown, the basal crest black at tip. Forewing ochreous tinged with rufous, the area below costa paler, becoming pure white at apex. A large white patch on inner area from near base to near tornus, rounded above, the terminal area redder to the oblique streak from termen just below apex, suffused with black towards tornus; the base white; traces of a double waved subbasal line from costa to submedian fold; a very indistinct double waved antimedial line, obsolete on the white area; orbicular and reniform with whitish annuli slightly defined by brown, the former with brown centre round the latter with its centre defined by black points, constricted at middle; a blackish patch beyond lower angle of cell; postmedial line double almost obsolete towards costa, strongly bent outwards below costa, then oblique, minutely waved and with series of black and white points on its

outer edge, bent outwards to inner margin at the extremity of the white patch, some slight pale points beyond it on costa; traces of a waved subterminal line; a terminal series of black points with white point before the point in submedian interspace; cilia reddish with series of black points at tips, wholly black towards tornus. Hindwing pale brown with terminal series of small dark lunules: cilia brownish white, the underside whitish, the costal area tinged with rufous, an indistinct diffused dark subterminal band from costa to vein 2, a terminal series of black points.

Habitat.—CENTRAL CHINA; HAINAN; ASSAM, KHASIS. *Exp.* ♂ 32, ♀ 36 mill.

2051. a. PERIGEODES TRICYCLA.

Perigea tricycla, Guen., Noct 1. p. 226 (1852); Hmps. Cat. Lep.

Phal. B. M. vii, p. 289, pl. 115, f. 12.

Bagada fuscostrigata, Beth. Baker, Nov. Zool. xiii, p. 209 (1906).

♂. Head and thorax pale ochreous mixed with dark brown and tinged with rufous; palpi with some dark brown at side of 2nd joint; antennæ brown; abdomen pale ochreous tinged with rufous, dorsally dark brown except at base. Forewing pale ochreous suffused with rufous and slightly irrorated with dark brown, the inner margin with fuscous brown fascia tinged with grey except at base, the postmedial area greyish brown except towards costa, terminated by the oblique dark brown streak from apex to the postmedial line at vein 5, diffused below; subbasal line represented by two black points below the cell; antemedial line very indistinct, double, rufous, minutely dentate, below vein 1 strongly bent inwards to inner margin; claviform represented by a dark striga at its extremity; orbicular pale, defined by brown except above, irregularly rounded; reniform pale, slightly defined by brown, strongly constricted at middle and figure-of-eight-shaped, extending well below the cell to vein 2, some dark points in its lower part, traces of an oblique line from it to inner margin; postmedial line indistinct, double, strongly bent outwards below costa, then minutely waved and oblique, some pale points beyond it on costa; subterminal line very indistinct, pale, defined on inner side by brown suffusion, slightly excurved below vein 7 at middle; a terminal series of dark points defined on inner side by pale lunules; cilia dark brown with a pale line at base. Hindwing dark brown with a reddish tinge; cilia with a pale line at base; the underside whitish tinged with brown, the terminal area suffused with brown, a brown postmedial line from costa to vein 5.

ab. 1, *fuscostrigata*—Hindwing on underside much more suffused with brown, a dark discoidal spot, the postmedial line entire.

Habitat—ASSAM, KHASIS; BORNEO; BR. NEW GUINEA. *Exp.* 42-44 mill.

2051. PERIGEODES MAGNA.

2052. PERIGEODES MALAYICA.

Orthogonia malayica, Snell., Veth's Midden Sumatra Lep., p. 46, pl. 4, f. 6 (1892).

Xanthoptera nigridia, Hmps. Moths Ind., ii, p. 320 (1894).

2428. PERIGEODES RECTIVITTA.

Genus PERIGEA.	Type.
<i>Perigea</i> , Guen. Noct., i., p. 225 (1852)	<i>spicea</i> .
<i>Condica</i> , Wlk., ix., 239 (1856)	<i>cupentia</i> .
<i>Prospalta</i> , Wlk., xiii., 1114 (1857)	<i>leucospila</i> .
<i>Bagada</i> , Wlk., xv., 1753 (1858)	<i>spicea</i> .
<i>Gaphara</i> , Wlk., Trans. Ent. Soc. (3) i., p. 96 (1862) ..	<i>tetera</i> .
<i>Myrtale</i> , Druce, Biol. Centr. Am. Het. i., p. 443 (1891) ..	<i>imitata</i> .

Proboscis fully developed; palpi upturned, the 2nd joint typically reaching about to vertex of head and smoothly scaled, the 3rd typically rather long; frons smooth; eyes large, round; antennæ of male typically minutely ciliated; thorax smoothly clothed with scales, the prothorax with spreading crest, the metathorax with slight crest; tibiæ moderately fringed with hair; abdomen with slight dorsal crests on basal segments. Forewing with the apex rectangular, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

- A. Forewing with a large part of wing occupied by grey or white patches *leprosa*.
- B. Forewing with a large part of wing not occupied by grey or white patches.
 - a. Forewing cupreous black brown.
 - a¹. Forewing with subterminal and terminal series of small white spots.
 - a². Forewing with the orbicular white centre defined by white points *stellata*.
 - b². Forewing with the orbicular not defined by white points.
 - a³. Forewing with the centre of the reniform broken up into white points *contigua*.
 - b³. Forewing with round white spot in centre of reniform with small brown lunule on it .. *leucospila*.
 - b¹. Forewing without terminal series of small white spots.
 - a². Forewing with the reniform broken up into white points *albomaculata*.
 - b². Forewing with the reniform with slight white lunule on its inner edge *atricuprea*.
 - b. Forewing not cupreous black brown.

- a*¹. Forewing not yellowish with patches of rufous and brown suffusion in parts.
- a*². Forewing with the reniform defined on all sides by white points.
- a*³. Hindwing white, the terminal area with dark suffusion, in female more suffused. . . *dolorosa*.
- b*³. Hindwing entirely suffused with brown in both sexes *galaxia*.
- b*². Forewing with the reniform not defined on all sides by white points *capensis*.
- b*¹. Forewing with the ground colour yellowish with patches of rufous and dark brown suffusion . . . *spicea*.

2439*a*. PERIGEA LEPROSA.

1722*a*. PERIGEA STELLATA.

Prospalta stellata, Moore, Lep. Atk., p. 111 (1882); Hmps., Cat. Lep. Phal. B. M. vii., p. 314, pl. 115, f. 27.

Head rufous, the basal joint of antennæ with white point in front; thorax deep red brown, the base of tegulæ rufous, the vertex of thorax and tip of prothoracic crest white; tarsi with white points; abdomen brown, the basal crest white, the others black, the ventral surface rufous. Forewing cupreous brown suffused with black leaving the discal and submedian folds redder; five white points at base in and below cell, followed by an oblique white striga from costa with two white points below it; an antemedial series of white points on and below costa and on the veins, defined by black and with white streak before it on inner margin; orbicular represented by a small white spot surrounded by white points; reniform with four white points in centre surrounded by white points; traces of a waved dark medial line; postmedial line indistinct, dark, with white point at costa, strongly bent outwards below costa, then dentate and produced to white points on the veins, oblique below vein 4, some white points beyond it on costa; a subterminal series of small white spots on the veins, reduced to points on veins 4·3·2; another series of small white spots just before termen and a series of points on termen; cilia with series of white spots at tips and points at middle towards apex. Hindwing fuscous brown, the cilia white at tips; the underside pale red-brown, the terminal area suffused with fuscous, a faint discoidal lunule and diffused minutely crenulate postmedial line.

Habitat.—SIKHIM. *Exp.* 40 mill.

1722*b*. PERIGEA CONTIGUA.

Prospalta contigua, Leech, Trans. Ent. Soc. 1900, p. 122; Hmps., Cat. Lep. Phal. B. M. vii., p. 314, pl. 115, f. 28.

Head and thorax deep red-brown; basal joint of antennæ white; prothoracic crest with some white scales, the metathorax with white patch; tibiae at base with white points, the tarsi ringed with white; abdomen

brown with the basal crest white. Forewing black-brown with a cupreous gloss; two white points at base; a subbasal white striga from costa and spot below cell with point in cell further from base; antemedial line represented by a white striga from costa, points on the veins and point on inner margin further from the base; claviform a small white spot; orbicular a small round white spot defined by black; reniform with three white marks in centre surrounded by small spots; traces of a waved dark medial line; postmedial line indistinct, dark, with white points at costa, strongly bent outwards below costa, then dentate and produced to white points on the veins, excurved to vein 4, then oblique, some white points beyond it on costa; a subterminal series of small white spots on the veins, somewhat excurved below costa and at middle; a terminal series of white points. Hindwing fuscous brown, the cilia whitish, brown at tips; the underside fuscous irrorated with white; a dark discoidal lunule and diffused minutely waved postmedial line.

Habitat.—W. CHINA; ASSAM, KHASIS. *Exp.* 30—42 mill.

1723. *PERIGEA LEUCOSPILA*.

1722. *PERIGEA ALBOMACULATA*.

Mamestra albomaculata, Moore, P. Z. S. 1867, p. 52; Hmps. Cat.,

Lep. Phal. B. M. vii., p. 316, pl. 115, f. 31.

1722c. *PERIGEA ATRICUPREA*.

Perigea atricuprea, Hmps., Cat. Lep. Phal. B. M. vii., p. 316, pl. 115, f. 32 (1908).

Head and thorax black-brown with a few white scales; metathorax with white patch; tarsi slightly ringed with white; abdomen fuscous brown. Forewing glossy black-brown slightly irrorated with white; an indistinct waved whitish subbasal line from costa to submedian fold, with white point beyond it in cell; antemedial line black defined on inner side by whitish, somewhat waved and oblique; orbicular and reniform defined by black, the former round, the latter with white lunule on its outer edges and somewhat angled inwards on median nervure; faint traces of an oblique medial shade from lower angle of cell to inner margin; postmedial line black with white striga from costa, strongly bent outwards below costa, then dentate and produced to short streaks on the veins, incurved below vein 4, some white points beyond it on costa; traces of a waved dark subterminal line with waved white striga from costa, incurved below vein 3; a terminal series of white points; cilia with a slight waved white line through them. Hindwing greyish suffused with fuscous brown, a faint discoidal spot and sinuous postmedial line; a fine black terminal and some whitish on termen towards tornus; cilia with a slight whitish line through them; the underside fuscous brown irrorated with white, a brown discoidal lunule and diffused curved postmedial line.

Habitat.—SIKHIM TIBET, Yatung. *Exp.* ♂ 34, ♀ 38 mill.

1721a. PERIGEA DOLEROSA.

Mamestra dolerosa, Wlk. XXXII. 667 (1865).

Hadena taprobanæ, Feld. Reis. Nov. pl. 110, f. 3 (1874).

Euplexia albomaculata, Semp. Schmett. Phil. p. 515, pl. 60. f. 2
(nec. Moore).

Head and thorax fuscous mixed with some ochreous; palpi black; the 2nd and 3rd joints white at tips; frons with black bars; tegulæ with black annuli; prothoracic crest tipped with ochreous, the metathorax with ochreous patch; pectus and legs ochreous white irrorated with brown; the tarsi black with pale tinge; abdomen ochreous suffused with fuscous brown. Forewing fuscous; subbasal line represented by ochreous striæ from costa and cell; some ochreous and black scales on inner margin before the antemedial line, which is indistinct, waved, black, interrupted, defined on inner side by ochreous striæ at costa and inner margin and ochreous point at submedian fold; orbicular with incomplete whitish annulus defined by black, small, irregularly elliptical; reniform with irregular white lunule in centre surrounded by ochreous points defined by black, constricted at middle; postmedial line with white spot at costa, strongly bent outwards below costa, then defined by slight ochreous lunules on outer side, dentate and produced to black and white points on the veins, oblique below vein 4, some white points beyond it on costa; subterminal line represented by a series of ochreous white points defined on inner side by small dentate black marks, excurved below vein 7 and at middle; a series of minute white points just before termen; cilia fuscous with series of ochreous white points at base. Hindwing white tinged with brown, the veins and terminal area suffused with fuscous brown, a terminal series of black striæ defined by whitish on inner side; cilia ochreous white, with a slight brown line through them on apical half; the underside white, the costal area tinged with ochreous and irrorated with fuscous, a discoidal point, slight diffused waved postmedial line from costa to vein 2, and diffused subterminal band.

Habitat.—C. CHINA; BOMBAY; MADRAS, Nilgiris; CEYLON, Kandy; PHILIPPINES, Manila; FIJI. *Exp.* 36-40 mill.

Larva, Brown. Food plant, *Conyza balsamifera*.

1721b. PERIGEA GALAXIA.

Perigea galaxia, Butl., P. Z. S. 1883, p. 159; Hmps. Cat. Lep.
Phal. B. M. vii, p. 324, pl. 116, f. 9.

Head and thorax fuscous brown mixed with grey-white; tarsi black ringed with white; abdomen grey suffused with fuscous. Forewing grey suffused with fuscous and irrorated with white; subbasal line represented by a white striga from costa; antemedial line black, defined on inner side by white towards costa, waved, somewhat oblique; orbicular white defined by black, small, round; reniform a white lunule with some black points on

it, its upper and lower extremities surrounded by white points; a diffused medial line, excurved at middle; postmedial line black, with white bar at costa, bent outwards below costa, then dentate and produced to black and white points on the veins, incurved below vein 4, some white points beyond it on costa; subterminal line defined by diffused fuscous on inner side, angled outwards at vein 7 and excurved at middle; a terminal series of black points; cilia with a series of white points at base. Hindwing grey-brown with a fuscous tinge; cilia whitish at tips; the underside white irrorated with fuscous, a discoidal lunule filled in with white, bisinuate postmedial line, and traces of diffused subterminal band.

Habitat.—PUNJAB, Kulu, Sultanpur, Simla, Dharmasala. *Exp.* 30-38 mill.

1721. *PERIGEA CAPENSIS*.

Apamea capensis, Guen. Noct. 1, p. 213 (1852); Hmps. Cat. Lep. Phal. B. M. vii, p. 332, pl. 116, f. 20.

Perigea apameoides, Guen. Noct. 1, p. 229 (part).

Caradrina conducta, Wlk., X, 296 (1856).

Celæna serva, Wlk. XV., 1689 (1858).

Hadena pauperata, Wlk., XV, 1727 (1858).

Mamestra prodita, Wlk., Journ. Linn. Soc. Zool. vi, p. 185 (1862).

Perigea inexacta, Wlk., XXXII, 682 (1865).

„ *canorufa*, Wlk., XXXII, 683 (1865).

„ *illecta*, Wlk., XXXII, 684 (1865).

Hadena leonina, Wlk., XXXIII, 735 (1865).

„ *spargens*, Wlk., XXXIII, 739 (1865).

„ *funesta*, Wlk., XXXIII, 740 (1865).

Perigea centralis, Moore, Lep. Ceyl. iii, p. 28, pl. 147 f. 2 (nec. Wlk.).

„ *meleagris*, Saalm. Lep. Madag., p. 271, f. 228 (1891).

2050. *PERIGEA SPICEA*.

Perigea spicea, Guen. Noct. 1, p. 226 (1852); Hmps. Cat. Lep. Phal. B. M. vii, p. 348.

Bagada pyrochroma, Wlk., xv. 1753 (1858), Hmps. Ill. Het. B.M. ix, p. 97, pl. 162, f. 2.

Acontia firina, Swinh., P. Z. S. 1885, p. 455, pl. 27 f. 5.

Genus *HADJINA*.

Type.

Hadjina, Staud., Iris., iv, p. 286 (1891).. .. *lutosa*.

Proboscis fully developed; palpi upturned, the 2nd joint slender, reaching to vertex of head and moderately fringed with hair in front, the 3rd short; frons smooth; eyes large, round; antennæ of male typically ciliated; build slender; head and thorax clothed almost entirely with scales, the pro and meta-thorax with spreading crests; legs moderately fringed

with hair; abdomen with dorsal crest at base only. Forewing rather short and broad, the apex rounded, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from well below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Forewing with the medial line indistinct or absent.

a. Forewing not suffused with fiery red.

a¹. Hindwing wholly tinged with brown.

a². Hindwing not ochreous.

a³. Forewing with the inner area cupreous red .. *cupreipennis*.

b³. Forewing with the inner area not cupreous red.

a⁴. Forewing purplish red-brown *chinensis*.

b⁴. Forewing fuscous brown *cinerea*.

b². Hindwing ochreous tinged with brown .. *modestissima*.

b¹. Hindwing white, the terminal area suffused with brown.

a². Forewing with the subterminal line excurved at middle *viscosa*.

b². Forewing with the subterminal line not excurved at middle *poliastis*.

b. Forewing suffused with fiery red *pyrovantha*.

B. Forewing with prominent rather diffused dark medial line *grisea*.

1834 b. HADJINA CUPREIPENNIS.

Ilattia cupreipennis, Moore, Lep. Atk. p. 112 (1882); Hmps. n.

Cat. Lep. Phal. B. M. viii, p. 525, pl. 136, f. 13.

Head and thorax fiery red mixed with dark brown and some grey; abdomen dark brown. Forewing deep cupreous red shading to brown mixed with grey on costal and terminal areas; subbasal line represented by a slight dark striga from costa; antemedial line very indistinct, waved; claviform absent; orbicular and reniform whitish irrorated with brown and very faintly defined by brown, the former round, the latter somewhat quadrate; postmedial line very indistinct, dark, bent outwards below costa, then produced to dark streaks with grey points on them on the veins, incurved below vein 4; hardly a trace of the subterminal line; a fine punctiform black terminal line. Hindwing glossy yellowish brown: a fine dark terminal line and slight pale line at base of cilia; the underside pale tinged with red and thickly irrorated with brown, a small black discoidal lunule and traces of a curved postmedial line.

Habitat.—PUNJAB, Murree; SIKHIM, *Eap.* 30-36 mill.

1833 b. *HADJINA CHINENSIS*.

Perigea chinensis, Wllgrn. Wien. Ent. Mon, iv, p. 169 (1860).

Segetia mandarina, Staud. Rom. Mem. vi, p. 482, pl. ix, f. 4
(1892); id. Cat. Lep. pal. p. 170.

„ *sarepta*, Græs. Bul. Ent. Zeit. XXXII, p. 350 (1888) nec. Guen.

Amyna pulverea, Leech, Trans. Ent. Soc. 1900, p. 114.

1834c. *HADJINA CINEREA*.

Hadjina cinerea, Hmps. Cat. Lep. Phal. B. M. viii., p. 526, pl.
136, f. 15 (1909).

♂. Head and tegulae pale fulvous; thorax dark brown mixed with grey and a few black scales; tarsi with pale rings; abdomen grey-brown, the anal tuft ochreous. Forewing dark brown suffused with grey and irrorated with black; subbasal line represented by a slight grey striga from costa; antemedial line very ill-defined, grey, diffused, waved; claviform absent; orbicular and reniform grey irrorated with black, undefined, the former round, the latter somewhat constricted at middle; postmedial line very ill-defined, grey, diffused, bent outwards below costa and oblique below vein 4; subterminal line very indistinct, grey faintly defined by blackish on inner side, excurved below vein 7 and at middle; a terminal series of slight black points. Hindwing silky fuscous grey, the cilia slightly paler; the underside with faint black discoidal spot and traces of postmedial line.

Habitat—SIK HIM, 1,800'. *Exp.* 26 mill.

1880. *HADJINA MODESTISSIMA*.

Apamea modestissima, Snell., Tijds. V. Ent. xx, p. 26, pl. 2, f. 14
(1877).

Hipæpa opacaria, Swinh., Trans. Ent. Soc., 1890, p. 264, pl. 8, f. 3.

1834d. *HADJINA VISCOSA*.

Mythimna viscosa, Frr. Neue. Beitr. i., p. 39, pl. 21, f. 3, (Aug.
1831) Staud. Cat. Lep. pal., p. 170.

„ *implexa*, Treit. Schmett. Eur. x., 2, p. 73 (1835); nec.
Hüb. Dup. Lep. Fr. Suppl. iv., p. 98, pl.
58, f. 7.

Head and thorax red-brown mixed with grey scales; tarsi fuscous with pale rings; abdomen ochreous. Forewing red-brown slightly irrorated with greyish ochreous; subbasal line absent; antemedial line hardly traceable, greyish, waved; claviform absent; orbicular and reniform small with faint grey annuli, undefined, the former oblique elliptical, the latter constricted at middle; postmedial line very indistinct, slightly defined by grey on outer side and with prominent grey striga from costa, bent outwards below costa and oblique below vein 4, some pale points beyond it on costa; subterminal line very indistinct, pale, angled outwards at vein 7 and slightly excurved at middle; a terminal series of blackish points; cilia with a fine pale line at base. Hindwing white, the termen tinged

with pale red-brown from apex to submedian fold, in female almost entirely suffused with brown; the underside with the costal area irrorated with red.

ab. 1.—Much more ochreous or grey irrorated with fuscous and with hardly a trace of rufous; forewing with the ante and post-medial lines more distinct, the former angled outwards in submedian fold and above inner margin and inwards on vein 1, a dark patch sometimes present between orbicular and reniform.

Habitat.—SPAIN; SICILY; CANARIES; SYRIA; PERSIAN GULF; SIND, Karachi 82. *Exp.* 28·34 mill.

1833c. HADJINA POLIASTIS.

1795a. HADJINA PYROXANTHA.

2053. HADJINA GRISEA.

Genus CATAMECIA.

Type.

Catamecia, Staud. Iris. x., p. 288 (1897) *jordana*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to about middle of frons and moderately scaled, the 3rd short; frons with truncate conical prominence with slight raised edges and corneous plate below it; eyes large, round; antennæ of male typically ciliated; thorax clothed chiefly with scales, the pro and meta-thorax with spreading crests; tibiæ slightly fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rectangular, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

Sect. I.—Antennæ of male serrate.

1871. CATAMECIA FURTIVA.

Sect. II.—Antennæ of male ciliated.

1830. CATAMECIA MINIMA.

Apamea minima, Swinh., P. Z. S., 1889, p. 410; Hmps., Cat. Lep.

Phal. B. M., viii, p. 543, pl. 136, f. 29.

Catamecia bacheri, Staud. Cat. Lep. pal., p. 213 (1901).

Genus NAMANGANA.

Type.

Namangana, Staud. Stett., Ent. Zeit. 1888, p. 28 *cretacea*.

Eupolia, Smith, Trans. Am. Ent. Soc., xxi., p. 69 (1894). *licentiosa*.

Proboscis fully developed, palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled in front, the 3rd typically short; frons smooth; eyes large, round; antennæ of male typically ciliated; head and thorax clothed chiefly with scales, the pro and meta-thorax with spreading crests; tibiæ moderately fringed with hair; abdomen with dorsal

crest at base only. Forewing with the apex rounded, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

Sect. I. (Eupolia).—Antennæ of male bipectinate with long branches.

2054a. *NAMANGANA PECTINICORNIS*.

Sect. II. (Namangana).—Antennæ of male ciliated.

A. Forewing with elongate V-shaped black marks on
terminal area between veins 7 and 3 *cashmirensis*.

B. Forewing without V-shaped black marked on terminal
area *atrescens*.

1942. *NAMANGANA CASHMIRENSIS*.

1858a. *NAMANGANA ATRESCENS*.

Genus CINGALESA.

Type.

Cingalesa, Hmps., Moths Ind., ii., p. 336 (1894) .. *strigicosta*.

2108. *CINGALESA STRIGICOSTA*.

Genus LOPHOTYNA.

Type.

Lophotyna, Hmps., Cat. Lep. Phal. B. M., ix, p. 19 (1910). *albirena*.

Proboscis fully developed; palpi oblique, fringed with long hair in front, the 3rd joint short, porrect; frons smooth with large tuft of hair; vertex of head crested; eyes large, round; antennæ of male ciliated; head and thorax clothed almost entirely with scales, the tegulæ produced to a slight dorsal ridge, the pro-thorax with high triangular crest, the meta-thorax with spreading crest: tibiæ moderately fringed with hair; abdomen with dorsal crests on basal segments. Forewing with the apex produced and acute, the termen strongly crenulate and obliquely curved; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with the termen waved; veins 3·4 from angle of cell; 5 obsolescent from below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1724. *LOPHOTYNA ALBIRENA*.

Genus GORTYNA.

Type.

Gortyna, Treit. Schmett. Eur. v (2) p. 330 (1825) *leucostigma*.

Helotropha, Led. Noct. Eur. p. 118 (1857) *leucostigma*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd short; frons smooth; eyes large, round; antennæ of male typically ciliated; head and thorax clothed chiefly with scales, the pro and meta-thorax with spreading crests

tibiæ moderately fringed with hair; abdomen with dorsal crests on basal segments. Forewing with the apex rectangular, the termen crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·9 from upper angle; 8 anastomosing with the cell near base only.

1795. GORTYNA LEUCOSTIGMA.

Noctua leucostigma, Hübn., Eur. Schmett. Noct. f. 375 (1808);
Staud. Cat. Lep. pal, p. 186.

Noctua fibrosa, Hübn., Eur. Schmett. Noct. f. 385 (1808) Dup.
Lep. Fr. vii 1, p. 132, pl. 109 f. 4; Steph. Ill.
Brit. Ent. Haust. iii, p. 7.

„ *lunina*, Haw., Lep. Brit. p. 209 (1809).

Cerastis lævis. Butl., Trans. Ent. Soc. 1881, p. 181.

Hydræcia khasiana, Moore, P. Z. S., 1881, p. 342, pl. 37, f. 5.

Genus HYDRÆCIA.

Type.

Gortyna, Ochs. Schmett. Eur. iv., p. 82 (1816) non descr.;

Hübn. Verz., p. 232 (1827), nec. Treit. 1825 *micacea*.

Hydræcia, Dup. Cat. Meth., p. 114 (1844) *micacea*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and fringed with long hair in front, the 3rd short; frons smooth; eyes large, round; antennæ of male typically minutely serrate; thorax clothed with hair and hair-like scales, the tegulæ produced to a slight dorsal ridge, the prothorax with sharp triangular crest, the meta-thorax with spreading crest; tibiæ moderately fringed with hair; abdomen with some rough hair at base, dorsal crest on first segment and lateral fringes of hair. Forewing with the apex somewhat produced and acute, the termen evenly curved and hardly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1594. HYDRÆCIA BASALIPUNCTATA.

Genus PYRRHIA.

Type.

Pyrrhia, Hübn. Verz., p. 233 (1827) *purpurina*.

1598. PYRRHIA UMBRA.

Noctua umbra, Hüfn. Berl. Mag. iii., p. 294 (1767); Smith, Cat.
Noct. N. Am., p. 216; Staud. Cat. Lep. pal. p. 224.

„ *marginata*, Fabr. Syst. Ent., p. 610 (1775); Dup. Lep. Fr. vii.
pl. 119, f. 8; Steph. Ill. Brit. Ent. Haust. iii.,
p. 108.

Noctua rutilago, Schiff, Wien. Verz. p. 88 (1776); Hübn. Eur. Schmett, Noct. f. 185.

„ *umbrago*, Esp. Schmett, iv., pl. 185, ff. 6-7 (1796).

„ *conspicua*, Borkh. Eur. Schmett, iv., p. 50 (1792).

„ *marginago*, Haw. Lep. Brit., p. 217 (1809).

Heliothis cilisca, Guen, Noct. ii., p. 179 (1852).

„ *exprimens*, Wlk. xi., 687 (1857); Grote, Bull. Buff. Soc. Nat. Sci. ii., p. 35, pl. iii., f. 5.

Pyrrhia angulata, Grote, Trans. Am. Ent. Soc. v., p. 93 (1874); id. Bull. Buff. Soc. Nat. Sci. ii., pl. 3, f. 6.

Hydræcia tibetana, Moore, A. M. N. H. () p. 232 (1878); id. 2nd Yarkand Mission Lep., p. 9, pl. i., f. 21.

Chariclea revilliger, Christ, Iris., vi., p. 92 (1893); Staud. Cat. Lep. pal., p. 223.

Pyrrhia aconiti, Holtz., Allg. Zeitschr. Ent. vii., p. 212 (1902).

Genus CALLÆCIA.

Type.

Callæcia, Hmps., Cat. Lep. Phal. B. M. ix., p. 56 (1910) .. *svinhæi*.

Proboscis fully developed; palpi obliquely upturned, the 2nd joint reaching to about middle of frons and moderately fringed with hair, the 3rd short; frons with large corneous prominence with raised edges, the lower edge produced to a plate grooved in front, a corneous plate below it; eyes large, round; antennæ of male laminate and almost simple; thorax clothed with hair and scales mixed, the pro and meta-thorax with spreading crests; tibiæ moderately fringed with hair; abdomen without crests. Forewing with the apex rounded, the termen evenly curved and slightly crenulate: veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from well below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

2025. CALLÆCIA SVINHÆI.

Genus CYTOCANIS.

Type.

Cytocanis, Hmps., Cat. Lep. Phal. B. M., ix., p. 110 (1910). *denticulosa*.

Proboscis fully developed; palpi obliquely upturned, the 2nd joint reaching about to middle of frons and moderately fringed with scales in front, the 3rd moderate; frons with large corneous prominence with raised edges, its lower edge produced to a beak-like process; eyes large, round; antennæ of male laminate and almost simple; thorax clothed almost entirely with scales and without crests; tibiæ smoothly scaled, the joints of fore tarsi rather short and the fungues rather large; abdomen without crests. Forewing with the apex rounded, the termen evenly curved and hardly crenulate; veins 3 and 5 from near angle of cell; 6 from upper

angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from well below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

2016. CYTOCANIS DENTICULOSA.

Genus ELYDNA.

Type.

<i>Elydna</i> , Wlk. xv., 1712 (1858)	..	..	..	<i>transversa</i> .
<i>Dyrzela</i> , Wlk., xv., 1758 (1858)	..	..	..	<i>plagiata</i> .
<i>Dadica</i> , Moore, P. Z. S. 1881, p. 349	..	..	..	<i>lineosa</i> .
<i>Radinaera</i> , Butl., A. M. N. H. (5) i., p. 161 (1878)	..	..	..	<i>cinerascens</i> .
<i>Leucocosmia</i> , Butl., Trans. Ent. Soc., 1886, p. 394	..	..	..	<i>reclusa</i> .
<i>Floccifera</i> , Hmps., Moths. Ind. ii., p. 281 (1894)	..	..	..	<i>erigida</i> .

Sect I.—Antennæ of male bipectinate with long branches to just beyond middle, the apical part ciliated.

1885. ELYDNA BOSCA.

Sect II.—(*Dyrzela*).—Antennæ of male strongly serrate above to middle, strongly fasciculate below.

1886. ELYDNA PLAGIATA.

Sect III.—Antennæ of male ciliated.

A. (*Leucocosmia*). Vertex of head of male with a cleft corneous ridge clothed with scales; abdomen clothed with woolly pile; fore and hindwings clothed with woolly hair above.

1875. ELYDNA RECLUSA.

Prodenia reclusa, Wlk., Journ. Linn. Soc. Zool. vi, p. 185 (1862).

Amphipyra agrotoides, Snell, Tijds. v., Ent. 1880, p. 77, pl. 6, f. 6.

Radinaera thoracica, Moore, Lep. Ceyl. iii, p. 31, pl. 148, f. 4. (1884).

Leucocosmia ceres, Butl. Trans. Ent. Soc., 1886, p. 394, pl. 9, f. 10.

Caradrina euthusa, Hmps., Ill. Het. B. M. viii, p. 79, pl. 145, f. 1 (1891).

„ *heliarcha*, Meyr., Trans. Ent. Soc., 1897, p. 370.

„ *unipunctata*, Beth. Baker, Nov. Zool. xiii., p. 201 (1906).

„ *insignifica*, Beth. Baker, Nov. Zool. xiii, p. 201 (1906).

B. Vertex of head of male normal.

a. (*Floccifera*). Abdomen of male with large sublateral tufts of flocculent hair from base.

1938. ELYDNA ERIGIDA.

Aletia erigida, Swinh. Trans. Ent. Soc., 1890, p. 221.

Caradrina crenulata, Beth. Baker, Nov. Zool. xiii, p. 202 (1906).

b. Abdomen of male without sublateral tufts of long hair from base.

a¹. Hindwing of male with the costal area on underside clothed with rough downturned scales with thicker ridge of scales along subcostal nervure.

- a*². Hindwing of male on underside with ridge of scales on medial part of vein 1, covered by a thick fringe of hair from inner margin.

1874*a*. ELYDNA BIPUNCTA.

Cosmia bipuncta, Snell. Veth's. Midden. Sumatra Lep. 44, 1880.

Graphiphora stellata, Moore, Lep. Atk. p. 119 (1882).

Caradrina lophophora, Hmps. n., Trans. Ent. Soc., 1895, p. 299; id. Moths, Ind. iv., p. 512.

Caradrina pratti. Beth. Baker, Nov. Zool. xiii., p. 202 (1906).

- b*². (*Dadica*). Hindwing of male with the inner area normal.

1877. ELYDNA LINEOSA.

- b*¹. Fore and hindwings of male with the medial part of termen excised.

1877*a*. ELYDNA TRUNCIPENNIS.

Elydna truncipennis, Hmps. n., Cat. Lep. Phal. B. M., ix., p. 168. (1910).

Head and thorax whitish suffused with pale rufous, the head rather whiter; palpi black, whitish at tips and in front; tarsi blackish ringed with white; abdomen greyish suffused with fuscous brown. Forewing pale rufous with slight dark irroration, the terminal area rather darker; subbasal line blackish, straight from costa to submedian fold in which there is a black point beyond it and a white point in cell further from base, antemedial line blackish, erect, slightly bent inwards to costa and incurved below submedian fold; orbicular represented by a black point, the reniform by a small yellowish white spot usually with white point above it and two minute points below it; a diffused dark medial line, oblique from costa to median nervure, then incurved; postmedial line blackish, slightly bent inwards to costa and incurved below vein 3, with minute black streaks beyond it on the veins; subterminal line indistinct, brown, slightly incurved between veins 6 and 4; a fine dark terminal line; cilia fuscous brown with a fine whitish line at base. Hindwing whitish suffused with brown especially on the veins and terminal area; cilia whitish with a brownish line near base from apex to vein 2; the underside with the costal area irrorated with brown, a small discoidal spot, postmedial series of slight black streaks on the veins and traces of a postmedial line towards costa.

Habitat.—JAPAN; COREA; N. CHINA; W. CHINA; PUNJAB, Kulu, Sultanpur; SIKKIM; ASSAM, Khasis; CEYLON, Pundaluoya, *Exp.* 28-34 mill.

- c*¹. (*Elydna*) Wing of male normal.

- a*². Forewing grey brown.

- a*³. Forewing with the postmedial line minutely
dentate *ochreipuncta*.

- b*³. Forewing with the postmedial line not dentate.

- a*⁴. Forewing with series of black points on the veins beyond postmedial line *renalis*.
*b*⁴. Forewing with series of short black streaks on the veins beyond postmedial line .. *rectilinea*.
*b*¹. Forewing with the ground colour ochreous yellow or red brown.
*a*³. Forewing with blackish patches on costa at middle and before apex *bisignata*.
*b*³. Forewing without blackish patches on costa.
*a*⁴. Forewing with the postmedial line minutely waved and excurved beyond the cell.
*a*⁵. Forewing with black discoidal spot .. *atripuncta*.
*b*⁵. Forewing without black discoidal spot .. *ochracea*.
*b*⁴. Forewing with the postmedial line not waved, angled at vein 6, then oblique *transversa*.

1869. ELYDNA OCHREIPUNCTA.

1878. ELYDNA RENALIS.

1878a. ELYDNA RECTILINEA.

Elydna rectilinea, Hmps. Cat. Lep. Phal. B. M. ix., p. 172, pl. 141, f. 17 (1910).

Head and thorax whitish tinged with rufous, the head rather white; palpi fuscous, white at tips and in front; tarsi fuscous ringed with white; abdomen grey tinged with brown. Forewing pale grey tinged with pale reddish brown; subbasal line slight, dark, straight, from costa to submedian fold; antemedial line blackish, oblique, straight or slightly incurved in submedian interspace, slightly bent inwards to costa; orbicular represented by a minute dark point, the reniform by some white scales; a diffused dark medial shades oblique from costa to lower angle of cell, then blackish; postmedial line blackish, erect, straight, slightly bent inwards to costa, with minute black streaks beyond it on the veins; subterminal line indistinct, dark, rather diffused, excurved below vein 7 and at middle; a fine brown terminal line with minute white points at the veins; cilia grey-brown with a slight yellowish line at base. Hindwing whitish suffused with brown; a fine brown terminal line; cilia whitish with the yellowish line at base; the underside white, the marginal areas irrorated with brown, a brown discoidal lunule, diffused sinuous subterminal line and terminal series of black striæ.

Habitat.—PUNJAB, Kulu, Sultanpur, Dalhousie. *Exp.* 32 mill.

2058a. ELYDNA BISIGNATA.

2058b. ELYDNA ATRIPUNCTA.

Elydna atripuncta, Hmps. Cat. Lep. Phal. B. M. ix., p. 175, pl. 141, f. 21 (1910).

♀. Head white, the palpi, frons, and antennæ except at base dark

brown; thorax white tinged with ochreous and irrorated with a few black scales; tibiæ and tarsi brown; abdomen whitish dorsally tinged with ochreous and irrorated with a few dark scales except at base. Forewing white tinged with ochreous and irrorated with black scales, the terminal area tinged with rufous; antemedial line brown, double on inner area, oblique towards costa, then waved, angled outwards at vein 1; a round black discoidal spot; postmedial line brown, excurved and minutely waved to vein 2, angled inwards in submedian fold to near antemedial line and outwards on vein 1; subterminal line brown, diffused, oblique from costa to vein 7, incurved at discal and submedian folds; a series of small black spots before termen; cilia ochreous with a series of fuscous points. Hindwing whitish suffused with ochreous yellow especially on terminal area; the underside whitish, the costal and terminal areas irrorated with brown, a small discoidal spot.

Habitat.—CEYLON, Puttalam. *Exp.* 36 mill.

2058. ELYDNA OCHRACEA.

2057. ELYDNA TRANSVERSA.

Genus ANDROLYMNIA.

Type.

Androlymnia, Hmps. Cat. Lep. Phal. B. M. ix., p. 179

(1910) *emarginata*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to vertex of head and slenderly scaled, the 3rd long; frons smooth, with large tuft of hair above; eyes large, round; antennæ of male somewhat laminate and almost simple; thorax clothed chiefly with scales, the prothorax with ridge-like crest, the metathorax with spreading crest; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing typically with the apex produced and acute, the termen excised below apex and excurved at middle, the inner margin with antemedial lobe and scale tooth; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from first below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

2098. ANDROLYMNIA EMARGINATA.

Genus NICARA.

Type.

Nikara, Moore, Lep. Atk., p. 126 (1882) *castanea*.

Proboscis fully developed; palpi upturned, short, the 2nd joint broadly scaled, the 3rd minute; frons smooth; eyes large, round; antennæ of male minutely ciliated; thorax clothed almost entirely with scales and without crests. Forewing rather short and broad, the apex rounded, the termen obliquely curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11

from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1792. NICARA CASTANEA.

Genus APOCALYMNIA.

Type.

Apocalymnia, Hmps., Cat. Lep. Phal. B. M., ix, p. 184

(1910) *tenebrosa*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd short; frons with large corneous process with raised edges; eyes large, round; antennæ of female laminate; head and thorax clothed almost entirely with scales, the prothorax without crest, the metathorax with slight crest; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen slightly waved and somewhat excised towards tornus; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1874c. APOCALYMNIA TENEBROSA.

Genus CALYMNIA.

Type.

Calymnia, Hübn. Verz., p. 235 (1827).. .. *trapezina*.

Eustegnia, Hübn. Verz., p. 236 (1827).. .. *diffinis*.

Euperia, Guen. Ann. Soc. Ent. Fr., 1839, p. 486 .. *trapezina*.

A. Forewing with the postmedial line obliquely down curved from costa to vein 6.

a. Forewing with wedge-shaped white patch on costa at postmedial line *restituta*.

b. Forewing without wedge-shaped white patch on costa at postmedial line *flavifimbria*.

B. Forewing with the postmedial line oblique from costa to vein 6 *ochreimargo*.

2055. CALYMNIA RESTITUTA.

Cosmia restituta, Wlk., x, 490 (1856).

Calymnia picta, Stand. Stett. Ent. Zeit., 1888, p. 257, id., Rom. Mem., vi, p. 503, pl. 10, f. 2.

2056. CALYMNIA FLAVIFIMBRIA.

Cosmia affinis, Hmps., Moths. Ind., ii, p. 321 part. (nec. Linn.).

Calymnia flavifimbria, Hmps., Cat. Lep. Phal. B. M., ix, p. 193, pl. 141, f. 27 (1910).

1873. CALYMNIA OCHREIMARGO.

Genus BASILICA.

Type.

Basilica, Hmps., Cat. Lep. Phal. B. M., ix., p. 209 (1910) *chrysosticta*.
2689a. BASILICA CHRYSOSTICTA.

Genus MUDARIA.

Type.

Mudaria, Moore, Indian Museum, Notes iii, p. 68 (1893) *cornifrons*.
1825. MUDARIA CORNIFRONS.

Genus PHRAGMATIPHILA.

Type.

Nonagria, Hübn. Verz., p. 241 (1827), Nec. Treit., 1825. . . . *typhæ*.
Phragmatiphila, Hmps., Cat. Lep. Phal. B. M., ix., p. 266 (1910). *nexa*.

Proboscis aborted, minute; palpi porrect, hardly extending beyond the frons and fringed with long hair below; frons with transverse corneous plate at middle, square in front and concealed by hair; eyes large, round; antennæ of male typically serrate and fasciculate; thorax clothed with hair only, the pro and metathorax with slight spreading crests; tibiæ fringed with long hair; abdomen with some rough hair at base and dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 9 from 10 anastomosing with 8 to form a rather long areole; 6 from the areole or cell; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 on a long stalk; 8 anastomosing with the cell near base only.

Sect. I.—Antennæ of male minutely serrate and fasciculate.

1978a. PHRAGMATIPHILA FUMEA.

Sect. II.—Antennæ of male ciliated.

A. Forewing with the small reniform with dark centre and pale annulus open above and below . . . *leucaneura*.

B. Forewing with the reniform a pale lunule . . . *grisescens*.

1978b. PHRAGMATIPHILA LEUCANEURA.

Phragmatiphila leucaneura, Hmps., Cat. Lep. Phal. B. M., ix., p. 269, pl. 143, f. 1. (1910).

♂. Head and thorax dark brown, the scales tipped with grey; pectus and legs dark brown mixed with greyish, the tarsi blackish ringed with white; abdomen greyish suffused and irrorated with dark brown. Forewing greyish ochreous strongly suffused and irrorated with dark brown, the veins of costal area with slight pale streak; traces of a curved blackish ante-medial line; orbicular and reniform very small, ochreous, defined by black except above and with some black before and between them, the former rather triangular, the latter with black striga in centre; traces of an oblique blackish medial line from lower angle of cell to inner margin; an oblique postmedial series of slight black points on the veins from vein 6 to inner

margin; an oblique, ochreous shade from apex; an oblique ochreous line from termen just below apex to inner margin, fine towards apex and broadening towards inner margin, defined on each side by dark brown suffusion; a terminal series of black points; cilia ochreous tipped with brown. Hindwing ochreous suffused with brown, the base and termen paler; the underside ochreous irrorated with brown, the terminal half suffused with brown, a dark discoidal spot.

Habitat.—BURMA, Hsipaw. *Exp.* 26 mill.

1798c. *PHRAGMATIPHILA GRISESCENS*.

Phragmatiphila grisezens, Hmps., Cat. Lep. Phal. B. M. ix.
p. 270, pl. 143, f. 2 (1910).

♀. Head and thorax grey tinged with dull brown; pectus, legs and abdomen suffused with fuscous. Forewing grey tinged with brown and irrorated with fuscous, the cell and area just below it suffused with fuscous, the terminal area suffused with fuscous narrowing to a point at apex; traces of a blackish antemedial line bent inwards to costa and excurved in cell and submedian interspace; reniform a small ochreous lunule defined by black; traces of an oblique waved medial line from cell to inner margin; traces of a blackish postmedial line, oblique towards costa, then with series of black points beyond it on the veins, excurved to vein 4, then oblique; a terminal series of minute black lunules defined on inner side by slight ochreous lunules. Hindwing greyish suffused with fuscous brown; the underside brownish white irrorated with brown, a small dark discoidal spot.

Habitat.—SIKHIM, 1,800'. *Exp.* 34 mill.

Genus CALAMISTIS.

Type.

Calamistis, Hmps., Cat. Lep. Phal. B. M. ix., p. 273 (1910) .. *fusca*.

Proboscis aborted, minute; palpi upturned, the 2nd joint reaching to middle of frons and fringed with long hair in front, the 3rd short; frons smooth; eyes large, round; antennæ of male typically bipectinate with moderate branches to apex; thorax clothed with long hair and hair-like scales, the pro- and metathorax with spreading crests; tibiæ fringed with long hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

Sect. I.—Antennæ of male bipectinate with moderate branches to apex.

1942a. *CALAMISTIS PRÆPALLENS*.

Calamistis præpallens, Hampsn., Cat. Lep. Phal. B. M. ix,
p. 275, pl. 143, f. 7 (1910).

♂. Head and thorax fuscous brown tinged with grey; hind legs whitish; abdomen white, slightly tinged with brown. Forewing grey-brown, the costal half paler; a diffused pale rufous fascia in discal fold from middle of cell to subterminal line; a black streak below basal half of cell; orbicular represented by a black point above median nervure, the reniform by a small fuscous spot at lower angle of cell slightly defined by white, its upper part defined by slight black points; a rather wedge-shaped black subterminal spot in discal fold with traces of black points on the veins from it to inner margin; a terminal series of slight black striæ. Hindwing white with fine dark terminal line; the underside with the costal area and terminal area to vein 3 tinged with pale rufous.

Habitat.—TRAVANCORE, Pirmad. *Exp.* 30 mill.

Sect. II.—Antennæ of male ciliated.

A. Forewing with the inner half pale to subterminal

line *microsticta*.

B. Forewing with the basal half of inner area conco-

lorous *submarginalis*.

1793. CALAMISTIS MICROSTICTA.

1946. CALAMISTIS SUBMARGINALIS.

Genus RABILA.

Type.

Rabila, Wlk., xxxii., 507 (1865) *frontalis*.

1591. RABILA FRONTALIS.

Genus ARENOSTOLA.

Type.

Arenostola, Hmps. Cat. Lep. Phal. B. M. ix., p. 281 (1910). *phragmitidis*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to vertex of head and moderately fringed with hair in front, the 3rd short, porrect; frons smooth, with tuft of hair; eyes large, round; antennæ of male ciliated; thorax clothed with hair and hairlike scales, the prothorax with slight spreading crest, the metathorax without crest; tibiæ moderately fringed with hair; abdomen without crests. Forewing with the apex somewhat produced and acute, the termen evenly curved and hardly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1942b. ARENOSTOLA PROCERA.

Tapinostola procera., Staud. Stett. Ent. Zeit. 1889, p. 47; Hmps.

Cat. Lep. Phal. B. M. ix, p. 286, pl. 143, f. 19; Staud, Cat.

Lep. pal., p. 189.

Head and thorax ochreous white mixed with brown; palpi and legs brownish; abdomen ochreous white tinged with brown. Forewing ochreous white tinged with pale rufous and rather thickly irrorated with

fuscous brown, the veins slightly streaked with brown; traces of a post-medial series of dark points on the veins, excurved to vein 4, then oblique; a terminal series of brown striæ. Hindwing white tinged with ochreous; the underside with the costal area and terminal area to vein 2 irrorated with brown.

Habitat.—W. TURKESTAN; E. TURKESTAN; MONGOLIA; KASHMIR, Numbra. *Exp.* 30-34 mill.

Genus SPHETTA.

Type.

Sphetta, Wlk., xxxii., 457 (1865) *apicalis*.
1585. SPHETTA APICALIS.

Genus. ACRAPEX.

Type.

Acrapex, Hmps. Moths Ind. ii, p. 286 (1894) *prisca*.
Acutipenna, Hmps. Moths Ind. ii, p. 287 (1894) *acuminata*.

Sect. I. (Acutipenna)—Antennæ of male annulated and ciliated.

1954. ACRAPEX ACUMINATA.

Sect. II. (Acrapex)—Antennæ of male ciliated and not annulate.

A. Forewing with hooked white mark above median nervure in lower extremity of cell *hamulifera*.

B. Forewing without hooked white mark above median nervure.

a. Forewing with dark shade along median nervure.

a¹. Forewing with pale streaks on the veins of costal area only *brunnea*.

b¹. Forewing with pale streaks on all the veins.

a². Head and tegulæ black. *atriceps*.

b². Head and tegulæ not black.

a³. Forewing ochreous white tinged with fuscous brown *leucophlebia*.

b³. Forewing pale pinkish rufous *prisca*.

b. Forewing without dark shade along median nervure *roseotincta*.

1952. ACRAPEX HAMULIFERA.

1952a. ACRAPEX BRUNNEA.

Acrapex brunnea, Hmps. Cat. Lep. Phal. B. M. ix., p. 318, pl. 144, f. 11 (1910).

Head and tegulæ dark brown slightly mixed with ochreous; thorax ochreous tinged with rufous; pectus and legs ochreous mixed with brown; abdomen ochreous suffused with brown. Forewing ochreous, the costal area suffused with red-brown leaving slight pale streaks on the veins; a diffused brown streak along median nervure and thence to the subterminal oblique fascia, with two white points on it at lower angle of cell; a slight brown streak below base of cell; an oblique pale fascia from apex to discal fold, with a diffused brown fascia below it from termen below apex to vein 3,

with minute black streaks on it in the interspaces; a terminal series of slight black lunules; cilia ochreous mixed with brown and with brown line near base. Hindwing ochreous white, the veins and terminal area tinged with brown; a fine brown terminal line; cilia whitish with a slight brown line near base; the underside whitish with the costal and terminal areas irrorated with reddish brown.

Ab. 1.—Hindwing more uniformly tinged with brown.

Ab. 2.—Forewing without the white points at lower angle of cell.

Habitat—BR. E. AFRICA; UGANDA; MASHONALAND; GAZALAND; TRANSVAL; NATAL; CEYLON, Maskeliya; BORNEO, Pulo Laut; BR. N. GUINEA; QUEENSLAND; S. AUSTRALIA. *Exp.* 20-30 mill.

1951b. *ACRAPEX ATRICEPS*.

Acrapex atriceps, Hmps. Cat. Lep. Phal. B. M. ix., p. 319, pl. 144, f. 13 (1910).

♂. Head and tegulae black; thorax ochreous tinged with rufous; with a black dorsal stripe; pectus and legs dark brown, the hind tibiae and tarsi ochreous above; abdomen ochreous. Forewing pale ochreous slightly tinged with rufous, the veins defined by brown streaks except on inner area beyond the oblique subapical fascia, the costal edge black-brown; a diffused brown mark at lower angle of cell with white points in and beyond the angle defined by some black scales; an oblique brown fascia from termen below apex to vein 3 where it is diffused inwards to lower angle of cell; a terminal series of black striae; cilia with black line at middle and mixed with black at tips. Hindwing ochreous white slightly tinged with red-brown; cilia ochreous white with a faint brown line at middle; the underside whitish slightly irrorated with brown, the costal area suffused with brown.

Habitat.—ASSAM, Khasis. *Exp.* 26 mill.

1953. *ACRAPEX LEUCOPHLEBIA*.

1951. *ACRAPEX PRISCA*.

1951c. *ACRAPEX ROSEOTINCTA*.

Acrapex roseotincta, Hmps. Cat. Lep. Phal. B. M. ix., p. 320, pl. 144 f. 16 (1910).

♀. Head and thorax ochreous tinged with brown; abdomen ochreous white. Forewing pale ochreous yellow faintly tinged with rufous and the veins slightly streaked with rufous; a slight blackish streak below basal half of cell; some black scales at lower angle of cell; an oblique postmedial veins of black points on veins 6 to 1; an oblique diffused rufous fascia from termen below apex to vein 3; a slight brown terminal line cilia yellowish white with a faint brownish line through them. Hindwing white faintly tinged with ochreous; the underside white with the costal area tinged with ochreous.

Habitat.—CEYLON, Maskeliya. *Exp.* 22 mill.

Genus SESAMIA.

Type.

Sesamia, Guen. Noct. i., p. 95 (1852) *vuteria*.

Microsemyra, Butl. P. Z. S. 1883, p. 155 *pallida*.

Sect. I.—Antennæ of male bipectinate with extremely short branches, the apex serrate.

A. (*Microsemyra*), Hindwing with veins 3·4 strongly stalked in male from cell in female.

1950. *SESAMIA PALLIDA*.

B. Hindwing with veins 3·4 from cell in both sexes.

1943. *SESAMIA INFERENS*.

Leucania inferens, Wlk. ix. 105 (1856); Moore, Lep. Ceyl. iii, p. 8, pl. 145, f. 3.

„ *proscripta*, Wlk. ix. 106 (1856).

Sesamia albiciliata, Snell, Tijd. v. Ent. xxiii., p. 44, pl. 4, f. 3 (1880).

„ *tranquillaris*, Butl. P. Z. S. 1880, p. 674.

Nonagria gracilis, Butl. P. Z. S. 1880, p. 675.

„ *innocens*, Butl. Trans. Ent. Soc. 1881, p. 173.

Sect. II.—Antennæ of male with fasciculate cilia.

A. Forewing ochreous slightly tinged with rufous .. *cretica*.

B. Forewing ochreous slightly tinged with olive .. *uniformis*.

1943a. *SESAMIA CRETICA*.

Leucania hesperica, Frr. Neue Beitr vi, p. 32, pl. 501, f. 2 (1852).
nec. Rmbr.

Sesamia cretica, Led. Noct. Eur., p. 225 (1857); Staud. Cat. Lep. pal. p. 190.

Nonagria cyræa, Mab. Ann. Soc. Ent. Fr. 1866, p. 559, pl. 8, f. 7 and 1867, p. 640, pl. 14, f. 1.

Sesamia fraterna, Moore, Lep. Atk. p. 103 (1882).

„ *striata*, Staud. Stett. Ent. Zeit. 1888, p. 27.

Head and thorax pale ochreous tinged with rufous; palpi, sides of frons and fore femora above brownish; abdomen ochreous white; forewing pale ochreous tinged with rufous especially on terminal half, the veins with slight pale streaks; faint fuscous streaks above and below extremity of median nervure, and beyond the cell above and below vein 4; sometimes with slight antemedial dark point in submedian fold and postmedial series of points on the veins with points before them in discal and submedian folds; a fine brown terminal line; cilia ochreous tinged with rufous and with fine pale lines at base and middle. Hindwing pure white.

Ab. 1.—*striata*. Forewing with dark streak below base of cell and streaks; on the veins of terminal area . . Asia Minor, Syria, W. Turkestan.

Habitat.—CORSIKA ; CENTR. ITALY ; DALMATIA ; CRETE ; EGYPT ; SUDAN ; BASUTOLAND ; ADEN ; ASIA MINOR ; SYRIA ; W. TURKESTAN ; PUNJAB, Kangra, Dharmasala ; SIKKIM. *Exp.* 30-42 mill.

Larva, Kirby, Eur. Butt. and Moths, p. 166; Hffm. Raup., p. 105.

Ochreous whitish ; head rufous ; spiracles black. Foodplant, in stalks of maize.

1943b. *SESAMIA UNIFORMIS*.

Nonagria uniformis, Dudgeon, J. Bomb. N. H. Soc. xvi, p. 402 (1905).

Head and thorax pale ochreous slightly tinged with brown ; palpi fuscous, whitish below ; frons tinged with fuscous ; fore and mid legs irrorated with fuscous ; abdomen ochreous white. Forewing olive ochreous sparsely irrorated with dark brown ; an antemedial black point in submedian fold ; a slight diffused fuscous shade on extremity of median nervure and just beyond lower angle of cell ; a slight black point in lower angle of cell and another in discal fold just beyond the discocellulars ; postmedial black points in discal and submedian folds with races of a curved series of black points beyond them on the veins ; a fine blackish terminal line not quite reaching apex and tornus ; cilia ochreous white with faint brownish lines near base and tips. Hindwing pure white ; the underside with the costal area slightly tinged with ochreous and irrorated with brown.

Habitat.—BENGAL, Burogah ; BOMBAY, Surat. *Exp.* ♂ 32, ♀ 34-38 mill.

Larva. Destructive to sugar-cane.

Genus XYLOSTOLA.

Type.

Xylostola, Hmps., Cat. Lep. Phal. B. M., ix, p. 335 (1910).. *indistincta*.

Proboscis fully developed ; palpi upturned, the 2nd joint reaching about to vertex of head and broadly fringed with scales in front, the 3rd long ; frons with small rounded prominence covered by a tuft of hair ; eyes large, round ; antennæ of male ciliated ; thorax clothed with hair and hair-like scales, and without crests ; tibiæ fringed with rather long hair ; abdomen with some rough hair at base, but without crests. Forewing with the apex rather produced and acute, the termen evenly curved and hardly crenulate ; veins 3 and 5 from near angle of cell ; 6 from upper angle ; 9 from 10 anastomosing with 8 to form the areole ; 11 from cell. Hindwing with veins 3·4 from angle of cell ; 5 obsolescent from just below middle of discocellulars ; 6·7 from upper angle ; 8 anastomosing with the cell near base only.

A. Forewing with black lunules in centre and on outer edge of reniform.. .. *robusta*.

B. Forewing with the reniform defined by black points *indistincta*.

1945. *XYLOSTOLA ROBUSTA*.

1889. *XYLOSTOLA INDISTINCTA*.

Genus ARCILASISA.

Type.

Arsilasisa, Wlk., xxxii., 470 (1865) *sobria*.
1939. ARSILASISA SOBRIA.

Genus CLETHRORASA.

Type.

Clethrorasa., Hmps., Cat. Lep. Phal. B. M., ix., p. 343
(1910) *pilcheri*.

Proboscis fully developed ; palpi upturned, the 2nd joint smoothly scaled and flattened against the frons, the 3rd short ; frons smooth, eyes large, round ; antennæ of male almost simple ; thorax clothed almost entirely with scales and without crests ; tibiæ smoothly scaled ; abdomen with dorsal crests on basal segments. Forewing narrow, the margins subparallel, the apex rounded, the termen evenly curved and not crenulate ; veins 3 and 5 from near angle of cell ; 6 from upper angle, 9 from 10 anastomosing with 8 to form the areole, 11 from cell. Hindwing with veins 3·4 from angle of cell ; 5 obsolescent from just below middle of discocellulars ; 6·7 from upper angle ; 8 anastomosing with the cell near base only.

1960a. CLETHRORASA PILCHERI.

Genus APSARASA.

Type.

Apsarasa, Moore, P. Z. S., 1867., p. 665 *radians*.

A. Hindwing with the white patch extending almost
to cell *radians*.

B. Hindwing with irregular white patch on termen.. *figurata*.

1962. APSARASA RADIAN.

1962a. APSARASA FIGURATA.

Apsarasa figurata, Moore, P. Z. S., 1877, p. 604; Hmps., Cat. Lep.
Phal. B. M., ix., p. 347., pl. 144, f. 32.

♀. Head and thorax blue-black ; palpi with white spot on basal joint in front ; frons with yellowish white patch above ; vertex of head and tegulæ at middle and tips with yellowish white bands ; pro- and meso-thorax with yellowish spots and meta-thorax with yellowish patch ; coxæ with white patches ; femora at extremities, tibiæ and tarsi, with white bands ; abdomen black-brown tinged with metallic blue, the two basal segments with yellowish white dorsal spots. Forewing blue-black, the costal terminal and inner areas with yellowish white patches leaving radiating blue-black bars and streaks ; the costal area with three small yellowish white spots on costal area followed by an oblique striga, then an erect striga, and irregular medial patch, a slight bar above end of cell followed by a striga, a triangular patch towards apex followed by an oblique bar and triangular patch at apex ; the terminal area with two short oblique streaks towards apex with point before the

upper one, a minute streak at vein 5 and four oblique triangular patches between vein 4 and tornus; the inner area with small triangular antemedial spot followed by a striga, a broad medial band from submedian fold to inner margin extending to just above the fold at extremity, followed by a wedge-shaped spot, then a narrow bar and wedge-shaped spot towards tornus; a yellowish white point at middle of cell and another at upper angle. Hindwing black-brown with some white on termen between vein 4 and tornus, its inner edge very irregular and angled inwards below veins 4 and 3; the underside with antemedial white spot on costa, slight streak in base of cell, some whitish below base of cell, faint medial band from costa to discal fold, slight postmedial spots below costa and vein 8, two short subapical streaks and slender elongate streaks above and below discal fold.

Habitat.—ANDAMANS. *Exp.* 46-50 mill.

Genus CHASMINA.

Type.

<i>Chasmina</i> , Wlk., ix, 146 (1856)	<i>tibialis</i> .
<i>Sphragifera</i> , Staud, Rom. Mén. vi, p. 544 (1892)	<i>sigillata</i> .
<i>Clinophlebia</i> , Hmps., Ill. Het. B. M., ix, p. 92 (1893)	<i>sericea</i> .

Sect. I. (Clinophlebia).—Forewing of male with the apex rectangular, the costa somewhat excised beyond middle and the costal neuration slightly distorted.

1957. CHASMINA SERICEA.

Sect. II (Chasmina).—Forewing with the apex rounded, the costa not excised, the neuration normal.

A. Forewing without subapical or postmedial dark patches.

a. Forewing without postmedial line	<i>tibialis</i> .
b. Forewing with postmedial line	<i>judicata</i> .

B. Forewing with sinuous dark patch from costa before apex

rejecta.

C. Forewing with elliptical rufous patch in and beyond end of cell

maculata.

1958. CHASMINA TIBIALIS.

Noctua tibialis, Fabr, Syst. Ent., p. 578 (1775).

Leocyma vestæ, Guen., Noct. ii, p. 213 (1852).

„ *dianæ*, Guen., Noct. ii, p. 213 (1852).

Chasmina cygnus, Wlk., ix, 147 (1856); Butl., Ill. Het. B. M., vi, p. 35, pl. 110, f. 3.

„ *glabra*, Wlk., xxxii, 636 (1865).

Xanthodes, mariæ, Mab., C. R. Ent. Soc. Belg., xxv., p. lx (1884).

1959. CHASMINA JUDICATA.

1960. CHASMINA REJECTA.

Noctua rejecta, Fabr., Syst. Ent., p. 601 (1775).

Acontia himacula, Wlk., xii, 796 (1857); Butl., Ill. Het. B. M., iii, p. 20, pl. 45, f. 8.

Chasmina stigmata, Hmps., Ill. Het. B. M., viii, p. 73, pl. 145, f. 10. (1891).

1961. CHASMINA MACULATA.

Genus CALLYNA.

	Type.
<i>Callyna</i> , Guen., Noct., i, p. 112 (1852)	<i>siderea</i> .
A. Abdomen with the terminal segments orange	<i>siderea</i> .
B. Abdomen with the terminal segments not orange.	
a. Forewing with ante and postmedial black patches on costa	<i>costiplaga</i> .
b. Forewing without ante and postmedial black patches on costa.	
a ¹ . Forewing with dark fascia in discal fold between postmedial and subterminal lines.	
a. Forewing with the claviform represented by a small black spot	<i>jugaria</i> .
b ² . Forewing with the claviform absent.	
a ³ . Forewing with the postmedial line dentate from costa to vein 4	<i>semivitta</i> .
b ³ . Forewing with the postmedial line oblique and straight from costa to vein 4.	<i>mystica</i> .
b ¹ . Forewing without dark fascia in discal fold between postmedial and subterminal lines	<i>monoleuca</i> .

2169. CALLYNA SIDEREA.

2173. CALLYNA COSTIPLAGA.

2171. CALLYNA JUGARIA.

2171a. CALLYNA SEMIVITTA.

Callyna semivitta, Moore, Lep. Atk., p. 161 (1882); Waterh. Aid. ii., pl. 160, f. 3.

♀. Head deep chocolate brown mixed with some white; palpi with the 1st and 2nd joints white in front; thorax chocolate-red, the tegulae white at base; pectus and legs brown mixed with white, the tibiae and tarsi ringed with white; abdomen grey-brown, the ventral surface irrorated with white. Forewing chocolate red with a purple gloss, irrorated with a few white scales, the base and the area below the costa and the upper part of cell thickly irrorated with ochreous white to the postmedial line; subbasal line indistinctly double filled in with white, waved from costa to submedian fold; antemedial line defined on each side by ochreous white, waved, interrupted, obsolete below submedian fold, an oblique white striga before it across the cell; orbicular and reniform with white annuli defined by black, the former with some ochreous scales in centre, its outer edge produ-

ced to a streak connected with the reniform, which has an ochreous centre, narrow, rather constricted at middle and slightly angled inwards on median nervure; postmedial line double filled in with ochreous white, irregularly waved, oblique from costa to vein 4, below vein 3 represented by white points on the veins, a black-brown fascia from it to subterminal line in discal fold; some white points on postmedial part of costa; an apical ochreous white patch extending on to the cilia at apex and with dark striæ on it at termen and dark wedge-shaped mark before it below costa; the subterminal line represented by an excurved ochreous white mark below the apical patch and two points in discal fold, then very faint, incurved below vein 3 and with slight dark mark on it at submedian fold; a terminal series of white points. Hindwing fuscous brown with a cupreous gloss; the cilia greyish intersected with white at the veins and tipped with white between veins 6 and 4; the underside brown irrorated with white, especially on basal half, the inner area greyish, a brown discoidal lunule and diffused medial band, some white on termen between veins 2 and 1.

Habitat.—PUNJAB, Kulu; SIKKIM. *Exp.* 48-66 mill.

2172. *CALLYNA MYSTICA*.

2170. *CALLYNA MONOLEUCA*.

Callyna monoleuca, Wlk. xv., 1667 (1858).

Leocyma apicalis, Snell. Tijds. v., Ent. xxiii, p. 54, pl. 4, f. 9 (1880).

Genus SEUDYRA.

Type.

Seudyra, Stretch, Cist. Ent. ii, p. 19 (1875) *transiens*.

Sect. I.—Palpi with the 3rd joint long; midwing with the termen slightly excised at submedian fold and the tornus lobed.

1571. *SEUDYRA VENOSA*.

Sect. II.—Palpi with the 3rd joint moderate; hindwing with the termen evenly curved.

A. Forewing with the apex produced, the termen obliquely curved.

a. Hindwing without discoidal spot *longipennis*.

b. Hindwing with black discoidal spot *catocalina*.

1572. *SEUDYRA LONGIPENNIS*.

1573. *SEUDYRA CATOCALINA*.

Phægorista catocalina, Wlk., xxxv. 1859 (1866); Butl. Ill. Het.

B. M. v., p. 20, pl. 82, f. 9; Kirby, Cat.

Lep. Het., p. 38.

Zalissa exigvifascia, Swinh., Cat. Het. Mus. Oxon. 1, p. 167 (1892).

B. Forewing with the apex not produced, the termen much less obliquely curved.

a. Both wings with the termen not crenulate.

- a*¹. Hindwing with the terminal band expanding
into a large quadrate patch above tornus .. *bala*.
*b*¹. Hindwing with the terminal band not expanding
into a large quadrate patch above tornus .. *transiens*.

1570. SEUDYRA BALA.

1569. SEUDYRA TRANSIENS.

Eusemia transiens, Wlk., vii. 1588 (1856); Kirby, Cat. Lep. Het.
p. 38.

Phægorista catocaloides, Wlk., Journ. Linn. Soc. Zool., vi, p. 87
(1862).

Agarista egoceroïdes, Feld. Reis. Nov., pl. 107, f. 10 (1878).

Seudyra dissimilis, Swinh. Trans. Ent. Soc., 1890, p. 174.

- b*. Both wings with the termen crenulate.

a. Forewing with curved white patch beyond the
cell *albifascia*.

b. Forewing with quadrate white spot in end of
cell *nepcha*.

1574. SEUDYRA ALBIFASCIA.

1575. SEUDYRA NEPCHA.

Genus. PROTOSEUDYRA.

Type.

Protoseudyra, Hmps., Cat. Lep. Phal. B. M., ix, p. 443.

(1910) *picta*.

Proboscis fully developed; palpi porrect, extending about the length of head, the 2nd joint moderately fringed with hair below, the 3rd short; frons with rounded prominence with minute pointed corneous process at middle; eyes large, round; antennæ of male ciliated; thorax clothed with hair and hair-like scales and without crests; fore tibiæ fringed with long hair: the mid and hind tibiæ moderately fringed with hair; abdomen with very large crest of curled metallic scales at base only. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1872. PROTOSEUDYRA PICTA.

Genus OPSYRA.

Type.

Opsyra, Hmps., Cat. Lep. Phal. B. M. ix, p. 445 (1910) .. *chaleoela*.

Proboscis fully developed; palpi obliquely upturned, the 2nd joint reaching about to vertex of head and moderately fringed with scales in front, the 3rd short, porrect; frons smooth; eyes large, round; antennæ of

male minutely ciliated; thorax clothed chiefly with scales, the pro and metathorax with spreading crests of very long spatulate scales, the patagia fringed with long rough scales at extremity; tibiae fringed with rather long hair; abdomen with large crest at base only. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

2174a. OPSYRA CHALCOELA.

Genus MICRAPATETIS.

Type.

Micrapatetis, Meyr., Trans. Ent. Soc. 1897, p. 369 .. *orthozona*.

Axiolata, Turner, P. Linn. Soc. N. S. W. xxvii., p. 120 (1902). *leucozona*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to about vertex of head and moderately scaled, the 3rd short; frons with rounded prominence; eyes large, round; antennae of male ciliated; thorax clothed almost entirely with scales, the prothorax without crest, the metathorax with large spreading crest; tibiae slightly fringed with hair; abdomen without crests. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from below upper angle; 7. 8. 9. 10 stalked; 11 from cell. Hindwing with veins 3·4 shortly stalked; 5 obsolescent from middle of discocellulars; 6·7 from upper angle or stalked; 8 anastomosing with the cell to near middle.

A. Forewing ochreous suffused with purplish red .. *pyrastis*.

B. Forewing dark red-brown with the basal area yellow .. *flavipars*.

1962a. MICRAPATETIS PYRASTIS.

Micrapatetis pyrastis, Hmps., Cat. Lep. Phal. B. M., ix. p. 454, pl. 146, f. 22 (1910).

♀. Head and tegulae purplish grey; thorax pale purplish red; palpi, pectus and legs blackish mixed with grey; abdomen purplish red. Forewing pale purplish red, the basal half with an ochreous tinge; a medial leaden grey band defined at sides by black lines, slightly constricted at discal fold and strongly at submedian fold, some slight pale points beyond it on costa; cilia whitish at base, blackish at tips. Hindwing fuscous with a purplish grey tinge; cilia whitish with a fuscous line through them; the underside rather paler with faint diffused curved postmedial line.

Habitat.—MADRAS, Gooty. *Exp.* 18 mill.

1962b. MICRAPATETIS FLAVIPARS.

Micrapatetis flavipars, Hmps., Cat. Lep. Phal. B. M., ix., p. 454 pl. 146, f. 23 (1910).

♀. Head and tegulae dark greyish brown; thorax ochreous yellow

pectus, legs and abdomen greyish brown. Forewing with the basal area ochreous yellow defined by the fine black antemedial line, which is minutely waved and somewhat oblique, the base of costa with a brown fascia; the rest of wing dark red-brown with a silvery gloss; an indistinct diffused red-brown postmedial line. Hindwing reddish brown with a greyish tinge, a fine pale line at base of cilia.

Habitat.—BOMBAY. *Exp.* 18 mill.

Genus HYPOCALAMIA.

Type.

Hypocalamia, Hmps., Cat. Lep. Phal. B. M., ix., p. 495

(1910)

.. .. *meterythra*

Proboscis fully developed; palpi obliquely upturned, the 2nd joint reaching about to middle of frons and moderately fringed with scales in front, the 3rd short; frons smooth; eyes larger, round; antennæ of male ciliated; thorax clothed with hair only and without crests; tibiæ moderately fringed with hair; abdomen without crests. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1709. HYPOCALAMIA METERYTHRA.

(To be continued.)



Hampson, George Francis. 1912. "The moths of India. Supplementary paper to the volumes in 'The Fauna of British India'. Series IV, Part [IV]." *The journal of the Bombay Natural History Society* 21, 878–911.

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