

as plentiful and as varied in the Carboniferous age as at any other time.

It would be worth while, when the opportunity offers, for some one to look over the weathered surface of the strata in the mountain of Ben Bulbin, where fragments, if not entire specimens, of sponges from which the spicules come might be found, after the manner that they have been discovered in the Carboniferous system in the south-west of Scotland.

EXPLANATION OF PLATE XIV. B.

- Fig. 1.* *Holasterella Wrightii*, spicule of, nat. size. The largest met with (diagram).
Fig. 2. The same, restored, to show the perfect form with spiral inflation on the arms. Magnified 7 diameters.
Fig. 3. The same. Furcate arm, much more magnified, to show—*a*, the simple spiral inflation, and *b*, the same when “broken up.” Scale 1-48th to 1-1800th inch.
Figs. 4, 5, 6, and 7. The same, to show the simple sexradiate and multifid divisions of the arms respectively (diagrams).
Fig. 8. Sarcohexactinellid. Fragment of large surface-spicule of unknown species.
Fig. 9. The same. Free end of anchoring-spicule.
Fig. 10. Lithistid. ? Tripod-like surface-spicule of unknown species.
Fig. 11. The same. Lateral view.
Fig. 12. The same. Dendritically branched surface-spicule of unknown species.
Fig. 13. The same. Form of body-spicule of unknown species.
Fig. 14. *Reniera*?. Sausage-shaped spicule of unknown species.
Fig. 15. Acerate spicule of unknown sponge.
Fig. 16. The same.
Fig. 17. Quadriradiate fragment of spicule of unknown sponge.
 N.B. *Figs. 3 and 8-17* inclusively are all drawn to the scale of 1-48th to 1-1800th inch.

XXVIII.—*Descriptions of new Species of Asiatic Lepidoptera Heterocera.* By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

[Continued from p. 129.]

38. *Thalassodes opalina*, sp. n.

Wings semitransparent, emerald-green, striated all over with white and with opaline reflections: primaries crossed in the middle by a straight transverse slender white line; a shorter and less-defined line towards the apex; costal margin yellow, fringe tipped with yellow: secondaries angulated, a slender angulated white line beyond the middle, sinuated below the angulation; basal half of subcostal vein yellow, fringe tipped with yellow: antennæ white at base, golden

beyond the base; body sap-green, white at the sides and below. Wings below paler than above and immaculate, primaries with cream-coloured costa. Expanse of wings 1 inch 8 lines.

Darjiling (*Lidderdale*). Type B. M.

Nearly allied to *T. depulsata*, from the Celebes, but confounded by Walker with his *Geometra dissita* from Canara.

39. *Thalassodes glaucaria*, Walker.

♀. Pale smoky grey; wings mottled all over with minute opaline white striations, the discocellulars slightly darker than the ground-colour; an angulated darker stripe, bordered externally with snow-white, and slightly undulated at external third: body slightly brownish, vertex of head and antennæ snow-white. Wings below pearly white, without markings; costa of primaries and body below cream-coloured. Expanse of wings 1 inch 6 lines.

Darjiling (*Lidderdale*). Type B. M.

Nearest to *T. bifasciata*, but very distinct. Walker describes the male only as a *Thalera*.

The three following species would unquestionably have been referred to *Comibæna* by Walker; but only the first of them has the long palpi of that genus. Some of the species placed in *Comibæna* by Walker, and also by others who have followed him, are referable to *Chlorodes*, the palpi being short and the anal angle of the secondaries distinctly lobate; others are nearer to *Agathia*, and others, again, to *Thalera* or *Thalassodes*.

40. *Comibæna pictipennis*, sp. n.

Wings above sap-green, indistinctly striated with pearly white: primaries with the basal five eighths of the costa yellowish, the remainder snow-white; an oblique white line across the basal fourth; a small black dot at the end of the cell; an oblique, internally sinuated, externally diffused, tapering, discal, snow-white belt, terminating at the first median branch; a slightly undulated submarginal white line; a slender white marginal line interrupted by black dots between the veins; fringe tipped with white; a plum-coloured spot with ferruginous inner margin near the external angle: secondaries with the costal area pearly white; a large quadrate subapical patch, the veins at apex, the anal angle, and anal three fifths of abdominal fringe plum-colour; a small annular marking of the same colour at the end of the cell; a large dull golden arched band resting on the outer margin, and extending up into the lower radial and interno-median inter-

spaces; outer margin towards apex plum-coloured, spotted with blackish; a very slender silvery-white marginal line; apical fringe plum-coloured, intersected with white; centre of fringe somewhat golden; anal fringe plum-coloured: front of head laky brown; palpi and back of head greyish; antennæ white; collar bright green in front, yellow behind; tegulæ yellow in front, green behind; thorax white in front, yellow in the middle, green behind; abdomen green towards the base, with white dorsal line, white behind. Under surface opaline greenish white, with faint indications of the margins of the plum-coloured spots; black discocellular and marginal dots: primaries with bright green costal border: secondaries with rosy fringe. Expanse of wings 1 inch 5 lines.

Darjiling (*Lidderdale*). Type B. M.

41. *Chlorodes pastor*, sp. n.

Emerald-green: wings with stramineous external border, bounded internally by a rosy submarginal stripe; a ferruginous marginal stripe; fringe traversed by an indistinct interrupted ferruginous line; submarginal stripe bounded within upon the primaries by a white stripe, and on the secondaries by a stramineous stripe, both with zigzag inner edge; a very irregular angulated white discal stripe, edged with sap-green, on the primaries uniting with the outer stripe between the median branches: primaries with a large oblong white patch varied with rose-coloured and yellow streaks near the external angle; costal border white, spotted with green at the base; a white-bordered subbasal orange band: secondaries with the abdominal margin white, spotted with dull red; fringe white, becoming yellowish towards the anal angle: vertex of head, antennæ, and probably the abdomen white. Under surface sericeous white: wings tinted with the green of the upper surface; costa of primaries and fringes slightly yellowish, a marginal series of small dark brown spots: secondaries with several subapical and subanal brown spots parallel to the outer margin. Expanse of wings 1 inch 10 lines.

Darjiling (*Lidderdale*). Type B. M.

Allied to *Comibæna sanguineata* of Moore.

42. *Agathia scutuligera*, sp. n.

Wings above emerald-green, fringe pale stramineous, streaked with rose-red at the extremity of the veins; a marginal series of diamond-shaped red-edged white spots, bounded internally by a pale stramineous stripe; costal borders white; a few red dots in an interrupted series across the

basal third : primaries with two dots at the end of the cell, the lower one black ; external angle broadly pale stramineous, traversed by a sinuous purplish abbreviated band, and mottled with lake-red : secondaries crossed at external third by a series of red dots ; apex purplish : head in front yellowish, varied with red ; back of head and antennæ white ; thorax and base of abdomen green ; rest of abdomen yellowish, sprinkled with red and with large red-edged lateral white spots, anal segments white at the sides. Under surface white ; wings showing a slight greenish tint ; fringe as above ; a lake-red marginal line : primaries with pale yellowish costa ; a purplish abbreviated band near the external angle, as above ; legs cream-coloured, anterior femora and tibiæ streaked with rose-red. Expanse of wings 1 inch 3 lines.

Darjiling (*Lidderdale*). Type B. M.

A. scutuligera is very like the *Comibæna devexata* of Walker, to which it seems to be allied.

43. *Agathia gigantea*, sp. n.

Brilliant emerald-green : wings sparsely mottled with mustard-yellow, crossed beyond the middle by an extremely irregular olivaceous stripe, followed by a partly black-edged greyish-white line, and limiting the external area ; on the second median interspace in all the wings this stripe is abruptly bent outwards so as to form three sides of a quadrangle ; external area (occupying two fifths of the primaries and half the secondaries) sandy yellowish, mottled with black and grey, and spotted and blotched with brilliant green mottled with mustard-yellow, the green spots and blotches being arranged in an imperfect discal series and a nearly perfect and partly confluent submarginal series ; fringe testaceous at its base, grey outwardly : primaries with the costal border pale flesh-colour, with two oblique blackish streaks near the base ; a nearly central zigzag sandy-yellowish stripe, and a large roundish patch of nearly the same colour at the base of internal area : secondaries with white basicostal area ; an olivaceous dot at the end of the cell ; a subcuneiform sandy yellowish patch before the middle of abdominal area ; base of the same colour : abdominal fringe white towards the base ; palpi and face white ; antennæ and proboscis fulvous ; top of head greyish brown ; collar and shoulders brilliant green ; thorax sandy yellowish, with two green spots on the metathorax ; tegulæ greenish ; abdomen testaceous, ornamented on each segment by a large central bilunate spot. Under surface sericeous white ; wings crossed by a blackish discal stripe, angulated on the primaries, followed at a short distance by an

ill-defined grey stripe, the area between these two stripes being striated with grey: primaries with a costal apical blackish spot and a second near the centre of the outer margin; a brownish dot at the end of the cell: secondaries with the outer border, excepting at apex, blackish; a minute blackish dot at the end of the cell. Expanse of wings 2 inches 3 lines.

Java (*Horsfield*). Type B. M.

44. *Agathia visenda*, sp. n.

Allied to *A. carissima**, but larger, with longer primaries and distinctly caudate secondaries; the external area with much more angular inner edge; the subapical green patch of primaries with distinctly zigzag inner edge, and the two spots below it larger and consequently more distinct, the external angle decidedly redder up to the second median branch; the costal border greyish brown, the curved stripe just before the middle of the wing darker and beginning in an irregularly cuneiform subcostal spot: secondaries with the external area wider and greyer at abdominal margin; the small green spot enlarged and placed further from the anal angle; the apical-marginal green spot almost separated into two very unequal semicircular spots. Wings below with the external area purplish, showing the green spots of the upper surface. Expanse of wings 1 inch 8 lines.

Darjiling (*Lidderdale*). Type B. M.

45. *Agathia beata*, sp. n.

Brilliant emerald-green: wings with the external area (occupying about a fourth of the primaries, and a third of the secondaries) dull black, limited internally by an undulated black-edged grey line; a large apical green patch almost obliterating the whole of the apical portion of the black external area of primaries; fringe whitish internally, black externally: primaries with pinky whitish costal border; a zigzag pale brownish stripe before the middle, commencing in a black subcostal spot; a large black spot at base: secondaries with the green apical patch terminating behind in an abbreviated white submarginal streak or line; a large subanal green patch composed of four unequal elongated lunate spots just beyond the undulated grey line; abdominal margin and fringe white towards the base; a small black basal spot: head brown in front; thorax blackish, the collar, shoulders, and a spot on the metathorax green; basal segment of abdomen black with

* Butler, Ill. Typ. Lep. Het. ii. pl. xxxvi. fig. 7.

a central green spot, three following segments green with pale brown borders and blackish dorsal tufts, remaining segments sordid white. Under surface creamy whitish; wings slightly tinted with green; external area grey, paler at the margins, and with the apical patches of the upper surface greenish white: primaries with an indistinct rosy zigzag stripe before the middle. Expanse of wings 1 inch 7 lines.

Darjiling (*Lidderdale*). Type B. M.

Nearest to *A. hemithearia* of Guénée.

46. *Thalera textilis*, sp. n.

Bright emerald-green, mottled, particularly on the veins, with pearly white; a submarginal chain-like belt of the same colour enclosing a series of green lunules; a marginal series of white and sulphur-yellow diamond-shaped spots, which extend into the fringe; fringe tipped with grey: primaries with grey-mottled chalky-white costal border; a white-edged green lunule at the end of the cell: secondaries with the basal half of abdominal fringe white: body mottled with white, abdomen with a dorsal series of white spots. Under surface white: wings glassy, opaline, veins dead white; fringe greenish spotted with testaceous, tipped with grey: primaries with blackish-speckled white costal border. Expanse of wings 1 inch 4 lines.

Darjiling (*Lidderdale*). Type B. M.

A beautifully delicate species, with strongly denticulated margin to the secondaries; it seems more nearly to approach "*Comibæna*" *albiceps* of Felder in pattern than any other known form.

Palyadæ.

DISSOPHTHALMUS, gen. nov.

Ophthalmophoræ affine, corpore robustiore, abdomine brevi, palpis tenuioribus, alis brevioribus, cellulis² discoidalibus (præsertim cellula alarum anticarum) longioribus, ramis subcostalibus anticarum valde approximatis. Gen. typ. *D. iridis*.

47. *Dissophthalmus iridis*, sp. n.

Wings above with the basal three fourths lilacine, minutely irrorated with opaline scales; a dusky streak beyond the middle; external fourth pale greyish brown, crossed by a submarginal lilacine belt spangled with metallic blue and green, the spots in primaries decreasing in size from the costa downwards; the centre of the belt in the secondaries occupied by a large golden-green spot enclosing a blind black oval

ocellus with buff iris, bordered in front with blackish; fringe tipped with opal: body greyish brown. Wings below pearly bluish, crossed just beyond the middle by a purplish streak; a broad purple submarginal belt; body creamy white, palpi orange, tarsi testaceous, femora and tibiae slightly brownish above. Expanse of wings 1 inch 2 lines.

Borneo. Type B. M.

Ephyridæ.

48. *Anisodes punctifera*, sp. n.

Near to *A. pardaria* from Borneo; ochreous, mottled all over with blood-red: primaries with a black subcostal dot near the base, a faintly indicated, oblique, zigzag, testaceous line, marked with two black dots at basal fourth; an oblique testaceous dash enclosing a black dot at the end of the cell; an oblique testaceous belt beyond the middle, margined externally by black dots, and emitting one internal and two external forks above the middle; a transverse testaceous dash near the external angle; a marginal series of black dots: secondaries pale at the base, crossed near the base by a testaceous abbreviated stripe; an interrupted, testaceous, mottled, undulated belt just before the middle, margined externally by a series of black dots, and limited internally by the black discocellular dot; a testaceous discal stripe forking towards the costa; a marginal series of black dots: antennæ with grey pectinations. Under surface cream-coloured, crossed by undulated grey lines corresponding with the bands of the upper surface; a black dot at the end of each cell. Expanse of wings 1 inch 10 lines.

Darjiling (*Lidderdale*). Type B. M.

49. *Anisodes Lidderdalii*, sp. n.

Ochreous, mottled all over with burnt-sienna red: wings with a black dot at the end of the cell of each wing, a marginal series of black dots, a dark greyish-brown oblique dash at apex, a second near the middle of external border, and two or three spots on the inner margins: primaries crossed beyond the middle by an angulated dark greyish-brown belt, which widens abruptly above the angulation at second median branch, and is excavated at its costal termination so as to give it almost a forked appearance: secondaries crossed close to the base by a dark brown stripe; a bisinuated, ill-defined, red line just before the middle, dotted at its extremities with blackish; two parallel, abbreviated, N-shaped, grey costal lines near the apex; a subquadrate discal dark brown patch

across the second median and discoidal interspaces : antennæ whitish, with grey pectinations ; a red posterior border on each side of the collar ; base of abdomen dark brown. Under surface stramineous, with all the markings of the upper surface, including the mottling, reproduced in grey. Expanse of wings 1 inch 3 lines.

Darjiling (*Lidderdale*). Type B. M.

In general pattern most like dark varieties of the species of the allied genus *Synegia* of Guénée. The following described forms should be referred to the latter genus :—*Anisodes hadassa*, from Japan ; *A. imitaria* and its variety "*A. ? obri-maria*," from Ceylon ; *A. pustularia* and *A. eumeleata*, from Borneo. *Anisodes ? platycerata* of Walker is a *Drapetodes*.

Erosiidae.

The larva of this group, as Mr. Moore has shown me, proves it to be Pseudodeltoid ; for convenience' sake, however, I introduce the following new species here, since this is where it would naturally be looked for by Lepidopterists working with M. Guénée's classification.

50. *Erosia himala*, sp. n.

Snow-white : primaries above with the basal half crossed by two widely separated, oblique, parallel, black stripes ; a slightly oblique smoky-brown stripe from the costa to the external angle ; an abbreviated submarginal black line ; costal margin dotted with black ; fringe brownish at the base : secondaries traversed by an elbowed black line parallel to the abdominal margin ; a large, oblique, pyramidal discal patch from just above the first subcostal branch to near the outer margin, ochreous with smoky brown extremities, its base excavated ; subapical area striated with brown ; a marginal, black, sinuated line connecting the caudal denticles ; a large, marginal, black spot at the extremity of the second median branch ; fringe traversed by a blackish line : anterior legs blackish internally. Wings below sordid towards the base : primaries with the black lines on basal half ill-defined ; external third brownish, flecked with darker striations : secondaries with creamy external area ; fringe traversed here and there by a blackish line ; a small black spot near the extremity of the second median interspace. Body below sordid white. Expanse of wings 1 inch 4 lines.

Darjiling (*Lidderdale*). Type B. M.

One of the largest and prettiest species in the genus.

Caberidæ.51. *Corycia vestigiata*, sp. n.

Snow-white, sericeous: wings crossed beyond the middle by an angulated series of internally brown-edged semicircular or lunate testaceous spots, followed immediately by a series of indistinct lunate brownish markings; a second similar but reversed submarginal series of lunate markings; a marginal series of minute black dots: frons reddish brown; antennæ testaceous. Under surface creamy white, immaculate. Expanse of wings 10 lines.

Darjiling (*Lidderdale*). Type B. M.

Macariidæ.52. *Evarzia indica*, sp. n.

Testaceous: wings black-speckled, crossed on the basal half by two subparallel blackish-mottled yellow lines, the outer one irregularly undulated: primaries with the external two sevenths darker, crossed obliquely from apex to inner margin by a broad dark brown stripe, which also crosses the secondaries just beyond the middle, its centre occupied by a sandy-yellow line; external area beyond the stripe greyish brown, marked at external angle with a black spot on a pale testaceous diffused patch striated with black; margin black; apical half of fringe blackish, inferior half testaceous; a sub-apical costal red-brown marking formed of two parallel oblique and slightly curved dashes corresponding in character with the commencements of the two subbasal lines; two black costal spots beyond the subapical dashes: secondaries with a diamond-shaped red-brown spot on second median interspace, and two or three ill-defined dots on the subcostal interspaces; a black marginal line: abdomen with two dorsal series of black dots. Under surface sandy yellow: wings speckled with black, crossed before the middle by a brown irregular line varied with ferruginous; a black dot at the end of each discoidal cell: primaries with a broad brown-edged rust-red band traversed by an indistinct lunulated brown line, and immediately followed by the smoky-brown external area; an oval sandy-yellow apical costal spot; fringe as above: secondaries crossed by a broad oblique discal belt, smoky brown internally, rust-red bordered with smoky brown externally; a black marginal line. Expanse of wings 1 inch 8 lines.

Darjiling (*Lidderdale*). Type B. M.

Near to *E. ozararia*, but with more defined markings, the broad discal stripe of the upper surface placed much further

from the outer margin ; the disk of secondaries spotted, the markings of the under surface darker, the apical spot oval and not bifid, and the broad belt of the secondaries of equal width throughout and placed further from the outer margin.

The males of *Evarzia* have a singular hyaline bladder-like spot near the base of the internal border of the primaries, somewhat as in the genus *Corymica*.

Fidoniidæ.

53. *Plutodes discigera*, sp. n.

Wings above citron-yellow ; primaries with a semicircular basi-internal patch of coffee-red bordered with plumbaginous and continuous with a broad triangular patch which occupies the basi-abdominal two fifths of the secondaries ; all the wings with a large oval discal patch of coffee-red, crossed by a zigzag darker red line and bordered with plumbaginous ; body red-brown ; back of head, collar, and anal tuft pale yellow. Under surface pale creamy yellow, all the wings with a large chocolate-brown oval patch occupying nearly the whole of the disk ; secondaries with pale reddish-brown basi-abdominal area. Expanse of wings 1 inch 3 lines.

India. Type B. M.

This species was placed by Walker with *P. cyclaria*.

54. *Plutodes flavescens*, sp. n.

Nearly allied to the preceding, but the wings of a lemon-yellow colour, the discal patches comparatively smaller, more rounded in form, the line across them considerably more zigzag, forming in the primaries ten, instead of three, angles ; body redder. Expanse of wings 1 inch 4 lines.

N.E. Himalayas (*Lidderdale*). Type B. M.

Owing to the increase of half a line in each of the front wings, the yellow area between the basal area and the oval discal patch is distinctly wider than in *P. discigera*.

55. *Plutodes exquisita*, sp. n.

Primaries above sulphur-yellow, with sericeous costal border ; outer margin and fringe citron-yellow ; an irregularly quadrate basi-internal rust-red spot with blackish margin ; disk almost wholly occupied by a broad rust-red belt, washed with pinky reddish internally and ochraceous externally, and traversed by a darker zigzag line, not reaching the costal margin, but edged at its upper extremity with plumbaginous, bordered internally by two black lines and externally by a single black

line flecked with plumbaginous: secondaries with the basi-internal and discal areas rusty red, edged externally with black flecked with plumbaginous; the disk also traversed by a darker zigzag line and bounded internally by two black lines, which terminate near the anal angle in a black spot, partly bordered internally with yellow and externally with plumbaginous; central area occupied by a triangular lemon-yellow belt; margin and fringe citron-yellow: body reddish; collar pale yellow; antennæ cream-coloured. Under surface pale creamy yellowish; the disks of the wings golden brown or pale clay-reddish, margined and banded with grey; fringes citron-yellow; abdominal border of secondaries slightly golden; body cream-coloured. Expanse of wings 1 inch 4 lines.

Darjiling (*Lidderdale*). Type B. M.

56. *Plutodes subcaudata*, sp. n.

Wings above pale sulphur-yellow, semitransparent, the costal border and fringes rather darker; primaries with a basi-internal triangular coffee-brown patch bordered with plumbaginous and black; disk almost wholly occupied by a broad coffee-brown belt, which, however, is abruptly narrowed to about one third of the width below the second median branch; this belt is traversed by an irregularly zigzag ferruginous line and bordered by a black-edged silvery line: secondaries with a basi-abdominal belt edged externally with plumbaginous and black, and a broad irregularly angulated belt, occupying nearly the whole disk, coffee-brown; the discal belt also bounded on both sides by a black-edged silver line, and traversed by a zigzag ferruginous line; external margin strongly angulated, with a large black spot extending into the fringe at the angle, so as to give it an almost caudate appearance; the outer half of the same fringe ochraceous: body brown; back of head and collar pale yellow; antennæ cream-coloured. Under surface creamy whitish, with yellow borders to the wings; discal belts formed nearly as above, but greyish brown with faint cupreous reflections. Expanse of wings 1 inch 5 lines.

Darjiling (*Lidderdale*). Type B. M.

Although similar in coloration, this species differs from the other members of the genus in the form of its wings, which somewhat approaches that of *Macaria*.

57. *Pagrasa rufescens*, sp. n.

Pale pinky brown: wings sericeous, inclining to flesh-colour: primaries with two large widely separated black costal spots; costal area minutely black-speckled; external border

greyish; fringe ferruginous; two widely divergent oblique orange stripes, the first slender, from median vein to inner margin, the second crossing the disk from the inner margin to just above the upper radial vein: secondaries with rosy outer border; an abbreviated submarginal stripe from the anal angle: antennæ silvery grey. Primaries below pale golden brown, subcostal and external areas dull blood-red; external border lilacine towards apex; a blackish costal spot at apical third: secondaries rosy brownish; an angulated discal ferruginous line: body below rosy brownish, tibiæ and tarsi greyish. Expanse of wings 1 inch 5 lines.

Darjiling (*Lidderdale*). Type B. M.

58. *Noreia sericea*, sp. n.

Sericeous pinky brown, the abdomen and basal areas slightly greyish: wings crossed just beyond the middle of primaries and before the middle of secondaries by an oblique dark ferruginous line; a slender irregularly undulated submarginal line of the same colour; a slender black marginal line; fringe rosy, pale at base: primaries with three semi-circular ferruginous lines across the cell and two parallel sub-basal sigmoidal lines below it. Under surface creamy whitish, sericeous; the wings sordid, crossed by two dark greyish-brown discal lines, the inner one straight, the outer one undulated; a slender marginal line; fringe rosy greyish towards the tips. Expanse of wings 1 inch 3 lines.

N.E. Himalayas (*Lidderdale*). Type B. M.

Zerenidæ.

59. *Abraxas pusilla*, sp. n.

Allied to *A. leopardinata*, but only of about two thirds the size; primaries with the central interrupted band expanded into a broad grey nebula occupying about a third of the wing; discal series of spots double, more or less confluent and forking towards the costa; marginal spots regular and generally confluent: secondaries with both the discal and marginal series of spots small and regular. Expanse of wings 1 inch 6 lines.

Darjiling (*Lidderdale*), Nepal. Type B. M.

There is no doubt in my mind of the distinctness of this little species. *A. leopardinata*, according to Walker, was a confused assemblage of three or four quite distinct species.

60. *Abraxas conspersa*, sp. n.

♂. Wings sericeous white: primaries above spotted and speckled with dark olive-green, the spots forming five bands—

the first basal, indistinct; the second subbasal, formed of three rounded spots, immediately followed by two larger, almost lunate spots and a rounded one on inner margin; third and fourth each of two closely approximated series, which combine into one band towards the inner margin; fifth formed of three series, the first of oval submarginal spots, the second of confluent lunate marginal spots, the third of semicircular spots on the fringe: secondaries with a discocellular spot, one or two dots towards base of abdominal margin, a discal interrupted series of two or three small subcostal, and one or two large abdominal spots; a submarginal series, a marginal series of elongate spots, and a series alternating with the latter upon the fringe, all blackish: body ochreous, spotted with black. Primaries below with all the markings sericeous grey. Expanse of wings 2 inches 4 lines.

Darjiling (*Lidderdale*). Type B. M.

Allied to *A. lapsariata*, but smaller, the white intervals between the bands of primaries mottled all over with olive dots and the central bands of large spots rather more sinuous.

61. *Abraxas consocia*, sp. n.

Near to the preceding, but considerably larger; the veins and borders of primaries pale olivaceous, the spots of the bands blackish, many of them confluent, and the secondaries dotted all with dark grey; the ordinary spots larger, those of the border confused by the numerous mottlings between them. Expanse of wings 3 inches 3 lines.

N.E. Himalayas (*Lidderdale*). Type B. M.

CALLABRAXAS, gen. nov.

Abraxati affine, differt autem cellulis brevioribus, vena costali alarum posticarum multo brevior, vena subcostali pone cellulam furcata. Gen. typ. *C. amanda**.

62. *Callabraxas amanda*, sp. n.

Wings above snow-white, sericeous: primaries with the basal half cupreous brown, crossed towards the base by three grey lines dotted with white on the veins, the third line undulated in the middle; a grey-and-white V-shaped marking immediately beyond the cell; costa towards apex black; two subapical spots, one below the other, close to the costa, three similar submarginal spots and an apical nebula grey; a marginal series of black spots; one or two minute grey dots near the external angle: secondaries with the external border

* *Abraxas Whitelyi* of Japan may also be referred to this genus.

golden ochreous, tapering towards the apex; a submarginal series of six oval black spots, the first two subconfluent, and eight marginal spots, of which all excepting the first and last are bifid; anal half of abdominal margin banded with black: body sordid cream-colour, spotted with black. Under surface of wings sericeous white: primaries with a dusky streak through the cell, otherwise the basal markings only visible from the transparency of the wing; a decreasing discal series of eight grey spots and a marginal series of bifid black spots: secondaries as above, excepting that the submarginal series of spots is continued to the costa, two spots being added at the upper extremity of the series: body sordid cream-colour, spotted and dotted with black. Expanse of wings 2 inches 2 lines.

Darjiling (*Lidderdale*). Type B. M.

This beautiful species, in the pattern of its primaries, somewhat resembles the genus *Melanippe*.

63. *Panæthia iridicolor*, sp. n.

♂ ♀. Wings above pale emerald-green, crossed in the middle by a broad angulated and widely sinuated chrome-yellow belt; a widely undulated discal stripe, white internally and yellow externally; external border washed with yellow, the veins and a series of internervular longitudinal rays beyond the discal stripe blue-black: primaries with a large and nearly complete annulus at the base, its inner edge yellow and its outer edge white; a small spot at the base of the costal border and a curved transverse line on the discocellulars blue-black: secondaries with the upper half of the discocellulars slightly blackish: body bright yellow; frons greenish, bright green just in front of the antennæ, the latter testaceous with the scape white; posterior margins of abdominal segments silvery white. Under surface pure white; primaries with a dark green line on the discocellulars. Expanse of wings 2 inches 4 lines.

Darjiling (*Lidderdale*). Type B. M.

This beautiful and delicate species is nearer to *P. hemionata* of Guénée from North China than to any other known species; it is, however, utterly dissimilar in colour to any moth yet described.

Larentiidæ.

64. *Sauris ignobilis*, sp. n.

♂. Pale sandy brown: primaries crossed by numerous angulated wavy blackish lines; the basal area, a central angulated

belt (most distinct towards the costa above the angulation), a broad subquadrate apical patch, only separated by a slender black line from the external border, which is of the same colour, creamy whitish. Under surface sericeous, sordid whitish. Expanse of wings 1 inch 3 lines.

Darjiling (*Lidderdale*). Type B. M.

65. *Lygranoa cinerea*, sp. n.

Primaries above sericeous grey, crossed in the middle by two parallel subangulated yellow stripes, the inner one spotted with black on the costa, and the outer one enclosing a black line at costa and a black dot just above the angulation; costal margin minutely black-speckled: secondaries sandy whitish: thorax grey, abdomen sandy whitish. Primaries below greyish, with the apical area and costal border golden; secondaries sandy whitish, minutely speckled with grey, costal border slightly golden: body below whitish, palpi golden. Expanse of wings $9\frac{1}{2}$ to $10\frac{1}{2}$ lines.

Darjiling (*Lidderdale*). Type B. M.

66. *Cidaria fissisignis*, sp. n.

Nearest to *C. mactata* of Felder; primaries above pale sericeous pinky brown, adorned with large white-bordered black-brown patches and spots in six series as follows:—two spots at the base, two partly divided and larger near the base, a 7-shaped series just before the middle; the fourth series consists of a large quadrate costal patch, behind and below which run four small spots in a curved oblique line, and below that again a large cloven patch from above the median vein to near the inner margin; the fifth (or discal) series begins upon the costa in a large spot, and is continued, by small spots at intervals upon a sinuated brown line, to the inner margin; the last series represents a moderately wide external border, interrupted in three places and divided by pale veins into more or less quadrate spots: secondaries sericeous white, slightly tinted with brown towards the abdominal and external borders, the disk crossed from the abdominal margin to the middle by two irregular dusky lines; external border dusky; a marginal series of black geminated dots; fringe pale stramineous intersected by a dusky line: thorax dark brown, longitudinally striped with grey on each side; abdomen grey. Under surface sericeous pale greyish brown; wings with blackish discocellular lituræ; a pale-edged dentate and crinkled blackish line just beyond the middle. Expanse of wings 1 inch 8 lines.

Darjiling (*Lidderdale*). Type B. M.

67. *Cidaria delecta*, sp. n.

Intermediate in character between *C. interplagata* and *mactata*: primaries above black-brown, basal fourth limited by a pale yellowish-white line, which emits a fork obliquely backwards towards the inner margin, and two nearly longitudinal streaks forwards to join a double stripe of the same colour, which runs obliquely through the centre of the wing; the inner line of the central stripe curves forwards and upwards from the first median branch so as to enclose a large partly cleft patch of the ground-colour, which crosses the end of the cell from the costal margin; the latter is also crossed by two indistinct whitish lines, and is partially enclosed by a pale brassy-yellow line close to the whitish one, and running across the disk; a slender dentate-sinuate whitish discal line followed below the third median branch by a gravel-brown stripe; a widely bisinuated submarginal whitish stripe; a nearly marginal slender whitish line; veins externally whitish or yellow; a slender indistinct whitish annular line near the middle of the inner border; fringe with a testaceous basal line: secondaries nearly as in the allied species: body whitish, tegulæ and sides of abdomen brown. Primaries below altogether greyer than above, brassy towards the apex, the markings less prominent: secondaries pale brassy yellow, minutely black-speckled; discocellular spot black and prominent; two central curved dusky lines and an indistinct discal streak dotted with brown: body below yellowish. Expanse of wings 1 inch 6 lines.

N.E. Himalayas (*Lidderdale*). Type B. M.

68. *Cidaria relata*, sp. n.

Allied to *C. silaceata*, *melancholica*, and *substituta*: primaries dark brown, crossed by four pale stripes, the first three pinky whitish and enclosing brown lines, the first subbasal arched, the second and third crossing one another so as to form a large 8-shaped figure, which covers more than a third of wing, the fourth biangulated, white, submarginal; several pale annular markings in the centres of the patches enclosed by the pale stripes: secondaries sericeous greyish white; anal half of abdominal border banded alternately with blackish and white; outer margin brownish: body pale bronzy brown, indistinctly banded with white. Primaries below greyish, with faint indications of the markings of the upper surface: secondaries whitish; a discocellular spot, an N-shaped marking on abdominal border, and a dentate-sinuate submarginal line dusky: body below whitish, legs testaceous; anterior tibiae

indistinctly banded with brown. Expanse of wings 1 inch 4 lines.

N.E. Himalayas (*Lidderdale*). Type B. M.

69. *Cidaria aurigena*, sp. n.

Allied to *C. inextricata* and *aerosa**: the primaries much more golden than either, the dark brown markings, being confined to the base, costal border, the large patch which crosses the end of the cell and which is acutely angulated, and to the apex; all the other spots which are brown in *C. inextricata*, and partly so in *C. aerosa*, are of a brassy-golden colour in this species: secondaries with scarcely a trace of the white discal stripes: body pale brassy yellowish; thorax greenish in the centre, with a brown longitudinal dorsal stripe. Under surface brassy yellow, with greyish lines, as in *C. inextricata*. Expanse of wings 1 inch 1 line.

N.E. Himalayas (*Lidderdale*). Type B. M.

Apart from differences of pattern and coloration, this species measures about half an inch less in expanse of wings than *C. inextricata*; the latter differs from *C. aerosa* in having ten instead of eight yellow lines and stripes across the costal half of the primaries, and in the dark brown spots on the border near the external angle.

70. *Cidaria aliena*, sp. n.

Nearly allied to *C. aurata* of the *C. corylata* group: primaries black-brown, crossed at basal third and again on the disk near the outer margin by two widely diverging ochreous bands, touched here and there with ferruginous, and bordered by tolerably regularly dentate-sinuate white lines; a cuneiform costal apical spot and a small spot near the centre of external border of the same ochreous colour, but not white-bordered; outer border towards the external angle almost wholly ferruginous; a marginal series of slender white lunules; fringe ochreous, spotted with blackish: secondaries white, tinted, especially towards the outer margin, with golden yellow, fringe ochreous: body white, spotted with yellow and dark brown alternately. Primaries below altogether paler than above: secondaries white, speckled with dark brown, and crossed in the middle by two parallel irregularly arched dark brown lines; a blackish discocellular spot; indications of a dark brown submarginal line; veins almost wholly yellow; legs brownish. Expanse of wings 1 inch 3 lines.

Bhotan (*Lidderdale*). Type B. M.

* Ill. Typ. Lep. Het. iii. pl. lv. fig. 7.



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