

similar to those of that species ; but the radial apophysis is shorter, stouter, and more obtuse at its extremity, the process also within its curvature is straighter, shorter, and stouter.

It is also allied to *Walckenaëra erythropus*, Westr., though the palpi, as well as the eminence on the caput of this last species, differ in structure, the digital joint being larger, the radial apophysis less strong at its extremity, the process within its curvature longer, more prominently turned upwards, and furnished with a cusp-like point at its end.

A single example received for examination from Count Keyserling, by whom it was found near Munich.

EXPLANATION OF PLATE XVII.

- Fig. 1.* *Neriène rasa*, sp. n., ♂, p. 343. Dux. *a*, profile, without legs or palpi ; *b*, front view of eyes and falces ; *c*, left palpus, sideways, above and a little underneath in front ; *d*, curved process at base on outer side of palpal organs, from in front ; *e*, natural length of spider.
- Fig. 2.* *Neriène Keyserlingii*, sp. n., ♀, p. 344. Germany. *a*, profile, without legs ; *b*, front view of eyes and falces ; *c*, hinder extremity of abdomen, from underneath ; *d*, same as *c*, in profile ; *x*, fold in front of spinners, supposed to conceal spiracular orifices ; *y*, the same as *x*, in profile ; *e*, genital aperture ; *f*, natural length of spider.
- Fig. 3.* *Neriène iracunda*, sp. n., ♂, p. 346. Lävland. *a*, profile, without legs or palpi ; *b*, front view of eyes and falces ; *c*, left palpus, from outer side, rather in front ; *d*, ditto, in front, rather on inner side ; *e*, natural length of spider.
- Fig. 4.* *Walckenaëra nasuta*, sp. n., ♂, p. 347. Lisbon. *a*, right palpus on outer side ; *b*, humeral, cubital, and radial joints of left palpus, from in front ; *c*, profile, without legs or palpi ; *d*, natural length of spider.
- Fig. 5.* *Walckenaëra congenera*, sp. n., ♂ (profile, without legs or palpi), p. 348. Munich. *a*, caput, from above and behind ; *b*, left palpus, from above and rather in front ; *c*, radial joint of ditto ; *d*, natural length of spider.

XLI.—*Descriptions of new Species of Lepidoptera from Japan.* By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

THE moths described in the present paper were mostly presented to the British Museum by Mr. Henry Pryer of Yokohama, who collected them in that locality. Amongst them are many species of great interest, exhibiting marvellous resemblance to well-known European types, whilst one or two show greater similarity to forms occurring in the New World.

One insect in Mr. Pryer's collection I was much surprised to find, upon examination, to be absolutely identical with a West-Indian form; I allude to *Gonitis fractifera*. As the Indian species of *Gonitis* seem to be constant to locality, the various forms being nearly allied and limited in their range, it is very strange to find a form common to St. Domingo and Jamaica in Japan.

Sphingidæ.

1. *Acosmeryx metanaga*, n. sp. (no. 217).

♂. Rather larger than *A. sericeus* ♂; coloration intermediate between it and *A. anceus*; markings of primaries and entire coloration and marking of the under surface almost as in *A. naga*—lilacine grey, clouded and banded with fuliginous brown; wings tinted upon the disk with ferruginous; primaries with a lunated belt dividing off the basicostal area and an oblique darker belt from the costa just beyond the middle to the external border, both fuliginous brown; the usual transverse undulated dark brown lines; outer border smoky brown, undulated internally, intersected by a grey stripe from the subcostal furca to the second median branch; a triangular subapical marginal dark-brown spot; secondaries greyish, becoming reddish on the disk, which is crossed from near anal angle by a dusky bordered lilacine streak, followed by a rather broad fuliginous outer border, which tapers to the anal angle; thorax, excepting the tegulæ, red-brown; margins of abdominal segments red-brown; antennæ sordid white. Expanse of wings 4 inches.

2. *Pergesa mongoliana*, var., Butl. (no. 219).

Differs from the ordinary Japanese examples in its much deeper coloration above, the absence of the pale patches at apex and on the disk of the primaries, and in the bright reddish coloration of the under surface. In this last character, however, it agrees with the type from Mongolia.

3. *Triptogon sperchius*, Ménétr. (no. 205).

We have received a pair of what appears to be this species, agreeing fairly with the published figures, and therefore establishing the entire distinctness of my *T. piceipennis*. Although I could not hesitate to describe an insect so entirely distinct in coloration and marking as *T. piceipennis* from the figure published by Ménétriés, it is satisfactory to be able to confirm the validity of the species by comparison with actual specimens.

Zygænidæ.

4. *Illiberis sinensis*, Walker (no. 243 B).

This insect has now come from Yokohama.

5. *Procris funeralis*, sp. n. (no. 244).

Deep purplish brown, the fringes paler; the disk of secondaries whitish and semihyaline; abdomen black, claspers and proboscis horn-yellow; a whitish extruded anal tuft. Expanse of wings 9 lines.

Arctiidæ.

6. *Spilosoma leucothorax*, Felder (no. 288).

This species is new to Japan.

7. *Spilarctia imparilis*, var., Butl. (no. 286).

The male now sent agrees with the typical female in spotting, but the female sent with it agrees more nearly with the typical male; it is therefore clear that, as in the European species, the Japanese *Spilarctiæ* vary considerably in the number of spots upon the wings.

8. *Spilarctia inæqualis*, n. sp. (no. 294).

♂. Wings above pale buff, becoming pink towards the inner margins; a black spot at the superior angle of each discoidal cell: primaries with a spot in the cell, two or three close to inner margin, near to which commences an oblique series from the centre of the margin to the lower discoidal interspace, where it meets a series of abbreviated black dashes running to the apex; a second less distinct series of similar dashes between the oblique series and the outer margin: secondaries with a spot on the discoidal interspace and four near the anal angle blackish grey: thorax white, the head and shoulders tinted with buff; abdomen carmine, with lateral black dots and fringe of ochreous hairs; antennæ black. Wings below nearly as above: body below whitish, the collar and fringe of the palpi carmine; upper surface of palpi and of front legs and the tarsi and knees of the other legs black. Expanse of wings 1 inch 4 lines.

♀. Wings above semitransparent white, tinted with pale buff at the borders; a blackish spot at the superior angle of each discoidal cell: primaries with a double series of abbreviated black dashes as in the male, but without the oblique series of spots or other spots noted as existing in that sex:

secondaries with a spot near the apex and a second near the anal angle: thorax and base of abdomen white; remainder of abdomen pink, but with the anal segments pale buff, a series of black spots on each side; head slightly yellowish; antennæ black. Wings below as above: body below white, venter black-spotted, anus buff; collar and fringe of palpi pink; upper surface of palpi and of front legs black; upper surface of the remaining legs brown. Expanse of wings 1 inch 10 lines.

The female at first sight looks almost like *S. rhodophila*, whereas the male agrees better with *S. obliqua*.

9. *Spilarctia rosacea*, n. sp. (no. 289, ♂).

Primaries above fawn-colour, with the borders and veins pale creamy buff; the basal third of costal margin black; a small spot at the superior angle of the cell, a second on the costa beyond it, a third just above the bend of the submedian vein, an oblique series of black spots from inner margin to apex, interrupted at the fourth median or lower radial branch; an abbreviated series of black points near the outer margin: secondaries rose-coloured, with the margins buff; a large black spot at the end of the cell: thorax cream-coloured; head grey; antennæ and eyes black; abdomen rose-coloured, with dorsal and lateral series of black spots. Primaries below bright rose-red, with the outer and inner margins and a patch at basal third of costa ochraceous, base whitish, a black spot at the end of the cell, a broad interno-median longitudinal streak and an oblique series of spots from the latter to the apex black: secondaries rose-coloured, with yellowish borders; a black spot at the end of the cell: body whitish, palpi and coxæ and femora of anterior and middle legs carmine, tibiæ and tarsi of hind legs blackish, venter laterally spotted with black. Expanse of wings 1 inch 9 lines.

The insect sent as the female of this species is *S. seriato-punctata* of Motschulsky, the male of which we previously possessed; the sexes of that species do not differ either in size, form, or colour, whereas the insect now described differs in all of these points, its chief resemblance, indeed, consisting in the presence of the black basicostal streak on the primaries.

Lithosiidæ.

10. *Cyana decipiens*, n. sp. (no. 1126).

Primaries sordid white, with broad chocolate costal border not quite reaching the base, a dusky-bordered, irregular, sub-

basal, pale sandy yellowish stripe, and a second across the disk, close to the external border; the veins upon the broad central area enclosed by these two stripes dotted with olivaceous; external area limited internally by a series of black >-shaped markings, almost forming a zigzag line; external angle clouded with olivaceous; fringe obliquely streaked with ferruginous; an oblique curved discocellular black dash; costal margin yellowish, spotted with olivaceous: secondaries shining white, with slightly brownish external area, broadest at apex: body white. Under surface sordid white, primaries broadly suffused with grey; a discal series of blackish semi-circles near the outer margin; fringe as above. Expanse of wings 1 inch 7 lines.

This species wonderfully resembles the New-Zealand genus *Declana*.

11. *Miltochrista torrens*, n. sp. (no. 266).

Primaries bright orange, with costal and outer margins red; two black dots at the base; two blackish irregular lines upon the basal half from inner margin to subcostal vein: secondaries yellowish rose-coloured, with bright rosy border; fringe of all the wings ochreous: thorax reddish orange; abdomen buff, with dorsal and lateral series of black dots. Under surface pale rosy, with the borders of the wings brighter in colour; body yellowish. Expanse of wings 1 inch.

12. *Systropha nivosa*, n. sp. (no. 270).

Snow-white, wings sericeous; primaries below pale brown with white fringe; anterior and middle pairs of legs brownish above. Expanse of wings 1 inch.

Notodontidæ.

13. *Stauropus persimilis*, n. sp. (no. 321).

Closely allied to *S. fagi*, but smaller, the ground-colour of the wings more uniformly reddish brown, the basal pale area of primaries much less defined; the whitish border below obsolete. Expanse of wings 2 inches 2 lines.

This is, of course, nothing but a small representative race of *S. fagi*; the caterpillar, probably of this species, from Hiogo, is black with castaneous head.

14. *Peridea cinerea*, n. sp. (no. 331).

Nearly allied to *P. sikkima*, with the same markings, but much smaller, altogether greyer, and with the yellow spots

on the disk of primaries replaced by snow-white ones; the primaries and thorax, seen as a whole, are distinctly ash-coloured instead of greenish brown. Expanse of wings 2 inches.

This species is of the same general tint as *Phalera sigmata*; but the body is browner; it and "*Heterocampa*" *sikkima* are decidedly best placed in *Peridea*, with which they appear to agree in all essential points of structure.

PALECA, n. gen.

Allied to *Cleapa*, but with the palpi nearly twice as large (giving the genus quite a *Deltoid* character), and with the antennæ less widely pectinated, with the apical fourth simple; body slightly more slender and decidedly longer. Type *P. rufescens*.

15. *Paleca rufescens*, n. sp. (no. 1067).

Primaries above clay-coloured, shining; the basal and external thirds dusky and edged with a pale line, so that the central third forms a broad belt, expanding upon the costa, and enclosing a blackish discocellular spot: secondaries pale shining brown, the external half being distinctly more dusky with defined inner edge: thorax clay-coloured, abdomen pale brown. Under surface pale cupreous brown, shining; wings with indications of a blackish discal line and with black discocellular spots. Expanse of wings 1 inch 3 lines.

INGURIDIA, n. gen.

Allied to *Ingura* (*I. recurrens*), but the wings broader, the secondaries altogether larger; antennæ simple, palpi slightly more slender; hind legs quite as strongly quadrispinose, but apparently rather less densely hairy; pectus covered with long coarse hairs. Type *I. abrostolina*.

16. *Inguridia abrostolina*, n. sp. (no. 782).

Dark brown, primaries above clouded with greyish; the discoidal spots and a large rounded spot below the cell indicated by black outlines, and enclosed by two transverse black lines, which indicate the central belt; a pale grey submarginal line and a black marginal line formed of confluent lunated spots; head and thorax pale and silvery, abdomen dark greyish brown. Under surface dark brown, shining; wings with a darker discal line and pale fringe; the fringe of secondaries almost wholly white. Expanse of wings 1 inch 1 line.

This species, though similar in general tint to the allied genus *Ingura*, is even more like *Abrostola* in pattern and coloration.

17. *Lophopteryx Pryeri*, n. sp.

Near to the "*Notodonta*" *Sieversii* of Ménétriés, but shorter in the wings, with more prominent scale-tooth from the inner margin of the primaries, and with the central belt and discal spots on these wings more sharply defined. Expanse of wings 1 inch 5 lines.

L. Sieversii is carefully figured; and therefore, although we do not possess the species, I have no difficulty in characterizing the Japanese insect as distinct.

Drepanulidæ.

18. *Oreta auripes*, n. sp. (no. 348).

♀. Allied to *O. calida* (Ill. Lep. Het. pl. xxii. fig. 6), size of the male of that species, and of the same general colour above—laky brown, mottled with grey; wings crossed by two grey lines, wider apart than in *O. calida*, the outer one on primaries incurved and bounded by an ill-defined yellow line which runs to apex; fringe and margin of secondaries bright ferruginous: body pale whity brown, the metathorax and abdomen slightly rosy; head and antennæ ochreous; collar rosy brown. Wings below bright ochraceous, clouded with rosy reddish, reticulated and dotted with lilacine grey; a curved discal line of the same colour across the primaries: body below creamy yellowish; anterior legs bright reddish orange; other legs golden orange. Expanse of wings 1 inch 9 lines.

This species should be placed between *O. calida* and *O. pulchripes*. *Drepanulides palleolus*, Motschulsky (no. 345), is a *Callidrepana*.

Saturniidæ.

19. *Tropæa aliena*, n. sp. (no. 323).

♂. Wings above pale yellowish green*, white at the base and along the abdominal border of secondaries; the usual small oval ocelli closing the discoidal cells; a slightly sinuous yellowish olivaceous discal stripe from costa of primaries to abdominal margin of secondaries; fringe pale sandy yellow: primaries with a second, irregular, oblique, subbasal, yellowish

* Probably emerald-green when fresh from the chrysalis, as there are traces of this colour on the underside of the wings.

olivaceous stripe; costal border sordid plum-colour, densely irrorated in front with white scales, and bounded behind by a black stripe: body white; the head, collar, margins of the thorax and abdomen slightly yellowish; a broad belt of dark plum-colour across the prothorax and tegulæ; antennæ bright testaceous; hind margin of eyes red. Wings below with an undulated discal line in place of the sinuous stripe of the upper surface; body below sordid white, palpi and legs rosy. Expanse of wings 5 inches 10 lines.

This beautiful species most nearly agrees with the Mexican *T. dictynna*, but differs in the absence of the conical chocolate patch uniting the ocellus of primaries to the costal border, in the more wavy discal stripe, and the presence of a second stripe towards the base of the primaries.

Linnaeus evidently confounded *T. dictynna* with *T. luna*; for although, in the 10th edition of his 'Systema,' he quoted Catesby's figure of the North-American insect and Petiver's representation of the same species as illustrations to his brief diagnosis, yet for the fuller description given in the 'Museum of Ulrica' he quoted Clerck's 'Icones' first of all; and the figure in the latter certainly represents the Mexican species, inasmuch as the wings are crossed by a well-defined discal stripe. It is probable that both descriptions are taken from the northern type.

Limacodidæ.

20. *Narosa culta*, n. sp. (no. 771).

Primaries above pale pinky brown; an irregular transverse subbasal olivaceous line followed by a broad unequal central olivaceous belt, a line of the same colour parallel to and immediately beyond the central belt; a black oblique patch just beyond the end of the cell, and above it one or two little brown lines; a rather broad olivaceous discal belt, indistinct towards the inner margin; a subconfluent marginal series of black dots: secondaries pale silky brown, with a dusky marginal line: body pale brown. Primaries and pectus below shining greyish brown; secondaries shining whitish, with indistinct irregular dusky discal line, a discocellular lunule and an interrupted marginal line blackish: venter whitish. Expanse of wings 1 inch 1 line.

Lasiocampidæ.

Mr. Pryer has sent home a pair of a curious variety of *Æona segregata*, in which the bands are ferruginous instead of blackish.

Hepialidæ.

21. *Gorgopis nipponica*, n. sp. (no. 236).

Primaries above olive-brown, shot with rose-colour towards the outer margin; the subbasal area darkest, marked with two unequal white dots placed obliquely; a spot closing the cell, an irregular discal series doubled above the median vein, and a marginal series deep olivaceous: secondaries greyish brown, shot with rose-colour; fringe brown, spotted in the middle with cream-colour: thorax olivaceous; abdomen greyish brown. Under surface bronzy olivaceous, tinted with rose-colour. Expanse of wings 1 inch 4 lines.

Cymatophoridæ.

22. *Cymatophora plumbea*, n. sp. (no. 625).

Silvery grey, primaries more metallic and less brown in tint than the secondaries; basal area crossed by six parallel blackish irregular lines, the three outer of which are thicker and more distinct than the others; a widely sinuated blackish line beyond the cell, followed immediately by two or three undulated parallel white-margined grey lines; veins on the disk alternately black and white; outer border broadly dusky, crossed by a white line limiting the dots on the veins; a wavy marginal blackish line; fringe sordid white, traversed by a dusky line: secondaries pale brownish, with broad diffused brownish external area, a whitish discal stripe, and a well-marked blackish dorsal tuft: thorax white, speckled with black, giving it the appearance of the colour of the primaries. Under surface pale whity brown, shining; a white-bordered dusky discal stripe; pectus white. Expanse of wings 2 inches.

Bombycoidæ.

BELOSTICTA, n. gen.

Allied to *Acronycta*, but differing in the much more elongated form of the primaries, giving it quite the aspect of a Notodont: palpi much broader than in *Acronycta*, legs hairy; pectus clothed with long hair. Type *B. extensa*.

23. *Belosticta extensa*, n. sp. (no. 739).

Pale greyish brown; primaries indistinctly banded with bronzy brown; the discoidal spots black-edged; two widely divergent irregular white-edged black lines across the wings;

an oblique black litura between these lines and below the orbicular spot; veins on the disk alternately black and white, a series of more or less sagittate interneural black streaks along the external border, most prominent near external angle, limited internally by an ill-defined whitish line; an undulated marginal black line, fringe sordid white; thorax whitish: under surface whitish, primaries and pectus tinted with pale purplish brown; wings shining. Expanse of wings 2 inches 2 lines.

24. *Acronycta consanguis*, n. sp. (no. 637).

Close to *A. menyanthidis*, but decidedly greyer, the sagittate marking near external angle of primaries more distinctly and neatly formed, as in *A. tridens*, the ∞ -like marking at the base replaced by a black-edged 8-shaped brownish marking. Expanse of wings 1 inch 7 lines.

The secondaries of this species are decidedly browner than in *A. menyanthidis*, and there is a well-defined pale brown discal stripe.

Leucaniidæ.

25. *Mythimna deparca*, n. sp. (no. 703).

Allied to *M. placida*; primaries pale greenish buff-coloured, external third ferruginous, crossed longitudinally by grey veins spotted with black, and transversely by a somewhat angulated dark-edged yellow line limiting the external border; inner edge of the external third regularly undulated, a slightly darker ferruginous undulated line just inside it across the disk; two geminated dark grey lines, converging towards costa, upon the basal area, a black dot between these within the cell, and a second below the cell; discoidal spots outlined in ferruginous, the reniform placed upon a ferruginous nebula from which a streak of the same colour runs to the inner margin; fringe rosy ferruginous, traversed by a grey line and spotted with ochreous: secondaries bronzy brown, darkest at outer border; fringe rosy, with yellow basal line: body above greenish buff-coloured, the centre of the thorax and fringe of the abdomen ferruginous; antennæ with brown pectinations. Wings below shining whity brown, with ferruginous borders, blackish discocellular spots, a dusky submarginal line; primaries clouded with greyish brown: body below ferruginous; palpi and upper surface of front legs purplish brown, tarsi yellowish; other legs above blackish, banded with white, below ochreous. Expanse of wings 1 inch 7 lines.

26. *Leucania Loreyi*, Duponchel (no. 648).

I at first thought this species distinct from the European form; but a close comparison under the lens has satisfied me that it is only a slightly rubbed example; all the markings are the same.

27. *Leucania extranea*, var., Guén. (no. 647).

This is a singularly sandy-coloured variety which at first sight I was inclined to believe a distinct species; I have, however, found a specimen similarly coloured in the collection from India.

28. *Nonagria turpis*, n. sp. (no. 655).

Whity brown; primaries with a curved series of black dots beyond the middle; thorax darker brown: wings below paler, shining, with blackish marginal dots, discocellulars and an indistinct discal line grey; body below brownish. Expanse of wings 1 inch 4 lines.

Xylophasiidæ.29. *Xylophasia scitula*, n. sp. (no. 751).

Primaries above clay-brown, sericeous, traversed by three very irregular paler lines—the innermost line limiting the basal third, subangulated, spotted with black, the central line oblique discal, dentate-sinuate, with the denticles represented by pale-edged black dots upon the veins, outermost line irregularly undulated, limiting the external border, bounded internally on costal border by an ill-defined greyish diffused spot or nebula; one or two black dots on the costal margin, and a series between the veins on the outer margin; secondaries shining fuliginous brown, with pale argillaceous, traversed by a dusky line; thorax red-brown, with the front of the collar pale; abdomen fuliginous, with reddish fringe. Under surface fuliginous; wings paler than the thorax and shining, outer border whity brown; discocellular spots and a discal stripe dark brown; a marginal series of black dots, costa of primaries tawny; coxæ and fringes of legs purplish brown; venter whitish, with lateral black spots and yellowish fringe. Expanse of wings 1 inch 6 lines.

30. *Dipterygia caliginosa*, Walker (no. 659).

Closely allied to *D. pinastri*, but larger and much darker, less red in tint, the oblique undulated outline of the dark area less oblique, and consequently with shallower sinuations; body altogether of a more smoky tint; under surface shining

grey, the postmedian line much less strongly defined and placed at nearly twice the distance from the outer margin. Expanse of wings 1 inch 8 lines.

Referred by Walker to the genus *Hadena*.

Apameidæ.

31. *Apamea limbata*, n. sp. (no. 749).

Primaries sandy whitish, mottled with grey, the central belt represented by two divergent undulated geminate black lines enclosing the discoidal spots, which are also outlined in black; reniform spot dark grey; an abbreviated black geminate litura close to the base, the costal area between the latter and the central belt suffused with dark grey; area between the central belt and the irregular outer border blackish, excepting at inner margin; outer border whitish, with widely bisinuate internal edge, a few scattered black scales and a marginal series of black dots; fringe testaceous, spotted with black: secondaries silky white, the external area, especially at apex, suffused with smoky brown; a spot closing the cell and a dentate-sinuate discal line of the same colour: body greyish brown; tegulæ grey at base, metathorax crossed by two subconfluent grey spots. Wings below shining sordid white; primaries slightly suffused with grey and with a distinct externally excised discal grey belt followed by a slender line of the same colour, marginal dots and fringe as above; secondaries with a spot at the end of the cell, a number of scattered scales on the costal area, a discal series of abbreviated dashes, and a marginal series of dots black: body below sandy brownish. Expanse of wings 1 inch 7 lines.

Possibly this may be the "*Caradrina variolosa*" of Motschulsky; but if so, the description is too imperfect for satisfactory identification.

Noctuidæ.

32. *Agrotis depravata*, n. sp. (no. 660).

Primaries whity brown, spotted here and there with greyish brown; an abbreviated black-edged zigzag pale line limiting the basal area; upon the latter several dark brown spots; two irregular parallel discal series of black lunules and a marginal series of partially confluent black dots; discoidal spots indistinctly indicated by black scales: secondaries sordid white, with diffused brown external area and blackish marginal line: body sordid whitish. Under surface sordid sericeous greyish white; wings with a slender black-dotted marginal line. Expanse of wings 1 inch 4 lines.

33. *Epilecta decorata*, n. sp. (no. 697).

Primaries above sap-green, the internal border from the inner edge of the central belt, and the external area suffused with red-brown, central belt indicated by two widely separated black-edged, pale green, lunulated stripes; a third somewhat similar stripe near the base; a blackish diffused spot at basal third of interno-median interspace; costal margin interrupted by oblique blackish spots and dashes, several of which are continuous with the transverse stripes; orbicular and reniform spots formed of dark grey annular markings enclosed within black lines, the reniform interrupting a subangulated red-brown stripe which crosses the wing; a submarginal series of spots, black internally and green externally; a wavy black marginal line, the sinuations of which enclose a series of pale dots at the base of the fringe: secondaries bright ochreous, clothed at base and on abdominal area with pale golden-brown hair; a large black discocellular spot; costal border fuliginous brown, shining; outer border, and several spots on the fringe confluent with it, broadly black: thorax green, varied with brown; abdomen brown. Primaries below stramineous, costa and outer border whity brown, a subcostal streak, a broad almost triangular discal patch (crossed by darker stripes), and a series of marginal dots blackish; secondaries bright ochreous, costal border whity brown, discocellular spot and outer border nearly as above; pectus greyish white; tarsi banded with black and white; venter brown. Expanse of wings 2 inches.

34. *Triphænopsis efflorescens*, n. sp. (no. 696).

Primaries above with the basal two thirds greyish brown, irrorated with bright green, mottled and striped with black, external third red-brown, crossed by an irregular blackish stripe limiting the outer border; a large white spot just beyond the reniform spot (which is black) edged with green: thorax brown, speckled with green and black, with dorsal orange tufts; the sides of the head, margin of collar, and shoulders white: secondaries bright ochreous, a broad streak in the cell, a broad interno-median streak from base to outer margin, the abdominal border, a large spot at the end of the cell, and a broad external border dark brown; costal border pale brown: abdomen brown. Primaries below sericeous brown, with the interno-basal area, a patch beyond the cell, the apical area, and outer margin pale stramineous; secondaries nearly as above, but the longitudinal streaks more slender: body pale greyish brown. Expanse of wings 2 inches.

35. *Graphiphora lepida*, n. sp. (no. 707).

Rosy brown, sericeous: primaries with the orbicular and reniform spots confluent and uniting with a longitudinal abbreviated basal dash below the median vein, these markings all very dark olive-brown; two very slender and irregular zigzag blackish central lines; a bisinuated submarginal series of pale-edged brown spots: secondaries dusky towards outer margin, fringe pale: thorax pale brown, with a greyish tint, rosy in front, with a blackish bisinuated line across the collar; head red-brown; abdomen brownish testaceous, with clay-coloured fringe. Wings and body below pale rosy brown; primaries greyish in the middle, discocellular spots and two continuous parallel discal lines grey. Expanse of wings 1 inch 8 lines.

36. *Graphiphora lubentia*, n. sp. (no. 699).

Primaries shining rosy brown, a chocolate-coloured nebula relieving the discoidal spots (which are well-defined and large), and limited internally by two parallel angulated brown lines, which cross the wing at basal two fifths; two or three brown markings near the base; two arched discal lines placed close together, the inner one undulated; a slightly wavy brown line, interrupted towards costa and terminating upon the costa in an oblique blackish dash, limiting the external area: secondaries silky greyish brown, darkest upon the outer border; fringe stramineous: thorax rosy brown, varied with chocolate-colour: abdomen greyish brown. Primaries below shining greyish brown, with reddish costal and external borders: secondaries shining creamy white, with broad, reddish, costal border, a greyish-brown streak parallel to the outer border, and an abbreviated discal line of the same colour across the costal area: body rosy brownish. Expanse of wings 1 inch 9 lines.

This species seems to be allied to "*Noctua*" *fuscostigma* of Bremer.

Orthosiidæ.

Mr. Pryer has sent an example of the European genus and species *Panolis piniperda*.

37. *Teniocampa evanida*, n. sp. (no. 712).

Sordid whitish brown: primaries crossed near the middle by two parallel straight dusky lines, terminating in the cell on each side of the orbicular spot; the latter is large and oblique, and touches the reniform spot, which is also large; the area

enclosed between these spots is greyish brown, and the spots themselves are indicated by a dark brown outline; an indistinct zigzag discal line, beyond which the ground-colour is paler; a dark brown line edged with whitish, straight almost to the costa, and then slightly irregular, limiting the external area; a marginal series of black dots: secondaries with the discocellular spot and an oblique anal streak dusky; an incomplete series of blackish marginal dots: abdomen tinted with gravel-yellow. Wings below whitish, sericeous, irrorated with grey; primaries suffused with grey; secondaries with a black discocellular spot: body below testaceous. Expanse of wings 1 inch 10 lines.

38. *Eupsilia strigifera*, n. sp. (no. 726).

Pale rusty brown: primaries crossed by three slightly curved parallel and nearly equidistant white lines, the two inner ones being rather nearer together than the second to the third, a fourth yellowish line with the usual subcostal elbow limiting the external border, a blackish dot at each corner of the discoidal cell, but the ordinary discoidal spots obsolete; secondaries shining whity brown, with diffused grey border and reddish fringe: body with the thorax rather deeper in colour than the abdomen. Under surface altogether pale whity brown, with a rosy tinge; wings sericeous, with traces of two parallel pale-edged dusky lines; costal borders slightly irrorated with blackish scales; fringe of primaries red-brown; anterior coxæ and palpi also red-brown, but not much darker than the rest of the body. Expanse of the wings 1 inch 6 lines.

39. *Dasycampa evelina*, n. sp. (no. 725).

Primaries pale gravel-brown, with a rosy tint over them; all markings very indistinct, and almost all with slightly paler margins; the first line at basal third, the second from reniform spot to inner margin, the third irregularly undulated and crossing the disk, the fourth submarginal and interrupted throughout by a series of black dots; a marginal series of brown lunules; fringe greyish; discoidal spots indicated by yellowish outlines: secondaries grey, with dark diffused outer border and pale rosy fringe, traversed by a grey line: body rosy, the abdomen greyish. Under surface shining rosy whitish: the primaries, with the exception of the costal margin, apical and external areas, suffused with grey; two dusky dots on the discocellulars, two parallel sinuous discal lines and the external edge of the fringe dark grey: secondaries with a black discocellular lunule; a trisinuuated, slender,

black, discal line speckled with rosy scales. Expanse of wings 1 inch 5 lines.

40. *Dasycampa ardescens*, n. sp. (no. 724).

Primaries rich laky brown, sericeous; markings similar to those of the preceding species, but redder, reniform spot partly grey: secondaries pale brown, with reddish fringe: thorax coloured like the primaries; abdomen wanting (probably pale brown, with reddish fringe). Wings below pale shining rust-red, with indistinctly brown, undulated, marginal line and minute, black, marginal dots: primaries suffused with pale greyish brown, excepting on the costal and external areas; secondaries with a black discocellular spot, and a wavy grey discal line: pectus dull red. Expanse of wings 1 inch 7 lines.

41. *Mesogona dilatata*, n. sp. (no. 706).

Primaries above greyish brown, shot with lilac, inner margin slenderly sordid white; two brown lines across the basal area and two across the disk, the latter very regular, slightly arched; a dusky brown streak across the wing just beyond the middle, obscuring the reniform spot, which is barely visible; orbicular spot grey, upon a pale brown background; a marginal series of blackish dots: secondaries shining brown, with stramineous fringe: head and thorax purplish brown; tips of palpi, front of head, and antennæ whitish; abdomen pale sandy brown. Under surface reddish; primaries with the basal three fourths, excepting the costal border, greyish. Expanse of wings 2 inches 1 line.

42. *Mesogona divergens*, n. sp. (no. 722).

Shining cupreous brown; primaries clearer and more coppery in tint than the secondaries or body, which are slightly greyish; markings of primaries, chiefly red-brown, as follows—two widely divergent oblique lines crossing the wing at basal and apical thirds, outlines of the two usual discoidal spots, an ill-defined streak from the reniform spot to the inner margin, and scarcely visible indications of a submarginal irregular greyish line; fringe of secondaries clear; thorax darker than the primaries, greyish behind; abdomen grey, with a somewhat reddish fringe. Under surface generally clearer and redder than the upper surface: wings with two parallel dusky discal lines and dusky discocellular spots; primaries broadly suffused with grey; secondaries whitish, with reddish borders: body dull fleshy reddish. Expanse of wings 1 inch 8 lines.

Cosmiidæ.

43. *Cosmia achatina*, n. sp. (no. 734).

Primaries clay-brown, basal and external areas irrorated with blackish scales; a broadly dentate-bisinate submarginal stripe, an angulated discal crenulated line, the margin of the orbicular spot, and two irregularly undulated oblique lines across the basal area sordid white; a blackish angulated line partially obscuring the reniform spot, which is indistinctly outlined in whitish; each of the lines united with a black spot on the costal margin: secondaries laky brown, with broad, diffused, blackish outer border, blackish discocellular lunule, and golden-yellow fringe: body pale bronzy brown. Wings below altogether paler; primaries pale brown, with a blackish discal belt, confined within two darker lines which extend beyond it from the costal almost to the inner margin; a pale costal patch just beyond the cell, and a white subapical spot; a marginal series of black dots: secondaries pale testaceous, with a diffused blackish subcostal spot and two discal lines, diffused between the median vein and the anal angle; a black discocellular lunule; a marginal series of black lunular markings. Body below whitish. Expanse of wings 1 inch 4 lines.

Xylinidæ.

44. *Xyлина mirabilis*, n. sp. (no. 622).

Primaries with the costal half pearly white, the internal half pale bronzy brown; a black spot at base of interno-median interspace; an oblique dark brown fasciole from costal margin to median vein at basal fifth; costa beyond this fasciole dark brown; a slightly oblique longitudinal brown stripe from the apex to just beyond the cell, where it joins a slender, postmedian, irregular, transverse line; a similar line from the inferior extremity of the subbasal fasciole; a maculated, white-edged, dark brown submarginal line; a very indistinct transverse line between the latter and the discal line; a series of dark brown marginal lituræ almost confluent, so as to give the appearance of a crenulated line; a black spot at end of cell; fringe grey: secondaries white, with pale brownish outer border; thorax dark brown; abdomen white. Under surface sordid white; primaries brownish, with white and dark brown apical costal dashes: secondaries almost pure white, with pale golden-brown borders: body, with the knees of the legs, black; tarsi brown. Expanse of wings 1 inch 10 lines.

Acontiidæ.45. *Acontia noloides*, n. sp. (no. 767).

Allied to *A. signifera*. Primaries above chalky white, a semicircular costal brown spot at basal fourth, two or three black dots at base; a grey spot towards the middle of the interno-median interspace; a rather irregular, central, brown band enclosing the reniform spot, which is represented by two black dots enclosed in a white 8-shaped figure; an indistinct blackish zigzag line just beyond the band, followed by an interrupted grey discal belt; an interrupted red-brown marginal border enclosing externally white-edged black dots; fringe pale pinky brown, spotted and edged with blackish: secondaries pale greyish brown, with creamy whitish fringe: thorax white, with brown-edged collar; abdomen brown. Primaries below brown, with pale-bordered, black, marginal dots; fringe whitish, spotted and edged with blackish: secondaries sordid white, costal area grey-speckled; two grey discal stripes, the inner one indistinct; discocellular spot and a marginal series of dots blackish: body brown, legs pale. Expanse of wings 8 lines.

The primaries above are marked somewhat as in *Nola candida*.

46. *Acontia arefacta*, n. sp. (no. 769).

Primaries above with the basal third sordid white, limited externally by a slightly angulated black line; external two-thirds pale golden brown, crossed in a line with the end of the cell by a very irregular, internally black-edged, white line, just beyond which the ground-colour is also whitish; orbicular and reniform spots represented by white-edged black dots; a very irregular, sinuated, submarginal, white line; fringe creamy white, traversed by a grey line: secondaries pale brown, with basal and costal areas whitish; fringe as in primaries: body sordid white. Wings below altogether paler than above; a grey discal line. Expanse of wings 9 lines.

Anthophilidæ.47. *Anthophila hebescons*, n. sp. (no. 770).

Primaries above buff; a broad, indistinct, oblique, yellowish-edged, rosy belt across the disk; outer border and fringe tinted with rose-colour: secondaries greyish brown, with whitish fringe: body whity brown. Under surface chalky white; primaries with a greyish median suffusion. Expanse of wings 9 lines.

This is a dull little species.

Eurhipidæ.

48. *Thyris usitata*, n. sp. (no. 252).

Dark purplish brown, with cupreous reflections: wings spotted with golden yellow, most of the spots forming a sub-marginal series; primaries with two unequal and nearly central hyaline white spots, the larger one in front of the smaller; secondaries with a broad, irregular, hyaline, white belt upon the basal half, but not reaching the costal margin: head, collar, and palpi golden yellow at the sides; tegulæ edged internally with yellow; a snow-white spot on the shoulder; abdomen crossed by two slender white bands. Wings below nearly as above, the yellow spots larger and more numerous: venter crossed by two broad white belts. Expanse of wings $8\frac{1}{2}$ lines.

The above description is taken from specimens obtained by Mr. Jonas. I delayed describing the species as I not only felt doubtful as to its correct location, but was uncertain as to the constancy of the characters distinguishing it from *T. fenestrella* of Europe. I now feel satisfied that it is distinct, having seen additional examples; and I have little doubt that its natural position is amongst the Noctuites, in the neighbourhood of *Penicillaria*.

49. *Penicillaria costalis*, n. sp. (no. 750).

Primaries purplish brown, the costal border, basal half of cell, median vein, and a V-shaped marking at the end of the cell (enclosing two dark brown lines) pale buff, two slender irregular black lines with dull castaneous borders indicating the central band; a reddish and black dash at base; a diffused castaneous nebula near the external angle, crossed by a submarginal series of >-shaped black markings; a whitish undulated marginal line: secondaries smoky brown, the discocellulars and marginal line dusky; a whitish line at the base of the fringe: body dark brown; the head, collar, and sides pinky buff. Under surface yellowish; a brownish diffused apical patch: secondaries with a blackish discocellular spot; two indistinct brown discal lines. Expanse of wings 1 inch 6 lines.

Plusiidæ.

50. *Plusia pyropia*, n. sp. (no. 795).

Primaries above fuliginous brown, with the central and externo-apical areas fiery cupreous; two widely separated, almost parallel, oblique, dark brown lines (the inner one

slenderly edged internally with silver) representing the central belt, and enclosing two silver spots placed obliquely end to end in the centre of the wing; a zigzag dark brown line halfway between the central belt and the outer margin; fringe at apex cinereous: secondaries and body pale smoky brown, the former with the external half darker; head and collar salmon-coloured. Primaries below grey, with the veins and borders sandy yellowish; secondaries pale buff, with a discocellular dot and a diffused angulated discal belt, limited internally by a darker line, grey; palpi and front of anterior coxæ reddish brown. Expanse of wings 1 inch 2 lines.

About the size and coloration of *P. rutila*, but more nearly allied to *P. ornatissima*.

51. *Plusia serena*, n. sp. (no. 789).

Allied to *P. gamma*, but smaller and shorter in wing, the "gamma" marking clearly cut, slender, and golden; the pale cloudings less prominent, more as in *P. u-aureum*; the secondaries with the dusky border less strongly defined. Under surface nearly as in *P. u-aureum*. Expanse of wings 1 inch 4 lines.

Mr. Pryer has sent the female of *Deva splendida*, an example of the West-Indian species *Gonitis fractifera* differing in no respect from specimens taken in Jamaica, a female of *Toxocampa enormis*, a male of *Catocala nivea*, a large variation of *C. mirifica*, a specimen of *Nyctipao crepuscularis*, and what seems to be an interesting variety of *Hypopyra dulcina*. Another species of Hypopyridæ is the so-called *Remigia ussuriensis* of Bremer, which is referable to the genus *Entomogramma*.

Focillidæ.

52. *Lacera procellosa*, n. sp. (no. 816).

Closely allied to *L. capella*, with the same general pattern; larger, considerably darker, the projections of the outer margin in the primaries much more prominent, the outer margin of the secondaries noticeably more angulated; most of the pale spots and lines on the wings more distinct and sharply cut, but the transverse pale buff subapical dots absent or indistinct; the submarginal zigzag lines of the primaries exceedingly irregular, the inner one distinctly whitish in the centre; secondaries considerably larger, the borders of the marginal black spots cinereous; under surface of the secondaries much more varied with pale greenish, the subapical black spots reduced to one, which is less sharply defined; the

black edging of the central band equal on both sides. Body dark smoky brown, almost black; the anterior femora with enormous development of woolly hair, their posterior and interior surfaces sordid buff-coloured. Expanse of wings 2 inches 6 lines.

Thermesiidæ.

53. *Bithiasa notigera*, n. sp. (no. 923).

Smoky brown: primaries with a minute white discocellular crescent, two scarcely visible wavy parallel lines, of a slightly darker hue than the ground-colour, just beyond the middle; external border limited by a similarly indistinct line; both it and the inner of the discal lines edged with white upon costal area; subapical portion of the external border snow-white, crossed by two zigzag brown lines, the outer of which is marginal and only distinctly visible because of the white fringe: secondaries with three indistinct lines, the innermost limited by the discocellular lunule, which is white; the second just beyond the cell, dentate-sinuate and partly edged with whitish; the third limiting the external border, dentate-sinuate and margined by white dots: anus with whitish tuft. Under surface as above. Expanse of wings 1 inch 4 lines.

54. *Capnodes curvipalpis*, n. sp. (no. 926).

Dark smoky brown, with a faint purplish reflection: wings from the centre crossed by three partly white-edged irregularly zigzag black lines; a marginal series of subconfluent triangular black spots, followed by a whitish line at the base of the fringe; the latter grey, traversed by a brown stripe; primaries with a partly white-edged zigzag black line near the base, discoidal spots small and buff-coloured. Wings below speckled with white scales, markings as above; tarsal joints white-edged. Expanse of wings 1 inch 2 lines.

Ennomidæ.

55. *Epione grata*, n. sp. (no. 363).

Pale golden brown; a line from apex of primaries to middle of abdominal margin of secondaries, the fringe, an angulated line limiting the basal area of primaries, and an oblique subapical costal dash ferruginous; costal area of primaries and the outer edge of the central line pearly greyish; secondaries with an arched grey discal line. Under surface bright yellow, mottled with laky red; external area clouded with pink and lilac and limited internally by an arched, slightly sinuated

blackish line ; a ferruginous line across each wing, that of primaries at basal third angulated, that of secondaries just beyond the cell and nearly straight ; primaries with blackish discocellular dot. Expanse of wings 1 inch 3 lines.

E. arenosa, a variety of *E. strenioides*, and the male of *E. leda* have been sent from Yokohama by Mr. Pryer.

56. *Hyperythra stulta*, n. sp. (no. 364).

Sordid stramineous ; external and internal areas of the wings shining, pearly ; a dull testaceous nebula near the external angle of primaries ; secondaries with a discocellular spot and numerous short striæ grey : body duller and more sordid than the wings, the tegulæ and main stem of antennæ whitish. Under surface sulphur-yellow, the wings sparsely sprinkled with little grey striations ; discocellulars of primaries covered by a grey-bordered white litura, a diffused transverse abbreviated grey streak crossing the median branches almost to the inner margin ; secondaries with a small 8-shaped grey discocellular marking : body sordid. Expanse of wings 1 inch 3 lines.

57. *Angerona nigrisparsa*, n. sp. (no. 373).

Clear ochre-yellow, the wings sprinkled with circular black dots ; a marginal series of black dots terminating the veins ; antennæ with brown pectinations ; abdomen greyish : under surface paler, but otherwise as above. Expanse of wings 2 inches.

58. *Nematocampa straminea*, n. sp. (no. 484).

Nearly allied to *N. resistaria* of North America, much larger, paler, and with more numerous lines across the wings. Above cream-coloured, the body and bases of wings yellowish : primaries crossed by three nearly parallel angulated dark greyish-brown lines, a broad patch of the same colour at external angle ; the discocellulars, the nervules, outer margin, and a number of fine short striæ upon the basal, costal, internal, and discal areas dark greyish brown : secondaries with the external two fifths, two central lines (the outer one angulated), the veins, and a number of speckles upon the abdominal area dark greyish brown : antennæ greyish. Under surface chalky white ; the wings with two slender central lines, the discocellulars, a few scattered striations, the margin, and tips of fringe greyish brown ; primaries with an abbreviated line across the middle of the cell, and a little patch near external angle, also greyish brown. Expanse of wings 1 inch 2 lines.

59. *Endropia gracilis*, n. sp. (no. 502).

Wings subangulated, above pale sandy brown, speckled with grey and black dots; a larger black dot on the discocellulars; an irregularly edged straight discal greyish fuscous stripe: primaries with a second interrupted angulated stripe limiting the basal area; costal margin up to the angulated stripe blackish; a blackish pyriform spot upon the outer margin just below the apex: thorax white, with blackish shoulders and brown anterior margin; head and collar orange; abdomen pale sandy brownish speckled with black dots. Under surface bright stramineous, the wings speckled and striated with dark brown; the indistinct stripes of the upper surface replaced by dark brown ones, the discal stripe being placed upon a diffused ferruginous band: body whitish, with the tibiae and tarsi stramineous, bases of the tibial spines black. Expanse of wings 1 inch 4 lines.

60. *Endropia abjecta*, n. sp. (no. 366).

Pale testaceous, tinted with pink, mottled and speckled with grey: primaries with the apical two fifths bronzy brownish; two transverse externally white-edged ferruginous lines—the inner one at basal third straight, the outer one, which crosses the disk obliquely, abruptly angulated towards apex; a triangular costal lilacine patch between the outer line and the apex; a ferruginous discocellular lunule: secondaries crossed by a central line similar to those of primaries; a slightly irregular grey discal line: body greyish. Under surface saffron-yellow, mottled with rose-colour, with bright rust-coloured lines, as above in shape; legs orange. Expanse of wings 1 inch 8 lines.

I find, from an examination of specimens in Mr. Moore's collection, that my genus *Thiopsyche* will have to sink as a synonym of Walker's *Corymica*, the type of which is a Bornean species formerly in Mr. Saunders's collection and now in the Hope Museum at Oxford. Mr. Pryer has sent the female of *C. Pryeri*.

Amphidasidæ.61. *Biston robustum*, n. sp. (no. 333).

Wings above smoky brown, with pink reflection, irrorated with black, crossed by three angulated and sinuated black lines, two of which are parallel and discal, the third crossing the discoidal cell and very indistinct upon the secondaries; primaries with an abbreviated central interrupted black stripe; secondaries paler than primaries: thorax blackish; the head,

collar, and tegulæ pale greyish brown; abdomen smoky brown, with paler margins to the segments; antennæ testaceous. Primaries below smoky brown, with whitish mottlings and white borders; three costal black spots and a series of smaller spots along the outer margin: secondaries white, clouded with brown, speckled with black, and crossed by two angulated discal black lines: body below bronzy brown. Expanse of wings 2 inches 11 lines.

Boarmiidæ.

62. *Boarmia arguta*, n. sp. (no. 392).

Wings above white, densely and transversely striated with grey and blackish, and crossed by blackish belts arranged as in *B. lunifera*, but much broader and more prominent; a submarginal series of black-edged, white lunules, as in *B. lunifera**, but much less prominent, those of primaries being barely distinguishable: body testaceous, thorax crossed by two transverse dusky strip. Under surface creamy white; wings with discocellular spots and an abbreviated discal series of dots dark grey; primaries with an angular subapical belt, enclosing a white apical patch, dark grey. Expanse of wings 2 inches 4 lines.

63. *Boarmia rimosa*, n. sp. (no. 394).

Sandy brown: primaries crossed by two interrupted sinuated oblique black lines, indistinctly edged with whitish; a brown-bordered zigzag whitish submarginal line: secondaries without the inner black line, but the others nearly as in primaries; an abbreviated, whitish, abdominal streak between the central black and the submarginal whitish lines. Wings below paler and greyer, crossed beyond the middle by a blackish-dotted paler stripe; a blackish dot on the discocellulars. Expanse of wings 1 inch 10 lines.

64. *Tephrosia petrosa*, n. sp. (no. 401).

Sandy yellow, densely mottled with dark brown; wings crossed at basal third by a mottled blackish band; a similar band, limited internally by a continuous dentate-sinuate black line; an interrupted submarginal series of externally pale-edged blackish spots; an undulated interrupted black marginal line. Under surface whity brown, mottled and striated indistinctly with grey: primaries greyish towards the base; external two fifths smoky brown; discocellulars dusky: secondaries crossed

* Ill. Lep. Het. iii. pl. xlviii. fig. 10.

by three blackish spots, the central one being placed upon the discocellulars; a diffused indistinct discal brown stripe. Expanse of wings 1 inch 7 lines.

LYCAUGES, n. gen.

Allied to *Hemerophila*; but the wings with the margins rounded and entire (not dentate-sinuate), the secondaries rather narrower, the palpi slightly shorter, the legs comparatively longer and more slender. Type *L. lactea*.

The species of this genus are small, and might by a casual observer be mistaken for *Acidalia*.

65. *Lycauges lactea*, n. sp. (no. 453).

♀. Creamy white; wings with marginal and discocellular black dots; an ill-defined brown stripe, followed immediately by a dentate-sinuate brown line from apex of primaries to middle of abdominal margin of secondaries; an indistinct sinuated submarginal brown line: abdomen speckled with dark brown and with two or three dorsal black dots on the posterior segments. Under surface creamy white, purer than above; the wings sparsely speckled with brown and with greyish discocellular spots. Expanse of wings 11 lines.

66. *Argidava maculata*, n. sp. (no. 513).

Sordid, shining, chalky white; primaries with a black basal dot, two spots near the base followed by an arched series of four crossing the basal third, a large spot at the end of the cell, two slightly undulated discal series (some of the spots in the outer series being large), and a marginal series of dots, all black; secondaries with a grey dot at the end of the cell, indications of a submarginal line and marginal dots of the same colour: front of head black, thorax greyish. Primaries below silvery grey, with barely a trace of any spots; secondaries shining white, with markings as above: body white. Expanse of wings 1 inch 1 line.

67. *Ophthalmodes cretacea*, n. sp. (no. 406).

Chalky white: wings crossed by two black lines, the outer one dentate-sinuate and postmedian; a black-edged grey spot at the end of each cell; two brownish discal stripes beyond the outer black line, the inner one close to it, the outer one submarginal; the outer border sprinkled with brownish scales; a marginal series of elongate black spots or fragments of lines: primaries with the inner black line placed far from the outer one near the base, and bounded internally by a brownish

band; a second, indistinct band from the discocellular spot to the inner margin: secondaries with the inner black line close to the discocellular spot and placed upon a brownish diffused streak or band: abdomen with indications of brown spots in pairs upon each segment. Wings below white, the markings of the upper surface for the most part obsolete; discocellular spots black and prominent; a marginal series of black dots and a dentate-sinuate brown postmedian line; primaries with a brown subapical patch or belt enclosing a quadrate apical white spot. Expanse of wings 2 inches 3 lines.

[To be continued.]

XLII.—*On the Nutritive and Reproductive Processes of Sponges.* By H. J. CARTER, F.R.S. &c.*

CONFLICTING statements have been made respecting the nourishment of sponges, which need but a little explanation to become reconcilable.

The subject has only just now presented itself separately, because it has hitherto been implied rather than stated that the nourishment of sponges was derived from foreign bodies observed in their interior.

* *Publications to which reference is made in the following Communication.*

1. 1826. GRANT, R. "Observations on the Structure and Functions of the Sponge." (Concluded.) *Edinburgh New Philosophical Journal*, vol. ii. p. 121, pl. ii.
2. 1848. CARTER, H. J. "Notes on the Species, Structure, and Animality of the Freshwater Sponges in the Tanks of Bombay." *Ann. & Mag. Nat. Hist.* ser. 2, vol. i. p. 303.
3. 1849. —. "A Descriptive Account of the Freshwater Sponges in the Island of Bombay, with Observations on their Structure and Development." *Ib.* vol. iv. p. 81, pls. iii.—v.
4. 1854. —. "Zoosperms in *Spongilla*." *Ib.* vol. xiv. p. 334, pl. xi.
5. 1856. LIEBERKÜHN, N. "Beiträge zur Entwicklungsgeschichte der Spongillen." *Archiv für Anat. Physiol. und wissenschaftliche Medicin*, pp. 1, 399 & 496, Taf. xv. und xviii.
6. 1857. CARTER, H. J. "On the Ultimate Structure of *Spongilla*, and Additional Notes on the Infusoria." *Journal Bombay Asiatic Society*, vol. v. p. 574, April 9th, reprinted in *Ann. & Mag. Nat. Hist.* ser. 2, vol. xx. p. 21, pl. i.
7. 1857. LIEBERKÜHN, N. "Beiträge zur Anatomie der Spongien." *Archiv für Anat. Physiol. und wissenschaftliche Medicin*, p. 376, Taf. xv. Juni (der Gesellschaft naturforschender Freunde mitgeteilt in den Sitz. v. 6. Sept. u. 2. Dec. 1856).
8. 1859. CARTER, H. J. "On Fecundation in the Two *Volvores* and their Specific Differences; on *Eudorina*, *Spongilla*, *Astasia*, *Euglena*, and *Cryptoglena*." *Ann. & Mag. Nat. Hist.* ser. 3, vol. iii. p. 1, pl. i.



Butler, Arthur G. 1879. "XLI.—Descriptions of new species of lepidoptera from Japan." *The Annals and magazine of natural history; zoology, botany, and geology* 4, 349–374. <https://doi.org/10.1080/00222937908679847>.

View This Item Online: <https://www.biodiversitylibrary.org/item/81200>

DOI: <https://doi.org/10.1080/00222937908679847>

Permalink: <https://www.biodiversitylibrary.org/partpdf/63183>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.