

NEW *URANIIDAE*, *EPIPLEMIDAE*, AND *GEOMETRIDAE* FROM THE ORIENTAL AND PALAEARCTIC REGIONS.

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FAMILY *URANIIDAE*.

1. *Stesichora puellaria multiguttata* subsp. nov.

This form from Aru is interesting as having the marginal spots in the hindwings still more numerous than in the type form from Timor. There are three large spots at the ends of veins 4, 6, 7, that on vein 4 followed by a small dot in the extreme apex of the tooth, and three smaller ones on veins 2, 3, and 5, while one hindwing even shows a smaller spot on vein 8; the forewings have four largish spots on basal half of costa, one in middle, and two towards apex, and the two on hindmargin below apex large, with an additional spot in the right wing on vein 6. On the underside the whole apex of forewing is smoky black.

One ♂ from Aru.

FAMILY *EPIPLEMIDAE*.

2. *Epiplema flavistriga* sp. nov.

Forewings: pale greyish ochreous, densely varied with darker ochreous wavy strigae, mixed in parts with black scales; towards the hindmargin the ground colour is tinged with darker ochreous; first line at one-fourth, indistinct, indicated by black dots on the veins and folds; outer line double, pale brownish, waved between the veins, and outwardly curved, from three-fifths of costa to outer third of inner margin; from above vein 2 to inner margin this line is preceded by a curved velvety black, irregularly triangular blotch, across which veins 1 and 2 and the submedian fold are marked in pale; an indistinctly outlined cloudy grey discal spot; hindmargin more thickly and coarsely black-speckled, but without a distinct limiting line, except between veins 4 and 6, where a thin black crescent edges a chestnut-brown blotch; anal angle below vein 2 occupied by a dull smoky grey blotch; fringe ochreous with a grey base.

Hindwings: whiter, the basal two-thirds traversed by curved strigae of black scales; an oblique black dash on discocellular, with a black spot above it; outer line slightly flexuous, bluntly angled on vein 4, brown, edged on each side, first by an ochreous, then by a dark brown line; from the base of the wing to the angle of the line runs, just above the median vein, a broad yellow streak; below which to the anal angle the inner edge of the outer line swells out into a broad velvety black blotch, across which veins 2 and 3 are marked in yellow; on the costa the line is preceded by a large black blotch; beyond the angle is a pale lustrous streak merging in a chestnut patch before the lower tooth, containing two indistinct black spots, and joined by two dark lunules from the upper tooth; the apical area of the wing is yellower ochreous.

Underside pale ochreous, densely mottled with black speckles, which form two more or less complete curved shades towards hindmargin; forewings more tinged

with brownish, and with a dark cloud at anal angle. Face and palpi brown-black above, ochreous below; vertex, thorax, and abdomen pale ochreous, unspckled; legs ochreous, unspckled; forelegs fuscous in front.

Expanse of wings : 32 mm.

One ♂ from the Khasia Hills.

Forewings with a tooth at veins 4 and 6, evenly excised between them and between 6 and the apex; inner margin sinuous, the anal angle lobed; hindwings toothed at veins 4 and 6.

FAMILY GEOMETRIDAE.

SUBFAMILY STERRHINAE.

3. *Brachycola paucinotata* sp. nov.

Forewings : greyish stone-colour, very minutely but densely strigulated or dusted with dark specks; lines very indistinct; first denoted by three black dots, on subcostal, median, and submedian veins respectively; outer line shown by fine black dashes on veins, at five-sixths; cell-spot dull; minute dark dots on margin at end of and between the veins; fringe concolorous.

Hindwings : similar, but the cell-spot oval, formed of shining white, somewhat raised scales.

Underside very pale ochreous, suffused in the forewings with faint rosy; outer line of both wings marked with rosy points. Face and palpi deep vinous red above, ochreous below; thorax, abdomen, vertex, and antennae concolorous with wings; third and fourth segments of abdomen with a red lateral blotch; tuft of the hind-tibiae purplish.

Expanse of wings : 37 mm.

One ♂ from S. Celebes (type), August and September 1891 (W. Doherty). A ♀ marked simply Australia (without abdomen), agrees in every particular with this ♂, but shows an obscure grey dentate median shade parallel to exterior line.

4. *Craspedia ignobilis* sp. nov.

Forewings : dull whitish ochreous, with a faint flesh-coloured tinge, speckled with fuscous; the lines ochreous, sinuous, indistinct; first hardly visible; median outcurved round the faint cell-spot; postmedian bent on vein 6, then dentate lunulate; two submarginal waved shades embracing the submarginal line; small black marginal dots, distinct only on upper half; fringe concolorous.

Hindwings : like forewings, but without first line; the median of forewings becoming antemedian.

Underside clearer, with little or no speckling; cell-spots distinct; the outer line only visible. Face and palpi externally dark brownish fuscous; collar brown; vertex and antennae pale ochreous; thorax and abdomen concolorous with wings.

Expanse of wings : 28—30 mm.

Two ♀ ♀ from Japan. A very inconspicuous insect.

5. *Craspedia imbella* sp. nov.

Forewings : dull white, thickly speckled with ochreous grey scales; lines ochreous grey, indistinct; all oblique, parallel to hindmargin; inner line from

one-third of inner margin towards middle of costa, before which it becomes obsolete; median shade from just beyond middle of inner margin towards three-fourths of costa, slightly bent below median vein; outer line finer and more distinct, irregularly waved and indented beyond cell, from three-fourths of inner margin to five-sixths of costa; submarginal very faint, indicated by darker clouds; a marginal row of black dots, which are sometimes expanded into dashes; fringe concolorous; cell-spot minute.

Hindwings: without first line; the submarginal distinctly ochreous; cell-spot larger.

Underside speckled with greyish fuscous; outer line and cell-spots of both wings and median shade of forewings strongly marked; costa of forewings yellowish; disc suffused with grey; marginal line continuous. Face and palpi dark brown; vertex white; collar ochraceous; thorax and abdomen like wings.

Expanse of wings: 24—27 mm.

Three ♀♀ marked merely Japan.

The hindwings are faintly elbowed at middle of hindmargin.

6. *Craspedia parallelaria* sp. nov.

Forewings: pale grey, with a faint ochreous tinge and very finely and thickly dusted with dark specks; three oblique diffuse slightly darker lines; one postmedian, from two-thirds of costa to middle of inner margin, and two submarginal; the paler marginal area with a faint shade along it; marginal line fine, black; fringe concolorous; cell-spot faint.

Hindwings: with the three lines curved; the cell-spot on the median line.

Underside greyer; the lines a little plainer, the second appearing subdenticulate. Face and palpi brown; vertex white; collar ochraceous; thorax and abdomen like wings.

Expanse of wings: 22 mm.

Two ♂♂ from West China.

GENUS *Emmiltis* Hüb., *Verz.* p. 309.

Hübner placed six species under *Emmiltis*.

2973. *rubricaria* = *rubricata* Schiff., = *rubiginata* Hufn.

2974. *ochrearia* = *ochreata* Schiff.

2975. *circuitaria* Hüb. *Geo.* 499.

2976. *vittaria* Hüb. *Geo.* 429.

2977. *parvularia* = *pygmaearia* Hüb. *Geo.* 335, 336.

2978. *nexaria* = *nexata* Hüb. *Geo.* 401, 421.

His brief description runs:—

“Die Flügel geröthet, streifweise schattig angelegt.”

The proper type of the genus is the first mentioned species, *rubiginata* Hufn., which at the same time best agrees with the description. Mr. Meyrick, *Tr. E. S.* 1892, p. 86, appears to have taken *pygmaearia* as type, and refers *rubiginata* to *Leptomeris* Hüb., which genus is only put forward on page 310. Does not the law of priority require that for *rubiginata* and all the species congeneric with it the name *Emmiltis* should be used rather than *Leptomeris* or *Craspedia*?

7. *Phrissosceles rufidorsata*.

Perixera rufidorsata Warr. Nov. Zool. III. p. 312. Khasias.

Perixera rufannularia Warr. Nov. Zool. IV. p. 221. Apia, Upolu.

This species must be transferred to *Phrissosceles*. The cell-spot of the hindwings is variable; besides the large smoky black form with paler centre and the round white dark-edged form, there occur large round spots filled up with ochreous and smaller spots with dark edges; the red-tinged dorsum will always, however, distinguish the species. In the original description of *rufidorsata* an error occurs with regard to the marginal spots; the larger spots are *between* the vein ends, the smaller at the ends. The species subsequently described from Apia as *rufannularia* cannot be looked upon as distinct, when the variability of the cell-marks is taken into consideration. Besides Apia, it occurs in Tugela, Solomon Islands; Milne Bay, New Guinea; Laiwui, Obi; and Woodlark Island.

8. *Pisoraca variospila* sp. nov.

I propose this name for the insect hitherto, I think, wrongly identified in the British Museum Collection as *monetaria* Guen., and so called by Hampson in the *Fauna of British India, Moths*, Vol. III. p. 450.

Guenée's short description of *monetaria* runs: "Ailes à peine dentées, d'un rouge-testacé clair, sans atomes, points, ni dessins autres qu'une large tache cellulaire d'un blanc d'argent cerclée de gris aux ailes inférieures. Dessous d'un carné-rosé clair, avec cette tache en transparence. Front et palpes concolorés, à vertex blanc. Cuisses postérieures garnies intérieurement de poils cotonneux. Borneo. 1 ♂. 36 mm."

The last sentence cannot certainly refer to *Pisoraca*, in which the hindlegs of the ♂ are armed only with three spurs, but in which genus the Indian insect is rightly placed by Hampson. Before I observed the discrepancy between this insect and Guenée's account, I had described (Nov. Zool. IV. p. 394, 1897) a *Perixera? pleniluna* from a ♀ from Penang. This is manifestly identical with Guenée's species, agreeing in every particular. I have seen another specimen, also a ♀, from the island of Saparoea, but at present no ♂♂.

The true *monetaria* probably does not occur in India at all. What evidently led to the misidentification is the fact that one of the forms of the Indian insect has a round white dark-edged cell-spot in the hindwings, like *monetaria*, instead of the more usual cloudy black one with pale centre. The description given of it by Hampson (*loc. cit.*) renders re-description unnecessary. The ground colour is always yellowish ochreous, with the usual markings fairly well expressed; *monetaria* Guen., on the other hand, is dull reddish without markings.

9. *Ptychopoda delicatula* sp. nov.

Forewings: semi-transparent bone-colour, tinged towards base with greyish ochreous; the lines greyish ochreous; first curved, very obscure; second, in middle, sinuous, the small black cell-spot on its outer edge; third at two-thirds, fine, lunulate; submarginal pale, preceded by an ochreous grey shade, which forms a deep sinus beyond cell, and a less conspicuous one above inner margin; fringe bone-colour, with minute dark dots at base beyond the veins.

Hindwings: similar, without first line.

Underside like upper. Thorax and abdomen like wings ; head damaged.

Expanse of wings : 22 mm.

One ♀, Dalhousie, N.-W. India, July 1891.

Superficially not unlike *Craspedia propinquaria* Leech from China.

10. **Ptychopoda indeterminata** sp. nov.

Forewings : dingy greyish ochreous, with darker grey lines, all parallel to hindmargin ; the inner and median indistinct, the outer more definite, subdentate-lunulate ; submarginal line pale, obscure, between darker shades ; fringe pale, with faint grey dots at the base beyond the veins ; cell-spot minute, just before the median line.

Hindwings : similar, without first line.

Underside very like upper. Face, palpi, and collar dark brown ; vertex, thorax, and abdomen like wings, but the abdomen more dusted with grey.

Expanse of wings : 25 mm.

One ♀ from Simla, August 1889.

Belongs to the *actiosaria* group.

11. **Ptychopoda lauta** sp. nov.

Forewings : pale stone-colour, powdered finely with dark atoms ; lines represented by distinct black vein-dots ; first at one-third, slightly angled below costa ; outer at three-fourths, angled on vein 6, then curved slightly to submedian fold, thence vertical, the spots on the subcostal and submedian veins more conspicuous than the rest ; a very faint median shade, incurved below middle ; a row of distinct black dots on the base of the fringe, which is concolorous ; a black cell-spot ; submarginal line very faint, and only to be observed in certain lights.

Hindwings : like forewings, without first line ; the hindmargin strongly rounded.

Underside without speckles ; the outer line on forewings strongly marked ; base of costa of forewings narrowly blackish. Face and palpi dark brown ; thorax and abdomen like wings ; tuft of hind-tibiae large, pale ochreous.

Expanse of wings : 24 mm.

One ♂ marked Japan only.

12. **Ptychopoda punctatissima** sp. nov.

Forewings : stone-grey, covered with darker grey slightly pink-tinged scales ; the lines all marked by distinct black spots on the veins, except the submarginal, which is pale and waved ; cell-spot and marginal spots black ; costa blackish.

Hindwings : similar.

Underside dingy grey, with the spots much less distinct. Head and collar black-brown ; thorax and abdomen grey, the latter with a large black spot on each segment.

Expanse of wings : 18 mm.

Two examples from Queensland.

SUBFAMILY HYDRIOMENINAE.

Amoebotricha gen. nov.

Agrees with *Amoebe* Hüb. in structure and appearance, but the antennae of the ♂ are fully bipectinate. In the forewings the areole is double, 10 anastomosing with 11 and again with 8, 9; 6 stalked with 7, 8, 9. In the hindwings the discocellular is angled below, the radial from the angulation.

Type *Amoebotricha grataria* Leech (*Anticlea*).

13. **Amoebotricha correlata** sp. nov.

Forewings: Whitish grey, suffused with dull rufous; the chief lines fine and black; the rest dull rufous; all in the main oblique and parallel to hindmargin; basal patch small, brown, edged with a black line angled on subcostal vein, and with a paler space in middle; the pale band following it much broader on costa than at inner margin, with two pale brown lines through it; inner edge of central fascia from nearly one-third of costa to one-fourth of inner margin, more or less outcurved between subcostal and median veins, followed by a brownish band, containing two darker lines; outer edge from two-thirds of costa to two-thirds of inner margin irregularly dentate and crinkled, preceded by a brown band with two darker lines; the central space pale grey, not suffused with rufous, and containing a distinct brown cell-spot; band beyond pale rufous with a dark line near edge of central fascia; marginal area brownish rufous, containing three crenulate darker brown lines, the outermost of which is blackish and edged by the paler submarginal line, which between veins 3 and 4 forms a whitish V-shaped mark; an oblique black apical streak; a dark marginal line interrupted by the veins; fringe rufous grey.

Hindwings: dull whitish, suffused with rufous grey towards inner margin, with traces of lines on inner margin above anal angle; an obscure cell-spot.

Underside dull pale grey, speckled with darker, the markings of the forewings showing through; hindwings with the cross-lines marked by dark spots on the veins; cell-spots distinct. Head, thorax, and abdomen rufous, the abdomen greyer and paler.

Expanse of wings: 37 mm.

One ♂, one ♀, from Gifu.

The antennae of the ♂ have shorter pectinations than the type species *grataria* and the hindwings are more produced at apex, as in *Plerocymia*, but the neurulation is typical. The insect bears great resemblance to *A. badiata* Hüb., under which name I believe it has been recorded by Mr. Leech, *A. M.* 1897. I. p. 659.

14. **Cidaria niveonotata** sp. nov.

Forewings: with all the dark markings olive-brown, all the pale markings snow-white; there is not a trace of any shade of yellow; in arrangement of markings the insect agrees exactly with *C. perpulchra* Butler.

Hindwings: white, somewhat suffused with greyish ochreous towards the hindmargin, and with traces of postmedian and submarginal curved lines.

Underside agreeing with *perpulchra*.

Head, thorax, and abdomen snow-white ; palpi externally tinged with brown ; base of shoulders and of patagia dark brown ; sides of abdomen spotted and dusted with brown.

One ♂, one ♀, from Sikkim. The ♀ from the Feld. Coll.

15. *Epirrhoë clathrata* sp. nov.

Forewings : like *E. catenaria* Moore, with the following points of difference : no red subcostal streak ; the whole marginal area beyond outer pale band suffused with dull brown, leaving a narrow bluish grey patch at middle of hindmargin, and a small spot at anal angle ; beyond the cell the brown tint spreads over the pale band and touches the black-brown central costal blotch ; the whole of the white central area between basal patch and outer band is traversed by thick diffuse wavy black lines, which often interlace and form annuli ; fringe brown throughout.

Hindwings : dirty whitish, tinged with brownish grey, darker towards hindmargin, forming waved bands, three central, one submarginal, and one marginal ; fringe brownish.

On the underside the outer line of central fascia is strongly dentate-lunulate, and in the forewings runs quite straight, not curved or notched. Abdomen dull grey, especially at the margin of the segments.

Expanse of wings : 34 mm., always smaller than *catenaria* Moore. Moore's type of *catenaria* was a ♂.

One ♂ from the Khasia Hills.

16. *Kuldscha cometifera* sp. nov.

Forewings : dull greyish brown ; the basal patch and bands of the central fascia and generally the marginal area darker ; basal patch edged by a curved whitish line ; central fascia edged on each side by an irregularly waved white line, the inner angled outwards on subcostal and median veins, with a wide sinus basewards above and below median, the outer bluntly projecting on vein 6 ; submarginal line whitish, hardly lunulate ; apex whitish grey, edged below by an oblique brown cloud ; space between basal patch and central fascia paler brownish with a darker central line ; space beyond central fascia darker brown with two or three irregularly waved lines ; middle of central fascia with a pale grey curved space, narrowed towards inner margin, between two darker lines, on the inner of which stands the black cell-spot ; fringe brownish grey.

Hindwings : whitish grey with a brownish tinge, which deepens towards hindmargin, where a pale submarginal band is visible ; marginal line black, interrupted.

Underside brownish grey, with the apex of forewings darker. Head and thorax like forewings ; abdomen like hindwings.

Expanse of wings : 44 mm.

1 ♂ from the Amur region.

17. *Larentia cheimatobiata*.

Camptogramma ? cheimatobiata Guen. *Phal.* II. p. 428 Tasmania.

In the Proceedings of the Linnaean Society of New South Wales, 1890, p. 879, Mr. Meyrick refers to this species of Guenée as one which he had up till then been unable to recognise. Until lately I thought that *extensata* Wlk. (of which, though

Walker gave 35 mm., Meyrick says the expanse is 23—25 mm.) might be identical ; but I have now been able to examine a specimen from Parkside, S. Australia, which answers in every detail to Guenée's description, and proves to be quite distinct. I refer it for the present to *Larentia* Tr., as it agrees in neuration and structure, though I doubt its being really congeneric with typical European species of the genus. In the forewings vein 6 is stalked with 7, 8, 9 ; 10 from just before end of cell anastomoses with 11, and again with 8, 9 ; in the hindwings the discocellular is angulated below, and the radial rises from below the centre ; the antennae of the ♂ are bipectinated.

Monochyria gen. nov.

Forewings : elongate ; costa straight, but shouldered at base ; apex bluntly rounded ; hindmargin strongly curved.

Hindwings : narrow ; both angles and hindmargin rounded.

Antennae of ♂ armed with fascicles of cilia ; face produced below ; palpi porrect, squamous, the third joint deflexed ; tongue and frenulum present ; abdomen with the hind segments laterally tufted.

Neuration : forewings, cell half the length of wing ; discocellular vertical above, oblique below ; first median nervule at three-fourths, second shortly before third, the median vein itself abruptly upturned at the end ; radials normal ; 7, 8, 9, stalked from end of cell ; 10 and 11 stalked, 10 anastomosing with 7, 8, 9, forming a single areole ; hindwings with discocellular oblique below ; costal anastomosing with subcostal for nearly three-fourths of cell ; veins 6 and 7 hardly stalked ; second median well before third.

Type : *Monochyria viridicinctata* Guen. (? = *poseata* Hüb.).

Agreeing in neuration with *Tephroclystia* Hüb., to which, however, it cannot well be referred.

18. **Perizoma constricta** sp. nov.

Forewings : grey, suffused with fawn-colour ; basal patch very small, limited by a thick vertical blackish line ; central fascia narrow, darker, edged with irregularly crenulate lines starting from blackish costal spots ; inner edge from shortly before middle of costa to beyond middle of inner margin, bent slightly above median vein ; outer edge from two-thirds of costa to two-thirds of inner margin, straight ; a central waved dark line ; a black linear cell-spot ; all the veins marked in black across the fascia ; the usual pale bands, traversed by a dark line, on each side of the central fascia are in this insect nearly of the ground colour ; space between outer band and submarginal line brown above the median vein ; submarginal line pale grey, lunulate, the lunules below costa, beyond cell, and above inner margin followed by black wedge-shaped markings ; submarginal area below median vein diffusely paler, edged above by a blackish horizontal streak above the median ; marginal line formed of pairs of black spots ; fringe pale grey, chequered with darker, and with a dark grey dividing line.

Hindwings : pale grey, with dark cell-spot, a curved postmedian line, marked with darker on the veins, followed by a slightly paler grey fascia before the darker grey marginal border.

Underside of forewings dark grey, of hindwings lighter, with the markings showing through. Head, thorax, and abdomen grey, sometimes tinged with fawn-colour, the thorax darker ; basal segment of abdomen with a black ring.

In the single ♀ the fawn-coloured tinge is quite absent ; the tints being pale and dark grey or dark fuscous only ; but this is probably not a constant difference.

Expanse of wings : 26—27 mm.

One ♀, 2 ♂♂, from Dalhousie, May 1891.

Easily distinguished by the narrow central fascia with its blackish veins ; and in particular by the oblique, not curved, hindmargin of the forewings.

19. *Perizoma verticata* sp. nov.

Forewings : pale grey, dusted with darker ; the basal patch and central fascia brownish black ; edge of the former and inner edge of the latter nearly vertical, slightly curved at costa, each margined by a very fine white line ; the intervening fascia with a rather darker grey centre ; outer edge of central fascia bluntly prominent at veins 6 and 4, then incurved, and in lower third vertical ; margined also by a fine white line ; submarginal line pale, waved, most distinct near costa, preceded and followed by darker shades, especially at costa where they are somewhat reddish tinged ; a small dark blotch on hindmargin below apex ; an irregular dark marginal line ; fringe grey ; cell-spot large, blackish.

Hindwings : pale grey, with faint traces of curved lines ; cell-spot dark.

Underside pale, with the markings indistinctly shown. Head, thorax, and abdomen cinereous ; metathorax and abdominal rings darker ; anal tuft ochreous.

Expanse of wings : 22 mm.

One ♂ from West China. In appearance nearest to *P. unifasciata* of Europe. The angulation in the discocellular of hindwings is very slight, and may easily be overlooked.

20. *Pseudocollix olivata* sp. nov.

Forewings : dull olive, finely speckled with darker ; costa black, from base to end of basal patch, the cross-lines of the patch, themselves very faint, commencing in black spots which coalesce ; a rufous streak along costal vein to the middle of wing, the basal patch also slightly rufous-tinged ; inner edge of central fascia from two-fifths of costa vertical to one-third of inner margin, wavy, starting from a black spot on costa, and marked by smaller black spots on veins and inner margin ; outer edge from two-thirds of costa to two-thirds of inner margin, starting from a large black costal spot, angled on veins 6 and 4, inwardly dentate on all the veins, the teeth black ; preceded by a fuscous-olive band, edged internally by a similar line ; a large black cell-spot ; submarginal line pale, lunulate-dentate, preceded and followed by fuscous-olive shades, the inner shade wholly interrupted between veins 6 and 7, and again between 3 and 4 ; black marginal dashes interrupted by the veins ; fringe olive.

Hindwings : the same, but the markings less distinct, the cell-spot small ; a slight rufous cloud in the costal half of central fascia.

Head, thorax, and abdomen olive, the vertex, thorax, and abdomen tinged with rufous. Underside shining whitish, flushed with flesh-colour ; base of costa of forewings, cell-spots, a sinuous postmedian line, macular interrupted submarginal line, and fine marginal line black.

Expanse of wings : 26 mm.

One ♂ from the Khasias, June 1899.

21. *Xanthorhoe castanea* sp. nov.

Forewings: dull whitish, suffused in parts with brownish grey; basal patch rather large, pale brownish, its outer edge darker and gently curved; crossed by a paler curved band; central fascia dull chestnut-brown, darker along its edges, twice as wide on costa as on inner margin; the inner edge curved parallel to the basal patch, from which it is separated by a narrow pale band, with a dark line through it close to the fascia; its outer edge bluntly rounded below costa, and angularly projecting at vein 4, marked by brown dashes on veins, projecting inwards; cell-spot blackish, in a paler space; beyond the fascia is a broad pale band, traversed by a dark line close to fascia, and edged outwardly by a lunulate-dentate line, marked by dark teeth on the veins projecting inwardly; submarginal line regularly lunulate, paler than the brownish grey external area, preceded on costa by a brown blotch; pairs of black spots on margin on each side of the veins; fringe brownish grey.

Hindwings: whitish, suffused with grey at base and along inner margin, where are seen the beginnings of waved dark lines, three central and two submarginal.

Underside dirty whitish, sprinkled with grey, with the lines obscurely marked in grey; cell-spots black. Head, thorax, and abdomen dark grey.

Expanse of wings: 30 mm.

One ♂ from the Gourais Valley, Kashmir.

Superficially much like *E. subangulata* Kollar, which, however, is placed by Hampson in his section of *Cidaria* with simple antennae; vein 6 is stalked with 7, 8, 9.

SUBFAMILY TEPHROCLYSTIINAE.

22. *Gymnoscelis picta* sp. nov.

Forewings: with ground-colour pinkish ochreous, which is almost obliterated by suffusion of fuscous and olive-brown; basal area brownish fuscous, edged by a distinct whitish ochreous line from two-fifths of costa, angled bluntly outwards in cell, then running obliquely waved inwards to one-third of inner margin; the dark area crossed in the middle by a slightly paler curved line; outer line whitish, regularly crenulate, from two-thirds of costa to two-thirds of inner margin, outcurved in middle; the central fascia included more brownish than fuscous, the veins across it minutely dotted with white and black; marginal area beyond wholly filled up with dark fuscous, the submarginal line being very obscure, and indicated by a slight pale patch on costa and at middle of outer margin; a large pinkish ochreous patch of ground-colour from costa to vein 6 beyond central fascia; marginal line and fringe dark, both interrupted by a distinct pale dash at the vein ends.

Hindwings: ochreous with slight traces of darker ochreous or pale brownish curved lines; cell-spot black, distinct; the veins pale, speckled with black; fringe ochreous.

Underside blackish; a curved whitish fascia beyond central band, joined to the pale spot at middle of outer margin, and a pale space below costa round the cell-spots, which are both distinct. Head fuscous; thorax and patagia fuscous mixed with ochreous; abdomen ochreous, with a subdorsal row of small black spots, the second and anal segments partially ringed with brown.

Expanse of wings: 17 mm.

One ♂ from the Khasia Hills.

Readily distinguished by the ochreous costal patch of forewings and wholly ochreous hindwings, as well as by the dark underside, which is like that of *infrazebrina* Hmps. The ♂ antennae are subserrate with rather long ciliations. The hind legs are broken off.

23. *Megatheca dentosa* sp. nov.

Forewings: ochreous suffused with grey; basal area crossed by several obliquely curved indefinite grey lines; central fascia dark grey, its edges obliquely curved, the outer becoming blackish and strongly denticulate, especially in the excurved portion below costa; submarginal line ochreous, uniformly dentate, preceded and followed by a blackish shade; the pale band between central fascia and submarginal shade is darkened beyond cell, and unspeckled ochreous between veins 3 and 4, thus forming a pale spot; cell-spot black, distinct; marginal line black, interrupted by a pale ochreous dot at the vein ends; fringe grey, with ochreous dashes beyond the veins.

Hindwings: similar.

Underside smooth, glossy, ochreous suffused with grey; darker grey ante-median, postmedian, and submarginal curved shades; submarginal line broad, curved, pale ochreous; cell-spots black. Head, thorax, and abdomen ochreous; patagia, and base and sides of abdomen much speckled with black; legs ochreous.

Expanse of wings: 17 mm.

One ♀ from Mackay, Queensland.

The hind-tibiae have the single long median spur characteristic of the genus, but the forehead is flat, not protuberant.

24. *Micrulia crassitibia* sp. nov.

Forewings: dull greyish ochreous, with a faint greenish tinge; the lines and shades brownish fuscous; inner edge of central fascia from costa at two-fifths to inner margin at two-fifths, bent in cell, then oblique inwards; outer edge from two-thirds of costa to two-thirds of inner margin, bluntly angled on vein 6, then oblique, slightly crenulate throughout; the fascia itself is brownish fuscous, edged and traversed by darker lines, and is preceded and followed by a narrow band of ground-colour with a dark central line; basal and marginal areas also brownish fuscous, but rather lighter than central fascia; submarginal line pale, waved; marginal line blackish, interrupted by distinct pale dots at the vein ends; fringe fuscous.

Hindwings: similar, but the basal space paler.

Underside dull fuscous ochreous, with the markings darker; fringe of hair along the median vein of hindwings and at anal angle ochreous-yellow. Head, thorax, and abdomen fuscous.

Expanse of wings: 17 mm.

One ♂ from Dammer Island, December 1898 (H. Kühn).

This species does not agree entirely with *M. tenuilinea*, the type of the genus, but may be placed here for the present: the hindwings are rounded, not triangular, with a slight lobe at the anal angle, which is fringed with hair, and the median vein and vein 2 bear a thick fringe of hairs; the hind-tibiae are thickly and coarsely tufted with hair, and have a single long median spur above the apical pair. The antennae are thick, lamellate, subserrate, and slightly pubescent.

In Nov. Zool. III. p. 391, I proposed to refer *recensitaria* Wlk. and *emarginaria* Hmps. to *Micrulia*; they are, however, better placed in *Dasimatia*, in which the whole underside of the hindwings is clothed with rough hairs.

25. **Tephroclystia foedatipennis** sp. nov.

Forewings: dingy fuscous, with the usual markings slightly darker, but very obscure; the edges of the central fascia, especially the outer which is angled at veins 4 and 6, are inwardly preceded by a dark shade; the usual paler bands on each side of it, and the submarginal line are slightly paler; marginal line black, interrupted by pale dots at the vein ends; fringe fuscous; cell-spot black.

Hindwings: the same.

Underside whitish, smeared with grey; the base of forewings, the cell-spots, postmedian bands, and marginal fasciae dark fuscous or blackish. Head, thorax, and abdomen all fuscous.

Expanse of wings: 22 mm.

One ♀ from Padang Rengas, Malay Peninsula.

This very inconspicuous species is something of the same tint as *T. rajata*, but more fuscous: besides the great difference of the underside, it may be distinguished by the much shorter and broader wings as in *T. pygmaeata*. The single remaining hind-tibia appears to have only one, long, middle spur, but this is probably accidental.

SUBFAMILY BRACCINAE.

26. **Bursada percurrens** sp. nov.

Like *quadripartita* Wlk., but with the following difference: the projection from the anal angle, which in that species reaches half across the hindwing and ends in a point, is here developed into a complete black curved band, dividing the yellow area into two parts, one basal, the other postmedian, and oblunate in shape.

One ♀ from Teoor, October 1899 (H. Kühn).

SUBFAMILY ASCOTINAE.

27. **Alcis invenustaria** ab. **suffusaria** nov.

Mr. Leech, in *Ann. and Mag. Nat. Hist.* 1897, i. p. 324, describes a form from China, in which the black markings and brown bands are darker and more prominent; this form, *sinicaria*, is exactly the opposite of that to which I propose to give the name *suffusaria*. Among eleven ♂♂ from Yokohama, whence probably came the original type-specimen of *invenustaria* in Pryer's Collection, occurs one in which all black markings are absent, and the upper surface of both wings suffused with dull grey in which even the brown markings are almost lost. The species must be transferred to *Alcis*, the forewings of the ♂ having a well-developed fovea, and the tongue being present though comparatively small; veins 10 and 11 are coincident throughout.

28. **Alcis molata** sp. nov.

Forewings: greyish white with an ochreous tinge, covered with dense transverse blackish fuscous striae; the lines black, starting from costal blotches;

first from one-fourth of costa curved to base of inner margin ; outer line from three-fourths of costa, dentate-lunulate, much incurved below middle and joining median shade at middle of inner margin ; submarginal line pale, lunulate, the lunules filled in with black forming a distinct line ; marginal spots and cell-spot black.

Hindwings : with antemedian diffuse dark shade ; postmedian strongly marked black dentate-lunulate line, and a black submarginal line bent beyond cell ; cell-spot black ; the postmedian line is followed by a distinct broad fulvous tint.

Underside dingy whitish grey without speckling ; the cell-spots, outer lines and submarginal shade indicated. Head, thorax, and abdomen like wings ; second joint of palpi blackish, the tips ochreous.

Expanse of wings : 46 mm.

One ♂ from Yokohama, June 1896.

The species bears much resemblance to *Serraca infixaria* Wlk., but it has no series of hairs on the underside of hindwings along the submedian fold, and the cell-spots are simple, not annular ; a characteristic which also distinguishes it from *A. ratotaria* Swinh. The palpi are laterally flattened and upcurved in front of face ; veins 10 and 11 of forewings coincident throughout.

Didymoctenia gen. nov.

Distinguished by the antennae of the ♂ which are armed with a pair of closely contiguous fine and long ciliations on each side of each joint, the ciliations themselves finely ciliated both laterally and apically. In the forewings veins 10 and 11 are coincident ; and a fovea is present. The scaling of the underside is smooth and glossy, as in *Myrioblephara*, to which genus it seems allied.

Type : *D. exsuperata* Wlk. (*Boarmia*).

29. **Ectropis** (?) **praepicta** sp. nov.

Forewings : whitish, thickly peppered with fine black atoms ; costal edge finely ochreous ; lines olive-fulvous, marked by black dashes on the veins, and starting from large black costal spots ; first from nearly one-third of costa to one-fifth of inner margin, bent below costa, preceded by a similarly curved and broader fulvous band ; median from two-fifths of costa embracing the cell-spot, bent inwards on the median vein, then vertical ; outer line from two-thirds of costa to two-thirds of inner margin, denticulate and outcurved in middle, followed by a fulvous band ; submarginal line whitish, irregularly lunulate, the lunules filled up with black, that between veins 3 and 4 forming an oblong black blotch reaching outer line ; marginal area fulvous-tinged, except between veins 3 and 4 ; a row of black marginal lunules ; fringe grey, with a reddish tinge ; the cell-spot consists of raised velvety black scales.

Hindwings : with single antemedian and double postmedian lines ; the lunules of the submarginal filled in with olive-fulvous ; cell-spot small, black.

Underside blurred cinereous, with the cell-spot and outer lines dark, blackish on the veins ; darker submarginal shades on both wings ; apex of forewings pale ; costa of forewing yellowish with black striae and spots ; fringe white with black base. Head, thorax, and abdomen whitish dusted with grey, the thorax rather darker ; metathorax with black ring ; face white with a black bar at top and across the middle ; palpi externally blackish, white underneath.

Expanse of wings : 48 mm.

One ♀ from Yokohama, June 1896.

Referred to *Ectropis* provisionally : the palpi are porrect and acutely rostriform, rough-haired above and beneath. In the forewings veins 10 and 11 are shortly stalked, 11 almost immediately anastomosing with 12.

SUBFAMILY SCOTOPTERYGINAE.

30. *Scotopterix* (?) *subnigrata* sp. nov.

Forewings : grey, thickly speckled with darker ; all the lines dark grey, first at one-fourth, curved ; second (median) curved and indistinct, touching the dark cell-spot, outer line at two-thirds, double, regularly dentate-lunulate, somewhat excurved between veins 7 and 2 ; submarginal pale and waved, interrupted by a slight pale spot below middle and preceded by a darker shade ; dark marginal lunules between the veins ; fringe grey, with dark grey mottlings beyond veins.

Hindwings : similar.

Underside with a broad blackish marginal border, separated by a narrow pale grey interval from the dark dentated outer line, which is thickened on inner margin ; median line and cell-spots blackish and well defined ; fringe as above ; costa of forewing ochreous, with fuscous speckles. Head, thorax, and abdomen grey.

Expanse of wings : 28 mm.

One ♀ from Cachar.

In forewings veins 10 and 11 are coincident, short stalked with 7, 8, 9, and anastomosing at a point with 12.

SUBFAMILY FIDONIINAE.

31. *Chiasmia connexa* sp. nov.

Forewings : cream white, scarcely speckled with dark ; costa blackish at base ; first line near base, sometimes obsolete, sometimes marked by a small black spot on inner margin ; a bent black bar just before middle, including the black cell-spot ; a small black spot on costa at three-fourths, from which a curved yellowish line, as in *C. strigata*, runs to the inner margin beyond or touching the black bar ; a triangular black blotch before apex, connected by a curved streak with a concise black line along margin from apex to vein 4, which reappears, equally concise, at anal angle ; fringe concolorous at apex and between veins 2 and 4, elsewhere black.

Hindwings : with a straight antemedian dark line from inner margin, and fine short black streaks at apex and anal angle, and along margin beyond cell ; a faint black cell-spot ; central area of wing beyond antemedian line suffused with yellowish.

Underside densely striated, and in the forewings partially suffused with iron-grey ; the apex and costal intervals of forewings yellow. Head, thorax, and abdomen cream-colour ; face sprinkled with dark scales ; a black dot on fillet at base of each antenna.

Expanse of wings : ♀ 24 mm. ; ♂ 22 mm.

One ♀, one ♂, Khasia Hills June 1899.

Closely related to *C. strigata* Warr., also from the Khasias ; in that species, however, the hindmarginal markings are at once broader and more diffuse, showing traces of a waved submarginal line ; the subapical costal spot consists of two

contiguous lunules, unconnected with the dark marginal patch. Moreover, the elbow in the hindmargin of forewings beyond vein 3, and the excision beyond cell in the hindmargin of the hindwings are much more marked in *strigata*. Still it is possible the two may be seasonal forms of the same insect.

SUBFAMILY SELIDOSEMINAE.

Scionomia gen. nov.

Forewings : elongate ; costa straight, convex at base, and before apex ; apex prominent, not acute ; hindmargin curved, and somewhat sinuous, being faintly concave just beneath apex and bulging in the middle.

Hindwings : narrow, with hindmargin rounded and subcrenulate.

Forewings of ♂ with round, quite transparent fovea. Abdomen of ♂ long and slender ; antennae simple, lamellate ; tongue present ; palpi obliquely upcurved, reaching top of head ; second joint hairy, third small and smooth ; hind-tibiae dilated, with four spurs.

Neuration : forewings, cell decidedly more than half as long as wing, broad ; discocellular vertical, slightly concave ; first median at two-thirds, second close before lower angle ; radials normal ; first subcostal anastomosing and becoming coincident with the costal ; second free ; third and fourth stalked from near end of cell, fourth into apex ; fifth absent. Hindwings with first subcostal and second median each before the end of cell.

Type : *Scionomia mendica* Butler (*Cidaria*).

SUBFAMILY SEMIOTHISINAE.

32. *Gubaria biflava* sp. nov.

Forewings : dark purple slate-colour, with a broad white central band edged on both sides by a black line, the inner attached to the black cell-mark at the subcostal vein, the outer angled below costa, the angle filled up with dark, and the black line itself mixed with orange scales ; costa grey mixed with orange scales ; a black costal blotch before apex margined with orange, with a minute pale spot at its lower edge ; marginal line black, slightly swollen between the veins ; fringe purplish grey, paler just at apex and below middle ; a fine black acutely angled basal line.

Hindwings : with the white band narrowed at each end, the inner black line straight, the outer curved in towards it at costa and inner margin, and mixed with orange scales ; veins beyond finely orange ; a small white triangular space along margin from vein 2 to 4, preceded between veins 3 and 4 by a long black blotch, the space between 4 and 7 irregularly blotched with black ; fringe white at apex, below vein 7, and from vein 2 to 4, the rest purplish grey ; inner margin and fringe yellowish.

Underside : basal area of both wings orange, this colour extending along costa and forming a large square blotch beyond second line, with a small white dot at its lower end ; the rest as above. Thorax and basal half of abdomen above purplish cinereous ; face and palpi, anal segments of abdomen above, the whole body beneath, and the legs orange.

Expanse of wings : 44 mm.

One ♂ from Great Banda, October 1898 (H. Kühn).

Distinguished from the allied forms by the orange costal blotch beneath. In both fore- and hind-wings the whitish fovea is very distinct, being edged on both sides with dark scales.

SUBFAMILY ENNOMINAE.

33. *Eurytaphria lilacina* sp. nov.

Forewings: pale pinkish grey, speckled with ochreous and fuscous atoms; the basal and marginal areas and the costal margin suffused with brownish olive; first line ferruginous, formed of distinct interneural lunules, from two-fifths of costa to one-third of inner margin, angled on the subcostal vein, then straight and oblique, preceded by a broad olive-grey shade from inner margin; outer line from four-fifths of costa to three-fourths of inner margin, parallel to hindmargin, lunulate and ferruginous, obscurely marked below middle, but the two lunules below costa and those beyond cell distinctly marked in dark brown, followed by a narrow olive-grey shade; both the line and shade are interrupted by the pale ground-colour from vein 7 to below vein 6; a slight linear cell-mark; fringe very narrow, pale, with minute dark dots beyond the veins.

Hindwings: with only the outer line, which is brown and distinct from vein 6 to inner margin; base of wing slightly brownish.

Underside yellowish, shading into pinkish and grey, much speckled with grey in forewings, clearer yellow in the hindwings; the dark marginal fasciae and outer line, as well as cell-spot of forewings marked. Head, thorax, and abdomen like wings; thorax and face tinged with darker.

Expanse of wings: 28 mm.

One ♀ from Kuching, Borneo.

The insect agrees with *Eurytaphria* except in the pectinations of the antennae; these, instead of being weak and distant, are quite as strongly built as in the ♀♀ of *Omiza*, *Hypochrosis*, and their allies; in the forewings vein 11 anastomoses with 12, and vein 10 is free.

34. *Prionia fulvifusa* sp. nov.

Forewings: with ground-colour greenish ochreous, except along costa and hindmargin, overlaid with deep fulvous, which along inner marginal half obscures the outline of the markings; a fulvous blotch at base of costa, another just beyond, and two olive-fulvous triangular spots, one at middle and the other at three-fourths; all darkest on costal edge; from the second an obscure fulvous shade runs obliquely to near base of inner margin, and from the middle one an irregularly edged fulvous fascia runs similarly oblique; from the last a sinuous deeper fulvous line runs, obscure below the middle; from costa before apex a broad fulvous fascia, widening to inner margin; and there is a narrower more obscure fascia from anal angle upwards; fringe mottled dark and lighter fulvous.

Hindwings: wholly dark fulvous, obscuring the markings; a darker brown median line, deeper on the veins, and traces of a slightly paler submarginal fascia.

Underside uniform dark leaden grey, fulvous-tinged along hindmargin, and ochreous along costa, where the edges of the costal spots show dark; fringes rich fulvous; face and palpi fulvous grey; vertex greenish ochreous; thorax and

abdomen rich fulvous ; shaft of antennae rufous-grey above, whitish beneath ; pectinations black.

Expanse of wings : 22 mm.

One ♀ from Kuching, Borneo (type) ; also a ♂ from Penang.

Like *P. contractaria* Wlk. = *intexta* Swinh., but distinguished at once by its rich fulvous coloration ; hindwings notched beyond cell.

35. *Zanclopera subusta* sp. nov.

Forewings : ochreous, speckled and suffused with different shades of brown ; all the lines starting from olive-brown costal marks ; first from one-fourth of costa to near base of inner margin, passing through a cloudy brown blotch between costa and median vein ; exterior line from two-thirds of costa to near middle of inner margin, irregularly dentate-lunulate, and projecting outwards beyond cell ; submarginal line pale, waved, preceded on costa by a large brown blotch which touches exterior line, interrupted between veins 6 and 7, and marked below 7 by a dark brown outward edging, which is continued through to the fringe ; a faint olive-brown median line, bent round the brown cell-spot, and approaching inner line at inner margin ; fringe ochreous above vein 7, dark brown below.

Hindwings : with the extreme base pale, without speckling ; two dark brown straight antemedian lines, the inner thick and diffuse, the second fine ; two dark-brown postmedian lines in a brownish shade, the first distinctly and strongly dentate ; a faint submarginal line, and interrupted dark brown marginal line ; fringe ochreous throughout ; cell-spot linear.

Underside of forewings with the lower half of outer marginal border black-brown ; the rest ochreous freckled with chestnut-brown ; a chestnut-brown diffused fascia near base ; hindwings with whole outer half black-brown, except the extreme margin which is ochreous, tinged with chestnut towards apex ; the basal area pale ochreous with a dark inner band.

Face and palpi dark brown ; lower edge of face ochreous ; vertex, thorax, and abdomen ochreous mixed with brown scales.

Expanse of wings : 28 mm.

One ♂ from Nias Island.



Warren, William. 1901. "New Uraniidae, Epiplemidæ and Geometridæ from the Oriental and Palaearctic Regions." *Novitates zoologicae : a journal of zoology in connection with the Tring Museum* 8, 21–37.

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