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XXVII.—On new species of Lycænidæ from West Africa

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Fig. 3. *Actæopyramis lætitia.*
Fig. 4. —— *brevicula.*
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Fig. 7. *Nassa* (*Alectryon*) *himeroessa.*
Fig. 8. *Tritonidea Sowerbyana.*
Fig. 9. *Metula daphnelloides.*
Fig. 10. *Murex* (*Ocinebra*) *Marjoriæ.*
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Fig. 12. *Mitra* (*Costellaria*) *diaconalis.*
Fig. 13. *Marginella* (*Glabella*) *alchymista.*
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Fig. 15. *Drillia dives.*
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Fig. 17. —— *continua.*
Fig. 18. —— *granatella.*
Fig. 19. *Clathurella opsimathes.*
Fig. 20. *Drillia lithoria.*

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Fig. 1. *Drillia audax.*
Fig. 2. *Daphnella nereïdum.*
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Fig. 6. *Daphnella thygatrica.*
Fig. 7. *Clathurella quisquilia.*
Fig. 8. *Daphnella thia.*
Fig. 9. —— *buccinulum.*
Fig. 10. —— *epicharta.*
Fig. 11. —— *hedya.*
Fig. 12. —— *Euphrosyne.*
Fig. 13. *Cythara elegantissima.*
Figs. 14, 15. *Cancellaria* (*Trigonostoma*) *luscinia.*
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Fig. 17. *Cylichna* (*Mnestia*) *bizona*, A. Ad., var.
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XXVII.—*On new Species of* Lycænidæ *from West Africa.*

By GEORGE T. BETHUNE-BAKER, F.L.S., F.Z.S.

I HAVE been working out a collection of Lycænidæ made in the neighbourhood of Sierra Leone by my friend Mr. D. Cator in the years 1901 and 1902, and among them are several new species, which I describe here; the types are all in Mr. Cator's collection, which for the time being is in my possession. There is also an *Acræa* which I cannot trace has been described as yet, and which is in the National Collection unnamed.

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Acræa igola leonina, subsp. n.

♂. Upperside: primaries hyaline, very slightly tawny (yet hyaline) over the cell and inner marginal area, beyond the middle of the cell a very slight trace of a darkish spot; apex and posterior margin broadly dusky. Secondaries reddish, with decidedly broad blackish margin; all the veins dusted with black nearly up to the cell, and between each of the veins a dark longitudinal dash of blackish nearly equal in length to the dusting just mentioned; a row of four black basal spots below each other, followed by a similar row of five spots, the one in the cell being shifted slightly basewards, beyond which is a row of three spots slightly curved and rather larger, beginning with one in the cell and reaching to the internal vein; beyond this is a straight row of three spots, the first on the costa, the second at the upper extremity of the cell, and the third below the cell in the angle formed by the first median vein; these spots are plainer on the underside than on the upperside. Beneath, the primaries are very shining; the apex and the posterior margin are yellowish, the short dusky dash between the veins being much plainer than on the upperside: secondaries much paler and shining, the dusky veins and dashes showing through more distinctly.

♀. Upperside: primaries hyaline, but altogether duskier than in the male: secondaries as in the male, but duskier; spots as in the male, but with the addition of one very small spot immediately below the second one of the last row. Underside: the difference in both wings is just the same as in the male.

Exp. alar., ♂ ♀, 56 millim.

This subspecies was taken in November, January, and again in June. It differs from *igola* in that the whole of the primaries are hyaline, with barely a trace of the tawny red. On the secondaries the arrangement of the spots differs, and *igola* lacks the broad dusting of the veins.

Pentila septistrigata, sp. n.

♂. Upperside: both wings white. Primaries with a broad dark costa and a very broad, dark, irregular apical area extending from just in front of the cell on the costa to rather lower than the third median vein on the posterior margin, with no spots or other marks. Secondaries with a distinct fine dark margin from the anal angle to the third median vein on the posterior margin; otherwise without any marks, except

that the transverse stripes of the under surface show through. Underside: primaries with a narrow stripe of brown along the upper margin of the cell, beyond which is a short, curved, pale brown stripe from the costa to near the base of the fifth median nerve; rising just beyond this on the costa is another transverse, curved, brown stripe, ending above the third median nerve near the posterior margin; both these curved stripes are a little indefinite interiorly; beyond the latter stripe is a sharply defined, darkish brown, scalloped, narrow, submarginal stripe, following nearly the same course, but ending below it on the second median nerve; beyond this is a marginal stripe parallel with it, but interrupted by the veins. Secondaries with six transverse brown lines, four of which extend from the submedian vein to the costa, the first three parallel with each other and the second three with each other, followed by a curved, scalloped, submarginal stripe from the apex to the anal angle, parallel with the fine dark line on the posterior margin; the third of the basal transverse lines does not extend to the costa, but ends near the upper margin of the cell, whilst the third of the second series ends on the fourth median vein; fringes white, intersected by a brown line; palpi yellow. Antennæ black, ringed with white and tipped with yellow; legs yellow, ringed with black; thorax and abdomen white.

Exp. alar. 34 millim.

This species may possibly prove to be a local race of *Ferrymani*, Grose-Smith, but it could be separated at a glance. Both wings are very much narrower; the primaries of my species also have scarcely any black on the costa, whilst *Ferrymani* has it extending well over more than half the cell and beyond it; whilst the black posterior margin of Grose-Smith's species extends more than three-quarters its length, but in my species not more than halfway down. The underside differs likewise. In the primaries the black patch in the cell by the costa and the marked black curved fascia is replaced in my insect by a slight brown streak and an indefinite pale brown slight fascia. In the secondaries the transverse brown lines are not half the width of those in "*Ferrymani*," and none of them are joined together, whilst in Mr. Grose-Smith's insect all the stripes are connected by the costa, and they are also very dark and quite different in colour to the pale brown of *septistrigata*.

This species is not common, but cannot be called rare, in Sierra Leone in February and in June and July. Specimens are in both Mr. Cator's collection and my own, the type being in Mr. Cator's.

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Micropentila Dorothea, sp. n.

♂. Upperside: both wings black, with tessellated black and white fringes. Primaries with a whitish spot in the cell near its upper extremity, below which near the submedian vein is a second; two thirds the length of costa and just below it are two whitish spots close together, between the second and third median veins beyond their middle is another whitish spot. Secondaries with a distinct whitish spot between the second and third median veins near their source, below which is another spot bisected by the first median vein; this is followed by a third larger spot between the submedian and inner marginal veins; on the costa is also a trace of another spot near the apex; these spots have the appearance as though they should form part of a curved row or fascia in spite of their isolation. Underside: both wings blackish brown. Primaries with inner margin lighter; three cream-coloured spots in the cell and one just beyond it; a spot above and below the cell at the base of the wings; on the costa a spot over the third cell-spot and another over the one beyond it, followed by larger twin spots, which with two small spots and a third larger one form a slight, curved, transverse fascia; on the costa are two more small spots horizontally placed, directly beyond which is a straight row of six spots below each other, forming a submarginal row; close to the posterior margin is a largish spot just below the uppermost median vein, between which and the discoidal vein is a smaller spot on the margin; there are traces of two other spots on the posterior margin near the anal angle; all the spots are cream-coloured. Secondaries covered with numerous cream-coloured spots; a series of three basal spots below each other, followed by a curved row of four from the costa to the inner margin across the middle of the cell; this is followed by a third curved row of four or five spots across the end of the cell from the costa to near the inner margin, the second of which lies in the extremity of the cell and is followed by another spot beyond the cell; yet a fourth curved row of large irregular spots lies beyond, followed by a distinct row of eight small spots from the apex to the anal angle, one between each vein, those at the anal angle being larger than the others; beyond these are two larger marginal spots just below the apex and three or four spots or dashes near the anal angle on the posterior margin. Head, thorax, and abdomen black; palpi cream-coloured, end joint black; legs black, ringed with cream-colour.

Exp. alar. 32 millim.

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This species, which is not uncommon, flying from January to March in Sierra Leone, is near *M. adelgunda*, Staud., but differs in that it has three spots in the cell in both wings and one beyond it; this is quite constant in all the specimens before me. Both primaries and secondaries are also broader and fuller than in Staudinger's species.

I dedicate this species to Mrs. Cator, who captured the first few specimens, thus discovering its locality, around which it appears to keep very closely.

Phytala elais Catori, subsp. n.

♂. Upperside: both wings pale somewhat shining blue. Primaries with a broad, velvety black, apical area and posterior margin, extending as a wedge-shaped patch along the costa to a third its length; the posterior margin decreases in width rapidly from the third median vein, where it is widest, to the inner angle; a large wedge-shaped patch, terminating in a quadrangular one, invades the blue of the wings along the upper margin of the cell, extending well beyond it; at the base of the inner margin is a large sex-mark, the submedian vein in the sex-patch being considerably swollen; the costal base of the wings is black. Secondaries with a very broad brown costa, the posterior margin being much narrower and tapering to little more than a broad line; the inner margin is broadly brown. Underside as in *P. elais*, Doubl.

♀. Entirely dull brown, with a very pale mauve oblique patch beyond the cell extending from the costal to the third median vein. Underside similar to the male, but duller, paler, much more ochreous, and it is without any lustre.

Exp. alar. 70 millim.

This species is, I believe, a local race of *elais*, Doubl., but may be recognized at a glance by the large black patch invading the blue area beyond the cell, which is quite absent in Doubleday and Hewitson's species. In this form it is quite constant. I have five specimens before me, whilst Mr. Cator has caught many more since his return; he tells me the black patch is markedly present in all. It flies from December to March.

Phytala leonina, sp.n.

♂. Primaries velvety black, with two or three small ill-defined blue transverse spots beyond the cell; the area between the cell and submedian vein bright palish blue, and half of the area between the first and second median veins the

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same colour. Secondaries velvety black, the whole of the area between the fifth median and the internal vein being bright blue, the posterior margin being narrowly black. Underside: both wings a peculiar shiny slaty grey. Primaries with the lower half to the inner margin sooty black, in which near the anal angle are two good-sized grey indefinite marks, the lower one being the larger. Secondaries with a very indistinct trace of a submarginal row of greyish crescentic marks, and a yet slighter trace of a pale narrow band nearer the cell.

♀. Both wings uniform dark brown; the primaries with a darker patch in the central area caused by the black patch of the underside showing through. Underside: both wings ochreous. Primaries with the central area from the base to nearly the posterior margin sooty black, the inner margin being pale grey; just beyond the cell at the upper edge of the black area are two small whitish spots. Secondaries with a faint trace of a submarginal row of paler spots, followed by a second equally faint nearer the cell.

Exp. alar., ♂ 34, ♀ 41 millim.

Occurring in February and June in Sierra Leone.

Epitola albomaculata, sp. n.

♂. Upperside: both wings pale sublustrous azure-blue. Primaries with blackish-brown costa to the cell and all the area above the fourth median vein; posterior margin very broadly blackish brown at the afore-mentioned vein, very rapidly decreasing to a fine margin at the anal angle. Secondaries with the costa dark brown, extending just into the cell and so straight to the posterior margin; posterior margin finely black, inner margin dark grey to the submedian vein. Underside: both wings greyish brown, more or less irrorated with grey and with various greyish spots. Primaries: cell grey, invaded by three large spots of the brown ground-colour; basal area of the first three median veins grey; a perpendicular fascia of five greyish spots to the first median vein, that near the costa small and indefinite, the other spots increasing considerably in size, beyond this a submarginal fascia of grey crescentic spots between each of the veins to the first median, followed by another similar marginal fascia only somewhat straighter. Secondaries with three transverse interrupted pale fasciæ across the wing at the base, across the middle of the cell, and across the end of the cell, beyond which is a transverse row of largish indefinite whitish spots from the costa to the submedian vein; between this row and the fascia across

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the end of the cell are two large white costal spots below each other; the posterior margin has a double row of crescentic whitish marks as in the fore wings.

Exp. alar. 42 millim.

This species flies in March. It is nearest *E. cercene*, Hew., but differs in the very broad blackish costa and apical area. *Cercene* is blue nearly to the costa itself, whilst beneath my species is covered all over with whitish fasciæ and spots in quite a different form to the fairly regular and small pattern of Hewitson's insect.

Epitola moyambina, sp. n.

♂. Upperside: primaries black, suffused with lustrous azure-blue from the inner margin to subcostal vein, extending well beyond the cell and almost up to the posterior margin at the anal angle; at the end of the cell the blue is invaded by a small wedge of the black ground-colour. Secondaries greyish black, paler along the costa, suffused with azure-blue from the discoidal vein to the second internal vein and extending nearly to the posterior margin, leaving a broadish black border thereto; fringes tipped with white at the apex. Underside: both wings greyish brown, tinged with a very slight purplish tint, with various greyish-white markings. Primaries with a short line of grey scales across the cell close to its end, below which is a double **V**-shaped mark, beyond which is another **V**-mark placed horizontally, below which is a larger patch of grey scaling; beyond this is a submarginal curved fascia of crescentic marks from the costa to the inner margin, one between each vein. Secondaries with three grey lines across the cell at the base, the centre, and near the end; above and below the latter are other similar short marks, forming a very interrupted transverse line across the wing; below the cell are a few scattered grey scales; there is a submarginal fascia of crescentic marks as in the primaries from the costa to the inner margin, and between this and the end of the cell is a very slight trace of a row of five or six indistinct spots, the two near the costa being the largest and best defined.

Exp. alar. 44 millim.

I have before me specimens taken in November and February; it will follow *E. cercene*, Hew., but differs from it in having less blue on both wings, the borders being much broader; *cercene* is blue in the secondaries up to the posterior margin, but my species has a broadish black border. Below my species has much less pattern and fewer marks, whilst the fasciæ that are present are much more distinct.

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Epitola nigra, sp. n.

♂. Upperside: both wings uniform dark blackish brown; primaries with a slight blue scaling at the lower extremity of the cell in the submedian area, and also between the first and second median veins; secondaries spotless. Underside: both wings uniform dull greyish brown without any pattern at all; primaries with a suffusion of black over the central area of the wing from the base to the posterior margin.

♀. Upperside: both wings uniform brown, not very dark, quite spotless. Underside: both wings pale ochreous; primaries with the black suffusion as in the male, at the upper extremity of which is a trace of a pale spot; secondaries spotless.

Exp. alar., ♂ 41, ♀ 43 millim.

This species, which flies in February, will come next to *E. pinodes*, H. H. Druce, from which it differs in having no blue whatever on the upper surface of the secondaries. *Pinodes* has blue suffused all over the wing.

Deudorix Catori, sp. n.

♂. Upperside: both wings black, suffused all over with rich sublustrous cobalt-blue. Primaries with the costa black to the subcostal vein; apex black and posterior margin black, broader near the apex, decreasing rapidly to a line at the inner angle. Secondaries, tail and lobe black; sex-patch at the base of costa small and black. Sexual tuft of the primaries black. Underside: both wings pale grey, with the usual *Deudorix* quadrangular mark at the end of the cells, beyond which is a waved transverse yellow line finely edged outwardly with white, extending right through both wings, followed by a similar interrupted submarginal line, ending in the secondaries in the upper of the two anal ocellated spots. In the secondaries the first line is **W**-shaped over the anal spots, both of which are velvety black, the upper one ringed broadly with yellow except on the posterior edge, which is whitish; the lower one, *i. e.* the lobe-spot, is edged internally with blue scales, above which is a yellow stripe edged with black on each side.

Exp. alar. 32 millim.

This species, which flies in January, is unlike any *Deudorix* that I know; its linear markings remind one rather of *Hypolycæna* than of *Deudorix*; the neuration, however, is that of the latter genus.

Lycænesthes subnitens, sp. n.

♂. Upperside: both wings blackish. Primaries with the inner margin covered for the basal three quarters of its length with shining deep violaceous-blue scales extending slightly into the cell. Secondaries with the discoidal area and half of the median area covered with the same coloured shining scales; this lustrous area is of a peculiarly deep tone of colour, and at a certain angle is hardly visible. Underside: both wings blackish brown, with various spots and marks defined by white lines. Primaries with a triangular dark mark near the base, edged laterally with white, followed by a broadish irregular dark band inclined in the opposite direction, as the two sides of an , edged with white; beyond this a transverse fascia from the costa, angled above the third median vein, whence it rapidly tapers to a point touching a largish spot in the inner angle, both the fascia and the spot being edged with white; from near the apex there is a submarginal band confluent with the afore-mentioned spot, edged with white, a fine dark marginal line; extreme posterior margin itself white, intersected at the veins. Secondaries with a broad basal laterally white-edged mark, which appears confluent with the triangular mark of the primaries; beyond this and adjoining it is another irregular curved fascia, edged with white all across the wing; touching this on the costa is a large spot, below which is a large double spot projected outwards, below which is another double spot projected inwards, adjoining an angled spot on the inner margin; outside this row of spots is a submarginal band, followed by a marginal row of white spots pupilled with blackish, two black anal spots more or less irrorated with metallic scales, the upper one with a deep orange-coloured iris.

Female precisely like the male above and below, the only difference being that the lustrous blue area of the primaries is a much greyer blue though not less shining.

Exp. alar., ♂ ♀, 22 millim.

This species, which flies in January, is nearest *L. Staudingeri*, S. & K., but the blue of the primaries is much less in extent, deeper in colour, and more lustrous, whilst *Staudingeri* has no blue at all on the secondaries.

Lycænesthes Marshalli, sp. n.

♂. Upperside: both wings entirely brown. Secondaries with three very fine, shortish, white tails; posterior margin black, finely edged internally with white; on the margin between the lower median veins are four black spots edged with white, one between each two veins, the size of each increasing

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towards the anal angle. Underside: both wings pale brown, almost entirely covered with white, with numerous dark brown marks and stripes. Primaries with a short, basal, dark, costal stripe and a dark triangular patch, beyond which is a broken dark stripe across the end of the cell, arising in a small costal spot; beyond this are two transverse costal fasciæ, the first one being angled and longer and broader than the second; between the angled fascia and the stripe crossing the cell is a broadish stripe extending from the fourth median vein to the submedian, and tapering rapidly to the latter; a broad submarginal stripe followed by a very fine one; posterior margin finely dark. Secondaries with two transverse, dark, broadish, basal bands, followed by three large dark spots across the wing, one on the costa, another across the cell, and the third on the inner margin, the latter being a double spot; outside these are two other large spots on the median area, beyond which is a broad curved dark stripe from apex right to the inner margin; at the anal angle is a small black spot followed by a short dash, another black spot with a yellow iris, above which is another small black spot; all of these have a slight scattering of metallic-blue scales; posterior margin itself finely dark.

Female like the male, but on the primaries there is a trace of two greyish spots, one on the posterior and one on the inner margin near the anal angle; whilst on the secondaries are two distinct rows of submarginal bluish-white spots roughly parallel with the posterior margin of the wing. On the underside there is decidedly more white, caused by the dark spots being smaller than in the male.

Exp. alar., ♂ 19–22, ♀ 23 millim.

This species, which I dedicate to Mr. G. A. K. Marshall who has done so much for entomology on the other side of Africa, flies in January, February, and June, and will come near *L. grammicus*, S. & K.; but it has not a marginal border of spots on either wings, as that species has on both wings, and the pattern beneath is very different, the underside pattern being between *grammicus* and the previous species here described, viz. *subnitens*.

Lycænesthes leonina, sp. n.

♂. Upperside: both wings brown. Primaries with a largish indefinite whitish patch at the end of the cell and in the median area, and a small blackish spot at the end of the cell; posterior margin darker than the rest of the wing. Secondaries with a small double black spot in the anal angle, followed by a larger one above it, above which is another, rather smaller; posterior margin finely dark brown,

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internally edged with whitish. Underside: both wings pale ochreous grey. Primaries with a darker spot at the end of the cell, edged with whitish; beyond this is a transverse sharply angled row of large darker spots, preceded by indefinite white dashes and edged laterally with white; this row extends from the costa just beyond the middle to near the middle of the inner margin, and is angled outwardly; beyond this is a row of darker lunules indefinitely and indistinctly edged with whitish; posterior margin finely dark. Secondaries with a small dark spot on the costa near the base, followed by a larger one about the centre of the costa; at the end of the cell is a rather large darkish spot laterally edged with whitish and paler in the centre, below which is another similar spot touching the inner margin; from this spot arises a curved row of similar spots extending up to the lower outer edge of the second dark costal spot; beyond this is a submarginal row of lunules laterally edged with whitish, outside which is a marginal row of smaller but more definite similar lunules; posterior margin finely dark; anal angle with two small black spots, above which, between the first and second median veins, is a larger black spot margined internally with yellow; slight blue metallic scaling is scattered over these spots.

♀. Upperside like the male, except that there is no white patch on the primaries, though there is a slight indication of a paler brown patch, and in the secondaries the marginal spots at the anal angle are continued nearly up to the apex. The underside pattern is the same, but in both wings the transverse row of large spots is very broadly margined externally with white, and the lunular marginal row is larger and more distinct, whilst in the primaries the row of large spots instead of being sharply angled is only curved.

Exp. alar., ♂ 31, ♀ 32 millim.

This species, which was taken in January, is somewhere near *L. lycœnoides*; but it is not white underneath as that species is, and the pattern is different.

XXVIII.—*On the Distribution of Mid-water Chætognatha in the North Atlantic during the Month of November.* By R. T. Günther, M.A., F.R.G.S.

[Plate XXIV.]

A report on the Cœlenterata obtained by Mr. George Murray during the cruise of the 'Oceana' in November 1898 appeared in the 'Annals' for April last. The organisms

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