under wing-coverts are similarly marked, but the bars are much narrower here. The primaries above are faintly marked with lighter bars on their inner webs. Below they are pearl-grey on the inner webs, variegated with white, and faintly barred with dark grey. The first primary is 2.5 inches shorter than the second, and 3.5 inches shorter than the fourth, which is longest, though very slightly exceeding the fifth. The third is rather longer than the sixth. The first three primaries are distinctly emarginated on the inner web at about one-third of the total length of their exposed portions; the next succeeding two less distinctly so. The legs are well feathered, the feathers projecting above an inch below the heel behind, and in front covering the upper part of the tarsus for a quarter of an inch. The tarsus is covered in front with a row of ten or eleven broad plates, behind by fifteen or sixteen rather narrower plates, with the divisions almost obsolete. These rows nearly join on the inner side, leaving on the outer side a space occupied by three irregular rows of small oval plates. The tarsi and toes are bright orange; the claws black.

The only specimen obtained is no doubt quite adult: the sex is not marked. Probably the adults of both sexes would be alike, except in size.

4. DESCRIPTION OF SIX NEW SPECIES OF DIURNAL LEPIDOPTERA IN THE BRITISH MUSEUM COLLECTION. BY A. G. BUTLER, BRITISH MUSEUM.

(Plate XXV.)

1. *PAPILIO VIRGATUS*. (Pl. XXV. fig. 1.)

Upperside cream-colour, with a deeper tint at the base, hind margin, and anterior margin; anterior wings with a broad, elongate, triangular black band at the outer margin, its point touching the anal angle, and divided in the centre by a narrow cream-coloured band running parallel to the outer margin; a short black band just beyond the cell, and a long band upon the cell, and tapering to near the anal angle; two bands crossing the middle of the cell, the outer one bounded by the median nervure, the inner one by the interior margin; two black bands at the base of the wing, the inner one touching the body. Posterior wings tailed, with an irregular black spot enclosing a pale blue lunule and with a dull yellow margin inclining to orange above, at the anal angle; a narrow black band crossing the wing at the end of the cell, slightly uncated at its outer extremity and tapering towards the anal angle, four blue-grey lunules surrounded with black along the lower edge of the outer margin; a cream-coloured lunule surrounded with black on the outer margin between the subcostal nervules; margin between the apex and first subcostal nervule black; a large cloudy black spot above the supra-caudal lunules. Tail black. Body greyish black, with the caudal extremity silver-grey; a cream-coloured band on each side of the thorax, and a ring of the same colour round the eyes; antennæ black.

Underside—ground-colour in the anterior wings as above; in the posterior a little brighter. Anterior wings with black hind margin; a greyish elongate triangular band, margined with black and sprinkled with yellow scales, its point towards the anal angle, a little way from and nearly parallel to the hind margin; the rest of the wing as above, except that all the bands are intersected by the nervules, which are yellow. Posterior wings—a bright orange lunule above the anal ocellus; an additional shorter black band outside and parallel to the central band; an additional black line above the black margin to the apical sinuation. Tail tipped with white; the cloudy spot above the tail only marked by a scattering of black scales; the rest of the characters as above. Body—prothorax yellow; mesothorax and metathorax grey; abdomen cream-coloured, with a yellow band along its outer margin.

Hab. Syria.

This species, taken by Mr. B. Lowne at Damascus, is closely allied to *P. podalirius* of Europe, but differs from it in having the posterior wings and tails proportionally much longer, the orange spot above the ocellus barely indicated on the upperside, the blue lunules much larger. On the underside the orange band crossing the wings between the two centre bands is wanting; the black band between the hind margin and the centre bands is also wanting; and the entire insect is smaller and not so highly coloured.

2. *PIERIS GLAUCE*. (Pl. XXV. fig. 2.)

Male. Upperside—anterior wing, basal half white, apical half deep brown, inner edge deeply indented; the base and the end of the cell deep brown. Posterior wing white, with broad black outer margin; base deep brown. Body black.

Underside—anterior wing deep brown; end of the cell, median nervure, base of submedian nervure and of the second and third median nervules sprinkled with white scales; a few white scales between the subcostal nervules near the apex, and between the third median nervule and the submedian nervure near the anal angle. Posterior wing rich yellow; base sprinkled with black scales; margin deep brown; a few yellow scales at the base; a broad crimson dash just below the basal portion of the anterior margin; six deep-brown hastate spots enclosing yellow spots along the hind margin. Body—head grey; thorax yellow, sprinkled with black; abdomen pale brown.

Female unknown.

Hab. Borneo.

Allied to *P. belisama* (Java); but has a broader apical band to the anterior wing on the upperside, and a broader margin to the posterior wing. On the underside the apical row of yellow spots in the anterior wing is only represented by a few white scales; in the posterior wing the crimson dash near the base is much broader, and the marginal row of spots much blacker and broader.

3. *ANTHOCHARIS PHLEGYAS*. (Pl. XXV. figs. 3, 3 a.)

Male. Upperside—anterior wing white, apex lilac, margined

with brown on its outer edge. Posterior wing white; nervures black.

Underside—anterior wing silky white; nervures yellow. Posterior wing silky white; nervures yellow at their outer extremities, black at the base.

Female. Upperside—anterior wing white, yellowish at the base and anterior margin; a broad orange apical band reaching along the outer margin nearly to the third median nervule, bordered on its outer edge by a brown band, and enclosing six brown spots, the two lowest ones being connected to one another and to the margin, and intersecting the orange band; a few brown scales on the interior margin of the orange band; an indistinct brown spot near the anal angle; a black spot at the end of the cell. Posterior wing white; five brown spots at the outer extremities of the nervules.

Underside—anterior wing white, yellowish at the base and anterior margin; a broad salmon-coloured apical band reaching along the outer margin, nearly to the third median nervule, and enclosing six brown spots; a black spot at the end of the cell. Posterior wing pale salmon-colour; a row of four lunular brown spots crossing the wing obliquely from the anterior margin, a little beyond the middle, and joining at an angle two similar brown spots running parallel to the outer margin; a small brown spot on the inner side of the submedian nervure at two-thirds of its length from the base.

Hab. White Nile.

Closely allied to *A. ione* (Port Natal), but much less robust; the violet apical band of the male and the orange band of the female much broader and fuller, and not enclosed in brown as in *A. ione*, the inner black margin being almost indistinguishable. The male without the black spots in the anterior wing, or the black terminations to the nervules of the posterior wings; all the other markings are also much less distinct, and the whole insect is much smaller.

4. GONEPTERYX GOBRIAS, Hew. (Pl. XXV. fig. 4.)

Male. Upperside bright yellow; all the wings with hind margins deeply sinuated; cilia (except at anal angle), front of the head, and base of the antennæ crimson; the remainder of the antennæ brown above and white beneath, with orange tips; thorax greenish grey; abdomen yellow. Anterior wing—apex and hind margin brown, with orange inner margin, the inner side deeply sinuated and dentated; a curved orange band at the end of the cell, and a band of orange spots crossing the wing a little beyond the middle, and connecting the apical band with the anterior margin. Posterior wing with very narrow chocolate-brown hind margin; orange on its inner side.

Underside—anterior wing pale yellow; apical band dark brown on its inner and light brown on its outer side, enclosing an almost triangular metallic-violet dash, the base of which touches the anterior margin; the band at the end of the cell only marked by a reddish outline; base of the wing reddish; a red spot at the outer termination of the costal nervure and the first subcostal nervule; a faint silver spot at the end of the cell. Posterior wing pale yellow; an

irregular pale orange band crosses the wing from beyond the middle of the costa to the second median nervule, where it is met by a smaller band crossing the space between the second and third median nervules; base of the wing reddish.

Female. Upperside cream-white; markings the same as in the male, but much less distinct.

Underside pale greenish yellow; markings the same as in the male.

Hab. Borneo.

This species, of which we have three examples in the British Museum, is closely allied to *G. verhuellii* (N. India), but differs from it in the deeper sinuations of the hind margins, the abrupt termination of the apex of the anterior wings, the breadth of the apical band, the dark margin to the posterior wings, and the absence of any sinuation in the anterior margin of the apex*.

5. *HELICONIA VULCANUS*. (Pl. XXV. fig. 5.)

Upperside—anterior wing deep brown, glossed with blue, crossed beyond the middle by a broad irregular oblique scarlet band. Posterior wing deep brown, glossed with blue; anterior margin light brown.

Underside—anterior wing rich chocolate-brown, with a broad irregular salmon-coloured band enclosing three small indistinct white spots, one within the cell, and one on either side of it; inner margin glossy light brown. Posterior wing rich chocolate-brown; anterior margin yellow; a broad yellow band crossing the wing a little above the middle and tapering towards the apex.

Hab. Demerara and Panama.

I found this species amongst the *Heliconidæ*, under the name of *H. melpomene*, to which it is allied; it differs from it, however, in having a broad yellow band across the middle of the posterior wing on the underside, and a brighter blue gloss on the upperside.

6. *DANAIS CENONE*. (Pl. XXV. fig. 6.)

Upperside—anterior wing transparent, with a broad black band along the outer margin, and black anterior margin; an irregular oblique black band at the end of the cell, connecting the anterior with the outer margin, and connected by a narrow black band with the middle of the last median nervule; a row of fourteen brown spots in couples between the nervules, close to the outer margin and upon the black band, the second, fourth, and sixth to fourteenth enclosing minute white spots; an oval white spot between the first and second and another between the second and third subcostal nervules; a brown spot in the middle and a white triangular spot at the base of the space between the third and fourth subcostal nervules; a row of seven white spots, the lowest one bilobed, running parallel to the hind margin and through the centre of the black band; nervures

* I had intended to describe this species under another name; but as Mr. Hewitson informs me that he has lately described it as *G. gobrias* in the 'Transactions of the Entomological Society,' I have of course adopted his name.

black. Posterior wing transparent, with a broad black band along the outer margin; a row of fourteen brown spots within the band, between the nervules and close to the outer margin, the second to sixth and the eighth to fourteenth enclosing minute white spots; a row of ten brown spots between the marginal row and the inner edge of the black band, the second to fourth, sixth, ninth, and tenth enclosing white spots; nervures black. Body—thorax black, spotted with white; abdomen black.

Underside the same as above, except that white spots take the place of all the brown ones, and the abdomen is white.

Hab. Philippine Islands.

5. DESCRIPTION OF A NEW GENUS OF TRICHIUROID FISHES OBTAINED AT MADEIRA, WITH REMARKS ON THE GENUS DICROTUS, GÜNTHER, AND ON SOME ALLIED GENERA OF TRICHIURIDÆ. BY JAMES YATE JOHNSON, CORR. MEM. Z. S.

Order ACANTHOPTERYGII.

Fam. TRICHIURIDÆ.

NEALOTUS, gen. nov.

Body elongate, compressed, incompletely clothed with delicate scales. Cleft of the mouth deep. Small teeth in the jaws and on the palatine bones; none on the vomer. First dorsal fin continuous, extending to the second; finlets behind the second dorsal and anal fins. Each ventral fin represented by a single small spine. A dagger-shaped spine behind the vent. No keel on the tail. Caudal fin well developed. Seven branchiostegal rays.

This genus may be entered in the synopsis of Trichiuroid genera in the 'Catalogue of the Collection of Fishes in the British Museum' thus:—

Each ventral represented by a single spine; a dagger-shaped spine behind the vent.

NEALOTUS TRIPES, sp. n.

First D. 21. Second D. 19. P. 13. A. 18. C. 16.

The compressed body is very elongate, and has a few large deciduous simple scales of delicate structure scattered here and there on the skin, which is faintly reticulated with oblique grooves or wrinkles, and has a steel-grey colour with a silvery lustre. The height of the body, compared with the total length, is as 1 to $9\frac{1}{2}$; whilst the length of the head, compared with the total length, is as 1 to $4\frac{1}{6}$. The black compressed head is flattened above, and is concave between the eyes, where there are four low ridges, the inner pair of which enclose an elongated diamond-shaped space. The lower jaw is longer than the upper, and each is armed with a single series of small deltoid distant teeth. Those of the upper jaw are inserted in the pre-

1 PAPILIO VIRGATUS.
2 PIERIS GLAUCE.
3 3^a ANTHOCHARIS PHLEGYAS

4. GONEPTERYX GOBRIAS. *Hew.*
5. HELICONIA VULCANUS.
6. DANAIS AENE.

Butler, Arthur G. 1865. "Description of six new species of Diurnal Lepidoptera in the British Museum Collection." *Proceedings of the Zoological Society of London* 1865, 430–434. <https://doi.org/10.1111/j.1469-7998.1865.tb02363.x>.

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