

but the very strong hooked bill and remarkable teeth displayed in the mandible are at variance with the most powerfully-billed pigeons, and we can form at present no opinion as to the probable use or adaptation of the latter structure. The position and linear form of the nostril agree with that of *Megapodius* as well as the bare space in front of the eye, and the indication of the want of feathers on the sides of the throat. The form of the wing approaches to that of *Penelope*. The tail of fourteen feathers is square and comparatively short, while the colouring of the plumage reminds us of some of the ground doves. The tarsi are short, and are naked very shortly above the tarsal joint; the outward covering has been destroyed, but in front appears to have consisted of rounded scales. The feet are of moderate size, and the outer and inner toes, quite unconnected at the base, are of equal length.

From a careful consideration of the general characters, we are inclined then to place this singular bird with the *Peneloponinae* or *Megapodinae*, probably the latter. We are aware of no existing description, though there is one allusion made to a bird which may eventually turn out to be this. In Mr. Strickland's Report on the Recent Progress and Present State of Ornithology, read before the British Association at York, it is stated, "The recent American voyage of discovery will extend our knowledge of Polynesian zoology, and its researches will be made known by Mr. Titian Peale, who is said to have discovered among other rarities a new bird allied to the dodo, which he proposes to name *Didunculus*;" and we believe "*strigirostris*" has been applied specifically. In that part of these voyages already published there is no zoology given, so that we cannot now ascertain the value of this discovery, and from the specimen before us possessing no characters in common with a struthious bird, we have ventured to characterize it as a new generic form.

July 30, 1845.

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XIX.—*Descriptions of new or imperfectly described Diurnal Lepidoptera.* By EDWARD DOUBLEDAY, Esq., Assistant in the Zoological Department of the British Museum, F.L.S. &c.

Fam. PAPILIONIDÆ.

Genus PAPILIO.

*P. Bromius*. *P. alis omnibus nigris, fascia communi lata punctisque marginali viridibus; subtus fuscis, posticis fascia maculari pallide aurea.* Exp. alar. 3 unc. 9 lin. vel 95 millim.

*Hab.* Ashanti. *P. Bromius*, Cat. of Lep. of Brit. Mus. 147.

Wings above black, traversed by a broad bright green fascia di-



vided by the nervures, commencing in the discoidal cell of the anterior wing, and terminating on the inner margin of the posterior wings, of which it occupies fully two-thirds. This band is nearly straight on its inner side, but externally it is suddenly widened below the radial nervure of the anterior wings, and much dentated on the posterior wings. It is preceded on the costa by a large subquadrate spot of the same colour divided into four by the nervures. At the apex of the anterior wings are two elongate green spots, followed on the outer margin by a series of geminate spots and a simple round one at the anal angle of the same colour. On the posterior wings, towards the outer margin, are three rounded green spots, each followed by a small dot of the same colour (sometimes very indistinct). These are succeeded by three geminate spots; the first rounded, the second elongate, the third rounded, near the anal angle and almost touching the transverse band. Below fuscous, the anterior wings darker at the base; towards the anal angle a marginal series of five or seven small white spots placed in pairs between the nervules, between which and the margin are two or three very minute white dots. Posterior wings with three black striæ in the cell, a macular band of a pale gold colour near the outer margin, and two points of the same colour near the anal angle.

Head and thorax black, spotted with white.

Abdomen fuscous, above with the edges of the segments paler, below with five series of white spots; anal valves rounded.

This species is closely allied to *P. Nireus*, but has the band much wider and somewhat different in its direction, and the anal valves are much rounder. I may here remark that the *P. Nireus* of Cramer, t. 378. f. F. G, from the Cape of Good Hope, is quite a distinct species from the true *Nireus* of the west coast of Africa. The distinctions were clearly pointed out to me by Dr. Boisduval, who had placed the name *Charopus* to it in his cabinet about four years ago. This name having been lately used by Mr. Westwood for a species in my brother's collection, the name cannot be now used for the Cape insect. I therefore propose for it the name of *Lyæus*. It may be known from *P. Nireus* by its generally smaller size, its cilia spotted with white, the apex of the anterior and disc of the posterior wings below clouded with silvery gray, and by the band of the posterior wings not being macular. This band is wanting in the females, the whole of the disc and outer margin of the posterior wings, and the apex of the anterior being clouded with light brown with silvery reflections. Only having seen imperfect specimens, when I drew up the catalogue of the *Papilionidae* in the collection of the British Museum, I was afraid to separate the Cape specimens, not being then aware that Dr. Boisduval, from the examination of numerous perfect specimens, had become



convinced of their being a separate species. To secure the name of *Lyæus*, it may be well to add the following short character:—

*P. Lyæus*. P. alis omnibus supra nigris, fascia transversa communi, macula costali, nervis divisa, maculisque duabus apicalibus alarum anticarum octoque submarginalibus posticarum viridibus subtus fuscis, nebulis apicis anticarum, discique posticarum argenteo-albidis, fascia submarginali haud maculari, maculisque duabus ad angulum ani pallide aureis: fœmina alis omnibus subtus fuscis, argenteo-brunneo nebulosis, ciliis in utroque sexus albo maculatis. Exp. alar. 3 unc. 7 lin. vel 93 millim.

*Hab.* Africa Australiori.

*P. Aidoneus*. P. alis anticis elongatis, fuliginosis, striis nigris; posticis angustis, dentatis, nigris, immaculatis (♂). Exp. alar. 3 unc. 10 lin. vel 95 millim.

*Hab.* Montibus Himalayis.

Anterior wings elongate, fuliginous; the nervures and nervules, the inner margin, four longitudinal striæ in the discoidal cell and eight between the nervules, black. Posterior wings long, narrow, dentate, the abdominal fold broad; entirely black, with purple and greenish reflections. Below all the wings as above, but paler.

Head rose-coloured, occiput black, forehead with a few black hairs. Antennæ black.

Thorax with the sides below rose-coloured.

Abdomen black above, rose-coloured below; the anal valves very large, rose-coloured.

This interesting species belongs to the same group as *P. Nax* and *Varuna*, close to which should be placed *P. Rhetenor*, *Protenor*, &c. The anterior wings have the inner margin very short, not being nearly one-half the length of the anterior margin: the posterior resemble in form those of *P. Rhetenor*, but like those of *P. Varuna* have no disco-cellular nervure, the median and subcostal actually anastomosing.

In the collection of H. G. Harrington, Esq.

#### Fam. APATURIDÆ.

##### Genus APATURA.

*A. Namouna*. A. alis omnibus supra fuscis, splendide cæruleo nitente, fascia transversa punctisque marginalibus albis, subtus argenteo-albis fimbria, fasciaque transversa, rufis.

All the wings above fuscous black, with a transverse pure white band slightly bordered with bluish, commencing by three rounded dots at the extremity of the discoidal cell of the anterior wings, afterwards widening and attaining the abdominal margin of the



posterior wings; beyond this band are three white dots towards the apex of the anterior wings, and one or two indistinct ones towards their anal angle, and on the posterior a series of seven whitish dots: anal angle rufous. The whole disc and inner margin of the anterior wings, and the whole of the posterior, except the pure white part of the transverse band and the white dots, are in certain lights of the most splendid metallic light blue. Below silvery white with pearly reflections, a faint indication of the band above; the costa of the anterior wings except at the base, the outer margins of all the wings, a transverse band beyond the middle much widened towards the anal angle of the anterior wings, rufous. This band is marked at its widest part by a round black spot, and bordered there externally with two sublunulate black spots and a sagittate one. In addition to this are two small black spots in the discoidal cell followed by two short black perpendicular lines, below this is a black spot and two black lunules, and on the posterior wings a black dot near the anal angle, preceded in the band by a similar one.

Head fuscous; the orbits of the eyes, the palpi below, and four spots on the vertex white. Antennæ fuscous.

Thorax and abdomen fuscous above, paler below; legs silvery white.

In the collection of the British Museum. Presented by W. W. Saunders, Esq.

Fam. ADOLIADÆ.

Genus ADOLIAS, *Boisd.*

*A. Euthymius*. A. alis omnibus supra læte aurantiacis anticis puncto discoidali, margine externo, strigaeque submarginali valde angulata, fuscis; posticis strigis duabus, submarginalibus, lunulatis, nigris (♂). Exp. alar. 3 unc. 7 lin. vel 90 millim.

*Hab.* Montibus Himalayis.

All the wings bright orange-red above, the anterior with a large spot on the disco-cellular nervure, followed by two small ill-defined ones on the lower discoidal nervule; the outer margin broadly fuscous black, with faint indications of four or five reddish lunules; this black border dilated towards the apex, much dentate internally, preceded by a broad zigzag striga, commencing near the anterior and extending nearly to the inner margin; the median nervules each with a round fuscous spot before their middle. Posterior wings clothed at the base with long hairs; a discoidal spot, two lunulate bands, and the outer margin slightly fuscous.

Below paler, all the wings marked at the base with some indistinct fuscous spots, beyond which is an undulating striga crossing the middle of the discoidal cell of the anterior wings,



and reaching the inner margin of the posterior wings near the middle. Beyond this is a less curved band commencing on the costa beyond the middle and reaching nearly to the anal angle, followed by a space rather paler than the rest of the wings. Beyond the middle are four black dots, the first and fourth largest, the latter pupiled with white. Faint indications of the bands above are visible below.

Head rufous; antennæ brown, darker towards the apex; palpi red.

Thorax and abdomen brick-red.

In the collection of H. G. Harrington, Esq.

Fam. NYMPHALIDÆ.

Genus *DIADEMA*, *Boisd.*

The genus *Diadema* of Boisduval is a most interesting one, from the resemblance which many of the species bear to those of other families. In general we find a *Papilio* and either an *Euplœa*, *Danaus* or *Acraea* always of the same country, which they much resemble in form, colour and character of the markings,—in some species so close as to have caused some confusion as to their identity with the older figures. In *D. Bolina* it is only the female which offers this resemblance to species of other groups, and as yet there has not been found representatives for two or three species, but probably some day these will occur.

*D. Boisduvalii.* *D. alis subdiaphanis, anticis fuscescentibus, supra basi margineque interno pallide rufescentibus, maculis basalibus discoidalibusque decem, striolisque marginalibus septem nigris; posticis rufis basi maculis nigris undecim, margine externo nigro, rufo maculato.* Exp. alar. 3 unc. 9 lin. vel 95 millim.

*Hab.* Ashanti. *Diadema* —? Cat. of Lep. of Brit. Mus. 97.

Anterior wings semitransparent, fuscescent, the internal margin tinged with red: in the discoidal cell are four rounded black spots, three placed in a triangle towards the base, one near the extremity, a similar spot on the disco-cellular nervule, one on the first median nervule, three at the base between the median and radial nervule, one on the radial a little beyond the middle; nervules fuscous, between them a series of fuscous striæ, on the fourth of which is a rounded whitish spot. Posterior wings rufous, paler towards the inner margin, the base itself black; the discoidal cell with three rounded black spots, the two nearest the base almost confluent; around the cell are six black spots, of which the fourth is very small, the fifth on the disco-cellular nervule. These are followed by two spots near the inner margin; the outer margin has a rather broad black border, undulated internally, marked with seven more or less lunulated red spots.



Below the anterior wings are nearly as above, but are shaded with a rosy red at the base, the posterior are yellowish, the discoidal cell rose-coloured in the middle, the lunules in the marginal band paler, the fourth of the spots round the discoidal cell wanting.

Head black, with six white spots; palpi rufescent; apex black; antennæ black.

Thorax black, spotted with white, two rufescent spots on the disc.

Abdomen black, with a row of brown spots on each side above, a series of paler ones on each side, and also a median series below.

In the collection of the British Museum.

This species closely resembles in its colouring *P. Ridleyanus*, and some of the *Acraeæ* near to *A. Zidora*. For the first time I have deviated from a rule I had laid down for myself, never to name an insect after any living entomologist, or even after any entomologist whatever; but having, in accordance with the law of priority, converted into a synonym the name of *Boisduvalii*, given to an *Adolias* by Mr. G. R. Gray, I have as a compensation dedicated this beautiful insect to my excellent friend, whose kindness and liberality to me in placing at my service his books, manuscripts and collections has been beyond all praise.

*D. Anthedon*, Boisd. MSS. D. alis omnibus nigris, anticis plaga magna, subapicali, alteraque magna marginis interni, maculaque parva disci albis, cæruleo-nitente. Exp. alar. 3 unc. 7 lin. vel 90 millim.

*Hab.* Africa Occidentali. *Diadema* — ? Cat. of Lep. of Brit. Mus. 98.

Anterior wings black, a longitudinal spot in the discoidal cell, a broad transverse fascia before the apex, and a large patch occupying nearly the whole inner margin, pearly white shaded with blue. Posterior wings silvery white at the base, the outer margin broadly fuscous, the fuscous colour extending inwards between the nervules. Below the wings nearly as above, but paler towards the apex, three small white spots at the base, another in the discoidal cell, and towards the anal angle a series of small gemmate white dots, preceded by two spots of the same colour; a faint fuscous line in the white fascia near the margin. Posterior wings pearly white, clouded with fuscous towards the outer margin, the nervules and a series of striæ between them fuscous, the margin narrowly fuscous with white lunules. Cilia spotted with white.

Head and thorax black with white dots.

Abdomen fuscous.

In the collection of the British Museum, &c.



This species as closely resembles *A. Hippocoon* and *Eupl. Nivius* as *D. dubia* does *Eupl. Damocles*. I have adopted the name under which it stands in Dr. Boisduval's cabinet.

*D. Euryta*. *D. alis omnibus supra nigro-fuscis, fascia media, communi, transversa, albida, anticis punctis duobus basalibus albis, nigrisque quinque, fascia subapicali alba, posticis subtus basi rufescente, punctis utrinque basalibus, nigris decem* (♀). Exp. alar. 3 unc. 3 lin. vel 82 millim.

*Hab.* Africa Occidentali.

This insect is the true *P. Euryta* of Clerck, t. 31. f. 4, but not the *A. Euryta* of Godart. Perhaps *P. Hirce* of Drury (*Diadema Hirce*, Cat. of Lep. Brit. Mus. 97) is only the male of this species. I have however seen a specimen, apparently a male, more nearly resembling *D. Euryta* in colour in the fine collection of M. Marechal at Paris. I therefore give the characters of *D. Hirce*.

*D. Hirce*. *D. alis anticis rufo-fuscis, basi nigro punctatis supra macula subapicali alteraque marginis interni rufis, posticis rufis basi nigro punctatis, striato fimbriatoque margine externo nigro subtus basi saturatiore.*

*D. Nyctelius*. *D. alis anticis supra nigris, apice cæruleo-nitente, margine externo albido striato; posticis albidis, basi, nervulis, margineque externo fuscis.* Exp. alar. 3 unc. 3 lin. vel 82 millim.

*Hab.* Sylhet.

Anterior wings brownish black, the apex broadly shaded with pale blue, the colour varying with the direction of the light: between the nervules is a series of whitish striæ, becoming less elongate towards the anal angle; posterior wings dusky white, fuscous at the base, the outer margin narrowly fuscous, the colour extending inwards between the nervules, which also are fuscous. Below the anterior wings are fuscous, with a marginal series of whitish spots, and two submarginal ones near the anal angle. Posterior wings fuscous; the inner margin and a double series of ill-defined spots towards the outer margin, of which those of the inner series are rounded, of the outer elongate, geminate, whitish.

Head and thorax black with white dots; antennæ with an elongate club, fuscous.

Abdomen fuscous.

In the collection of the British Museum.

This species closely resembles some of the Indian *Euplææ*.

[To be continued.]



Doubleday, Edward. 1845. "Descriptions of new or imperfectly described Diurnal Lepidoptera." *The Annals and magazine of natural history; zoology, botany, and geology* 16, 176–182.

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