

well. In the young state the bird is destitute of the scarlet orbits so conspicuous in the adult."

5. DESCRIPTIONS OF SOME BUTTERFLIES FROM THE COLLECTION OF MR. WALLACE. BY W. C. HEWITSON.

(Annulosa, Pl. LIV., LV.)

NYMPHALIDÆ.

DIADEMA PANDARUS (Pl. LIV. figs. 1, 2).

♂ *P. Pandarus*, Lin. = *P. Calisto*, Cram. pl. 24.

♀ *P. Pipeleis*, Cram. pl. 60 = Hübner, Sammlung.

Although differing greatly in size and colouring from the figures of Cramer and Hübner, I have no difficulty in believing that the Butterflies here figured are varieties of the same species.

The insects previously figured are from Amboyna; these are from New Guinea, where, Mr. Wallace remarks, the Butterflies are generally smaller than those of Amboyna.

The male of the Amboyna insect is without the white band of the anterior wing; the female has it. The male now figured seems to represent the female of that insect. The upperside of the female here differs but little from the underside of Cramer's figure of the same sex. The undersides of both sexes of the Amboyna and New Guinea Butterflies are nearly identical.

I think it is not at all unlikely that the other figures in the plate, which I have preferred at present to consider as a distinct species, may be only another variety of *D. Pandarus*.

The insects of this genus are well known to be subject to great variation both in size and colour. *D. Lasinassa* has been figured by Cramer alone under thirteen different names; and I have no doubt that *P. Alimena*, pl. 221, and *P. Vitellia*, pl. 349, both of Cramer, are one and the same species.

Exp.  $3\frac{4}{10}$  inches.

*Hab.* Ké Islands, near New Guinea.

All the insects of the plate are kindly lent to me from the private collection of Mr. Wallace.

DIADEMA DEOIS, Hewitson (Pl. LIV. figs. 3, 4, 5).

Upper side, male (fig. 4), dark brown. Anterior wing with an indistinct transverse band of lighter brown beyond the middle. Posterior wing with a large central rounded white spot, with, between it (touching it) and the anal angle, a rufous spot marked with two black eye-like spots, each with a central dot of light blue, two other indistinct black spots towards the costal margin touching the central white, each with a scarcely seen dot of blue.

Under side. Anterior wing as above, except that the central band is nearly white, that the wing beyond it to the apex is lighter brown, and that there is a black spot with a dot of blue near the anal angle.

Posterior wing, from the base to the central white spot, brown; the outer margin brown, traversed by a rufous line; the rest of the wing, except the central white spot, orange, with five blue-black eye-like oval spots, three near the apex, two near the anal angle, each with a single dot of light blue, except that which is nearest to the anal angle, which has two.

Female (fig. 3) brown. Anterior wing with a large central space of white reaching from the costal margin to nearly the outer margin; the nervures black. Posterior wing light brown, with a large central space of white; four black eye-like spots beyond the middle placed in pairs, three of them with the central dot of blue.

Under side (fig. 5) white, tinted with lilac beyond the middle. Anterior wing with a broad space of brown attached to the inner margin, from the base of the costal margin to near the outer margin, where it is marked by a black spot with two dots of blue. The outer margin and apex (which is traversed by a line of white) brown. A faint line of brown parallel and near to the outer margin. Posterior wing as in the male, but with less orange, the outer margin and a line near it brown.

Exp.  $3\frac{1}{2}$  inches

*Hab.* Aru, New Guinea. In the collection of Mr. Wallace.

#### EURYTELIDÆ.

##### MELANITIS MELANE, Hewitson (Pl. LV.).

Upper side. Male (fig. 1) dark green or blue-brown, lighter at the margins. Anterior wing crossed near the apex by a curved band of light green. Posterior wing with a submarginal band of the same colour, broader towards the anal angle, where it is marked by two round black spots, each with a dot of light blue. Outer margin of both wings dentated, with bifid lunular white spots between each dentation.

Under side as above, except that it is rufous-brown, that the submarginal band of the posterior wing is orange near the anal angle, that there are three black eye-like spots (two on the orange), the spot nearest the anus marked with two dots of blue.

Female (fig. 2): upper side light rufous-brown, tinted with lilac towards the margins. Anterior wing with a large space of white beyond the middle. Posterior wing with two indistinct black spots dotted with blue between the median nervules. Under side as above, except that it is lighter, that the whole of the posterior wing (the costal and outer margins excepted) is of a dirty white, that there are three black spots dotted with blue (larger and more distinct than above) and surrounded with orange.

Variety: female (fig. 3) differs on the upper side from the last (which appears to be the most typical) as represented in the plate. On the under side it differs from that figure in having the costal margin broadly brown, the eye-like black spots surrounded with orange, the spot nearest the anal angle marked with two dots of light blue.

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Variety: female (figs. 4, 5) has (more than the other varieties) two indistinct black spots on the upper side of the anterior wing. On the under side there are three such spots (two only, dotted with light blue). On the under side of the posterior wing there is a fifth black spot.

Exp. ♂  $3\frac{3}{10}$  inches, ♀  $3\frac{6}{10}$  inches.

Hab. New Guinea.

Greatly as the four examples of the plate differ from each other, I cannot separate them, except in colour; their chief variation seems to consist in the differing distance of the eye-like spots from the outer margin. This may be noticed also in the genus *Drusilla*, in which the beautiful large eyes of the posterior wing vary much in their relative distance from the outer margin.

6. NOTES ON THE HABITS, HAUNTS, ETC. OF SOME OF THE BIRDS OF INDIA\*. BY A. LEITH ADAMS, M.B., SURGEON 22ND REGIMENT. COMMUNICATED BY MESSRS. T. J. & F. MOORE.

The Vulture tribe is very generally distributed over India, and yet the traveller may journey over a vast extent of that country and meet with scarcely a single species; for during the greater part of the day they mount to high elevations and soar in great circles, seldom remaining constant in any locality. They prefer the neighbourhood of towns or along the highways, often congregating in flocks; and it is not uncommon to see different species together. We have seen them even in the centre of the Scinde deserts; in fact no situation is without its species, for with few exceptions they abound all over Asia.

I have devoted much attention to the question whether these birds discover their food by smell or sight; and after many practical observations I am convinced it is by sight alone they are enabled to find out their prey. In illustration of this fact, I may adduce the following as an occurrence familiar to every Himalayan sportsman. After a bear or other large animal is killed, the hunter soon finds himself surrounded by rapacious birds, where none were seen before; they are observed dashing down the glens, and sailing in circles around his quarry. Some sweep within a few yards of him. Others are soaring at higher elevations, and even at such vast altitudes that the huge Bearded Vulture appears only as a small speck in the deep blue heavens; but gradually it becomes more distinct as its wide gyrations increase. It may gather itself up and close its wings, or dash in one fell swoop hundreds of feet, and the

\* Throughout the following paper I have given only the result of careful examination and experience. No species is named whose identity I have not confirmed; such as are doubtful will be left unnamed and a description given, taken shortly after death. The nomenclature followed is with little variation that of Blyth's catalogue.—A. L. A.



C. Hewitson, del. et lith. 1858

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1. 2. DIADEMA PANDARUS 3. 4. 5. DIADEMA DEOIS

