No. 13. Bahalla Island, off Sandakan Harbour, contains both black and white nests, the collection of them being farmed out by Government. The apertures are in the face of a precipitous sandstone cliff, some 600 feet high, and are entered from the summit, the climbers being lowered down from the top by ropes.

No. 14. Ulu Sembakong Caves. Natives informed me of some valuable caves on the Sembakong River, which empties itself into Sebuco Bay, East Coast; these could only be visited by going through the country with an armed force, as some of the head-hunting tribes are hostile.

No. 15. Some caves at Waleigh-waleigh, Kinoram River, a tributary of the Bongon River, a part of the northern Kinabalu watershed; these were visited some years ago by the late Mr. Frank Hatton.

No. 16. Mantanani. These caves are situated in a group of uninhabited islands of that name, about 20 miles off the north-west coast of Borneo. Both white and black nests are taken, the collection being in the hands of two Borneo tribes who collect in alternate seasons.

I have now enumerated all those caves that are known at present. Doubtless this vast territory contains others perhaps richer than these, and in the course of time, when the country is more fully explored, we shall be able to fix their position definitely on the map of British North Borneo.

6. A Note on *Ornithoptera victoriæ*, Gray.

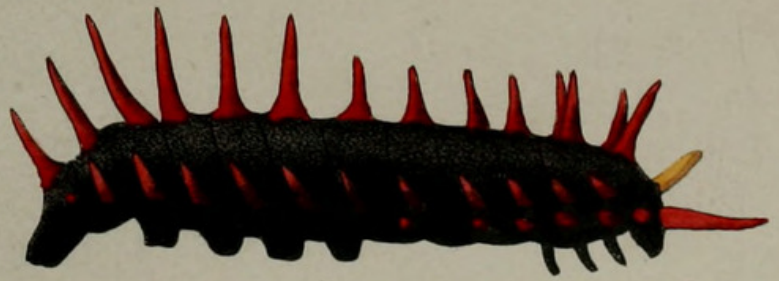
By Osbert Salvin, M.A., F.R.S.

[Received February 7, 1888.]

(Plate IV.)

At the meeting of the Society held on the 1st of March last I had the pleasure of exhibiting a male specimen of an *Ornithoptera*, from the island of Maleita, one of the Solomon group. This specimen Mr. Godman and I considered to belong to the male of the long-known *O. victoriæ*, the description of which was based upon a female example obtained by J. Macgillivray, but of which the locality was not recorded. The females, of which specimens were also exhibited, from Maleita Island agree with the type, hence our determination of the male. The male and the underside of the female have since been figured by Mr. Henley G. Smith, on the first plate of his new work 'Rhopalocera Exotica,' the male having been described in the June number of the 'Annals and Magazine of Nat. Hist.' of last year (1887).

Mr. Woodford, the enterprising naturalist who captured these specimens, has since returned to England, bringing with him a large



W. Purkiss lith.

Hanhart imp.

ORNITHOPTERA VICTORIÆ.

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NATURAL HISTORY

collection from the Solomon Islands, made almost exclusively in the island of Guadalcanar. In it are examples of both sexes of an *Ornithoptera* closely allied to the Maleita insect; but on comparison we find that the males differ in several points, so much so that we considered it desirable that the Maleita and Guadalcanar forms should bear different names. The differences are not great, it is true; but that there should be any is only in conformity with what we find in a very considerable number of other species of Butterflies, all of which go to prove that the productions of Guadalcanar and Maleita are, to a large extent, modifications of one another. These differences I have pointed out below.

The females from each island hardly differ appreciably from one another, though the submarginal spots of both wings are perhaps larger in the Maleita form; it therefore becomes an important question where the typical female was obtained. Mr. Gray gave us little help upon this point, stating that it came from one of the islands of the South Pacific, mentioning the Solomon Islands as one of the places where it might have been taken. John Macgillivray was the naturalist who sailed in H.M.SS. 'Rattlesnake' and 'Herald,' and it was by him that the type was sent to the British Museum.

The 'Rattlesnake' did not visit the Solomon Islands, but the 'Herald,' commanded by Capt. Denham, was there in 1854–55. Through the kindness of Capt. Wharton, the Hydrographer to the Admiralty, I have had an opportunity of seeing the chart prepared by Capt. Denham on which the route of the 'Herald' is laid down. From this it appears that the ship touched at Wanderer Bay on the south coast of Guadalcanar, and at Makira on the south coast of San Cristoval, and that she never approached Maleita at all. Now, so far as we know, no species of *Ornithoptera*, not even the wide-ranging *O. urvilliana*, occurs on San Cristoval; hence it becomes practically certain that Macgillivray obtained the type of *O. victoriæ* at Wanderer Bay, Guadalcanar.

It thus follows that the males now brought us from Aola, on the north side of this island, are males of the true *O. victoriæ*, and that the Maleita form is the one requiring another name.

The two forms may be described as follows:—

1. Ornithoptera reginæ, sp. n.

Ornithoptera victoriæ, Salv. & Godm. P. Z. S. 1887, p. 190 (1st March), ♂; H. G. Smith, Ann. & Mag. N. H. 1887, xix. p. 445, ♂; id. Rhop. Ex. Ornithopt. pl. i. ♂ ♀ (nec G. R. Gray).

♂. Wings deep black; base of the primaries, except the costa, with a large patch of golden green, the outer margin of which is irregular and ill defined and reaches to within a quarter of an inch of the end of the cell; towards the apex is a large subtriangular golden patch; parallel to the inner margin and near the anal angle is an elongated stigma similar to that of *O. priamus* and its allies. The secondaries, almost from the costal margin to beyond the cell, are rich golden green, the distal part of the cell being black, though the nervures closing it are green. There are also three contiguous

submarginal golden-green spots, whereof the two nearest the anal angle have a large central patch of golden yellow. Beneath, the wings are shining golden green, with the nervures, margins, a large subtriangular patch over the end of the cell of the primaries, a series of submarginal spots at the end of each secondary nervure, and two lunate spots on either side of the lower radial of the primaries black.

The antennæ and prothorax are black; the abdomen ochraceous grey, with a double row of spots on either side and a ventral median line black.

The primaries are narrow, with hardly any perceptible anal angle, the outer and inner margins meeting in a continuous regular curve. The secondaries are elongated and narrow, and the inner margin deeply incised; the elongated hairs of the inner margin are pale yellow.

♀. Like that of *O. victoriæ*, the submarginal spots on both wings, especially those of the secondaries, being apparently rather larger, rounder, and not so lunate.

Egg: nearly spherical, the surface finely rugose, like that of an orange, diam. 4 millim.

Hab. N.W. Bay, Maleita Island (*Woodford*), Solomon Group.

Mus. Godman & Salvin; H. Grose Smith.

The peculiar neuration of the male is described in our former note (P. Z. S. 1887, p. 190).

2. ORNITHOPTERA VICTORIÆ. (Plate IV. ♂.)

Ornithoptera victoræ, G. R. Gray, P. Z. S. 1856, p. 7, pl. 39 (♀).

Similar to *O. reginæ*, but the wings of the male broader, the subapical spot of the primaries smaller and divided into three parts by the nervures, and the green of the base of the wings more restricted: the secondaries are almost entirely suffused with green, except the inner and outer margins; on the distal half are a few black scales, where, in *O. reginæ*, the wings are chiefly black: beneath, the discal green portion of the primaries is broken up by a series of broad black lunules, of which there are only two in *O. reginæ*, and there is a black spot between the subcostal and its fourth branch.

Larva (half-grown) dark brown; spines carmine; urticating process pale yellow. The head bears four spines (two long and two short); the first and second segments eight each, 3–5 six each, 6–11 four each, 12 two (Mr. Woodford's notes).

Hab. Wanderer Bay (*Macgillivray*), Aola (*Woodford*), Guadalcanar Island; Florida Island (*Woodford*)?: Solomon group.

Mr. Woodford's collection contains a female example from Florida Island, which, in the absence of the male, I am unable to determine with certainty. Judging from the other Butterflies from this island, I notice that their affinity to those of Guadalcanar is great, and it is most probable that the *Ornithoptera* found there is the same as that of Guadalcanar; but an examination of the male is necessary to determine the point with certainty. The only difference between

this female and the series of the same sex from Guadalcanar is that the submarginal spots are very small.

Mr. Woodford informs me that both *Ornithoptera victoriæ* and *O. urvilliana* are very fond of frequenting the sweet-smelling white flowers of *Cerbera odollam*[1], a plant common in the Solomon Islands, and also in the Fiji islands.

EXPLANATION OF PLATE IV.

Fig. 1. *Ornithoptera victoriæ*, ♂. Imago, upper and under sides.
2. —— ——, half-grown larva; from a drawing by Mr. C. M. Woodford.
3. *Ornithoptera reginæ*, egg, natural size, and a portion of surface magnified.

February 21, 1888.

Prof. W. H. Flower, C.B., LL.D., F.R.S., President, in the Chair.

Mr. Arthur Thomson exhibited a series of Insects reared in the Insect-house in the Society's Gardens during the past year, and read the following Report on the subject:—

Report on the Insect-house for 1887.

The following is a list of the Insects exhibited in the Insect-house during 1887:—

Silk-producing Bombyces and their Allies.

Indian.

Attacus atlas.
—— *pernyi.*
—— *cynthia.*
Actias selene.
Antheræa mylitta.
Cricula trifenestrata.

American.

Samia cecropia.
Telea polyphemus.
* —— *angulifera.*
—— *promethea.*
Actias luna.
Dirphia tarquinia.
Hypochera io.

African.

Antheræa cytherea.

[1] *Cerbera odollam*, Mr. Hemsley tells me, is closely allied to the Oleander, and similar in aspect. It is common on the sea-shores of India, Ceylon, Malaya, North Australia, and throughout Polynesia, even as far eastwards as Pitcairn Island, though it does not reach the American coast. The seeds will bear long immersion in the sea without injury, and the plant is one of the early inhabitants of coral islands.

* Exhibited for the first time.

Diurnal Lepidoptera.

European.

Papilio machaon.
—— *podalirius.*
Thais polyxena.
Parnassius apollo.
Euchloë cardamines.
Vanessa antiopa.
—— *io.*
Vanessa levana.
Argynnis euphrosyne.
Limenitis sibylla.
Melanargia galathea.
Apatura iris.
Aporia cratægi.
Lycæna corydon.

African.

Papilio porthaon.
—— *policenes.*
Papilio nireus.
—— *morania.*

American.

Papilio ajax.
—— *asterias.*
Papilio troilus.
—— *turnus.*

Nocturni.

Smerinthus populi.
—— *tiliæ.*
Sphinx ligustri.
—— *pinastri.*
Deilephila euphorbiæ.
—— *galii.*
Chærocampa oldenlandiæ (Japan).
—— *elpenor.*
**Otus myron.*
**Philampelus achemon.*
**Hemaris cynoglossum.*
**Deiopeia pulchella.*
Callimorpha dominula.
Bombyx quercus.
Boarmia repandata.
**Demas coryli.*
Notadonta ziczac.
Eacles imperialis.
**Composia olympia.*

Of the silk-producing Bombyces, one species, *Telea angulifera*, was exhibited for the first time. I had, altogether, six cocoons of this interesting species, three belonging to the Society and three to the Hon. Walter Rothschild. All of them produced moths, the Society's producing two fine males and one poor female, and Mr. Rothschild's three fine females. It is curious to note that the *males* of this species so much resemble the *females* of *Telea promethea*.

Whilst speaking of the silk-producing Moths, I wish to say that on the 8th of September last I received twelve cocoons of a Silk-Moth from Mr. Gerald Dudgeon, of Darjeeling, which he had found wild near that place, but of which he did not know the name. These cocoons, which are very curious and unlike any other cocoons I have seen, I regret to say, have not produced any moths.

Mr. Dudgeon, in a letter he wrote at the time he sent the cocoons, gives a description of the larvæ. Of the cocoons (which I now exhibit) he says, the larva "about the middle of June constructs a curious hanging-cocoon, with an aperture all along the top. The lower extremity of the cocoon is pointed and encloses a well-formed *drain*. This drain consists of a small cell made of hardened silk,

* Exhibited for the first time.

Salvin, Osbert. 1888. "A Note on Ornithoptera victoriae, Gray." *Proceedings of the Zoological Society of London* 1888, 116–122. https://doi.org/10.1111/j.1469-7998.1888.tb06685.x.

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