

ART. XXVII.—On *Dodonidia helmsi*, *Fereday*.

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## Plate XV.

THIS species was added to the list of New Zealand butterflies by Mr. R. W. Fereday in 1882, in which year a description of the butterfly was written by him, drawn from a single specimen captured by Mr. Helms, of Westport, at an altitude of 1,500ft.

It has been my good fortune during the past summer to obtain eight good specimens of the insect; they were all obtained in the North Island, within a few miles of Wanganui. Seeing the great rarity of the butterfly, a few remarks on its habits may be worth recording. All the specimens were captured in small bush-gullies, the sides of which are partially cleared of the light bush that formerly covered them. In the upper parts of these gullies the stream at the bottom has formed a small gorge, and, as there is a steep fall, it rushes over small boulders and waterfalls. About half a mile from the head of the gully the fall becomes much less steep, and the bottom is broad and flat, the floor consisting of material brought down by the stream from the upper part of its course. Owing to the very small incline in this part of the gully the water flows sluggishly and spreads well over the flat bottom, forming a well-defined swamp, in which ordinary swamp-plants are found, such as *Typha angustifolia*, *Carex virgata*, *Cyperus ustulatus*, *Arundo conspicua*, and now and then a bush of *Veronica salicifolia*. It was in this part of the gully that the insects were found flapping lazily over the swamp-plants, and now and then alighting on leaves of shrubby trees that everywhere fringe the valley-bottom. It was particularly noticeable that the insects nearly always settled on the underside of the leaves of *Brahyglottis repanda* or *Fuchsia excorticata*, where the bright silver streaks on the under-surface of their secondaries so harmonized with the white surface of the underside of the leaf as to afford them abundant protection. The insects fed upon the honey in the flowers of the *Veronica* shrubs on which some of our specimens were captured. In three valleys of the nature above described these insects were found. One of these was close to Wanganui, and the other two at Kai-iwi, about eight miles in a direct line from the other locality. Though I have frequently visited these gullies

in previous summers whilst making botanical and entomological collections, I have never previously seen any specimens of this butterfly. Mr. Drew, curator, Wanganui Museum, assures me that, though he has often shot over these gullies, he has never seen any specimens of the butterfly.

We were, unfortunately, unable to find any larvæ or pupæ of the insect, but from the way the imago hovers over *Brachyglottis repanda* and *Fuchsia excorticata* it would seem probable that the larvæ feed on the foliage of one of these trees.

The occurrence of this butterfly suddenly, and in considerable numbers, seems to me a good instance of the sudden sporadic increase of butterflies about which so much speculation has been indulged in and so little is really known. In 1894 the usually rare *Danaïd archippus* became abundant in Wanganui, breeding in hundreds on plants of a species of *Gomphocarpus*; but, though the same plants have been kept in the same place in gardens, and numerous others have been sown, the insect did not appear last summer. The only cause one can imagine to have effect in this peculiar circumstance is the variation in climate and temperature from year to year. It is possible that some peculiar and unusual conditions of temperature or other meteorological variations are necessary for its full development in any summer.

Four of the specimens caught have been kept by my brother and myself in private collections; two have been placed in the Wanganui Museum, and two in the Canterbury Museum. The type-specimen described by Mr. Fereday is also in the Canterbury Museum. For a full description of the imago I refer to Mr. Fereday's article, "Transactions of the New Zealand Institute," vol. xv., p. 193.

In his description of the butterfly Mr. Fereday places a note of interrogation after the genus, subsequently remarking that, as he could not obtain the necessary books of reference, he was unable to determine the genus. The specimen was afterwards sent to England, and placed in the genus *Dodonidia*; but I have been unable to find the characters of this genus in any of the reference works at my disposal. It appears to be closely allied to the genus *Dodona*, which contains a few Indian species. In that case it would belong to the family *Erycinidæ*, and not to the *Nymphalidæ*.

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EXPLANATION OF PLATE XV.

- Fig. 1. *Dodonidia helmsi*, upper side.  
Fig. 2. *Dodonidia helmsi*, under side.  
Fig. 3. Venation of primary.  
Fig. 4. Venation of secondary.