

The Flight Period of *Dodonidia helmsi* (Lepidoptera: Satyridae)

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Literature Records

Hudson (1898) stated that the adult of *Dodonidia helmsi* (Fereday) appears in February, but later extended the flight period of the species to January and February (Hudson, 1928). Two recent popular books on New Zealand Lepidoptera give the flight period of this species as usually late January and February (Gaskin, 1966) and summer (Laidlaw, 1970). Miller (1971) reported that *D. helmsi* "is on the wing only during January and February". This species has also been recorded as flying in February at Whangarei (Patterson, 1930); in early February at Whiteman's Valley, Wellington (Whittaker, 1963) and in late January above the timber line in the Tararua Range (Gibbs and Ramsay, 1960). There exist two literature records of this species flying outside these months. Helms observed several specimens near Greymouth in October (Hudson, 1898) and a single specimen was seen at Hamilton on 30 December 1940 (Hudson, 1950).

Museum Records

Specimens in the main and Hudson collections at the National Museum, Wellington were examined. Sixteen specimens in the main collection are recorded as being captured during late January and the first two weeks of February. However, there exist 8 specimens captured outside this period. Data for these specimens is recorded below:

Ohakune: 3 October 1924, T. R. Harris; Silverstream, Wellington; 17 January 1912, 3 March 1909; Dun Mt., Nelson: 28 December 1912 (2), A. Hamilton, 12 January 1907; Banks of Paturau River, Nelson: 16 January 1916 (2).

Specimens in the Hudson collection and records in his register range from late January (earliest record: Mt. Arthur, Nelson 20 January 1920, C. Christophers) to mid-February (latest record: Long Acre, Wanganui, 16 February 1915). There are 4 specimens in the collection reared from larvae collected by H. W. Simmonds on the Dun Mt., Nelson in November 1918. These are recorded as emerging in December and January. One specimen in this collection was taken in the same locality on 15 February 1885.

Field Records

(1) I observed *D. helmsi* flying in some numbers (about 15 individuals) on 5 February 1968 in clearings in *Nothofagus* forest at Butterfly Creek, Eastbourne, near Wellington. This species was also present at the same locality on a number of occasions in late January to early February of 1969 and 1970.

(2) On 27 December 1968 3 specimens of *D. helmsi* were observed between the top of the Puffer Track (NZMS I/N 161-763478; 500 m a.s.l.) and the Smith's Creek suspension bridge (NZMS I/N 161-785496; 270 m a.s.l.) in the Tararua Range.

(3) One individual of *D. helmsi* was captured at Donnelley's Flat, Mt. Holdsworth, Tararua Range (NZMS I/N 157-971689; 370 m a.s.l.) on 29 December 1971 (J. MacArthur, pers. comm.).

(4) *Dodonidia helmsi* was abundant along the Dun Mt. Tramway, Nelson on 30 December 1970. Ten individuals were seen in approximately 30 minutes, in a small clearing just above Third House at about 630 m a.s.l., in *Nothofagus* forest. The species was most numerous (about 20-30 individuals seen in one hour) at Coads Creek (NZMS I/S 20-687204; 830 m a.s.l.). They were flying along the open track and over the stunted beech at the transition zone between the *Nothofagus* forest on sedimentary rocks and the low open vegetation on

ultrabasic rocks. No *D. helmsi* were seen flying amongst the vegetation on the mineral belt (i.e. ultrabasic rock) itself.

(5) Fifty plus individuals of *D. helmsi* were observed on each of two days (12 and 19 December 1970) in the Waitakere Ranges, near Auckland (D. W. White, pers. comm.).

DISCUSSION

Literature records of the flight period of *D. helmsi* advance the view that this species usually flies only in January and February. Despite the fact that Hudson (1928) gave the flight period as January and February his statement in the same paragraph that "It is on the wing for a very short period"; combined with the records in his register indicate that it is reasonable to suppose that he regarded the flight period as usually late January and the first two weeks of February. Likewise, Gaskin (1966) reported this period as the usual time of appearance for the species whilst Miller (1971) stated that *D. helmsi* flies only in January and February.

On the contrary the numerous flight records of *D. helmsi* outside this period, based on specimens collected 50 or more years ago and the recent field records, suggest that the literature records are misleading. The evidence provided above from both sources indicates that the flight period of *D. helmsi* extends from late December to early March in the Wellington and Nelson areas of New Zealand. On the basis of two recent field records this species also flies in the Auckland area outside the flight period given in the literature.

Further observations are needed to determine whether in any one locality *D. helmsi* flies continuously from late December to late February/early March. Flight records of this species for the Dun Mt., Nelson, cover late December, January and February but they are all isolated records from different years. It is possible that annual differences in physical factors and, perhaps, the intensity of larval parasitism, by a tachinid fly (Hudson, 1928) may limit the flight period of *D. helmsi* to a few weeks in different months each summer in the same locality. However, in my opinion, the above two factors are more likely to affect the abundance, rather than the length of the flight period, of *D. helmsi*.

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