

THE OCCURRENCE OF A HOLLYHOCK-SEED EATER, NOCTUELIA RUFOFASCIALIS, AT VERNON, BRITISH COLUMBIA (Lepidoptera:Pyralidae)

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Day after day in June, 1945, attractive red and white moths (Fig. 1, *Noctuelia rufofascialis* Stephens) were seen in my garden in Vernon. Some sat on the leaves of hollyhocks, others on the walls of adjacent buildings. They were not easily disturbed, and at rest held the wings in a typically pyralid manner, the whole insect having a triangular outline.

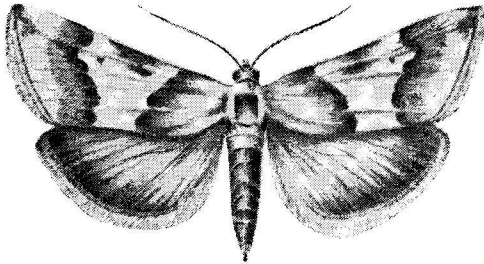


Fig. 1. *Noctuelia rufofascialis* Stephens.

No particular attention was paid to the moths, other than to admire the live specimens. By mid-July damage to the buds of hollyhocks (*Althaea rosea* Cav.) was obvious, and many of the seed heads showed an exudation of messy brown frass. On July 21 a number of infested buds and heads were examined. Each contained a fine caterpillar, white with wine-red bands. The almost continuous series from youngsters 4.5 mm. long to apparently mature larvae of 15 mm., suggested either an overlapping of broods or a long egg laying period.

A few heads were kept in a jar; from them two fully grown larvae emerged on July 26, and entered the damp soil provided. Three days later each had formed a silken cocoon, thin and somewhat irregular, but commodious. They pupated on August 2, and the moths emerged on the tenth, both females. On the same day a freshly transformed male was caught in the room, no doubt originating from the mass of flower and seed heads thrown into the waste-basket on July 21.

An adult was seen in the garden on August 12, and infested plants were noticed in other gardens in Vernon.

Either my collecting in 1945 was too thorough, or the following winter was unsuited to the species. During the period from May to August, 1946, not a single larva was found on the 20 or more hollyhock plants at my house. However, on September 8, Miss Glorianne Stromberg, a neighbour, found one mature larva in her garden, and kindly gave it to me. Mr. Ben Sugden sketched it the next day (Fig. 2).

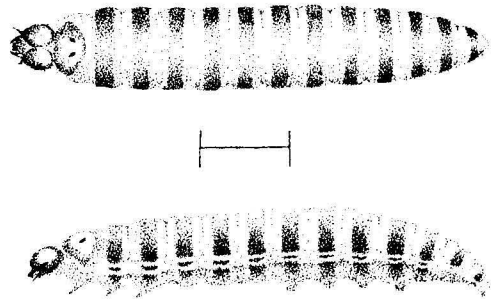


Fig. 2. Mature larva of *Noctuelia rufofascialis*.

In the hollyhock there is an almost regular progression of flowering, from the lower to the upper part of the main stem, and along each lateral branch. The first sign of the presence of caterpillars is that many of the young flower buds, those of about 10 mm. long, turn brown and are obviously dead. Small larvae can be found in most of them, feeding on the flower parts, especially near the bases. Later, by the time some buds are ready to open, they leave the dead ones, crawl under the bracts of fresh buds, and bore inwards. Here again they feed chiefly on the lower parts, indeed not always preventing the flowers from opening. Later still, many are found to have migrated to the seed heads, choosing those in which the bracts still tightly close the tops. There they tunnel in the green seeds, going completely around through the ring of them, hollowing the

head out and leaving only a tube. It is at this time, when the larvae are nearly mature, that the untidy blotches of faeces pushed from the entrance hole are most obvious.

With one exception, all the larvae seen had these habits. The individualist was in the open, during the day, feeding on the upper surface of a hollyhock leaf.

At Vernon, hollyhock was the only observed host. Heinrich (1921. Some Lepidoptera likely to be confused with the pink bollworm. *Jour. Agric. Research* 20 (11):807-836, pls. 93-109. *Noctuelia*, p. 829-830), recorded *N. rufofascialis* larvae from the pods of *Abutilon*, *Malvas-trum*, *Wissadula*, and *Sida*, all malvaceous

plants, at Brownsville, Texas. He reported that the larvae pupate in a thin cocoon, either in the empty seed pod or on the outside of the plant. He gave no figures of the insect, but it is possible he was dealing with the typical subspecies. All the specimens seen at Vernon were smaller and more brightly colored than the typical form, white and red instead of ash gray and reddish brown. The larval colors were almost exactly those of the adults.

ACKNOWLEDGMENTS—I am indebted to Dr. T. N. Freeman of Ottawa, Ont., for identifying the reared moths and citing Heinrich's paper; and to Mr. Ben Sugden of Armstrong, B.C., for the illustrations.

INTRODUCTION INTO BRITISH COLUMBIA OF TWO SPECIES OF JAPANESE CERAMBYCIDAE (Coleoptera).—*Semanotus japonicus* Lacordaire.—On April 3, 1917, the late Max H. Ruhmann collected a fine cerambycid at the outskirts of Vernon, B.C., on the flowers of a native shrub. This specimen was given to the late Ralph Hopping of Vernon, specialist on the Lepturini, who marked it as a new species but remained suspicious and did not describe it. While examining materials in the collections of the California Academy of Sciences recently, I recognized it as *S. japonicum*. Dr. E. C. Van Dyke tells me that in Japan the species breeds in a cupressine tree, *Cryptomeria*

japonica. Since there are a number of Japanese farmers in the Vernon district, it is probable that the Ruhmann specimen emerged from furniture or crating lumber in some settler's effects.

Callidium rufipenne Motschulsky. Professor G. J. Spencer has kindly allowed me to record that in March, 1927, at Vancouver, B.C., he reared a series of small reddish cerambycid from some wood of Japanese origin. One of these beetles is now in the Linsley Gressitt collection in the California Academy of Sciences, and agrees perfectly with Japanese examples of *C. rufipenne*.—Hugh B. Leech, Calif. Acad. Sci., San Francisco, Calif.

NEW LITERATURE

CATALOGUE OF THE ODNATA OF CANADA, NEWFOUNDLAND AND ALASKA.—Francis C. Whitehouse. Reprinted from the Transactions of the Royal Canadian Institute, Vol. XXVII, No. 57, October, 1948.

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In the author's words in his introduction, "this is a recapitulation of the recorded data on the odonate fauna occurring north of the international boundary; giving distribution; life zones within the territory covered; a list of the papers from which the records are taken, or are cited, in the text; flight periods, and selected references to descriptions and figures . . . for full bibliographies of species described prior to 1910, the reader is referred to the indispensable pages of Muttonski's Catalogue, to which the second numbers in this list refer." The first numbers are presumably the author's own, since he does not state their source.

One hundred and eighty-six species are recorded from Newfoundland and Labrador, every province and the Northwest Territories, to the Yukon and Alaska; British Columbia is represented as the Mainland, Vancouver Island and the Queen Charlotte Islands. The zones used are those of Merriam. "Capitals are used where the species finds optimum conditions in the zone indicated; lower case where the species extends only part way into the zone or is scarce there." This last

feature constitutes a very useful item in any catalogue and so do the flight periods which have been taken from all records; where these "are too scant to represent the flight period fully, then first and last dates are given in suggestion that the imago life centres upon these."

The list of references includes over 156 titles, the latest distributional lists of the various specified areas being printed in heavy type. At the end of the catalogue is an index containing genera alphabetically arranged with species in each genus also alphabetically arranged.

Beyond a couple of trifling typographical errors, the compiling, editing and printing is perfect to the last punctuation mark, which is a real achievement in so detailed an undertaking. The paper is heavy and serviceable as it would need to be, or it would be worn to shreds in the hands of any working odonatist.

The author pays a glowing tribute to Dr. E. M. Walker, Dean of Canadian students of Dragon flies, whose past efforts constitute at least 80 percent of the material in this Catalogue. In the opinion of the reviewer, all entomologists in Canada owe an equally heavy debt of gratitude to Mr. Whitehouse for this extremely painstaking and inclusive piece of work.

—G. J. SPENCER