

Impaction of the Gullet of a Starling with a Lepidopteran Pupal Case

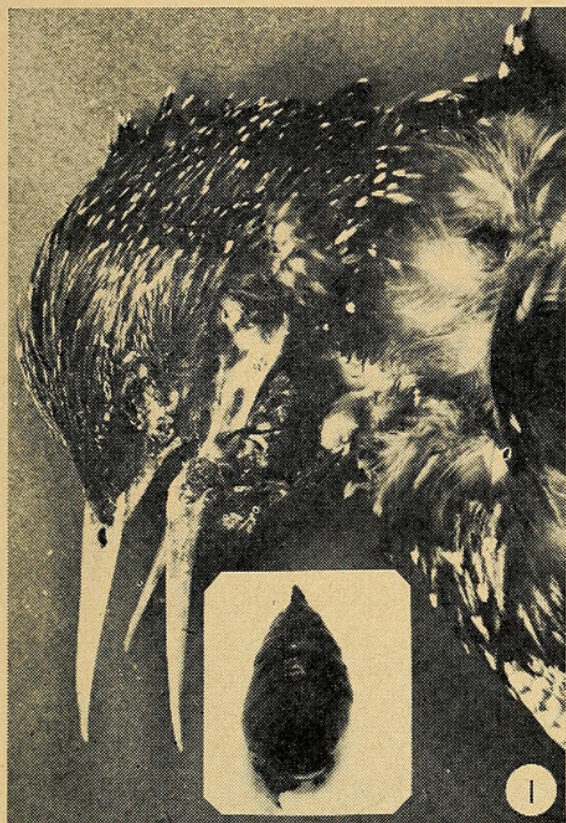


FIGURE 1. Pupal case fragment in throat of Starling.
Insert: Pupal case fragment removed.

SIXTY-FOUR Starlings *Sturnus vulgaris* L. (46 males, 17 females, one unsexed) were found dead on 21 March 1957 in a city park in Hamilton, Ontario, by Mr. V. Bruce Collins of this department. One of the Starlings, a male, was observed to have a swelling in the throat region. When the area was laid open, the posterior sixth of a lepidopteran pupal case was found blocking the upper end of the esophagus (Figure 1). Autopsy revealed that the crop was empty and normal in appearance; the intestine contained fragments of one or more tapeworms, two nematodes, and possibly the partially digested remains of a part of the lepidopteran pupa. Identification of the lepidopteran involved is not certain, but the fragment of the pupal case resembles in size and appearance the posterior end of the pupal case of the tomato hornworm *Protoparce quinquemaculata*. Some of the birds in this group, when examined at the Ontario Veterinary College, were determined to have strychnine in their tissues.

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REVIEWS

Flora of Manitoba

By H. J. SCOGGAN. Ottawa, Queen's Printer, 1957. 619 p. \$5.00. (National Museum of Canada Bulletin No. 140)

An acute need has been met by the appearance of a flora for the Province of Manitoba. This is the first flora to be published for the entire region, and more than replaces the erroneous and inadequate lists which have long served as the sole floristic record for the area. All those whose interests, directly or indirectly, are related to what is known of

the complement of vascular plants of Manitoba, and of Central Canada in general, will be gratified by the printing of this National Museum of Canada bulletin. To the small band of botanists whose professional interests include the area covered by the flora, it will serve as a reliable repository of information and a framework for extended enquiry. To the naturalist and student botanist, it will provide a serviceable guide to the native and introduced plants of the province. And for those in the applied sciences—

foresters, agriculturists, conservationists and others—it will be indispensable both in the field and in the laboratory.

That Dr. Scoggan has eliminated a vast lacuna in our floristic inventory is shown clearly by the fact that his flora includes 204 entities for which no published report had existed, although many of these plants scarcely qualify as rarities.

The flora is introduced by a short account of the early collecting and records, with references to more recent reports and collectors. This is followed by an account of the main geological features of the area, a section which would have been enhanced by the inclusion of a map. It seems rather inadequate, but probably in the tradition of many floras and manuals, to present little more than the bald facts of surface geology of a region. The next step might have been taken, and some indication made that the major physiological regions do, in fact, bear characteristic flora, and that in this area the nature of the substratum is probably important in determining relative floristic diversity. The section on vegetation under "Climate and Vegetation" is based on the old and in some ways dated system of Halliday. An unfortunate feature here is the inclusion of tediously long lists of species with no indication of relative abundance or exclusiveness. The heading is "Vegetation," but the treatment is really floristic.

There follows a short section on the geographical affinities of the flora. Again, the treatment is rather traditional, but perhaps of necessity in this first comprehensive publication. Many of the interesting and critical phytogeographical aspects of the flora of the area are masked by the breakdown adopted here, and future strictly phytogeographical treatments will certainly result in a more meaningful and illuminating account.

The main part of the flora consists of artificial keys to the 113 families, 495 genera and 1541 species, subspecies and varieties which are included in the indigenous and introduced flora of the province. For each entity commoner synonymy

is indicated, together with a few cryptic comments on ecology, notes on distribution in the province and other published reports, followed by an account of the general distribution. A useful and helpful feature of the keys is the inclusion of plants which have not actually been recorded for the province but which might be expected to be added to the flora. Of necessity, the keys are relatively technical, and they will bring about the early eclipse of all but the most ardent amateur botanist.

Taxonomically, the flora conforms to the standard North American approach, with but a few inconsistencies. Dr. Scoggan has made no attempt to align the treatment with modern taxonomy, and his species and genus concepts seem to follow those of Gray's Manual. Peculiar exceptions are his acceptance of *Parnassia multiseta* and *Galium septentrionalis*. But the complete absence of nomenclatural innovations, while it postpones again a taxonomic (and agonizing?) reappraisal, is consistent with the conservative approach. However, it is more surprising that this work, on a large and poorly known area, should include not a single description of a new entity. Certainly Dr. Scoggan has set the stage for extended and detailed investigation, both floristic and taxonomic.

The bulletin is well printed with few errors, but a more substantial cover and spine would have increased the life expectancy of the book.

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The New Way of the Wilderness

By CALVIN RUTSTRUM. New York, Macmillan, 1958. 272 p., illus. \$4.50.

Although the word *new* appears in the title, Rutstrum's book stresses the time-tested methods of the successful camper which are based on good equipment properly used by an experienced hand. At the same time the author points out how *new* developments are applied to those basic methods.



Ritchie, J C . 1958. "Flora of Manitoba, by H. J. Scoggan [Review]." *The Canadian field-naturalist* 72(3), 147–148. <https://doi.org/10.5962/p.358726>.

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