

with their higher nutritive qualities as compared with the old faded leaves of the fall and early winter not only provided the means of quicker growth but a shortening of the time to complete development. Milder temperature also has some influence for the pupal period was 11 days

as against 25 days in the fall rearing.

A condensed summary of the changes from egg to adult in the spring and summer is as follows: First instar, 5 days; second instar, 9 days; third instar, 7 days; fourth instar, 15 days; fifth instar, 13 days; pupation, 11 days; total, 60 days.

A PRELIMINARY LIST OF THE FLESH FLIES OF BRITISH COLUMBIA (Diptera: Sarcophagidae)

E. R. BUCKELL and G. J. SPENCER

Dominion Entomological Laboratory, Kamloops, B.C.

In the course of efforts to unravel the problems of natural control factors of grasshoppers, it was necessary to rear sarcophagid maggots that were killing hoppers and to make field collections of the flies. A paper on these flies is in course of preparation, but in the meantime it seems advisable to record the species that have been captured and those that have been reared from their acridiid hosts in the Chilcotin, near Lytton, and on the Lac du Bois ranges at Kamloops. The nomenclature is according to Aldrich's Monograph "Sarcophaga and Allies", Thomas Say Foundation, 1916, brought up-to-date through the kindness of Dr. A. R. Brooks, Division of Entomology, Ottawa.

*Indicates species recorded in literature as parasites of grasshoppers in North America.

†Indicates species reared in this Province from *Melanoplus mexicanus mexicanus* Saus.

Wohlfahrtia meigenii Schiner
 **Agria affinis* Fallen
Sarcophagaria ravinia Parker
 †*Sarcophaga sinuata* Meigen
Sarcophaga latisterna Parker
 **Sarcophaga atlanis* Aldrich
 †*Sarcophaga hunteri* Hough
 †*Sarcophaga opifera* Coquillett
 **Sarcophaga caridei* Brethes
 †*Sarcophaga falciformis* Aldrich
 †*Blaesoxiphothea coloradensis* (Aldrich)

Sarcophaga eleodis Aldrich
 †*Acridiophaga aculeata* (Aldrich)
 †*Acridiophaga aculeata* var. *gavia* (Aldrich)
 †*Acridiophaga aculeata* var. *taediosa* (Aldrich)
 †*Sarcophaga reversa* Aldrich
 †*Sarcophaga rapax* Walker
 †*Sarcophaga tuberosa* var. *harpax* Pandelle
 †*Sarcophaga tuberosa* var. *sarracenioides* Aldrich
 †*Sarcophaga tuberosa* var. *exuberans* Pandelle
Sarcophaga sulculata Aldrich
Sarcophaga bullata Parker
Sarcophaga nearctica Parker
Sarcophaga planifrons Aldrich
Sarcophaga lherminieri R.-D.
Sarcophaga insurgens Aldrich
 †*Sarcophaga kellyi* Aldrich

A large number of female flies which key out to the *aculeata* triplet has been reared from maggots emerging from grasshoppers; without males it is impossible to assign them to a variety: males have been reared only of *S. aculeata*. Female flies of the species *Sarcophaga planifrons* and *S. lherminieri* have been frequently captured, pursuing flying grasshoppers and apparently larvipositing on them; it is possible that they also will prove to be parasites of these insects.