The hemlock looper appears to be the more susceptible of the two species of DDT. This difference may be associated with behaviour. When the hemlock looper larvae were set out for the tests in the evening they were extremly active, dropping from the foliage and trying to escape over the tanglefoot. This activity continued after spraying, thus exposing the larvae to more DDT as they moved over the foliage and across the trays. The green-striped forest looper larvae were more docile, tending to settle down on the foliage and remain stationary. Some larvae moved under the foliage and remained there, thus not being directly exposed to the insecticide.

As no further defoliation was observed after July 25, and no top-kill occurred, the control operation was considered a success.

References

Hopping, G. R. 1934. An account of the western hemlock looper, **Ellopia somniaria** Hulst, on conifers in British Columbia. Sci. Agr. 15: 12-19.

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LIOCORIS SPP. COLLECTED ON ALFALFA IN CENTRAL AND NORTHERN BRITISH COLUMBIA

J. C. ARRAND[1]

During the summers of 1957-58 collections were made in alfalfa fields from Grand Forks through the Interior to as far north as Fort St. John, in the Peace River district. Identifications were made according to Kelton (1955):

Fort St. John, Taylor, Two Rivers—*Liocoris lineolaris, L. rufidorsus, L. borealis, L. unctuosis, L. elisus, L. nigrosignatus, L. solidaginis.*

Vanderhoof—*L. unctuosis, L. borealis, L. columbiensis.*

Smithers—*L. unctuosis.*

Vernon, Otter Lake, The Coldstream Valley—*L. lineolaris, L. rufidorsus, L. borealis, L. unctuosis, L. elisus, L. nigrosignatus.*

Grand Forks—*L. lineolaris, L. rufidorsus, L. borealis, L. unctuosis, L. nigrosignatus.*

Liocoris unctuosis, L. borealis, and *L. lineolaris* appear to be the most important species economically. One or more of these species generally made up the bulk of the "Lygus bug" population, although the relative abundance varied considerably.

It is interesting to note that in Kelton's (1955) distribution maps of *Liocoris* spp. in the prairies provinces, *L. nigrosignatus* is limited to the southern part of Alberta. Kelton does not record *L. elisus* from the northern areas of the prairies provinces, although he had examined specimens from the Yukon. *L. nigrosignatus* and *L. elisus* were commonly collected on alfalfa in the Peace River district.

Kelton, L. A., 1955. Species of **Lygus, Liocoris,** and their allies in the Prairie Provinces of Canada (Hemiptera: Miridae). Canadian Ent. 87: 531-556.

In Memoriam

WILLIAM DOWNES - 1874-1959

William Downes was born in Combe Raleigh, South Devon, England on October 13, 1874. His father, the Reverend W. Downes was an ardent botanist and an authority on the geology of the West of England. From him, and two elder brothers, Mr. Downes learned the elements of botany, geology, and entomology. All three men were keen entomologists with good collections.