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July 1990

Western Hemlock Looper in the West Nelson Forest Region - 1990

SYDNEY

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Populations of the western hemlock looper, Lambdina f. lugubrosa, increased dramatically in traditional outbreak areas near Revelstoke, as forecast in the 1989 regional FIDS report. At Bigmouth Creek, north of Revelstoke, trace defoliation of some western hemlock regeneration as well as light to moderate defoliation of ground vegetation occurred. Larvae have not yet reached the peak feeding period.

Larval collections to date on western hemlock were highest at Bigmouth Creek (115 per standard 3-tree beating) with lower numbers at Goldstream and Tangier rivers, Downie, Cusson, Martha, Woolsey, Akolkolex and Carnes creeks (average 7, range 2-12 on western hemlock). Larvae were also present on western red cedar at all locations except Bigmouth and Cusson creeks (average 24, range 4-59) and on Douglas-fir, only at Carnes Creek (3 larvae). While Bigmouth Creek was the only area with visible defoliation, other areas sampled indicate the potential for some defoliation in 1990 as larvae continue to increase feeding, possibly into August. There is the potential for an outbreak in 1991 if not in the current year.

Six outbreaks have been recorded in the Interior at intervals of approximately 8 to 9 years and generally causing defoliation for 2 to 3 years before collapsing rapidly. The most recent infestation in the Nelson Region occurred in 1982 and 1983, with 8000 ha and 32 000 ha of defoliation, respectively, in areas from Cusson Creek to north of Mica Creek, primarily in old growth hemlock-cedar forests. Extensive mortality and top-kill have resulted from previous infestations.

Hemlock sawfly, Neodiprion tsugae, populations were also recorded at some locations (Bigmouth Cr. - 80 larvae, Goldstream R. - 48, Tangier R. - 37) and may influence overall defoliation levels.

Previous looper infestations collapsed after 2 to 3 years of defoliation, often due to adverse weather conditions. Other natural controlling factors include parasites, predators and diseases.

Ground assessments will continue with aerial surveys to more fully delineate the extent and severity of hemlock looper activity in 1990. Egg surveys will be conducted this Fall to provide a forecast for 1991.

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