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PEST REPORT

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Larch casebearer in the Nelson Region with Defoliation Predictions for 1987

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The larch casebearer, Coleophora laricella, which generally caused negligible to light defoliation of western larch in 1986, is expected to cause similar low levels of damage in 1987 based on larval sampling at 19 sites in November and again the following March (see figure). Moderate defoliation may occur at Beaver Falls and the Castlegar pulp mill area where larval counts were highest in the Region.

The larch casebearer is an introduced defoliator of western larch, first collected in British Columbia in 1966 and causing various degrees of damage every year, although no mortality has been reported in B.C. To assist in combatting this pest, parasites imported from Europe have been introduced in a number of locations in a biological control program initiated in 1969. This program is expected to continue and it is these parasite release sites (currently 19 active sites) that form the basis for overwintering larval collection areas.

Larval sampling to help predict potential defoliation has been done in the fall (usually November) for a number of years. In the last three years this type of sampling has been commpleted in both November and March in part to determine preferred sampling period. In most cases March sampling has resulted in lower larval numbers, but regionally this reduction has been no more than 30% (1985 - 28%, 1986 - 23%, 1987 - 30%) and has had no effect on predicted defoliation categories. Predictions have proved reliable for 1985 and 1986 using this method. Causes for larval population reductions over the winter period have not been determined although bird predation and adverse climatic conditions are postulated as factors.

To further determine larval population potentials and subsequent defoliation, collections will be made at a number of sites for parasite rearing after the major feeding period has finished by about end May, when the casebearer is in its non-feeding pupal stage. Natural control factors such as parasites have been effective in drastically reducing populations of larch casebearer sometimes in the same year.

Fig. Location, average number overwintering larvae and predicted defoliation of western larch by larch casebearer, Nelson Forest Region, 1987.

Location	No. larvae/100 fascicles[2] Nov. 1986	Mar. 1987	% Change[1]	Predicted defoliation[2] Nov. 1986	Mar. 1987
Jaffray	1.0	1.4	>40.0%	neg.	neg.
Koocanusa L.	.1	.3	>200.0%	none	none
Ellenvale Cr.	2.7	3.9	>44.4%	neg.	neg.
Cranbrook	.2	3.3	>1550.0%	none	neg.
E. Arrow Cr.	.8	.4	<50.0%	neg.	none
Rykerts	10.1	4.3	<57.4%	neg.	neg.
Salmo	1.6	1.0	<37.5%	neg.	neg.
Thrums	10.2	14.5	>42.2%	neg.	light
Fruitvale	32.1	20.3	<36.8%	light	light
Anarchist Mt.	13.8	6.1	<55.8%	light	neg.
Shuttleworth Cr.[3]	5.5	2.9	<47.3%	neg.	neg.
Cranbrook Res.	22.5	6.7	<70.2%	light	neg.
Cranbrook-6-mi-lane	3.5	1.9	<45.7%	neg.	neg.
Castlegar Pulp	66.2	51.7	<21.9%	mod.	light
W. Castlegar	31.2	21.4	<31.4%	light	light
Wycliffe	23.9	9.8	<59.0%	light	neg.
Rossland	54.9	36.1	<34.2%	light	light
Beaver Falls	64.3	58.7	<8.7%	mod.	light
Johnstone Cr.	5.8	1.3	<77.6%	neg.	neg.
Regional Avg.	18.4	12.9	<30.0%	light	light

[1] >% = denotes increasing population; <% = denotes decreasing population.

[2]

#larvae/100 fascicles	def. cat.
0.6 - 11.5	negligible (neg)
11.6 - 60.4	light
60.5 - 136.5	moderate
136.6+	severe

[3] In Kamloops Region