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# PEST REPORT

Pacific and Yukon Region • Pacific Forestry Centre • 506 West Burnside Road • Victoria, B.C. • V8Z 1M5

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PACIFIC & YUKON REGION  
506 W. BURNSIDE RD.  
VICTORIA, B.C. V8Z 1M5 CANADA

June 1989

**SYDNEY**

## Western Budworm Larval Levels and Predicted Defoliation of Douglas-fir in the Southern Interior of British Columbia June 1989

C. Wood  
Forest Insect and Disease Survey

An average of 19% of the buds in 50 Douglas-fir stands surveyed by FIDS Rangers in late May in four forest regions were infested by early-instar western spruce budworm larvae, Choristoneura occidentalis, in 1988.

The declines were mostly in the Thompson River drainage at 19 of 20 sites in the Kamloops and Lillooet TSAs, averaging 6% of the buds infested. An average decline from 60% to 19% occurred at four lower elevation sites east of Pemberton in the So0 TSA of the Vancouver Region. However, moderate to severe defoliation could still occur at higher elevations in these areas, based on egg counts in 1988.

Increases were significant at all nine sites surveyed in the Boundary TSA in the Nelson Region, averaging 39%, up from 16% in 1988. At five of twelve sites in adjacent Okanagan Valley drainages the average infested buds was 28%, similar to 1988. Two sites near Horsefly and Mahood Lakes in the eastern part of the Cariboo Region increased to 20% and 40% from 8% and 1% of the buds infested, while at two nearby sites less than 3% were infested.

At Orchard Lake near Kamloops, where budworm-infested Douglas-fir were sprayed with Bacillus thuringiensis (B.t.) in 1988, there were no larvae. None were found in new buds at Pendleton Lake near Mahood Lake in the Cariboo Region near Douglas-fir defoliated in 1988.

### Predicted defoliation

Based on these bud surveys, defoliation is forecast to be severe at 20% of the sites, mostly in the South Okanagan west of Peachland and in the Nelson Region, between Anarchist Mountain and Rock Creek including Bridesville and Johnstone Creek Provincial Park, and McKinney and Nicholson creeks.

Moderate defoliation is forecast at 24% of the sites, mostly adjacent to areas of severe defoliation and near previously defoliated stands in the Cariboo and Vancouver regions, and at Sabiston Creek west of Kamloops.

Light defoliation is forecast at the remainder (52%) of the sites, most of which are in the Kamloops TSA.

Table. Percent Douglas-fir buds infested by early-instar western spruce budworm larvae, and predicted defoliation in the southern interior, June 1989.

Region/TSA	No. sites surveyed	Percent buds infested/site		No. of sites with Increase/decrease	Predicted defoliation <sup>1</sup> (number of sites)				
		1989	1988		None	Light	Mod.	Severe	
<u>Cariboo</u>									
Williams Lake	4	16	8	4 / -	-	2	2	-	
100 Mile House	1	0	-	no change	1	-	-	-	
<u>Kamloops</u>									
Kamloops	18	5	16	1 / 17	1	16	1	-	
Lillooet	2	8	38	0 / 2	-	2	-	-	
Okanagan	12	28	25	5 / 7	-	4	3	5	
<u>Nelson</u>									
Boundary	9	39	16	9 / 0	-	1	3	5	
<u>Vancouver</u>									
Soo	4	19	60	0 / 4	-	1	3	-	
	50	19	27	19 / 30	2	26	12	10	

<sup>1</sup>Percent buds infested

1-15  
16-30  
31+

Predicted defoliation

light  
moderate  
severe

\* \* \* \* \*