



FIDS Pest Report 93-5

June 1993

## Two-year-cycle Spruce Budworm in the Prince George and Quesnel Forest District

R.L. Ferris and R.D. Erickson  
Forest Insect and Disease Survey

The two-year-cycle spruce budworm Choristoneura biennis is damaging the buds of alpine fir and white spruce in the Bowron and Willow river drainages. Infested bud counts at five locations in the Prince George Forest District indicate increasing populations. The average percent buds infested by larvae increased to 46% in 1993 from 12% in 1991. Four surveys in the Quesnel Forest District also indicate increased defoliation. The average percent buds infested by larvae increased to 45% in 1993 from 28% in 1991.

Aerial surveys in August are not expected to show the complete extent and locations of defoliation as this is the first year of feeding. The 1994 aerial survey will show the complete defoliation.

In 1992 the last major feeding year, the Prince George Forest Region had 104 000 ha of defoliation up from 8600 ha in 1990. The Cariboo Forest Region had over 160 000 ha up from 14 000 ha. The defoliation in 1992 was mainly light and is expected to be moderate and severe in 1994.

Location	Percent buds infested	Predicted defoliation <sup>1</sup> for 1994
<u>Prince George Forest District</u>		
9 km Tumuch Rd.	42	severe
16 km Tumuch Rd.	46	severe
6 km Everett Cr.	28	moderate
13 km Everett Cr.	63	severe
<u>12 km Post Rd.</u>	<u>52</u>	<u>severe</u>
Average	46	severe
<u>Quesnel Forest District</u>		
Big Valley Cr.	60	severe
Pundata	80	severe
Bowron Lake Rd.	26	moderate
<u>Barkerville</u>	<u>16</u>	<u>moderate</u>
Average	45	severe

<sup>1</sup> - 1-15% infested buds, light defoliation; 16-30, moderate; 31+, severe.

Defoliation has been recorded periodically in this area since 1914, with 800 000 ha defoliated in 1962. Up to 10% top-kill can occur with extended severe defoliation, but mortality is usually limited to understory trees. The most important problem caused by the budworm is increment loss. In a study done in 1961, plots near Babine Lake had a 76% increment loss due to severe budworm defoliation.

Control has been limited to disease, parasitism and weather. Chemical control programs have not been used against the two-year-cycle spruce budworm in British Columbia.

For further information contact Forestry Canada in Prince George at 963-2212 or at Pacific Forestry Centre at 363-0600.

\* \* \* \* \*