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November 1990

NORTHERN TENT CATERPILLAR IN THE SKEENA VALLEY

1990 UPDATE AND FORECAST FOR 1991

Prince Rupert Forest Region

A.J. Stewart
Forest Insect and Disease Survey

Defoliation by the northern tent caterpillar, Malacosoma californicum pluviale, continued for a second year in the Skeena Valley. Valley bottom deciduous growth, mostly black cottonwood, was lightly to severely defoliated throughout the Skeena Valley from the Kasiks River area east to the Shames River area. This was a considerable increase in area from 1989 when defoliation occurred for 3 km east of the Exchamsiks River area. Light to moderate defoli ation also occurred in several areas of Terrace, particularly affecting domestic fruit trees. From an aerial survey in July, the area defoliated in the Skeena Valley totalled 3 230 ha, comprising 1 990 ha of light defoliation, 1 135 ha moderate, and 105 ha severe.

Defoliation in the Skeena Valley is again expected to increase in area and intensity in 1991, based on surveys of egg masses conducted in September (Table 1). Levels of disease and parasitism were not assessed in 1990 but are not expected to significantly impact the population at this stage of outbreak expansion.

In all areas, early season defoliation was followed by a second, smaller flush of foliage in mid to late summer. Usually there is very little tree mortality directly attributable to defoliation by tent caterpillars; however, successive years of moderate to severe defoliation will reduce radial growth and may cause branch and twig dieback.

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Table 1. Predictions of 1991 defoliation by the northern tent caterpillar based on egg mass counts in the Skeena Valley. Prince Rupert Forest Region 1990.

Location (east to west)	Current Defoliation	Tree(s) Sampled[1]	Avg. DBH (cm)	Avg. No. Egg Masses old	Avg. No. Egg Masses new	1991 prediction[2]
Ferry Island	None	bCo	13	0	1	Light
Terrace townsite	Light	apple	11	3	26	Severe
Lakelse River	None	bCo	11	0	1	Light
Shames River	Light	wB	11	5	21	Severe
		bCo	12	1	12	Severe
Esker Creek (SCI bCo nursery)	Light	bCo	11	7	58	Severe
Kasiks River	Light	bCo	11	1	18	Severe
Kwinitsa River	None	bCo	11	0	1	Light
		rA	10	0	0	None

[1]bCo=black cottonwood, wB=white birch, rA=red alder

[2]Predictions of defoliation are based on thresholds developed from work with tent caterpillars on trembling aspen; 10 or more egg masses per tree of these sizes indicates severe defoliation the following season unless significant parasitism or disease intervenes.

Homeowners can reduce populations by clipping and destroying egg masses during the winter months. The grey masses, covered with a silvery-brown protection layer, are found on small twigs and branches. These are quite visible on small trees before leaf flush. Also, early spring larval colonies can be clipped and burned before the young larvae disperse to feed.

Once the larvae have dispersed and feeding is underway, insecticides may be considered where populations and resulting damage is of particular concern. The following insecticides are registered for use against the northern tent caterpillar in British Columbia. When using insecticides, remember to always follow the directions and application rates listed on the label.

Biological insecticides: Dipel 132 and Thuricide 48lb contain a bacteria toxic to insects only.

Chemical insecticides: Sevin (various formulations), Ortho (Orthene), Ambush 500 EC.

The Forest Insect and Disease Survey will continue to monitor tent caterpillar populations and assess their impact in 1991.

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