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NORTHERN TENT CATERPILLAR IN THE KALUM FOREST DISTRICT 1992 AND FORECAST FOR 1993

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Northern tent caterpillar, Malacosoma californicum pluviale, defoliated deciduous trees and shrubs over 1160 ha in the Skeena River Valley, a sharp reduction from 4260 ha of defoliation recorded in 1991. Defoliation was noted in the Terrace area and west along the Skeena River to as far as the Exstew River. Feeding damage was mainly trace to light on trembling aspen, birch, willow, black cottonwood and some brush species. Occasional individual fruit trees were moderately to severely defoliated in Terrace. No defoliation was noted in the Wedeene River Valley during aerial surveys, where 1380 ha were mapped in 1991.

An early spring saw colonies already hatched by the second week in April. By mid-May tents were common throughout Terrace and were noted as far as 30 km east of Terrace and south of Terrace into Kitimat. As many as a dozen tents per tree were found, with fruit trees and mountain ash notably among the preferred hosts. Damage was generally light at this time, with the occasional small fruit trees already almost completely stripped.

In the second half of May, after a month of above average temperatures, a severe frost over much of the region caused high levels of mortality in the northern tent caterpillar populations. Very little feeding occurred after this time and many areas recovered a full complement of foliage resulting in the greatly reduced area and intensity of defoliation noted during aerial surveys.

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Based on fall egg mass surveys, defoliation in the Skeena River Valley in general is expected to be minimal in 1993, with only localized areas of visible damage (table). In the Terrace area, feeding damage may be more common; defoliation is expected to be light with only some localized more severe defoliation, specially in fruit trees.

Table Predicted 1993 defoliation by the northern tent caterpillar based on egg mass counts in the Kalum District. Prince Rupert Forest Region, 1992.

Location	Host[1]	Avg. DBH (cm)	Avg. No. Egg Masses old	Avg. No. Egg Masses new	1993 Pred. Def.[2]
Exstew R.	bCO	12	<1	0	NIL
west Terrace	tA/wB	10	6	2	LT
south Terrace (Old Remo)	tA/wB	11	<1	0	NIL
east Terrace	tA	9	4	1	LT

[1]bCO-black cottonwood, tA-trembling aspen, wB-white birch

[2]Predictions are based on the number of egg masses by tree diameter that will cause complete defoliation (from thresholds developed in work on forest tent caterpillars on tA):

DBH	# egg masses
2.5	2
5.0	5
7.5	9
10.0	11
12.5	14
15.0	19

Little control should be required. In individual high value trees in chronic attack areas, homeowner could reduce populations by destroying the silvery gray-brown egg masses during the winter months. These are found on twigs, small branches and young stems. After egg hatch, in early spring, colonies become readily evident and can still be effectively controlled by removal at early larval stages.

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Larvae begin to disperse in the final stages and control becomes difficult and expensive. This is the most destructive stage and incursions from outside controlled areas become common. Insecticides are generally not recommended and should not be required in the coming year; however, for special situations the following insecticides are available. Their application should scrupulously follow label directions.

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 1993.

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