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PEST REPORT

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

Pest Report 91-23

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DOUGLAS FIR TUSsock MOTH
IN THE
KAMLOOPS FOREST REGION, 1991

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FORESTRY CANADA -
PACIFIC & YUKON REGION
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Douglas-fir tussock moth, *Orgyia pseudotsugata* populations increased for the fourth consecutive year in Douglas-fir stands between Kamloops and Savona, where eight small patches of severe defoliation totaled 135 ha. Elsewhere, defoliation was limited to single Douglas-fir and ornamental spruce in urban areas, including Kamloops, Vernon, Kelowna and Penticton. Virus infection and parasitism in some late instar larvae and cocoons between Keromeos and Hedley, may have contributed to a decline of populations in that area. Larvae were also active and defoliated scattered Douglas-fir in a few localized areas in the Fraser Valley of the Vancouver Region and near Christina Lake in the Nelson Region.

Male moth captures in pheromone-baited sticky traps increased for the sixth consecutive year in Douglas-fir stands selected for the greatest historical frequency of outbreaks. Counts at 18 monitoring sites in Kamloops Region, averaged 38 moths per trap (6 traps/location), up from 25 in 1990. Single traps located at 1-2 kilometer intervals in the Thompson and Okanagan valleys, to determine population distribution and to help locate epidemic centers, averaged 59 moths per trap, up from 47 last year. Both types of trapping methods reflect increased egg laying potential and therefore additional defoliation in 1992. Additionally, an average of 38 moths per trap were caught by the British Columbia Forest Service at 163 separate locations in the Kamloops Region.

Egg mass surveys at 37 sites in the Thompson, Okanagan and Similkameen valleys where most traps contained 40 or more moths, or where there was previous defoliation, indicated severe defoliation at 8 sites, moderate at 6, and trace or none at 17 (Table). Egg mass density was determined using a sequential sampling method, which required the inspection of a minimum of 20 trees per site.

Table. Summary of sequential Douglas-fir tussock moth egg mass surveys, and pheromone trapping, 1991 and predicted defoliation for 1992, Kamloops Forest Region.

Location	Avg. No. Moths/Trap	Avg. No. Egg Masses/Tree	1991 Defoliation	Predicted 1992 ¹ Defoliation
MONITORING TRAPS				
<u>Battle Creek</u> Km 3	59	0.0	Nil	Nil
<u>Monte Creek</u> Robbins Range	62	0.1	Nil	Trace
<u>North Okanagan</u> Vernon	46	0.2	Nil	Trace
Winfield	49	0.2	Nil	Trace
<u>South Okanagan</u> Anarchist Mtn.	37	0.2	Nil	Trace
Blue Lake	50	0.8	Nil	Moderate
Kaleden	59	0.2	Nil	Trace
<u>Similkameen Valley</u> Stemwinder Park	33	0.0	Nil	Nil
DISTRIBUTION TRAPS				
<u>Deadman River</u> Km 16	61	0.0	Nil	Nil
Criss Creek	-	0.0	Nil	Nil
Sabiston Creek	98	21.0	Light	Severe
<u>Indian Gardens</u> E. of Guichon Rd.	79	1.8	Nil	Moderate
Guichon Rd. Junc.	42	0.4	Trace	Light
W. of Guichon Rd.	52	0.9	Nil	Moderate
Pipeline - W1	-	-	Severe	Severe
Pipeline - E1	-	-	Severe	Severe
Pipeline - E2, E3	-	-	Severe	Severe
NE Corner Lot 20	-	-	Trace	Moderate
N. of Ranch	-	-	Light	Severe

Location	Avg. No. Moths/Trap	Avg. No. Egg Masses/Tree	1991 Defoliation	Predicted 1992 ¹ Defoliation
<u>Six Mile Ranch</u>				
Rifle Range	102	0.3	Nil	Light
Six Mile Ranch Rd.	101	0.4	Trace	Light
1.2 km E. of prev.	92	0.4	Trace	Light
1.3 km E. of prev.	114	0.1	Nil	Trace
Brussels Creek	-	6.1	Severe	Severe
Munro Creek	-	-	Severe	Severe
<u>Dominic Lake Rd.</u>				
Km 2	56	0.2	Nil	Trace
<u>Beaton Rd.</u>				
Beaton Lake	-	2.1	Light- Moderate	Severe
<u>Kamloops</u>				
Rose Hill	-	0.1	Nil	Trace
<u>Duck Range Rd.</u>				
Monte Creek	-	0.1	Nil	Trace
<u>Pritchard</u>				
5.1 km W. Pritchard	58	0.1	Nil	Trace
<u>Similkameen</u>				
Shoemaker Creek	11	1.4	Nil	Moderate
Shoemaker Creek	6	0.6	Nil	Light
Winters Creek	106	0.2	Nil	Trace
Larkin	59	0.5	Trace	Light
Larkin	5	0.7	Trace	Moderate
Plot 20	95	0.0	Nil	Nil
Bradshaw Creek	64	0.2	Nil	Trace

¹ 1-50 Average no. egg masses per 10 m² foliage - light defoliation
 51-150 Average no. egg masses per 10 m² foliage - moderate defoliation
 151+ Average no. egg masses per 10 m² foliage - severe defoliation

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Douglas-fir Tussock Moth

Defoliation forecast for 1992,
based on egg surveys.

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|---------|------------|
| ⊗ NONE | ◐ MODERATE |
| ○ LIGHT | ● SEVERE |

