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SUMMARY OF FOREST PEST CONDITIONS IN THE VANCOUVER FOREST REGION, 1995

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This summary is an overview of some of the more important forest pests active in the region up to early September. Aerial surveys were completed by late July and copies of the completed maps were sent to the various districts by early August. A more detailed report on these and other pests, their impact, and some forecasts will be available in the annual report later this year.

Western spruce budworm populations in the Fraser TSA collapsed following six consecutive years of defoliation. The infestation was mainly in the Nahatlatch River area north of Boston Bar in the Fraser Canyon. Mainly light with some moderate defoliation was recorded during the outbreak, no tree mortality was observed. Some top kill has occurred in a few areas where consecutive years of moderate defoliation occurred. Tree mortality caused by the **Douglas-fir beetle** increased region-wide. In the Fraser TSA about 220 ha were recorded, up from 100 in 1994. The main areas of increase were in the Nahatlatch River, the Coquihalla Highway, and Skagit River areas. In the Soo TSA, about 150 ha were recorded, up from 100 in 1994. Increased mortality occurred mainly in the Glacier lake and Lillooet River areas. New areas of mortality, totalling about 350 ha were recorded in the Sunshine TSA, mainly near Powell, Goat, Windsor, Dodd, Horseshoe, and Lois lakes. Goat Island in Powell Lake also had substantial areas of mortality. This outbreak, only a few years old, was flown for the first time this year. About 50 ha of recent mortality were recorded in the Mid-Coast TSA, down from 140 recorded last year. **Phantom hemlock looper**

populations moderately to severely defoliated semi-mature Douglas-fir over 10 square blocks in southeastern Burnaby, for at least the third consecutive year. Some tree mortality and top-kill is expected to occur as a result of this outbreak. **Root diseases** continue to be widespread in all age classes of Douglas-fir region-wide.

The area of mature lodgepole pine killed by **mountain pine beetle** increased by about 30% to almost 600 ha. Most mortality continues to occur in the Soo TSA, near Pemberton. Increases were recorded throughout this TSA, with the Birkenhead River and Lake area, as well as the mouth of Joffre Creek being the two main areas of beetle killed pine. In the Fraser TSA, mortality continued in Manning Park. **Pine needle cast** infections were down, no area was recorded during aerial surveys, although infections still persist in the eastern sections of Manning Park. Surveys in Scots pine Christmas trees for the pine shoot beetle, recently introduced to eastern North America, were negative.

Low levels of **western hemlock looper** larvae were found in some lower mainland areas, part of an ongoing pheromone trap calibration study. **Western blackheaded budworm** populations on the north end of Vancouver Island remained low for the fourth the consecutive year.

Mortality of high elevation fir by the **balsam bark beetle** increased to about 1700 ha from 1350 in 1994. Increases were mainly recorded in the Mid-Coast and Fraser TSA's. **Balsam woolly adelgid** continues to be found beyond the (1992) regulation zone, in areas beyond any previous known distribution. Gouting and top-deformity continued in young stands in areas within the regulation zone. The **pacific silver fir beetle** is becoming increasingly common in predisposed and stressed amabilis fir in southwestern British Columbia.

Although **spruce beetle** populations remained low in the region for the tenth consecutive year, some small areas of recent mortality, totalling about 80 ha, were recorded, mainly in the Fraser TSA, adjacent to the Merritt District where spruce beetle populations have been increasing. Sitka spruce in Pacific Rim National Park and adjacent areas were moderately defoliated by a combination of a **spruce budmoth**, a **conifer cutworm** and the **green spruce aphid**. This is the first time this conifer cutworm has caused noticeable damage on Sitka spruce in coastal British Columbia. Elsewhere, damage by the spruce aphid was generally low.

Assessments at the 12 **Acid Rain National Early Warning System (ARNEWS)** plots, including a newly established plot in the Clayoquot Model Forest found no evidence of acid rain damage. Tree mortality of about 1% was attributed to natural causes. As well, at 10 of these plots, five-year assessments including height, diameter, foliar and soil chemical analysis, and shoot growth rates and foliar retention and health were

carried out. About 20 planted and natural **young stands** were surveyed for pest problems which included low levels of root rot, foliar diseases and mammal and climatic damage.

For the first time, **dunnage surveys** were carried out in the Vancouver Region. Dunnage is the crating and pallets that accompany shipments of goods into Canada from overseas. The survey consisted of examining dunnage at port and industrial sites as well as the use of pheromone traps at the port locations or in nearby natural stands. At a trap site in Richmond, near Burns Bog, an **Asian ambrosia beetle** was recovered, the first time this insect has been found in western North America. Evidence of insect activity found during ground surveys, including **old woodborer** and **ambrosia beetle** damage, was discovered in dunnage originating from China, Israel, and Australia. As well, live adults of a **powder post beetle** from India were found in crating at a Burnaby warehouse, as well as in pheromone traps in the area.

Winter moth populations remained at generally low levels, causing patchy light defoliation in previously infested areas of south Vancouver and Victoria. The **western oak looper** killed Garry Oak and Douglas-fir trees over 50 ha on the north side of Burgoyne bay on southern Saltspring Island. The oak looper infestation has been active at varying levels on the Island for at least 15 years in Mount Maxwell provincial park, the adjacent Ecological Reserve and nearby private lands. Defoliation of Garry Oak trees this year is mostly severe with complete stripping of trees common. The **oak leaf phylloxera** continued to cause discolouration and premature leaf loss on about 10% of the Garry oak trees in greater Victoria, similar to the last two years. Discolouration of scattered Garry oak continued north to Nanoose Bay and on the gulf Islands. **Jumping gall wasp** populations continued to decline in greater Victoria but remained static in the deep Cove area of the Saanich Peninsula and Maple Bay. **Northern tent caterpillar** populations were widespread on southeastern Vancouver Island, and the Gulf Islands for the third consecutive year and in the Powell River area for the second consecutive year. Moderate to severe defoliation occurred on deciduous trees and shrubs, including fruit trees, throughout these areas. **Cottonwood sawfly** populations collapsed this year following a slight decline in 1994. The sawfly had lightly to severely defoliated mainly native black cottonwood, as well as some hybrid poplars, on an island in the Fraser River near Chilliwack, for four consecutive years. For the second consecutive year, **poplar leaf blight** infections were mapped during aerial surveys. About 35 ha of moderate to severe discolouration, up from about 20 ha in 1994, were mapped on two islands in the Fraser River near Chilliwack. Discolouration by **bigleaf maple scorch** was again common in areas of east coastal Vancouver Island, and parts of the sunshine coast while remaining at low levels on other mainland areas. **Powdery mildew** on bigleaf was less common and severe than in 1994. For the second consecutive year, **dogwood leaf blight** infections were down, foliar discolouration and premature leaf

drop were not as common as in previous years. **Birch leafminer** populations, while common, were not as widespread or severe in the Fraser Canyon and upper Fraser Valley areas this year. **Fall webworm** was again common throughout the Fraser Valley and the east coast of Vancouver Island. **Apple Ermine moth** populations declined in the lower mainland and sunshine coast areas.
