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SUMMARY OF FOREST PEST CONDITIONS IN THE VANCOUVER FOREST REGION

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This summary is an overview of some of the more important forest pests active in the region up to the end of August. A more detailed report on these and other pests, their impact, and some forecasts will be in the annual regional report which will be available later this year.

The early part of 1993 was marked by cold temperatures and strong winds in several areas, while the late spring and summer of 1993 was wetter and cooler than normal. The unseasonable weather caused *winter damage* to conifers in the Fraser Valley, as well as delaying aerial surveys. Heavy rains in July washed the partially eaten and brown foliage off trees defoliated by the western budworm, making detection from the air difficult.

Defoliation by the *western spruce budworm* decreased almost 86% to 2 970 ha in 40 infestations, mostly in the Soo TSA. Defoliation in the upper Lillooet river area declined to about 2 885 ha from the 10 000 ha recorded in 1992. Almost no defoliation was seen in the Birkenhead River-Gates lake area, except for one small patch of about 85 ha at Phelix Creek near Birkenhead Lake. Defoliation in the Nahatlatch river area in the Fraser TSA doubled to 745 ha of very light defoliation. Mortality caused by the *Douglas-fir beetle* increased 60% to 285 ha in 187 infestations. Most was in the Fraser TSA, 240 ha, between hope and the Nahatlatch River. In the Soo TSA, mortality increased a 50% to 45 ha. *Douglas-fir tussock moth* populations in the Chilliwack area collapsed as predicted, no defoliation was observed or reported. Although some trees previously defoliated at a local golf course still had thin crowns, most showed signs of recovery by mid-summer.

The area of mature lodgepole pine killed by *mountain pine beetle* declined by about 33% to 515 ha. Most mortality occurred in the Soo TSA, where the area declined by 37% to 465 ha, mostly in the Birkenhead Lake, Birkenhead River, and Tenas Creek area. Infestations in the Joffre Creek area were reduced in size, and several infestations in the Birkenhead River Valley near Owl Creek, and above and opposite Gates Lake declined. Spring sampling in the Birkenhead flats area opposite Tenas Creek found a high 'R' value indicating increasing populations, infestations in this area continue to destroy much of the pine component. Salvage logging is planned in some of the more severely infested areas. In the Fraser TSA the area infested increased to 50 ha from 40 ha in 1992, mostly in the eastern half of Manning Park. *Pinewood Nematode* surveys continued using pine and hemlock trap logs at a woodborer infested site in the upper Lillooet River Valley. Results of this study will be available later this year.

Western blackheaded budworm populations on northern Vancouver Island remained at endemic for the third consecutive year with no defoliation observed or reported.

Mortality of high elevation fir by the *balsam bark beetle* declined by 405 ha to 375 ha mostly in the Fraser TSA. *Balsam woolly adelgid* populations caused heavy gouting and reduced growth in a young stand in the Cameron River area on Vancouver Island. Populations of the adelgid were also confirmed on *Abies* in the Spuzzum area, outside the new quarantine zone. *Fir root bark beetle* were common on predisposed mature amabilis fir on northern and central Vancouver Island.

Spruce beetle populations remained low for the eighth consecutive year. One current attack, and a few standing dead trees were observed in the upper Ainslie Creek area, near Boston Bar. *Spruce weevil* continued to attack Sitka spruce leaders throughout most of the host range. *Spruce aphid* populations declined following colder than normal late winter months. Light to moderate defoliation of shoreline spruce occurred in scattered coastal areas, but overall damage was less than that recorded in 1992.

Assessments at 10 existing and 1 new *Acid Rain National Early Warning System (ARNEWS)* plots found no evidence of acid rain damage. Tree mortality of about 1% was attributed to natural causes. About 30 planted and natural *young stands* were surveyed for pest problems which included root rots, defoliators, stem rusts, foliar diseases, mammal and climatic damage. Eleven seed orchards were examined at least once, detecting low to moderate levels of pests including *balsam woolly adelgid* and the *hemlock woolly adelgid*.

Climatic damage attributed to cold weather and high winds in late winter/early spring caused foliar discoloration followed by branch die-back on several coniferous species throughout the upper Fraser Valley, as well as in young stands on Vancouver Island.

Winter moth populations continued to defoliate deciduous boulevard trees in south Vancouver, and in scattered locations in Surrey and New Westminster. Defoliation in the Delta, Ladner and Tsawwassen areas declined. Patchy light to moderate defoliation occurred throughout previously infested stands in the Greater Victoria area. *Oak leaf phylloxera* damage to Garry oak in the Greater Victoria area remained similar to levels recorded over the past two years. The phylloxera was also collected, for the first time, from Garry oak at Sumas Mountain near Chilliwack. *Jumping gall wasp* populations spread into north Saanich, while the damage decreased slightly throughout previously infested areas in Greater Victoria. *Northern tent caterpillar* populations increased and lightly to severely defoliated branches and whole trees throughout southeastern Vancouver Island, some of the Gulf Islands as well as in Strathcona Provincial Park. Defoliation of native black cottonwood and some hybrid poplars by *cottonwood sawfly* increased about 10% to 730 ha on Islands in the Fraser river near Chilliwack. Some of these areas were defoliated for the third consecutive year. *Bigleaf maple scorch* declined in intensity and incidence on the mainland while remaining at levels similar to 1992 on Vancouver Island. *Dogwood leaf blight* continued to severely affect trees throughout the host range, branch and lower crown die-back was common in areas that have experienced repeated, severe infections. *Birch leafminer* populations increased, most birch on mainland areas up to Yale were moderately to severely infested. *Fall webworm* populations declined somewhat, but tents were still in evidence throughout most of southeastern Vancouver Island to Campbell River and throughout the Fraser Valley to the Hope area.

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