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PEST REPORT

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FIDS PEST REPORT 95-19

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

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The following report summarizes the forest pest situation by host in the Cariboo Forest Region, following the summer survey of the Forest Insect and Disease Survey section of the Canadian Forest Service. Only the status of the major pests is outlined in this overview survey, the impact and forecasts will be reported in October.

The area of mature Douglas-fir recently killed by **Douglas-fir beetle** decreased again this year in Cariboo Forest Region to 2930 ha in 604 patches of 2-200 trees, down from 5230 ha in 1730 patches last year. Nearly 90% of the regional total infested area, over 2440 ha, were mapped in the Chilcotin Military Block near Riske Creek, similar to the size of the infestation in 1993. Infestations of Douglas-fir beetle in Quesnel TSA decreased to 127 ha in 89 patches, down from 150 patches over 220 ha last year. Infested trees were mapped mainly along the Fraser River north and south of Quesnel. The outbreak decrease continued in the Williams Lake TSA where 330 ha over 335 patches were located, down from 1170 patches totalling 780 ha in 1994. There was also a decrease in the Chilcotin Military Block near Riske Creek to 2440 ha in 140 separate patches from 4110 ha in 190 patches last year. A decrease in attacks noted last year in 100 Mile House TSA, continued with 36 ha in 39 patches mapped down from 120 ha in 220 patches in 1994. The most severe damage was recorded near Kelly Lake and Loon lakes and along Bonaparte River. Control efforts in the TSA included helicopter logging in areas not accessible by normal means. Decreased beetle attack has mainly resulted from host depletion and sanitation logging. There was no defoliation of Douglas-fir by **western spruce budworm** mapped during aerial surveys this year. However, during ground assessments, localized populations were

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recorded that resulted in trace defoliation at several locations, including Big Bar Lake road, Hart Ridge and Kelly Lake.

The area of lodgepole pine recently killed by **mountain pine beetle** more than doubled to 3930 ha from 1660 ha last year, however, the number of infestations decreased slightly to 960 from 1170. In the Quesnel TSA the number of infestations decreased to 316 from 370 but the area doubled to 1026 ha from 570 ha last year, mainly south and west of the city of Quesnel. The most severe infestations were mapped in the Narcosli-Twan creeks area, north of Quesnel in TFL 5, near Charleson Creek and in the Nazko area. Beetle infestations in Williams Lake TSA more than tripled in area to 2900 ha. The number of patches increased to 650 from 550 last year, approximately 60% of the regional total. Major increases occurred in the Big Lake area and north of the Military Training Area near Makin Creek. Infestations increased nearly tenfold in the Chilcotin Military Block to 960 ha from 100 ha last year. Recently killed trees were mapped in 1-120 ha patches, mainly in the northern part of the block with some spilling across the boundary. Infestations continued in 100 Mile House TSA, where severe tree mortality was mapped over 40 ha in 40 patches, down slightly from 125 ha in 215 patches last year. The reduction is due in part to prompt and effective management of small infestations. The area of lodgepole pine infection by the **pine needle cast** fungus increased again this year to 556 000 ha of light and moderate defoliation from 495 300 ha light to severe last year, mainly in the 100 Mile House and Williams Lake TSA's. In the sixth consecutive year of infection in the region, damage, mainly growth loss, is restricted to regeneration 1-5 m high. Attacks on young lodgepole pine terminals by the **lodgepole pine terminal weevil** increased this year, averaging 12% of stems, up from <1% in 1994. The most severe areas were in the pine biogeoclimatic zones in the western parts of the region, where consecutive mild winters have promoted build-up of weevil populations.

There was no defoliation of spruce and alpine fir recorded this year in the immature year of **two-year-cycle budworm** in the region, following 110 520 ha of light and moderate defoliation from Barkerville to Mahood Lake last year. There were 45 small, 0.5-3 ha patches, of recent **spruce beetle** killed mature Engelmann spruce mapped over 65 ha in the eastern part of Cariboo Region from Bowron Park to Horsefly River, up slightly from 40 infestations over 60 ha last year.

Western balsam bark beetle infestations continued in high elevation alpine fir stands throughout the region over 1700 ha in 38 separate patches, down slightly from 2500 ha in 65 patches in 1994. Balsam bark beetle infestations are chronic in many parts of the region.

The **forest tent caterpillar** defoliated mainly trembling aspen over 47 360 ha in 172 separate patches from Quesnel to Horsefly, down from 52 000 ha in 470 infestations

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last year. The area affected was similar to that damaged in 1993, however the location of the infestations has shifted farther north to the Quesnel and Quesnel River areas. As predicted, infestations expanded fivefold in Quesnel TSA, resulting in 41 580 ha of light to severe defoliation in and near the city of Quesnel, southeast along the Quesnel River from the city to Beaver Creek and northwest of Quesnel to the Blackwater River. The outbreak decreased further to 5780 ha of light to severe defoliation in the Horsefly area following five years of consecutive increases, down from 10 190 ha last year. Most of the defoliation occurred from Big Lake to Rose Lake east of Williams Lake. **Satin moth** populations declined, causing 40 ha of severe defoliation of mainly aspen near Bluff Lake southwest of Tatla Lake, down from 160 ha of severe defoliation last year. Satin moth is a pest of deciduous trees introduced to Canada from Europe 75 years ago. Mortality of willow caused by the **poplar-and-willow borer** continued predominately in the wetter biogeoclimatic zones of the eastern portion of the region. Willow shrubs were defoliated by the **pacific willow leaf beetle** in 0.25-10 ha patches from Quesnel south to Canim Lake including Williams Lake and Horsefly. Damage was most severe in aspen wetlands where willows were completely defoliated. The defoliation was more severe and widespread than last year. There was no mortality or damage associated with acid rain in the three **bio-monitoring/Acid Rain National Early Warning System**, **ARNEWS**, plots located in the Cariboo Forest Region near the Cottonwood River east of Quesnel, west of Williams Lake near Felker Lake and east of Chasm along the Bonaparte River. Further study will be carried out in September in the form of foliage sampling for chemical analysis and other tree re-measurement.

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