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PEST REPORT

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FIDS PEST REPORT 95-21

September 1995

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

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Forest Insect and Disease Survey

This is a summary of the main forest pests in the Nelson Forest Region to the end of August 1995. Chronic agents such as root diseases and white pine blister rust are not included. Field surveys will continue in September and a more complete annual regional report will be available later in the year. Due to a redefinition of Canadian Forest Service mandates, FIDS surveys were greatly reduced in 1995.

Infestations of the **mountain pine beetle** have been mapped over 6752 ha in the region to date, up from 2750 ha in 1994. In the East Kootenay (current total 4197 ha), infestations more than doubled from north of Invermere to north of Golden, most notably in Kootenay National Park with over 2000 ha. The number of new small infestations increased in the southern part of the Rocky Mountain Trench, mostly from the north end of Moyie Lake into the Peavine and Hogg creeks and Fassiferne area. In the West Kootenay (current total 2555 ha), most of the increase occurred in the Arrow District from the Blueberry Creek - Nancy Greene Lake area northwest to the Eureka Mountain area. The 351 ha of beetle activity in the Boundary District was similar to 1994 and mostly still in the southwest. Populations declined for the second year in the Kootenay Lake District with 57 ha mapped in southeastern areas. Semi-mature trees, mainly lodgepole pine, killed by the 1994 **drought** were mapped over 2962 ha from the United States border to just south of Kootenay National Park. Most mortality was on the west side of the Rocky Mountain Trench south of Cranbrook, with patches in the Moyie Lake and Matthew Creek to St. Mary Lake areas. Other areas included Findlay Creek, scattered patches along Columbia and Windermere lakes, and along the Kootenay River near Pedley Creek.

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The area with trees killed by the **spruce beetle** decreased to 186 ha from 285 ha in 1994, though much of the 1994 attack had not turned colour by late July/early August aerial surveys. Increased activity was noted along the Elk River north of Elkford, along the Beaverfoot River, and a small new infestation was mapped along the White River. **Black army cutworm** larvae stripped 20% of the spruce seedlings over roughly 20 ha in a mixed species plantation along the Blackwater Ridge.

Douglas-fir beetle infestations ranging from single trees to several hundred trees were mapped over 178 ha throughout the region, down from 237 ha in 1994. Increased activity occurred in the Steamboat Mountain to Cartwright Lake area, and near Premier Lake. Light beetle activity continued along the Lower Lussier and Kootenay rivers near Canal Flats, in the Golden area, and along McNaughton Lake. Infestations collapsed in the Arrow and Kootenay Lake districts from almost 4000 trees on 142 ha in 1994 to a few scattered, mostly single trees in 1995.

The **western balsam bark beetle** killed mature alpine fir currently mapped over 2100 ha in higher-elevation stands. The most concentrated mortality continued in the upper drainages on the eastern side of the Purcell Mountain Range. The area of spruce and alpine fir moderately defoliated by the **two-year-cycle spruce budworm** in the Bugaboo Creek drainage increased to 761 ha from 40 ha in 1994. Defoliation in the Monashee Range declined to 187 ha at light intensity, from 282 ha in 1994 and 4300 ha in 1993.

After five years of defoliation, no current feeding by the **western hemlock looper** was recorded in the Nelson Region. Plots established to assess impact will be reassessed in September.

In the Golden area, light to moderate defoliation of mainly trembling aspen by the **satin moth** was mapped over 6274 ha in the third year of an infestation. The population declined in the older portion of the infestation but there was some spread of defoliation including a small infestation at Jubilee Mountain. Elsewhere, the 3 year outbreak in the Anarchist Mtn. to Greenwood area collapsed with only two small patches of defoliation observed west of Bridesville (<10 ha). Patches of new defoliation, from light to severe, were mapped from Castlegar to Trail (61 ha), along Duncan Lake (236 ha), and at the Westfall River (46 ha). Moderate to severe discolouration of birch foliage by a leafminer occurred for the fourth year but over less area. Discolouration was noted in the Tangier River to Jumping Creek area, lower Kaslo River, and along the West Arm of Kootenay Lake. Mostly severe discolouration of willow foliage by the **gray willow leaf beetle** was common along Revelstoke and Arrow lakes, and along the Kootenay and Slocan river valleys. Moderate to severe discolouration of elm foliage by the **elm leaf beetle** occurred throughout the city of Nelson.

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High populations of **voles** in the Revelstoke District and adjacent national parks have damaged plantations up to about 5 years old. Combined with the effects of **Rhizina root disease** in the first year of establishment, several sites are currently at less than half their planted density. In older sites, vole damage has mostly been limited to deciduous brush, especially willow.

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