

September, 1994

PRELIMINARY SUMMARY OF FOREST PEST CONDITIONS IN THE NELSON FOREST REGION, 1994

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This is a summary of some of the main forest pests active in the Nelson Forest Region to the end of August, 1994. A more complete annual regional report on these and other pests, their impact and forecasts, and related projects such as pheromone trapping, pests of young stands, and biomonitoring will be available in early 1995.

PINE PESTS

About 3300 active **mountain pine beetle** infestations have been mapped over 2750 ha in the region to date, down from 7724 ha in 1993. In the East Kootenay, the number of small pockets of recent attack continued to increase north of Invermere to the southern end of McNaughton Lake, but remained stable near Moyie and Whitetail lakes and along Wildhorse Creek. Infestation continued to decline elsewhere in the southern Rocky Mountain Trench. In the West Kootenay, scattered patches of tree mortality increased in the Arrow District from the Blueberry Creek and Paulson Pass areas and north along the west side of Arrow Lake to the Inonoaklin River area, but declined in the Boundary Forest District and remained static in the Kootenay Lake District.

Moderate to severe discoloration of year-old lodgepole pine foliage by **pine needle cast**, *Lophodermella concolor*, was widespread in the southern two-thirds of the region for the fourth year, with conspicuous patches mapped over 227 000 ha. Moderate to severe discoloration on ponderosa pine by a needle fungus, *Leptomelanconium cinereum*, was mapped over 3100 ha in the southern Rocky Mountain Trench.

Patches of ponderosa pine were killed by bark beetles for the third year, mostly the **red turpentine, mountain pine, Ips**, and **western pine beetles**. Forty-five patches of up to ten dying trees were mapped throughout the host range in the southern Boundary and Arrow Forest Districts, down from 170 patches in 1993.

HEMLOCK PESTS

Western hemlock looper population collapsed in most areas of the region in this, the fifth year of outbreak. Generally light defoliation has been mapped on only 3000 ha to date, down from 48 500 ha in 1993, and mostly in areas of recent expansion near Arrow and Trout lakes.

Western blackheaded budworm increased, especially in Glacier National Park, and lightly defoliated 4600 ha. Most of the defoliation occurred in, or adjacent to the recent western hemlock looper infestation. Increased **hemlock sawfly** populations combined with the budworm to moderately defoliate hemlock stands along the Beaver River. Light defoliation continued on 50 ha at Gray Creek along Kootenay Lake.

SPRUCE PESTS

The area of trees killed by the **spruce beetle** increased to 285 ha in 106 patches, in several areas of the region. Brood examinations indicate increasing populations in untreated infestations, especially the Bush River and McMurdo Creek areas. In treated areas and infestations in the Cranbrook Forest District, populations were generally static to declining.

Black army cutworm larvae stripped all the herbaceous vegetation over more than 100 ha in an unplanted cutblock along McNaughton Lake, and severely defoliated 10% of the recently planted spruce in a nearby mixed-species plantation.

DOUGLAS-FIR PESTS

Almost 600 **Douglas-fir beetle** pockets of 1-10 killed trees were mapped over 235 ha throughout the region so far, up from 22 ha in 1993. Increased activity occurred along Steamboat Mountain and Premier Lake in the East Kootenay, and new patches were mapped in scattered areas throughout the Kootenay Lake and Arrow Districts.

Rhabdocline needle cast moderately to severely discolored Douglas-fir over about 19 000 ha along the east side of the Rocky Mountain Trench, and in side drainages of Kootenay Lake.

TRUE FIR PESTS

Western balsam bark beetle infestation continued and killed mature alpine fir over 3300 ha in higher-elevation stands, mostly throughout the southern two-thirds of the region.

The area of spruce and alpine fir defoliated by the **two-year-cycle spruce budworm** in the Monashee Range declined to 280 ha, down from 4300 ha in 1993. This reflected the change in population from mostly maturing larvae to smaller, earlier instars. Light defoliation by immature larvae was mapped over 40 ha along Bugaboo Creek, but none in the Rocky Mountain Range.

LARCH PESTS

Larch budmoth larvae defoliated western and alpine larch over 680 ha, mainly near Fernie. Small infestations were noted as far north as the Beaverfoot River and west to the Moyie-St. Mary river drainages.

Infections by **larch needle cast** declined throughout the host range to endemic levels. Populations of the **larch casebearer** remained at low, mostly endemic levels.

DECIDUOUS TREE PESTS

Defoliation of mainly trembling aspen by the **satin moth** was mapped over 4660 ha. Increased populations severely defoliated stands in the Golden area over 4580 ha, compared to 2700 ha in 1993. Moth flights were noted as far south as Cranbrook. Defoliation in the southern Boundary District declined for the second year with mostly light defoliation only over 80 ha. Scattered patches of aspen killed in previously severely defoliated stands, mostly in the Anarchist Mountain to Rock Creek area, were mapped over 360 ha.

Foliar discoloration by **birch leafminers** increased in the southern Arrow and Kootenay Lake Districts, but declined in the Revelstoke and northern Arrow Districts and remained static in Glacier National Park. Severe discoloration was common throughout the host range in these areas with larger patches mapped over 2600 ha.
