



Pest Report 93-34

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FOREST INSECT AND DISEASE CONDITIONS IN ECOLOGICAL RESERVES OF THE NELSON FOREST REGION 1993

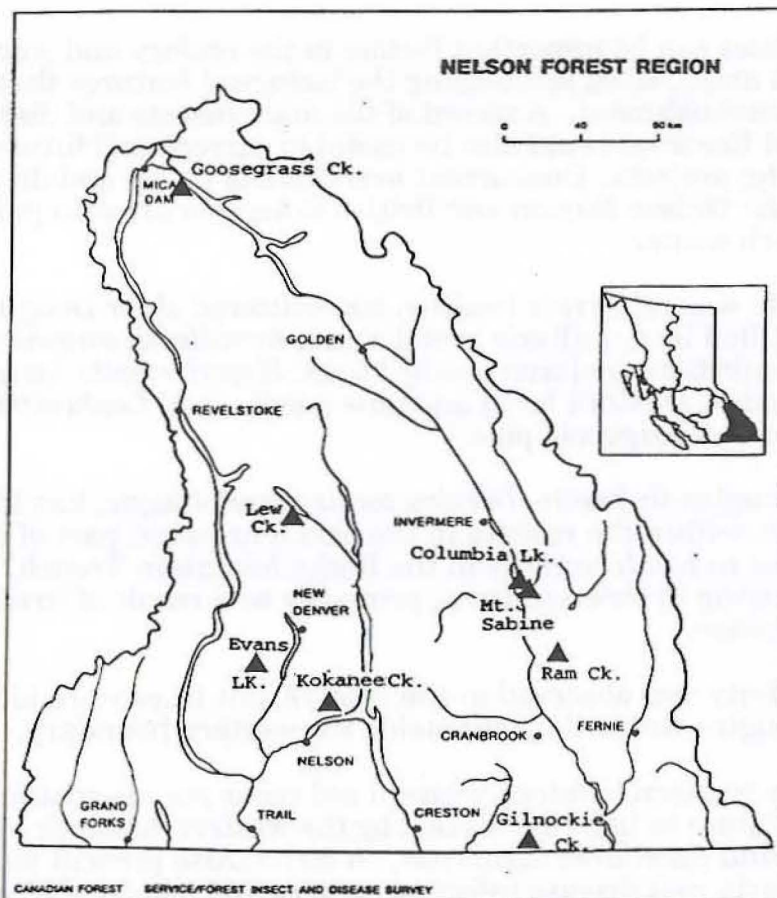
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Forest Insect and Disease Survey

This overview summarizes current insect and disease activity observed in the 8 Ecological Reserves within the Nelson Forest Region (Map 1). Observations are relatively limited in scope and in some cases based only on aerial surveys due to lack of access. Additional assessments will be conducted as resources and access permit.

Forest insects and diseases can be important factors in the ecology and successional development of forested areas, often influencing the biological features that were the reason for reserve establishment. A record of the main insects and diseases specific to the Ecological Reserves could also be useful to current and future research or biomonitoring projects. Concurrent overviews of insect and disease conditions throughout the Nelson Region and British Columbia are also published as annual FIDS reports each winter.

- Mt. Sabine**
Ecol. Reserve
No. 19 The site was relatively healthy, but scattered older Douglas-fir were killed by *Armillaria* root disease, *Armillaria ostoyae*. Light foliar infections by larch needle blight, *Hypodermella laricis*, occurred on western larch and pine needle cast, *Lophodermella concolor*, on lodgepole pine.
- Columbia Lk.**
No. 20 The Douglas-fir beetle, *Dendroctonus pseudotsugae*, has killed about 50 trees within the reserve in the past four years, part of a general increase in beetle activity in the Rocky Mountain Trench. The attack is occurring in stressed trees, primarily as a result of *Armillaria* root disease.
- Ram Ck.**
No. 26 No activity was observed in the reserve, but trees were killed by the Douglas-fir beetle just outside the western boundary.
- Lew Ck.**
No. 31 Mature western hemlock-western red cedar stands sustained a second year of trace to light defoliation by the western hemlock looper, *Lambdina fiscellaria lugubrosa*, on 80 ha. Also present were chronic *Armillaria* root disease infection centers and heart rot of western hemlock caused by *Echinodontium tinctorium*.

- Evans Lk. No. 32** Chronic light infestation of alpine fir by the western balsam bark beetle, *Dryocoetes confusus*, occurred in higher elevation stands throughout the area.
- Goosegrass Ck. No. 56** Light to moderate defoliation of primarily mature western hemlock was caused by the western hemlock looper along lower portions of the creek for the past two years. This is part of an infestation covering over 48 000 ha in the Columbia River system.
- Gilnockie Ck. No. 104** Mountain pine beetle, *Dendroctonus ponderosae*, continued to kill groups of +20 trees in and near the reserve. Lodgepole pine foliage was moderately affected by *L. concolor* and western larch foliage lightly affected by *H. laricis*.
- Kokanee Ck. new reserve** Most significant agents in the new reserve: scattered Armillaria root disease centers mainly affecting Douglas-fir; white pine blister rust, *Cronartium ribicola*, infecting western white pine; and larch dwarf mistletoe, *Arceuthobium laricis*, parasitizing western larch.



Map 1. Locations of Ecological Reserves within the Nelson Forest Region.