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**FOREST INSECT AND DISEASE CONDITIONS
IN YOHO NATIONAL PARK, 1995**

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Forest Insect and Disease Survey

Some of the more important forest insect and diseases found in the park are discussed by host in this report. For a broader perspective, please refer to the annually published report "Forest Insect and Disease Conditions, Nelson Forest Region, 1995".

Aerial surveys were conducted through the main corridor, and lower portions of the side drainages of the park in mid July, during a Parks Canada funded helicopter flight. Limited ground surveys were conducted between June and September.

This report is written in fulfillment of the requirements for obtaining and maintaining a Parks research/collection permit. Insect and disease problems have, in most cases, been previously discussed with Parks personnel during the course of field surveys.

Pine

Mountain pine beetle, *Dendroctonus ponderosae*, killed an estimated 1100 lodgepole pine on 45 ha, almost a twofold increase in the number of trees from 1994. The main concentration continues on the south slopes across from Field, but the number and size of spot infestations in the Beaverfoot River area are continuing to increase. Individual, recently killed trees were noted near Wapta Lake. Other groups of about five trees were mapped on the flats between Otterhead and Emerald rivers.

The infestations are expected to continue to increase in 1996. Spring brood samples had a reproductive ratio of 5.4, with ratios of over 4.0 indicating an increasing population. Fall surveys had a current (1995) to red (1994) attack ratio of 1.5:1. No new attacks were found near the single beetle attacked trees at Wapta Lake.

The level of secondary insect activity in recent pine **blowdown** was assessed in the Kicking Horse-Beaverfoot rivers area. The most common insects were *Ips* spp. which were present at moderate levels on 65% of the blowdown, that had not dried out. Woodborers, mainly *Monochamus* sp. were present generally at low levels on 40% of the trees; light Ambrosia beetle attack was present on 15% of the trees. Mountain pine beetle attack was present on 5% of the trees. The main impact on surrounding stands should be limited mortality for one or two years by *Ips* beetles. To date most of the *Ips* beetle activity has been attack of the blown over trees, which often still have one root intact and remain attractive for additional brood development. The low level of mountain pine beetle attack will not be a significant factor, especially in the light of naturally increasing populations in the general area.

Trees discoloring due to **porcupine and bear** damage are a common feature throughout the park, concentrated attack continued along the Kicking Horse River between Porcupine Creek and Otterhead River.

Spruce

No new **spruce beetle**, *Dendroctonus rufipennis*, infestations were observed along the Ice River, where 5 ha were mapped in 1994. Small infestations continued along the Beaverfoot River just outside the Park boundary. Beetle activity continued in chronic blowdown at Hoodoo Creek, where light attack was present on blowdown, and there were several partial attacks on standing trees. The potential for a localized infestation remains. Other areas with potential localized beetle infestations starting, are in blowdown areas mapped in 1992 along the Ottertail River and at Mt. Dennis. No ground surveys were done in these areas, but standing tree attack would not likely show up until late 1995 or 1996. A similar increase in the number of localized spruce beetle infestations is occurring in the Golden TSA.

Larch

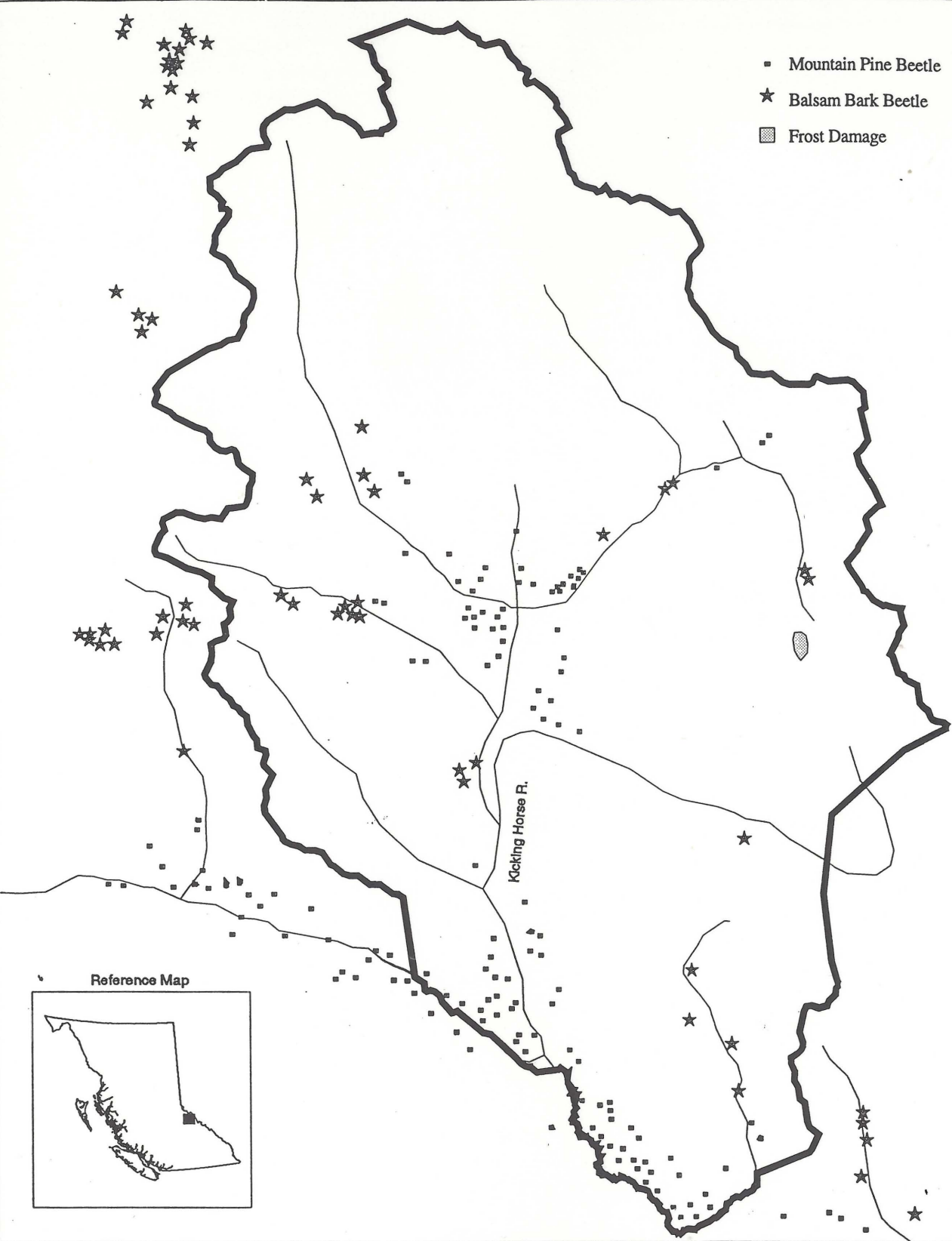
Late spring **frost** caused premature discoloring and mortality of alpine larch foliage over roughly 75 ha in the Lake O'Hara area. Damage was most severe on intermediate and understory trees and on the mid and lower crown of codominate trees.

Deciduous trees

Satin moth, *Leucoma salicis*, defoliated 300 ha of trembling aspen along the Kicking Horse River just outside the western boundary of the park. Other defoliating insects also present were several **aspen leafrollers**, including *Pseudexentera oregonana*, and *Epinotia* sp.

No **gypsy moth**, *Lymantria dispar*, adults were caught in traps placed at campgrounds in the park.

Areas of current insect infestations in and around Yoho National Park, 1995



Natural Resources Canada
Canadian Forest Service
Forest Insect and Disease Survey



Scale 1: 275000
Projection: Lambert Conformal Conic
Map Produced by GIS: 21 Nov 95