



FIDS Pest Report 93-33

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SPECIAL REPORT

Forest Insect and Disease Conditions

in Yoho National Park, 1993

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Forest Insect and Disease Survey

Some of the more important forest insect and diseases found in the park are discussed in this report. For a broader perspective, please refer to the annually published report "Forest Insect and Disease Conditions, Nelson Forest Region, 1993". Other than mountain pine beetle, which killed an estimated 600 trees, forest insect and disease activity was minor.

Aerial surveys were conducted along the main Highway corridor and along the lower Ottertail, Amiskwi and Beaverfoot rivers during early August. This was part of a regional survey in cooperation with the British Columbia Ministry of Forests. Limited ground surveys were conducted between May and October.

This report is written in partial 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

The number of trees killed by **mountain pine beetle**, *Dendroctonus ponderosae*, doubled to 600 from 280 in 1992 (see map). The main concentration continues to build on the south slopes across from Field. Other spot infestations of + 5 tree were mapped on the flats between Otterhead and Emerald rivers, and widely scattered along the Kicking Horse River to the junction of the Beaverfoot River.

Large broods were found during spring examinations, however, the trees were very desiccated, which resulted in high levels of brood mortality prior to beetle maturation. Consequently the 1993 attack level was considerably smaller at 3%, than the 27% recorded in 1992. These results indicate that there will be a decrease in the number of discoloring pine in 1994.

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

Spruce

Minor **spruce beetle**, *Dendroctonus rufipennis*, activity continued in chronic blowdown at Hoodoo Creek. 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 before 1995 or 1996. A similar increase in the number of localized spruce beetle infestations is occurring in the Golden TSA, where infestations have tripled in the last year.

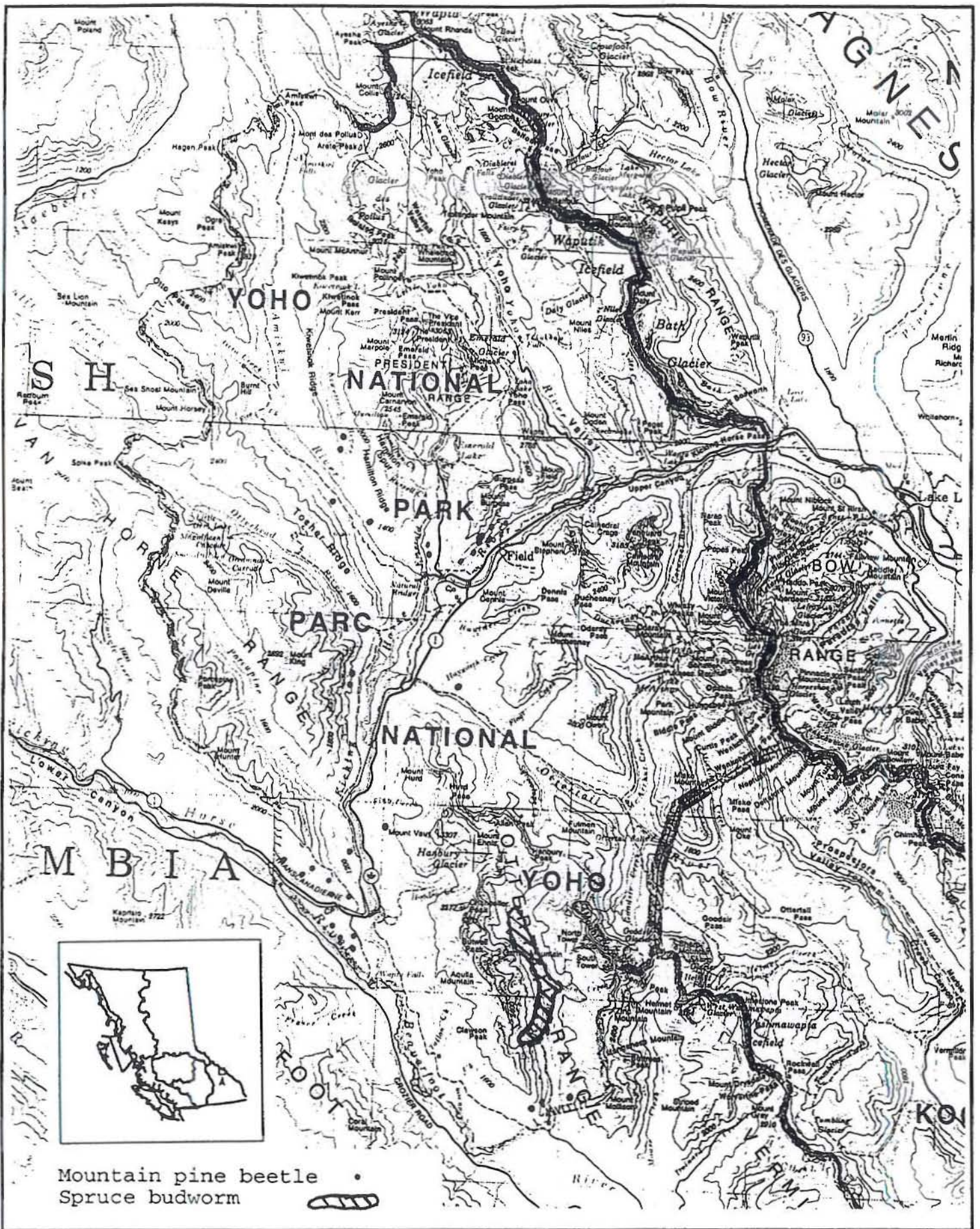
Immature **two-year-cycle spruce budworm**, *Choristoneura occidentalis*, larvae destroyed approximately 40% of the 1993 foliage of mature spruce and alpine fir over 730 ha along the Ice River. This represents a two-fold increase in area from mature larval feeding in 1992, and may indicate that increased defoliation could occur in 1994 when the mature larvae will be feeding. However, no ground checks were done, and sampling of budworm infestations at Marble Canyon in Kootenay National Park suggested that populations are declining.

Fruiting bodies of root diseases, *Armillaria ostoyae*, and *Innonotus tomentosus*, were noted at several locations in mature spruce--alpine fir stands along Cataract Creek. No quantitative data was collected.

Deciduous trees

A combination of **aspen leafrollers**, including *Pseudexentera oregonana*, and *Epinotia* sp., continued to moderately defoliate trembling aspen along the western portion of the park. The main center of the infestation covered 300 ha, most of it outside the park.

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



Areas of current insect infestations in Yoho National Park,
 Forest Insect and Disease Survey, 1993.