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PEST REPORT

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BLACKHEADED BUDWORM DEFOLIATION OF WESTERN HEMLOCK

BRITISH COLUMBIA, 1985

C. Wood, L. Unger, R. Andrews, R. Erickson, N. Humphreys, R. Turnquist
Forest Insect and Disease Survey

Blackheaded budworm, Acleris gloverana, defoliated western hemlock stands over an estimated 36 000 ha in British Columbia in 1985.

The most extensive defoliation (25 000 ha) was on the Queen Charlotte Islands (now in the Vancouver Forest Region) where primarily moderate and severe defoliation occurred along the eastern islands, south of Sewell Inlet. Some light defoliation extended into small patches of hemlock on the west coast of Moresby Island and the southern portion of Graham Island. Very light defoliation occurred over 2 000 ha of immature western hemlock, Amabilis fir and Douglas-fir at Statlu Creek in the Chehalis River drainage east of Vancouver and in several patches of trees in Stanley Park.

Increased populations in the Prince Rupert Region lightly defoliated western hemlock over 2 800 ha along Douglas Channel between Kitimat and Gardner Canal, for the first time since 1974.

In the Interior, 4 500 ha of western hemlock was moderately to severely defoliated in the Quesnel and Mitchell lakes area of the Cariboo Region, the first time since 1967. In the Kamloops Region, 860 ha of overmature hemlock and red cedar in Wells Gray Park were lightly defoliated, 640 ha at Scotch Creek near Chase and 640 ha near Mabel Lake, east of Vernon. Light and moderate defoliation over 150 ha was recorded by ground surveys in late July at two locations between Nakusp and Mica Creek in the Nelson Region, where 19 100 ha of light defoliation was recorded during the second year of the infestation in 1984. Accurate definition of defoliated stands during aerial surveys, delayed until September, was complicated by seasonal foliage color change.

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Tree damage can usually be expected following one year of severe defoliation. In the most severely defoliated immature stands on the Queen Charlotte Islands top-kill of the upper half of 50% of the trees is likely to occur; significant tree mortality can be expected following 2 to 3 years of moderate to severe defoliation. During the most recent infestation on the Queen Charlotte Islands in 1973-74, 67% of the immature and 33% of the mature trees in study plots died after 2 years of severe defoliation. Significant tree mortality was not recorded in the interior and south coastal mainland infestations.

Egg sampling is currently in progress and will provide an indication of expected defoliation in 1986 in areas currently defoliated. However, based on previous infestations and increased numbers of larvae in beating samples, numerous coastal valleys especially in the Portland Canal, Douglas Channel to Bella Coola and between Howe Sound and Hope, are also subject to increasing populations and defoliation in 1986. There was no evidence of population increases on Vancouver Island. Historically, infestations have seldom caused significant defoliation for more than two to three years.

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