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Pacific Forest Research Centre,
Forest Insect and Disease Survey,
506 West Burnside Road,
Victoria, B. C. V8Z 1M5

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Mountain Pine Beetle Conditions

· Prince Rupert Forest District, 1976

by

Donald F. Doidge and H. Peter Koot

The mountain pine beetle has been epidemic in mature lodgepole pine stands in Prince Rupert Forest District since 1969 when the first outbreak appeared at Date Creek. Surveys in 1976 indicated that about 18,000 of the trees killed by beetle in 1974 and 1975 (red-topped) remain unlogged in the District.

In 1972 the British Columbia Forest Service mounted a salvage and control program, then expanded it in 1973, using methods recommended by Dr. L. Safranyik of the Canadian Forestry Service. The program was considered to be 80% successful in reducing beetle populations in the Smithers - Houston areas. However, in the eastern portion of the Prince Rupert District, mountain pine beetle infestations occurred at Babine Lake, opposite Donald Landing, 350 red-tops; Smithers - Moricetown along the Bulkley River, 200; Houston, 200; and Donald Landing, 100. In the western portion of the Smithers Ranger District, the Harold Price Creek infestation continued with an estimated 4,200 red-topped lodgepole pine along with an additional 1,900 in the nearby Suskwa River Valley. The Hazelton Ranger District is currently working on the main problem area which is up the Kispiox River drainage and near Hazelton, with an estimated 1,900 red-tops.

Just west of Hazelton and north of Kitwanga there was an overall increase in numbers of red-tops, larger infested areas being: Radio Tower Hill with 2,000 red-tops (down from 5,000 in 1975); opposite Carnaby, 2,000; Ritchie, 1,000; Seeley Lake, 1,000; Woodcock, 500; Kitwancool, 500; Weegett - Douse creeks, 500 (reduced by logging, from 3,000 in 1975); Price Creek, 400 (new in 1976); Kitseguecla River, 350; Kitwanga Lake, 250; Kitwanga, 200; south of Kitwanga, 140; Mill Creek, 125; Nash Y, 120; Cedarvale, 110, and Cranberry River, 100.

In the Bella Coola Ranger District, near the junction of the Dean and Takia rivers there were 410 red-tops.

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The infestation along Harold Price Creek, which is inaccessible to salvage logging, was examined in September and showed sufficient brood to continue the infestation in 1977. The infestation area has sufficient mature lodgepole pine to have absorbed the 1976 attack, and probably to absorb part of the 1977 attack. In the upper reaches of the Creek the large areas of susceptible pine probably will be attacked in 1977 as the mature pine in the present infestation is depleted. An examination of these susceptible stands revealed a light beetle population which, along with the maturity of the stand, provide the basis for the prediction of increased beetle attacks in 1978.

In September 1976 a cruise strip was run on Radio Tower Hill to ascertain stand depletion caused by mountain pine beetle in an area where no salvage or control was attempted. On the strip, 24% of the pine were healthy, 3% were currently infested (1976 attack), 10% were red (1975 attack), 5% had been partially attacked and 58% were gray (dead 3 years or more). This means that about 75% of the lodgepole pine trees have been killed by beetles. This is substantiated by aerial counts which show the trend: 640 red-tops in 1973, 1,000 in 1974, 5,000 in 1975, and then the decline in 1976 to 2,000 red-tops. The population of beetles is declining because of the reduction of susceptible lodgepole pine trees in the stand. Some salvage logging is planned.

The cool summer of 1976 caused a late beetle flight. In areas examined in September brood development was retarded with most of the new generation still in the egg stage, however the warm fall weather probably enabled the eggs to hatch and the larvae to develop and become cold hardened.

Where the program of salvage logging of the green infested pine was implemented, the beetle population was significantly reduced. Felling and burning of infested trees in areas where logging was impractical also contributed to the success of the program. In the areas where the beetle population has been reduced the emphasis should now be on management of the pine stand to minimize losses.