

FOREST INSECT AND DISEASE CONDITIONS

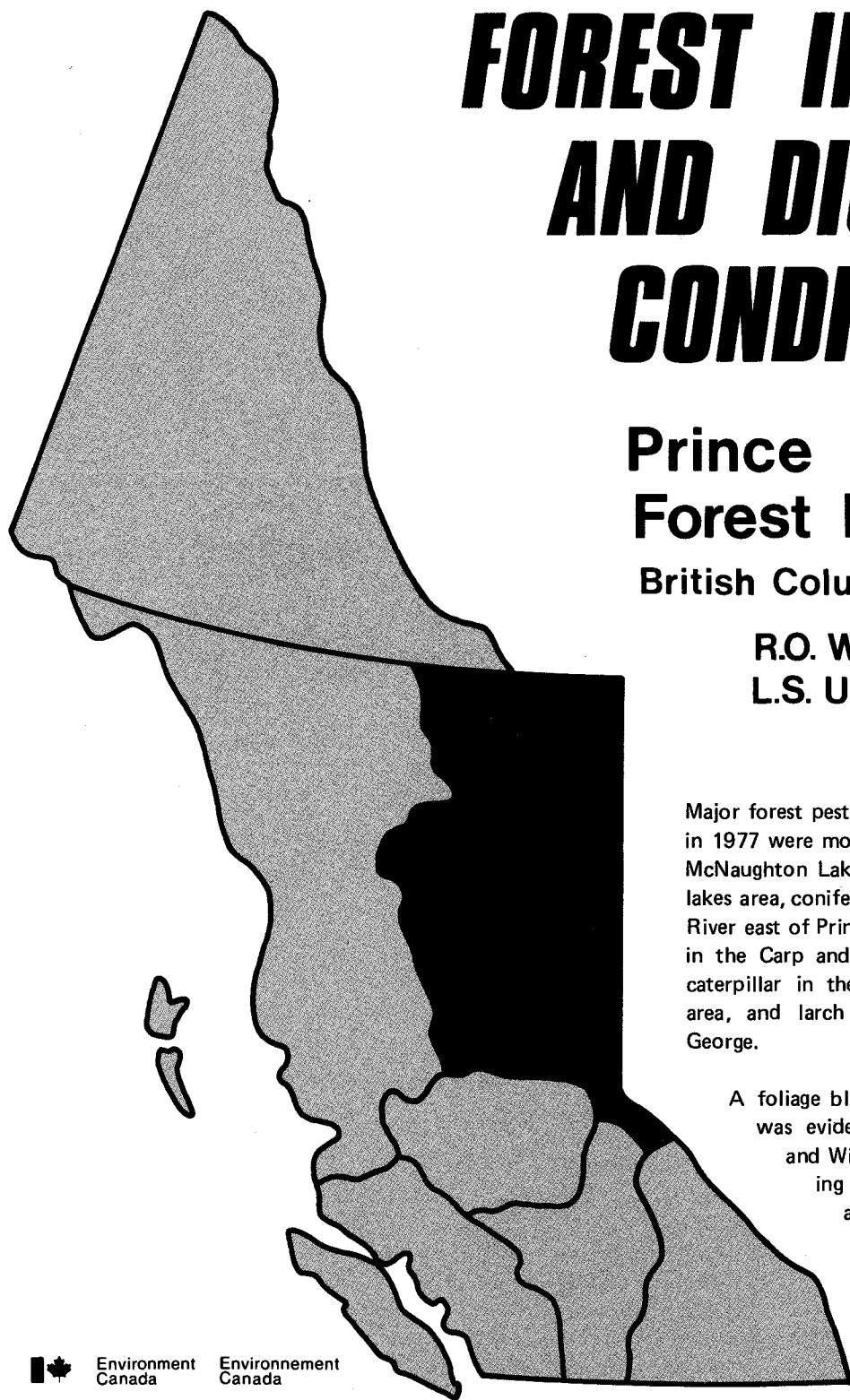
Prince George Forest District

British Columbia, 1977

**R.O. Wood
L.S. Unger**

Major forest pest problems in the District in 1977 were mountain pine beetle along McNaughton Lake and the Stuart - Takla lakes area, conifer sawfly along the Fraser River east of Prince George, spruce beetle in the Carp and Inzana lakes area, tent caterpillar in the McBride - Valemount area, and larch sawfly west of Prince George.

A foliage blight on trembling aspen was evident between Germansen and Williston lakes; winter drying caused widespread damage in the Pine Pass and Monkman Pass area, and late frost killed numerous buds near Prince George.

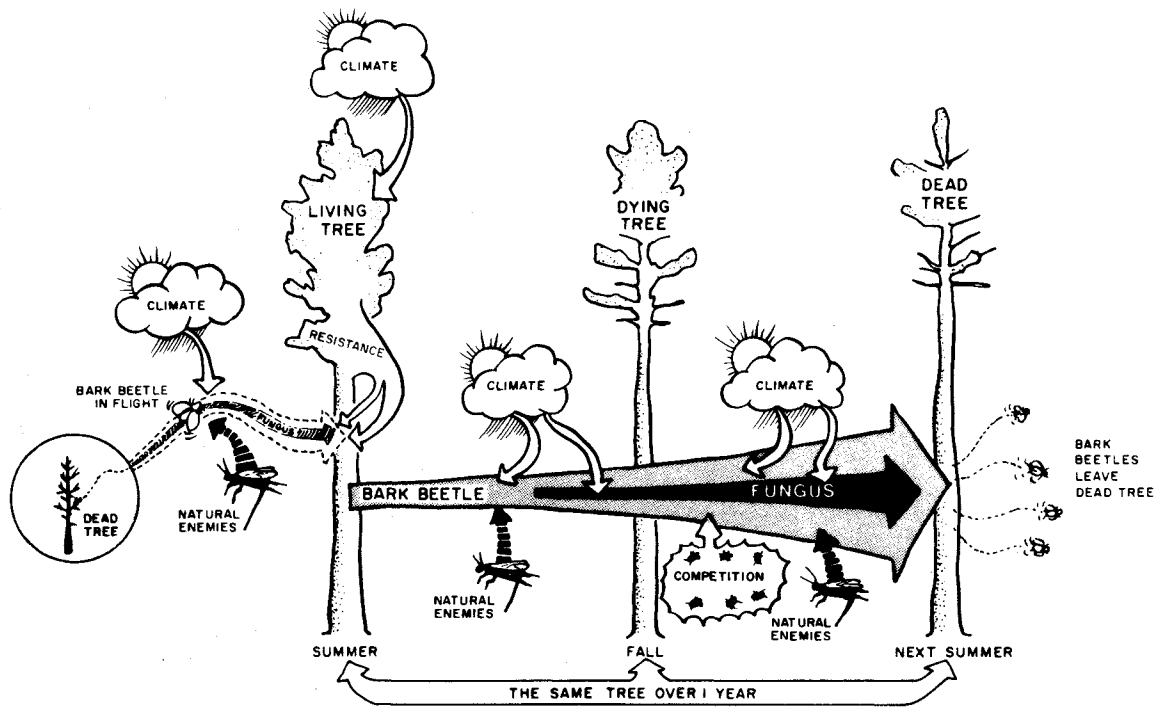


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Interaction between the tree, the beetle and its associated fungi.

Tree mortality caused by **MOUNTAIN PINE BEETLE**, *Dendroctonus ponderosae*, increased in 1977. Many of the small patches of dead trees recorded last year had fewer red tops this year, but new areas of mortality were observed south of Wonder Lake, north of Inzana Lake and along Middle River. The greatest increase was in white pine-lodgepole pine stands along both sides of McNaughton Lake from Bulldog Rapids south to the district boundary. There were 2,200 red-top trees in 1977, compared to 205 in 1976. Five hundred red-top lodgepole pine occurred at Swift River north of Valemount. In

the Stuart - Trembleur lakes area, the number of red tops remained similar to that of 1976, at 300 trees.

PINE ROOT WEEVIL, *Hylobius warreni*, caused root collar girdling throughout the southern portion of the District. Young planted lodgepole pine were girdled at Norman Lake, Punchaw Lake, and 32 km west of Prince George. Roadside pines were girdled between Bowron River on the east, to the Kenny Dam road on the west.

THE SPRUCE BUDWORM, *Choristoneura fumiferana*, population in the Liard - Smith rivers area decreased to near endemic levels during the last 2 years. But during the infestation, the trees had reduced increment, and top-kill averaging 1.2 m was noted on 27% of the trees examined.

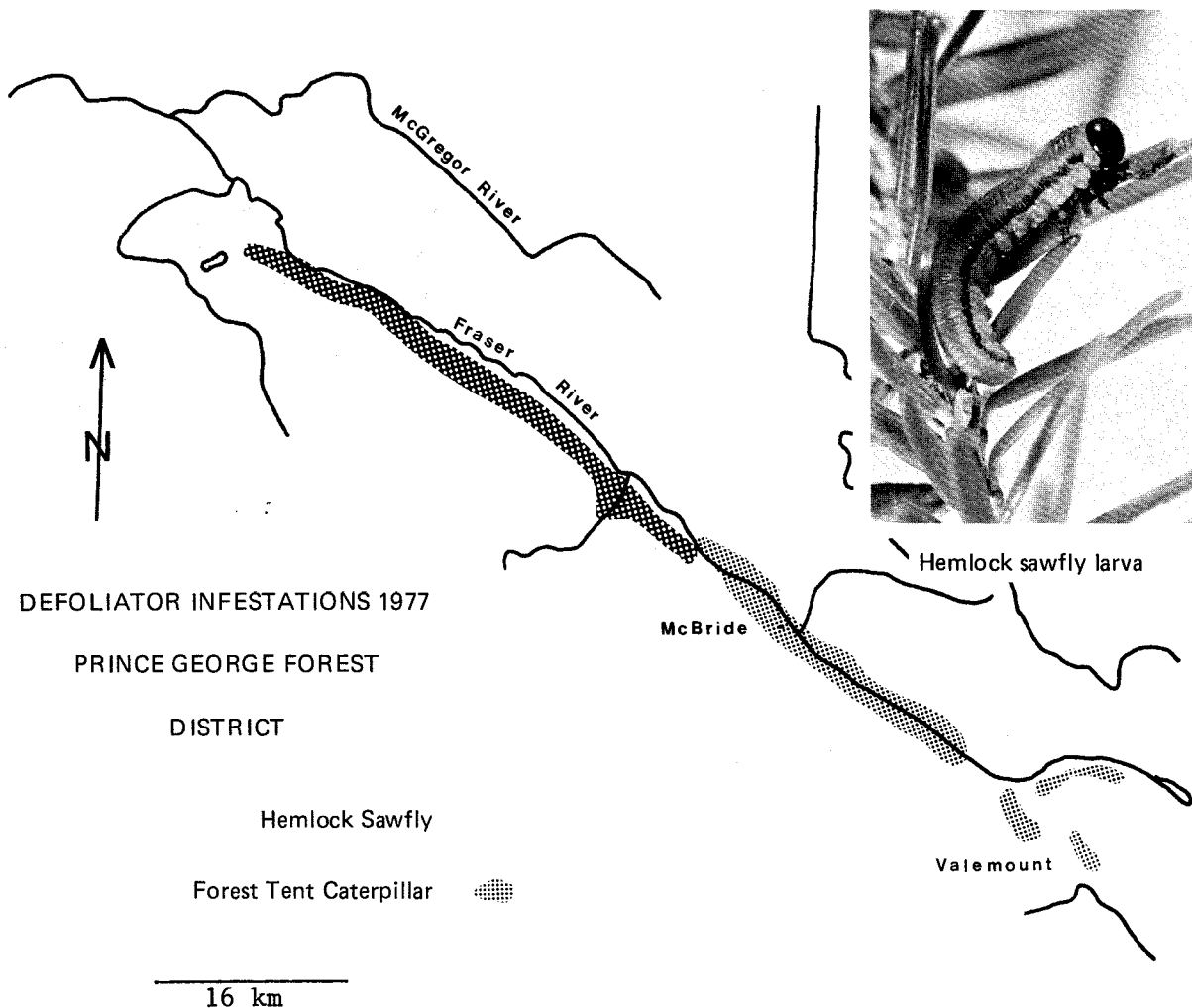
THE 2-YEAR-CYCLE SPRUCE BUDWORM, *Choristoneura biennis*, larval population increased in the Holmes River area. Although this was not the main feeding year, early instar larvae lightly defoliated alpine fir. More severe defoliation will probably occur in 1978 when the maturing larvae are feeding. Low numbers of budworm larvae were found in the Tumuch Lake area.

The number of budworm moths caught in pheromone traps decreased slightly from 1975, but as this is the non-flight year, it indicates either that 1-year-cycle or off-phase 2-year-cycle budworms were present, particularly in the Pine Pass area. Identification of these closely related *Choristoneura* is not practical once they have remained for a few days in the traps.

SPRUCE BEETLE, *Dendroctonus rufipennis*, killed trees over 9 800 ha. Areas up to 300 ha of recently killed white spruce were present in the Carp, Weedon, and Merton lakes area. Small pockets of 2 to 15 beetle-killed spruce trees occurred over 8 000 ha southeast of Inzana Lake, and over 600 ha south of Chuius Mountain. A few standing trees were lightly attacked along the Nation River. Wind-felled trees along the Alaska Highway between km 141 and 146, Willow River, Johnson Creek, Purden Lake Park, Holmes River, Stone Creek, and Bateman Road near Aleza Lake were lightly attacked. Some of the 1976 brood matured and probably flew and attacked by fall, thereby indicating continuing tree mortality in 1978.



Spruce beetle adult and galleries



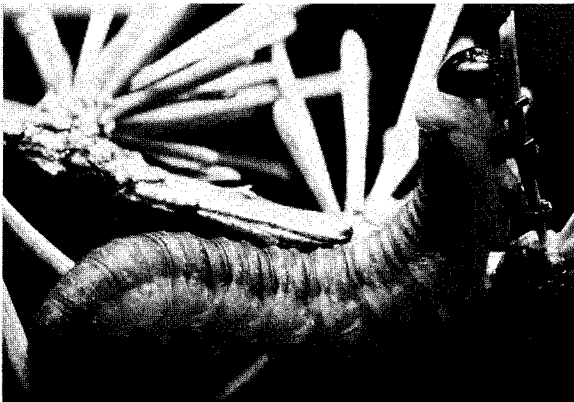
A SAWFLY, *Neodiprion* sp., for the third consecutive year, caused moderate to severe defoliation of western hemlock on 64 000 ha east of Prince George from Purden Lake to McKale Creek. In the most severely defoliated area between Hungary and Slim creeks, only a small portion of the 1977 foliage remained. High numbers of larvae were collected at Sinclair Mills, Sugarbowl Creek, Driscoll Creek, Dome Creek, Hungary Creek and Dore River, but none showed signs of disease, which would indicate a collapse of the population. Previous infestations have declined following the third year of significant defoliation.

FOREST TENT CATERPILLAR, *Malacosoma disstria*, defoliated trembling aspen on 30 400 ha in the McBride area. Defoliation was continuous along the Fraser River between McKale and Kiwa creeks. Additional patches of defoliation occurred from Valemount to Tete Jaune Cache to Alpland in Mount Robson Park. Although the area of infestation expanded, defoliation was less severe than in 1976.

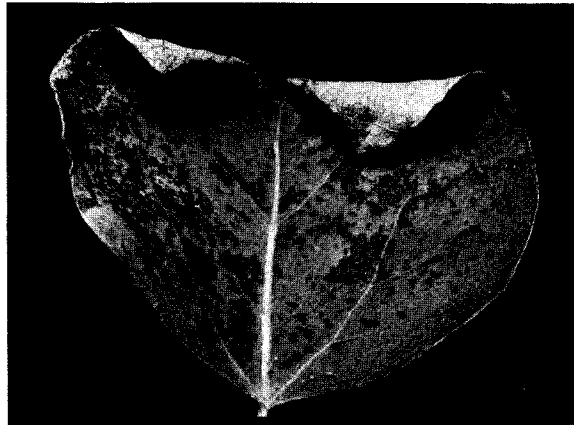
The infestation has been active since 1972 and as all larvae examined appeared healthy, it is expected to continue in 1978.

LARCH SAWFLY, *Pristiphora erichsonii*, was present in all tamarack stands in the District. Defoliation reached 95% on 1 600 ha in the Bednesti - Tatuk lakes area but was only light in the Peace River, Monkman, and Liard River areas.

The number of overwintering cocoons in duff samples near Tamarack Lake indicates continuing defoliation in 1978.



Larch sawfly larva



Aspen leaf blight

ASPEN LEAF BLIGHT, *Venturia macularis*, caused widespread browning and loss of trembling aspen foliage. Many of the trembling aspen stands in the Williston, Carp, Cunningham, Chuchi, Manson and Germansen lakes areas had up to 95% of the foliage missing.

WINTER DRYING, resulting in reddened foliage on lodgepole pine, occurred over 1 300 ha at Pine Pass, Le Moray River and Silver Sands Creek. Light discoloration also occurred near Gwillim Lake south of Chetwynd and Tumbler Ridge in the Monkman area. At Klingzut Mountain, part of the area was affected for the second consecutive year.

THE LEAF BLOTCH MINER, *Lyonetia saliciella*, caused severe browning of birch, willow and alder leaves over extensive areas from Dave Henry Creek along McNaughton Lake south of Valemount to Tete Jaune Cache, east into Mount Robson Park and west to McBride.

High populations of **ASPEN LEAF MINER**, *Phyllocnistis populiella*, caused extensive damage to trembling aspen between Tete Jaune Cache and Mount Robson Park. Individual trees had 100% of their leaves mined.

A LATE FROST caused mortality of terminal buds of young spruce in much of the area between Hixon and McGregor River. The damage probably occurred when water amid partially opened bud scales froze and killed the buds.

STATUS OF FOREST PESTS IN PACIFIC REGION 1977

PEST	DISTRICTS						
	PRINCE RUPERT	PRINCE GEORGE	VANCOUVER	CARIBOO	KAMLOOPS	NELSON	YUKON
MOUNTAIN PINE BEETLE	Epidemic declining excepting Kitwanga to Dorreen	Infestations around McNaughton L	Widespread infestation Klinaklini R	Widespread infestation throughout District	Widespread infestation throughout District	Infestations throughout District	Not found
SPRUCE BEETLE	Epidemic - Smithers Landing area	Outbreaks at Carp and Inzana lakes	Localized attacks Mowhokam Cr	Light, localized attacks Bowron L	Epidemic in Lambly Cr, Bouleau L. area. Increasing elsewhere	Low populations	Low populations Haines Jct.
DOUGLAS-FIR BEETLE	Not found	Populations very low	Light attacks Fraser Canyon, Pemberton, Vancouver I	Light population in trap trees Joes L Road	Infestations near Kamloops and Cache Cr. Increasing elsewhere	Low populations	No host
WESTERN SPRUCE BUDWORM (1-YEAR-CYCLE)	Low populations	Low populations	Extensive infestations Fraser Canyon - Pemberton areas	Moderate population south of Clinton	Heavy defoliation Fraser R - Carpenter L. Decreasing in Shuswap L	Small outbreak near Revelstoke	Low population
SPRUCE BUDWORM (2-YEAR-CYCLE)	Low populations	Moderate population along Holmes R	Not found	Bowron Lakes, MacKay R - Hendrix L moderate	No defoliation noted in off-year	Populations increasing, some defoliation	Not found
WESTERN BLACKHEADED BUDWORM	Minor defoliation Oweegee Cr and Babine L	Low populations	Low populations	Low populations	Blue R infestation near collapse	Generally low. One light outbreak near Kimberley	Low populations
FOREST TENT CATERPILLAR	Not found	Severe defoliation near McBride	Not found	Not found	Infestation near Vavenby and Gosnell	Decrease from 1976	Not found
CONIFER SAWFLIES <u>Neodiprion</u> spp.	Shore pine defoliation Porcher I. Tree mortality Pitt I	High populations east of Prince George	Low populations	Moderate populations	Heavy defoliation Vavenby and near Clearwater L	Generally low	Low population
CONE RUSTS	Poor cone crop - spruces	Not found	Not found	Not found	Not found	Not found	Low incidence southwestern Yukon

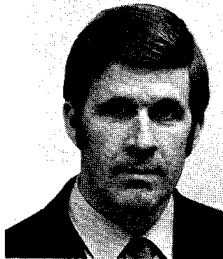
Forest District Ranger Assignments - 1978

CARIBOO

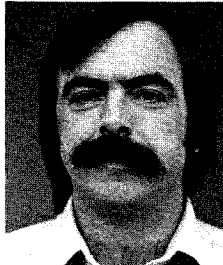


Stan Allen

VANCOUVER



Ernie Morris



Colin Wood

KAMLOOPS



Dick Andrews

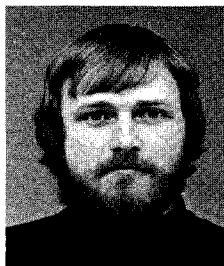


Jack Monts

PRINCE GEORGE & YUKON TERRITORY

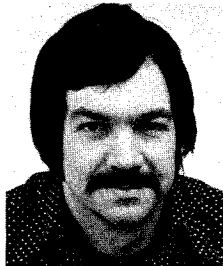


Roly Wood



Leo Unger

PRINCE RUPERT



Don Doidge



Peter Koot

NELSON



Cliff Cottrell



Bob Erickson

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