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# PEST REPORT

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## SUMMARY OF FOREST PEST CONDITIONS

IN THE

YUKON TERRITORY

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Forest Insect and Disease Survey

This report provides a brief summary of forest pest conditions in the Yukon Territory in 1990. A more detailed report will be available later.

The most important pest problems detected during the survey included: winter damage to pine and spruce from Watson Lake to Dawson City; defoliation of spruce by eastern spruce budworm in the La Biche River valley; defoliation by large aspen tortrix of trembling aspen along the Alaska Highway from west of Arkell Creek to east of Takhini Hot Springs, and defoliation of tamarack by larch sawfly and larch-willow rust near Finlayson and Frances lakes. Winter damage was wide spread; however, recovery is expected to be good. Defoliation by spruce budworm, large aspen tortrix, larch sawfly and rust cause increment loss, but little tree mortality will occur and recovery should be good in 1991.

About 75 insect and disease samples were collected at permanent and random sites in stands from Watson Lake along the Robert Campbell Highway through Whitehorse to Kluane National Park, along the Alaska Highway to Alaska and from Dawson City through Whitehorse to Watson Lake.

Yukon Forest Service staff were contacted at Whitehorse, Carmacks, Teslin, Dawson City, Beaver Creek and Watson Lake. A meeting with headquarters staff was held at Whitehorse to inform them of Forestry Canada - FIDS work plans and to coordinate the aerial survey to map defoliation by large aspen tortrix, which was paid for by the Yukon Forest Service. Kim Rhymer and the rest of the staff of the Yukon Forest Service were very helpful.

### SPRUCE PESTS

#### Eastern spruce budworm, Choristoneura fumiferana

Defoliation of spruce was visible along the La Biche River in the southeast corner of the Yukon, as an extension of a major outbreak in northeastern British Columbia. However, due to time and budget constraints, the area was not mapped. Populations were not noted anywhere else in the Yukon. Population forecast for 1991 will be available later following examination of egg mass samples from northeastern British Columbia.

#### Spruce bark beetle, Dendroctonus rufipennis

There were no active spruce beetle populations noted in the Yukon in 1990. Contacts with the B.C. Forest Service at Atlin and Dease Lake indicated no current populations near the Yukon-British Columbia border, near where populations were last reported in predisposed spruce in 1987.

### PINE PESTS

#### Pinewood nematode, Bursaphelenchus xylophilus

Pinewood nematode was found for the first time in the Yukon during a survey of spruce logs in a sawmill near Whitehorse. Nematodes were extracted at the Pacific Forestry Centre from one of twenty-one samples collected in the Yukon, and this is the northern most distribution record. The nematode is extremely rare in forests in the Pacific and Yukon Region, with only individual trees affected at a few widely distributed locations.

#### A pine needle cast, Lophodermella concolor

Light infections of year-old needles were common near Frances Lake along the Robert Campbell Highway, where 2% of the foliage on 80% of the lodgepole pine was infected. Severe infections often result in considerable premature needle loss.

#### Lodgepole pine terminal weevil, Pissodes terminalis

Damage and larvae were found for the first time in a young lodgepole stand near Watson Lake. This was the most northern distribution record for this insect. However, the occurrence is very low with less than 1% of the lodgepole pine infested.

### LARCH PESTS

#### Larch sawfly, Pristiphora erichsonii

Larch sawfly populations declined after three consecutive years of defoliation of tamarack near Finlayson and Frances lakes. Population sampling indicated a declining population, with little if any defoliation expected in 1991.



Larch-willow rust, *Melampsora paradoxa*

Larch-willow rust moderately infected tamarack, in conjunction with larch sawfly, near Finlayson and Frances Lakes. About 20% of the foliage on 20% of the larch along the Robert Campbell Highway was infected, which resulted in thinning of crowns similar to that of defoliation by larch sawfly. Light infections are expected in 1991.

MULTIPLE HOST PESTSWinter damage

Buds, leaders and foliage mortality due to below normal winter temperatures, was common on leaders and laterals of pine, spruce and trembling aspen at scattered locations from Watson Lake to Dawson City. The largest area affected was near Beaver Creek where 40% of the foliage on 90% of the white and black spruce was damaged over 5000 ha. The intensity of damage varied from 2% of the leaders in a young pine stand near Watson Lake to 50% of the foliage on 90% of the young growth pine stand along the Klondike Highway near Twin Lakes.

Currently, winter damage is the most important problem in the Yukon and effects more trees over larger areas than any other pest. Recovery from winter damage is usually good, with damage limited to growth reduction and crooks.

Joint Canada-Sweden lodgepole pine trials

Trees at this plot in the Takhini Forest Reserve continue to exhibit poor growth and vigor. Ten percent of the lodgepole pine are dead, 50% have cumulative leader damage and 2% have new leader damage, all caused by winter damage. Many of the Siberian larch have died, 30% of the remaining trees have leader damage, of which 20% is current damage.

DECIDUOUS TREE PESTSLarge aspen tortrix, *Choristoneura conflictana*

Large aspen tortrix populations decreased slightly and defoliated trembling aspen over about 9100 ha, down slightly from 10 200 ha in 1989. Defoliation was severe over 4 365 ha, moderate over 1775 ha, and light over 2960 ha. Defoliation was mapped on both sides of the Alaska Highway and the Takhini River from west of Arkell Creek to east of Takhini Hot Springs, and between Flat Mountain and Lake Laberge.

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