

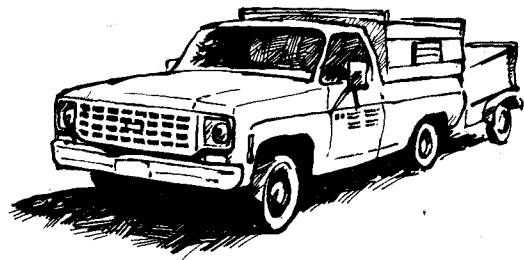


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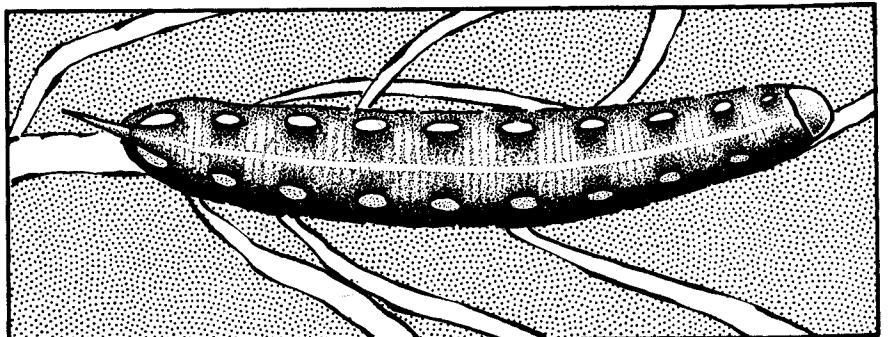
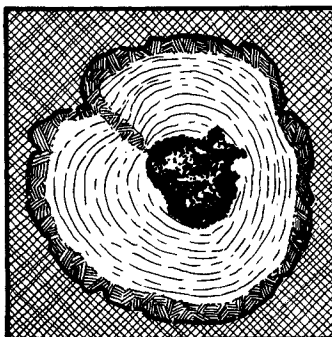
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# 1980 Forest Insect and Disease Conditions

Yukon Territory  
J.S. Monts



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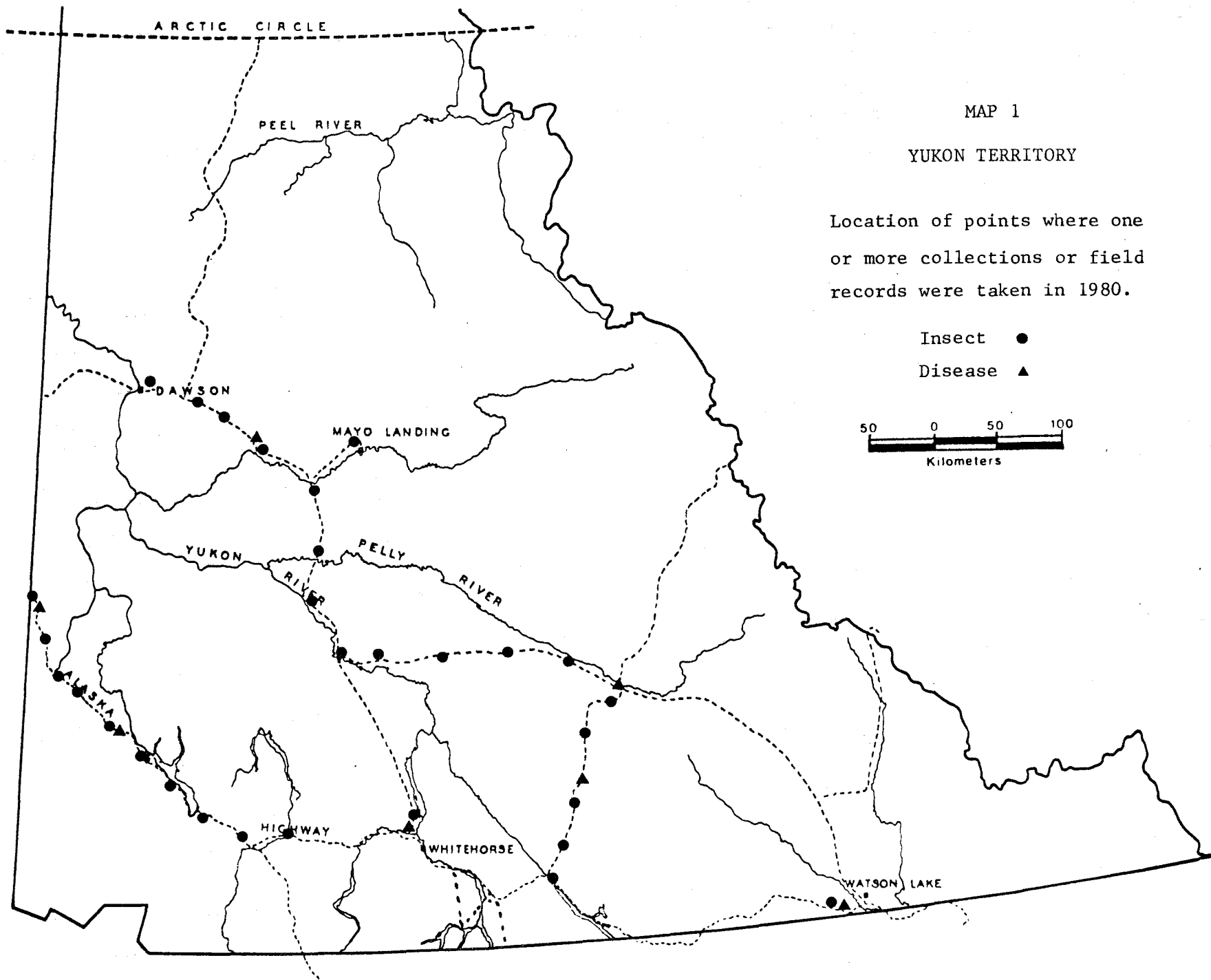
SUMMARY

This report outlines the status of forest insect and disease conditions in the Yukon for 1980, emphasizing pests capable of sudden, damaging outbreaks.

Pest populations were generally low with the exception of large aspen tortrix which caused moderate and severe defoliation along the Yukon River from Carmacks to McQuesten. Spruce beetle populations declined at Aishihik River. Defoliators were at endemic levels but black headed budworm larvae were common in small numbers in collections at Haines Junction and Ross River. Forest nursery trees and provenance trials were examined with Yukon Lands and Forests staff.

The 1980 field survey commenced on June 15 and was completed June 25, basically covering areas not surveyed in 1979. The survey consisted of monitoring pest populations at 35 locations (Map 1) and examination of nursery and provenance trees.

A forest insect and disease training seminar was presented in March by Dr. J. Hopkins and the author at Whitehorse and field instruction and liaison was included at each District station during the June field survey.



TREMBLING ASPEN PESTS

Large aspen tortrix, Choristoneura conflictana

Moderate and severe defoliation of trembling aspen occurred in patches of 200 to 1 000 ha in stands along the Yukon River at Carmacks and from Stewart Crossing to McQuesten, near Pelly Crossing and north of Mayo where defoliation has persisted for the past 4 years. Light defoliation was observed west of Whitehorse, near Beaver Creek and Teslin.

At Carmacks, Willow Creek and Stewart Crossing, where severe defoliation has persisted for four years, tree mortality was assessed by examining 100 trees at each location. Less than 5% of the trees were dead, although top kill and branch dieback were evident on up to 30% of the trees.

The aspen stands have a compliment of healthy white spruce understory which will provide forest cover if aspen mortality increases.

Numerous tortrix moths were observed laying eggs in late June, indicating that defoliation will probably continue in 1981.

Trembling aspen mortality

Tree mortality exceeded 50% in mature trembling aspen stands, in the townsite and along the Alaska Highway at Beaver Creek. The cause is unknown, however site disturbance is suspected as the cause. Healthy white spruce understory trees, up to 100 per hectare, will provide sufficient forest cover if the mortality continues.

Aspen leaf and shoot blight, Venturia sp.

Light damage to trembling aspen leaves and shoots was noticeable in widespread areas near Whitehorse, Teslin, Minto, Carmacks and Champagne. The disease had blackened several leaves on each branch tip throughout the stands.

SPRUCE PESTS

Spruce beetle, Dendroctonus rufipennis

Spruce beetle attacks along the Aishihik River and at Haines Junction declined in 1980, but occasional roadside trees, weakened by exposure and salt damage, were partially attacked along Kluane Lake. At the north end of Little Salmon Lake and at Quiet Lake, 1979 partial attacks and pitchouts were noted adjacent to recent and old blowdown. The absence of successful attacks and the numerous pitchouts indicate low

beetle populations that are not expected to cause any tree mortality in these areas in 1981.

Black-headed budworm, Acleris gloverana

A few blackheaded budworm larvae were found in samples from white spruce trees along the Klondike Highway north of Carmacks. No damage was noted and populations are expected to remain at endemic levels in 1981.

Salt Damage to Conifers

Severe foliage browning and occasional tree mortality, caused by use of salt on roads was conspicuous on white spruce and lodgepole pine trees for 5 km along the Alaska Highway at Champagne, Kluane Lake and for 30 km along the Robert Campbell Highway at Little Salmon Lake. Heavy use of salt on major roads in the Yukon Territory will likely continue to cause damage to the roadside trees.

PINE PESTS

Rodent damage

Varying hares killed up to 30% of the lodgepole pine and up to 50% of the trembling aspen trees, by girdling at the base of the stems, in stands along the Robert Campbell Highway from Carmacks to Ross River. The rabbit population apparently peaked in 1980 and damage will likely subside in 1981.

PESTS OF NATURAL AND MANAGED SECOND GROWTH STANDS  
AND PLANTATIONS

Lodgepole pine in provenance trials in three plots at Watson Lake and one plot at Takhini Forest Nursery were examined with Yukon Lands and Forests staff to determine the incidence of insect and disease damage. Trees from U.S.A. and B.C. provenances exhibited symptoms of site unsuitability and some tree mortality had occurred.

Pest populations appear to be at endemic levels in the Watson Lake trials and surrounding native lodgepole pine stands. Up to 15% tree mortality occurred in plot one. The trees examined had deformed root systems or "root balls" that likely originated during planting, and top kill on up to 10% of the trees in plot two was symptomatic of poor root development. Trees in plot three were in good condition, but occasional stem cankers of Endocronartium harknessii caused light branch damage.

Takhini provenance plots had occasional trees damaged by the stem rust, Cronartium comandra. An unknown needle cast damaged the 1979

needles of 50% of the trees of southern provenances, and up to 15% mortality was likely caused by poor site condition.

A spruce aphid, Pineus sp., infested twigs and branch tips on 20% of the white spruce in young stands along the Klondike River east of Dawson City, resulting in minor damage and some branch deformity.