ANNUAL REPORT OF FOREST BIOLOGY RANGER

for

YUKON DISTRICT

1958

FOREST BIOLOGY SURVEY

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INTRODUCTION

The Forest Insect and Disease Survey in the Yukon Forest Biology Ranger District began on June 20 and terminated on August 15. Only the areas accessible by roads in Yukon Territory and Atlin Ranger District were surveyed. A house trailer stationed at the Yukon Forestry Division in Whitehorse, Y. T. was used as headquarters.

Table 1 shows the host trees and the number of insect and tree disease collections made from each. Map 1 shows the localities where collections and field records were taken.

Table 1

Collections by Hosts
Yukon District - 1958

Coniferous hosts	Forest insects	Tree diseases	Broad-leaved hosts	Forest insects	Tree diseases
fir, alpine	6	1	alder, mountain	1	-
hemlock, western	1	-	alder, Sitka	6	-
larch, eastern	6	-	aspen, trembling	25	2
pine, lodgepole	21	2	birch, dwarf	11	-
spruce, black	5	-	birch, water	1	-
spruce, Sitka	1	-	birch, white	9	-
spruce, white	102	2	cottonwood, black	2	-
			poplar, balsam	4	-
			willow	43	2
			miscellaneous	4	-
			Total	106	5
Total	142	5	Grand total	248	10

Alaska Spruce Beetle, Dendroctonus borealis Hopk.

At Mile 1070, Alaska Highway, a group of five scattered white spruce trees were attacked in 1958. The trees were examined on July 31 and both larvae and parent adults were present. These trees were also attacked by a species of engraver beetle.

An Engraver Beetle in Lodgepole Pine, Ips sp.

Damage caused by this beetle was very light in 1958, however, a group of three lodgepole pine trees was attacked in the vicinity of lower Hazel Creek, B. C. A few scattered trees near Minto, Yukon Territory were also attacked and when the trees were examined in early July only young larvae were present.

Black-headed Budworm, Acleris variana (Fern.)

A light population of the black-headed budworm was observed on white spruce in the Watson Lake, Whitehorse, Haines Junction, Carmacks and Atlin districts. An average of five larvae was collected per 3-tree beating sample in late June. Adults and pupae were present in beating samples taken in mid-July near Carmacks, Yukon Territory. Only an occasional larva was collected elsewhere in the Yukon District.

Spruce Seedworm, Laspeyresia youngana (Kearf.)

Although the white spruce cone crop was light, cone samples were obtained from five localities. Each sample consisted of 50 cones and the percentage infested is shown in Table 2. All the samples were taken in late July or early August and only the larval stage of this insect was present in the infested cones.

Table 2

Percentage of White Spruce Cones Infested by the Spruce Seedworm (50-Cone Samples) Yukon Territory, July-August, 1958.

Locality	Percentage infested
Mile 139, Haines Road	20
Mile 1030, Alaska Highway	15
Mile 3, Aishihik Road	16
Mile 865, Alaska Highway	9
Carcross	20

Aspen Leaf-miner, Phyllocnistis populiella Cham.

The aspen leaf-miner infestation in the Watson Lake District increased slightly in 1958. The infestation extended from the British Columbia - Yukon border at Mile 626, Alaska Highway, to the Little Rancheria River at Mile 670. Only a trace of the miner was found elsewhere in the Yukon District. Table 3 shows the results of the examination of leaf samples taken at three localities. A sample consists of ten 18-inch branch tips selected from five trees.

Table 3

Percentage of Trembling Aspen Leaves Infested by the Aspen Leaf-miner (18-inch Branch Samples), Yukon District - 1958

Locality	Date	No. leaves examined	Percentage of leaves infested	Stage of insect
Watson Lake	June 19	604	80.6	pupa
Vand Creek	July 13	593	6.5	adult
Rancheria River	August 13	742	27.2	adult

Aspen Leaf Blotch Miner, Lithocolletis sp.

Trembling aspen trees in an area which extended six miles west of Stewart Crossing on the Dawson Road and five miles east on the Mayo Road were infested by this miner. The degree of infestation ranged from medium to heavy. A standard branch sample taken at Stewart Crossing on July 15 showed that 90 per cent of the leaves were infested. Only a few living larvae and pupae were found in the infested leaves.

The aspen blotch miner was observed to a lesser degree in aspen stands growing along the highway between Carmacks and Stewart Crossing. Very few mined aspen leaves were seen elsewhere in the Yukon District.

A Birch Leaf-roller, Eulype sp.

The birch leaf-roller population southeast of Dawson decreased in 1958, but continued to severely defoliate alder and white birch trees in the area west of Dawson. Alder trees growing along the Alaska Highway from the Yukon - Alaska border to Kluane Lake were also lightly defoliated.

Large Aspen Tortrix, Choristoneura conflictana (Wlk.)

A stand of trembling aspen trees three miles north of Carmacks, covering about 400 acres was very heavily defoliated by this insect. The average defoliation was estimated to be about 75 per cent. When the District was surveyed in mid-July most of the adults had already emerged.

Willow Leaf-miner, Lyonetia saliciella Busck.

The infestation at McKee Creek, west of Atlin, B. C., increased to about 250 acres in 1958. Although the miner prefers willow leaves, trembling aspen leaves were also mined.

A Spruce Gall Midge, ? Rhabdophaga swainei (Felt)

Damage attributed to larvae of this midge was light in all areas in the southern Yukon with the exception of Dawson and Mayo districts where no evidence of this cecidomyiid's presence was found. No collections were made as the adults had emerged by late June. Figures 1 and 2 illustrate damage caused by the midge.

A Lepidopterous Spruce Tip Miner

This miner continued to cause light damage to white spruce buds in the Teslin, Whitehorse and Haines Junction districts. Figures 3 and 4 in the photographic section illustrate damage caused by this miner.

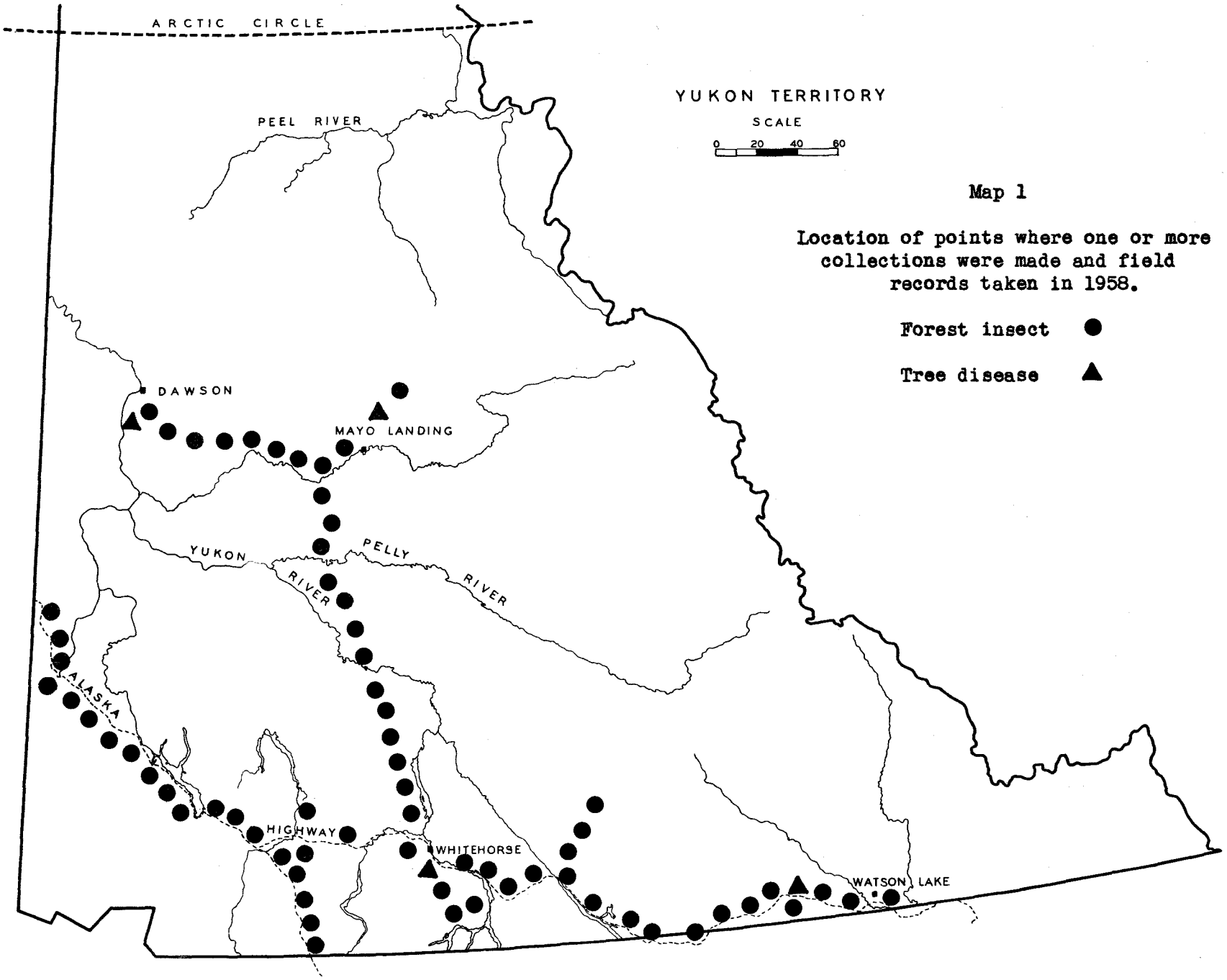
STATUS OF TREE DISEASES

Needle Rust on White Spruce

"Witches' brooms" caused by Peridermium coloradense (Diet.) Arth. and Kern continued to be associated with light damage in the District. White spruce trees of all age classes in the Atlin Lake area were heavily infected by this rust.

Western Gall Rust

A group of ten reproduction lodgepole pine trees was infected by Peridermium harknessii J. P. Moore at Mile 658 Alaska Highway, Y. T. No sign of this disease was observed elsewhere in the District.



Map 1

Location of points where one or more collections were made and field records taken in 1958.

Forest insect ●

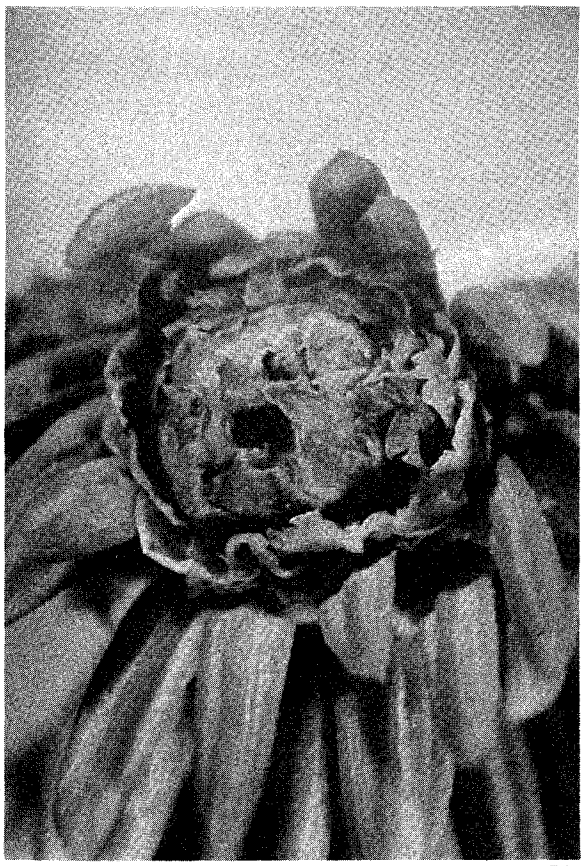
Tree disease ▲

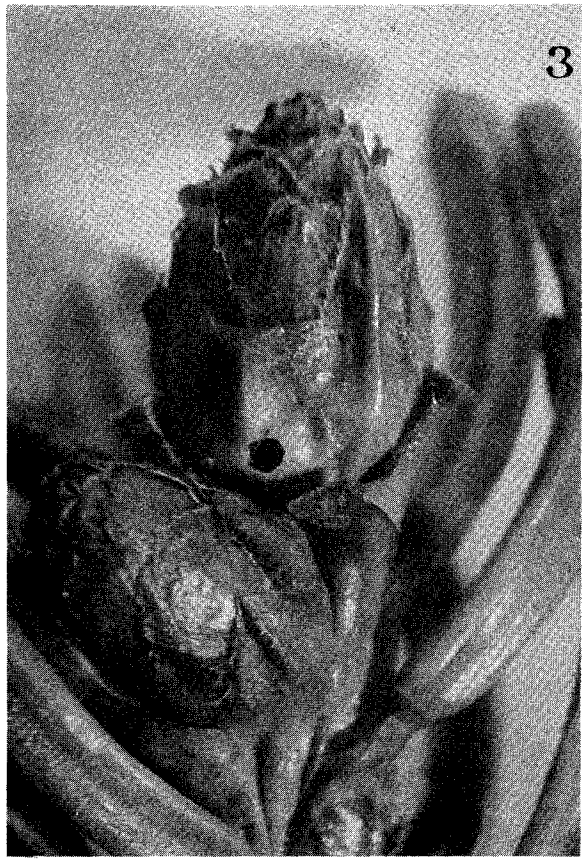
Figure 1. Spruce gall midge, Rhabdophaga swainei (Felt). Emergence hole made by an adult midge in a white spruce bud. Whitehorse, Y. T. August 2, 1958.
A. Craigmyle.

Figure 2. Cross section of a bud mined by the spruce gall midge. Whitehorse, Y. T. August 3, 1958.
A. Craigmyle.

Figure 3. Emergence hole made by an unidentified lepidopterous spruce tip miner in a white spruce bud. Whitehorse, Y. T. August 3, 1958.
A. Craigmyle

Figure 4. Cross section of a mined bud. Whitehorse, Y. T. August 3, 1958.
A. Craigmyle.





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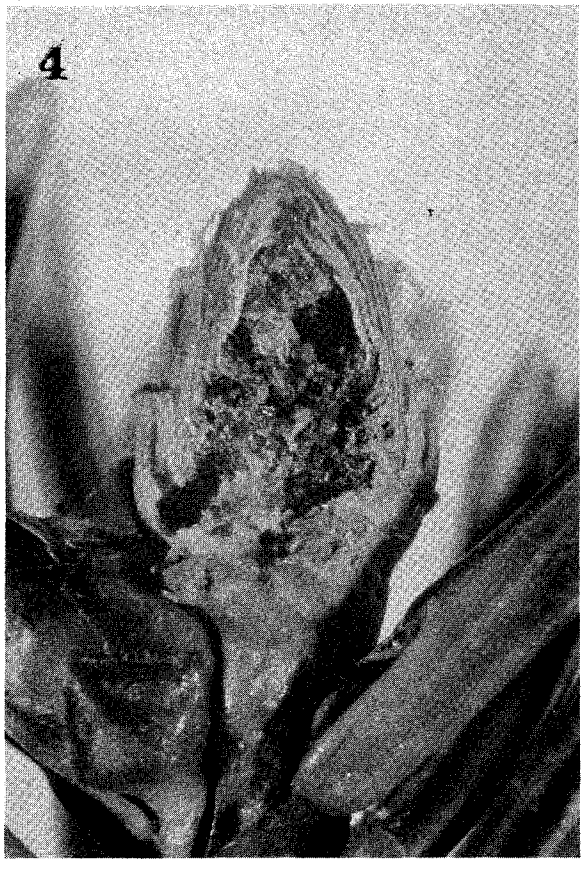

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