

ANNUAL DISTRICT REPORT  
YUKON DISTRICT  
YUKON TERRITORY 1968

by  
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## INTRODUCTION

The large aspen tortrix was the most destructive defoliator of aspen poplar in the Yukon Territory in 1968. Discoloration of aspen foliage by poplar serpentine miner was extensive in southern parts of the District. A high percentage of the spruce cone crop was destroyed by two species of spruce cone insects. Population levels of most other insects remained relatively the same as in 1967. An aerial survey of spruce stands in the southeastern Yukon revealed no evidence of spruce budworm damage.

Spruce needle rust infections were generally light throughout the District. Comandra blister rust caused notable mortality in many stands of regeneration lodgepole pine. Needle casts of spruce and pine were common and red belt occurred in two areas of the District.

## INSECT CONDITIONS

### Large Aspen Tortrix, Choristoneura conflictana (Wlk.)

Light defoliation, intermixed with patches of severe defoliation, occurred throughout most of the aspen covered areas of the Yukon. The patchy defoliation pattern which prevailed in 1968 indicated a reduction in populations from the previous year.

Along the Alaska Highway patchy, severe defoliation was observed in the Dezadeash Valley between Champagne and Haines Junction and in an area 38 miles southeast of Beaver Creek.

North of Whitehorse along the Klondike Highway, patches of severe defoliation were evident near Fox Lake, at Carmacks, 18 and 21 miles north of Carmacks, 28.7 miles north of Pelly Crossing and 9.2 miles south of Stewart Crossing. Along the Stewart River, between Stewart Crossing and Mayo, patchy light to moderate defoliation was observed. Severe defoliation occurred in a small area 11 miles north of Elsa.

Along the Dawson Highway patchy moderate to severe defoliation was observed west of Stewart Crossing for 20 miles. Patches of severe defoliation occurred from 15 miles west of McQuesten to Dawson City with the largest occurring 42 miles west of McQuesten.

In the Ross River area moderate to severe defoliation was evident at Frances Lake and in scattered patches along the Pelly River from Campbell Creek to Ross River.

Spruce Budworm, Choristoneura fumiferana (Clem.)

White spruce in the major river drainages east of Watson Lake to the Northwest Territories Border were checked by aerial survey and no defoliation by spruce budworm was observed. Ground checks at Fantasque, Hyland and Stewart lakes revealed no evidence of budworm.

Spruce Gall Midge, Mayetiola piceae Felt

Damage by this gall midge was common in the southwest portion of the Yukon. At Canyon Lake, high populations on the lower branches caused large numbers of tips to die which gave the trees a brown appearance. Light damage was found at Sulphur Lake, 3.4 miles north of Haines Junction and 11.7 miles west of Burwash Landing.

Poplar Serpentine Miner, Phyllocnistis populiella Cham.

Two major infestations of poplar serpentine miner were noted in the Yukon in 1968. Severe discoloration of foliage occurred in the larger stands of aspen throughout the Beaver Creek area. In the southwestern portion of the District severe discoloration occurred from a point 100 miles west of Watson Lake east to the Beaver River and north to Frances Lake. Light damage was noted in numerous other stands.

Spruce Cone Insects, Dasynura rachiphaga Tripp, Laspeyresia youngana (Kft.), Pegohylemyia sp.

White spruce cones in several locations in the Yukon contained high populations of cone insects. Severe damage was caused by the cone worm, L. youngana and a cone maggot, Pegohylemyia sp. Of the cones examined, 67.5 per cent were damaged by these two species. The spruce cone axis midge D. rachiphaga was found in all cones examined, but damage was negligible.

DISEASE CONDITIONS

Spruce Cone Rust, Chrysomyxa pirolata Wint.

Spruce cone rust infected cones of white spruce in several locations across the southern Yukon. Light infections were recorded at Haines Junction, southeast of Whitehorse and 79.6 miles east of Teslin.

Spruce Needle Rusts, Chrysomyxa spp.

The spruce needle rust, Chrysomyxa ledicola Lagerh. was noted on

both black and white spruce throughout the Yukon in 1968. Moderate to severe damage was encountered in spruce on the tops of the mountains in the Dawson City area although little damage was found in the valleys. Light to moderate damage was recorded 52 miles south of Haines Junction and on understory regeneration at Canyon Lake. A high incidence of Chrysomyxa woroninii Tranz. was recorded on Midnight Dome near Dawson City and a low incidence at Mile 36.2 of the Dempster Highway, Keno, Beaver Creek, Carmacks and Squanga Lake.

Chrysomyxa ledicola Lagerh. was collected on spruce cones 43 miles east of Teslin and 52 miles south of Haines Junction.

Comandra Blister Rust, Cronartium comandra Pk.

Regeneration lodgepole pine in several areas between Watson Lake and Whitehorse were infected with this stem rust and some mortality was noted. The most severely infected stand was found 55.9 miles east of Teslin where rodents chewed out cankers and a high incidence of mortality occurred.

The known range of comandra blister rust on the alternate host, Geocaulon lividum, was extended north from Whitehorse with collections at Carmacks, Stewart Crossing and Mayo.

A hyperparasite of rust fungi, Cladosporium sp. was found on a rust canker 130 miles north of Watson Lake.

#### Climatic Damage

Typical reddening of foliage due to winter drying was observed in two locations in the Yukon in 1968. Black spruce in a valley bottom 4.8 miles southeast of Beaver Creek sustained severe damage. Although the old foliage was killed, new buds survived and the trees appeared to have recovered. Lodgepole pine on the north side of the town of Whitehorse sustained light damage.

#### OTHER NOTEWORTHY INSECTS AND DISEASES, 1968

Causal Agent	Host	Remarks
<u>Insect</u>		
Bark beetle, <u>Cryphalus nitidus</u> Sw.	Willow	Collected 12.7 miles west of Destruction Bay.

## Other Noteworthy Insects and Diseases - Cont'd.

Causal Agent	Host	Remarks
Lodgepole pine beetle, <u>Dendroctonus murrayanae</u> Hopk.	Lp. pine	Low populations in several locations. Caused some mortality in a small area near Teslin.
Spruce bark beetle, <u>Dendroctonus obesus</u> (Mann.)	W. spruce	Collected from logs at Kluane Lake.
Eastern larch beetle, <u>Dendroctonus simplex</u> Lec.	Tamarack	Low populations at Frances Lake.
Zimmerman pine moth, <u>Dioryctria zimmermani</u> (Grote)	Lp. pine	Collected 26.5 miles west of Watson Lake.
Bark beetle, <u>Ips perturbatus</u> Eich.	W. spruce	Appeared to have caused some tree mortality 25.8 miles west of Destruction Bay.
Poplar leaf miner, <u>Lithocolletis</u> spp.	T. aspen	Common in the southern portion of the District. High populations on regeneration at Whitehorse.
Willow leaf miner, <u>Lyonetia</u> sp.	Willow	Caused light damage at Watson Lake.
Bark beetle, <u>Orthotomicus latidens</u> Lec.	Lp. pine	Collected 68.4 miles east of Teslin.
Pitch nodule maker, <u>Petrova albicapitana</u> (Busck)	Lp. pine	Collected near Watson Lake.
Pitch nodule maker, <u>Petrova metallica</u> (Busck)	Lp. pine	Collected 11 miles west of Watson Lake.
Root collar weevil, <u>Pissodes</u> sp.	Lp. pine	Medium populations at Johnson's Crossing. Low populations at Watson Lake, Carmacks and Mayo.

## Other Noteworthy Insects and Diseases - Cont'd.

Causal Agent	Host	Remarks
Four-eyed spruce bark beetle, <u>Polygraphus rufipennis</u> Kby.	W. spruce	Collected from several locations in the Yukon.
Leaf tier, <u>Pseudexentera improbana oregonana</u> . Wlshm.	T. aspen	Light damage east of Whitehorse.
Spruce bud midge <u>Rhabdophaga swainei</u> Felt	W. spruce B. spruce	Low populations throughout the Yukon. Moderate damage occurred at Mile 44, Dempster Highway.
Bark beetle, <u>Taenioglyptes ruficollis ruficollis</u> Hopk.	A. fir	Collected at Rose Lake. A northern extension of distribution in the Region.
<u>Disease</u>		
Leaf spot of birch, <u>Atopospora betulina</u> (Fr.) Petr.	Birch	Collected 52 miles south of Haines Junction.
Pine needle rust, <u>Coleosporium asterum</u> (Diet.) Syd.	Goldenrod	Collected at Watson Lake, Mayo and 75 miles north of Whitehorse.
Spruce needle cast, <u>Isthmiella crepidiformis</u> (Darker) Darker	W. spruce B. spruce	Caused light needle drop in numerous locations.
Needle cast, <u>Lirula macrospora</u> (Hartig) Darker	W. spruce	Collected at Minto and Teslin.
Pine needle cast, <u>Lophodermella montivaga</u> Petr.	Lp. pine	Caused severe needle drop along the Canol Road 60 miles south of Ross River.
Snow blight, <u>Lophophacidium hyperboreum</u> Lager.	W. spruce	Collected south of Dawson City at an elevation of 3500 feet.
Poplar leaf spot, <u>Marssonina tremuloidis</u> (Ell. & Ev.) Kleb.	T. aspen	Severe discolored patches at Carcross, Tagish, Haines Junction, Johnson's

## Other Noteworthy Insects and Diseases - Cont'd.

Causal Agent	Host	Remarks
Leaf rust of willow, <u>Melampsora epitea</u> Thuem.	Willow	Crossing and the Lewis River Crossing.  Common throughout the Yukon. High incidence at Carcross, Mile 33 Dempster Highway and Frances Lake.
Western gall rust, <u>Peridermium harknessii</u> J. P. Moore	Lp. pine	Collected in the Watson Lake area.
Fir needle rust, <u>Pucciniastrum epilobii</u> Otth.	A. fir Fireweed	Light infection on alpine fir at Quiet Lake. Fireweed was severely infected at Tagish and Frances Lake, moderate at Squanga Lake and light at Watson Lake.
Leaf rust, <u>Pucciniastrum sparsum</u> (Wint.) E. Fisch	W. spruce Alpine bearberry	Collected at McClintock on bearberry. A rust, believed to be <u>P. sparsum</u> , was collected from white spruce at Destruction Bay.
Tar spot, <u>Rhytisma salicinum</u> (Pers.) Fr.	Willow	Common in the District. High incidence at McClintock and Destruction Bay.

## SUMMARY OF INSECT AND DISEASE COLLECTIONS BY HOSTS

Host Coniferous	Collections		Host Deciduous	Collections	
	Insect	Disease		Insect	Disease
White spruce	33	33	T. aspen	42	7
Black spruce	6	20	B. poplar	1	2
Lodgepole pine	12	19	Birch	0	4
Alpine fir	3	9	Willow	9	8
Larch	1	0			
	55	81		52	21
Insect collections from miscellaneous hosts					2
Disease collections from miscellaneous hosts					26
GRAND TOTAL					237