Environment Canada | Environnement Canada
Forestry Service | Service des Forêts

FOREST INSECT AND DISEASE CONDITIONS IN MANITOBA PROVINCIAL PARKS, 1972

by V.B. Patterson and G.N. Still

NORTHERN FOREST RESEARCH CENTRE
EDMONTON, ALBERTA
INFORMATION REPORT NOR-X-55

MARCH, 1973

FOREST INSECT AND DISEASE CONDITIONS IN MANITOBA PROVINCIAL PARKS, 1972

by

V. B. PATTERSON and G. N. STILL

NORTHERN FOREST RESEARCH CENTRE
INFORMATION REPORT NOR-X-55
MARCH 1973

CANADIAN FORESTRY SERVICE
ENVIRONMENT CANADA
5320 - 122 STREET
EDMONTON, ALBERTA, CANADA
T6H 3S5

TABLE OF CONTENTS

FOREST INSECT AND DISEASE CONDITIONS IN MANITOBA PROVINCIAL PARKS, 1972

by

V.B. Patterson* and G.N. Still**

INTRODUCTION

Special emphasis was placed on provincial parks and campgrounds during general forest insect and disease surveys in Manitoba in 1972. Noteworthy insects and diseases reported from each of 11 Manitoba provincial parks are listed in the following report, including comments on the species of most concern in each park.

ASESSIPPI PROVINCIAL PARK

Perennial tree diseases and wood borers were responsible for severe damage to aspen poplar in some areas of Asessippi Provincial Park.

Poplar Borer, Saperda calcarata Say

This poplar borer was the only insect species to cause any serious damage in the Park in 1972. Overmature aspen poplar, particularly in the public beach area along the Shell River, were severely infested.

White Trunk Rot, Fomes igniarius (L. ex Fr.) Kickx.

White trunk rot was a serious problem in aspen poplar along the Shell River. Numerous fruiting bodies on the trunks of overmature trees indicated a high incidence rate in the advanced stage of the disease.

Hypoxylon Canker, Hypoxylon mammatum (Wahl.) Miller

This disease was responsible for a number of dead aspen poplar in the beach area and throughout the general campground and picnic areas.

---

* Supervisor, Insect and Disease Survey; and

** Ranger, Insect and Disease Survey.

Northern Forest Research Centre, Canadian Forestry Service, Environment Canada, 5320 - 122 Street, Edmonton, Alberta, Canada T6H 3S5.

BIRDS HILL PROVINCIAL PARK

Aspen poplar defoliators were the most abundant insect species in Birds Hill Provincial Park in 1972. Dwarf mistletoe of spruce and Hypoxylon canker of aspen continued to be the most important tree diseases recorded.

Large Aspen Tortrix, Choristoneura conflictana (Wlk.) and Forest Tent Caterpillar, Malacosoma disstria Hbn.

Patches of moderate to severe defoliation occurred in the northern and eastern portions of the Park and light defoliation was common generally. The large aspen tortrix was the major defoliator but the forest tent caterpillar contributed significantly to the overall damages.

Noteworthy Insects and Diseases

Causal Agent	Host	Remarks
Insects		
Oak webworm, Archips fervidanus (Clem.)	B. oak	Low incidence, light to moderate damage to individual trees.
A pine tube moth, Argyrotaenia tabulana Free.	J. pine	Light needle mining in young plantations.
Solitary oak leaf miner, Cameraria hamadryadella (Clemens)	B. oak	Scattered light to moderate leaf mining.
Oak leaf miner, Cameraria macrocarpae Freeman	B. oak	Some scattered light leaf mining.
Snout moth, Dioryctria poss. banksiella Mutuura, Munroe & Ross	Scots pine	Rust galls on the main stems of several young planted trees were infested with this species.
Larch sawfly, Pristiphora erichsonii (Htg.)	Tamarack	Light defoliation common in tamarack stands.

Causal Agent	Host	Remarks
Poplar borer, *Saperda calcarata* Say	T. aspen	Scattered signs of boring damage common, particularly in the campgrounds.
Disease		
A witches' broom, *Apiosporina collinsii* (Schw.) Hoehn.	Saskatoon	Light to moderate brooming of understory trees.
Spruce mistletoe, *Arceuthobium pusillum* Pk.	B. spruce Tamarack	Heavy brooming in the northwest section of the Park. Several brooms on tamarack caused by this species, which normally occurs on spruce in Manitoba.
Poplar ink spot, *Ciborinia whetzellii* (Seaver) Seaver	T. aspen	Traces of leaf infection.
Black knot of cherry, *Dibotryon morbosum* (Schw.) T. & S.	Chokecherry	Scattered patches of light to moderate infection.
White trunk rot, *Fomes igniarius* (L. ex Fr.) Kickx.	T. aspen	Low incidence of infection.
Rust, *Gymnosporangium* sp.	Saskatoon	Patches of moderate to severe leaf infection.
Hypoxylon canker of aspen, *Hypoxylon mammatum* (Wahl.) Miller	T. aspen	Low incidence of cankered trees common. Some recent mortality.

CLEARWATER PROVINCIAL PARK

Moderate to severe leaf skeletonizing of white birch was fairly extensive in the Park but there were no other significant insect or disease problems detected.

Noteworthy Insects and Diseases

Causal Agent	Host	Remarks
Insect		
Pineapple gall aphid, *Adelges lariciatus* (Patch)	W. spruce	A few trees lightly to moderately infested in the Campers Cove area.
Birch skeletonizer, *Bucculatrix canadensisella* Cham.	W. birch	Patches of moderate to severe leaf skeletonizing.
Spiny elm caterpillar, *Nymphalis antiopa* (Linn.)	Willow	A few moderately to severely defoliated willow clumps observed.
Larch sawfly, *Pristiphora erichsonii* (Htg.)	Tamarack	Light defoliation.
Poplar borer, *Saperda calcarata* Say	T. aspen	Some boring damage observed in the Campers Cove area.
Aspen webworm, *Tetralopha aplastella* Hlst.	T. aspen	Light infestation.
Disease		
Jackpine mistletoe, *Arceuthobium americanum* Nutt. ex Engelm.	J. pine	Some patches of moderate brooming.
Spruce mistletoe, *Arceuthobium pusillum* PK.	B. spruce	Some patches of moderate brooming.
Yellow witches' broom, *Chrysomyxa arctostaphyli* Diet.	B. spruce	Low incidence of brooming.

Causal Agent	Host	Remarks
Globose gall of poplar, *Diplodia tumefaciens* (Shear) Zalasky	T. aspen	Light infection on a few trees in the Campers Cove area.
Hypoxylon canker, *Hypoxylon mammatum* (Wahl.) Miller	T. aspen	Low incidence of infected trees.
Balsam poplar leaf blight, *Linospora tetraspora* Thompson	B. poplar	Scattered patches of moderate to severe leaf blight.

DUCK MOUNTAIN PROVINCIAL PARK

Defoliation of aspen poplar was the only significant damage in the Park in 1972.

Large Aspen Tortrix, Choristoneura conflictana (Wlk.)

The large aspen tortrix infestation covered a larger area than in 1971. Defoliation was moderate to severe west of a line running northwest and southeast of Childs Lake and into Duck Mountain Provincial Forest to within three miles of the Saskatchewan border.

Noteworthy Insects and Diseases

Causal Agent	Host	Remarks
Insect		
Pineapple gall aphid, Adelges lariciatus Patch	W. spruce	A few trees lightly to moderately infested in the Childs Lake campground.
Forest tent caterpillar, Malacosoma disstria Hbn.	T. aspen	Low populations in the Childs Lake area.
Yellow headed spruce sawfly, Pikonema alaskensis (Roh.)	W. spruce	Light to moderate defoliation in the Childs Lake campground.
Disease		
White trunk rot, Fomes igniarius (L. ex Fr.) Kickx.	T. aspen	Low incidence of infected trees.

GRAND BEACH PROVINCIAL PARK

Defoliation of aspen poplar and jack pine were the only significant insects recorded. Mistletoes on spruce and jack pine and rust galls on jack pine were again the most important tree diseases.

Noteworthy Insects and Diseases

Insects

Causal Agent	Host	Remarks
Large aspen tortrix, *Choristoneura conflictana* (Wlk.)	T. aspen	Patches of moderate defoliation in the southeastern section of the Park; light defoliation common throughout.
Jack pine budworm, *Choristoneura pinus pinus* Free.	J. Pine	Scattered light defoliation.
Aspen blotch miner, *Lithocolletis salicifoliella* Cham.	T. aspen	Light leaf mining of saplings and young fringe trees.
Forest tent caterpillar, *Malacosoma disstria* Hbn.	T. aspen	Scattered light defoliation.
Jack pine sawfly, *Neodiprion* spp.	J. pine	Scattered light defoliation.

Diseases

Jack pine mistletoe, *Arceuthobium americanum* Nutt. ex Engelm.	J. pine	Heavily broomed trees in campgrounds. Mistletoe known to occur on Elk Island.
Spruce mistletoe, *Arceuthobium pusillum* Pk.	B. spruce	Broomed trees in campgrounds. Mistletoe known to occur on Elk Island
Globose gall rust, *Endocronartium harknessii* (J.P. Moore) Y. Hiratsuka	J. pine	Scattered light gall infections.

GRASS RIVER PROVINCIAL PARK

Willow leaf miners and large aspen tortrix were the only insect species causing serious damage in the Park in 1972. No important tree diseases were recorded.

Noteworthy Insects

Causal Agent	Host	Remarks
Cooley spruce gall aphid, Adelges cooleyi (Gill.)	W. spruce	A few trees severely infested in Gyles Park on Simonhouse Lake.
Large aspen tortrix, Choristoneura conflictana (Wlk.)	T. aspen	Defoliation ranging from light to severe in the Reed Lake area.
Willow leaf miner, Lyonetia sp.	Willow	Patches of moderate to severe leaf mining along Highway 391 in the Reed Lake area and at Gyles Park on Simonhouse Lake.
Vagabond gall aphid, Mordwilkoja vagabunda (Walsh)	T. aspen	Light infestation in Gyles Park.
Larch sawfly, Pristiphora erichsonii (Htg.)	Tamarack	Light defoliation.

HECLA PROVINCIAL PARK

Defoliation of balsam fir and brooming of spruce were the only serious problems recorded on the Island in 1972.

Noteworthy Insects and Diseases

Causal Agent	Host	Remarks
Insect		
Ugly nest caterpillar, *Archips cerasivoranus* (Fitch)	Chokecherry	Widely scattered low incidence.
Birch skeletonizer, *Bucculatrix canadensisella* Chamb.	W. birch	Light leaf skeletonizing common.
Balsam gall midge, *Dasineura balsamicola* (Lint.)	B. fir	Scattered traces of needle galls.
Aspen blotch miner, *Lithocolletis salicifoliella* Chamb.	T. aspen	Scattered light leaf mining.
Balsam fir sawfly, *Neodiprion abietis* complex	B. fir	Small patches of light to moderate defoliation five miles southwest of Hecla.
Yellow headed spruce sawfly, *Pikonema alaskensis* (Roh.)	B. spruce W. spruce	Scattered light defoliation of regeneration.
Disease		
Spruce mistletoe, *Arceuthobium pusillum* Pk.	B. spruce W. spruce	Heavily broomed trees at scattered points.
Poplar ink spot, *Ciborinia whetzellii* (Seaver) Seaver	T. aspen	Traces of leaf infection.
Aspen shoot blight, *Venturia macularis* (Fr.) E. Muell & V. Arx.	T. aspen	Patches of light shoot infection of regeneration.

PAINT LAKE PROVINCIAL PARK

The only significant pest detected in the Park was the large aspen tortrix, Choristoneura conflictana (Wlk.). Defoliation of aspen poplar by this species, ranging from light to severe, occurred in the area between the campground and Highway 391.

Some tree failure has occurred in the campground near the beach area. Soil slippage along the lakeshore has destroyed a number of mature white spruce either by splitting the trunks or completely uprooting the trees.

SPRUCE WOODS PROVINCIAL PARK

The spruce budworm was again the most serious pest in the Park and responsible for widespread severe defoliation of white spruce. Defoliators of aspen poplar caused moderate to severe injury.

Spruce Budworm, *Choristoneura fumiferana* (Clem.)

An aerial survey was conducted in June in order to determine the extent of damage by the spruce budworm. Moderate to severe defoliation of current needle growth was common in natural spruce stands throughout the Park. The current outbreak has been in progress since 1967 and many trees that have been subjected to three or more consecutive years of severe defoliation are beginning to show evidence of declining vigor.

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

Defoliation of aspen poplar by this species was moderate to severe along Highway 258 from the north end of the Park to Kitchi Manitou campground.

Noteworthy Insects and Diseases

Causal Agent	Host	Remarks
Insect		
Ugly nest caterpillar, *Archips cerasivoranus* (Fitch)	Chokecherry	Numerous tents in the Kitchi Manitou campground and in the area to the north.
Solitary oak leaf miner, *Cameraria hamadryadella* (Clemens)	B. oak	Patches of moderate to severe leaf mining.
Stem gall, *Disholcaspis spongiosa* Karsch	B. oak	Some isolated light to severe infestations of small clumps.
Forest tent caterpillar, *Malacosoma disstria* Hbn.	T. aspen	Very little injury within the Park. Severe in the agricultural area at the south end of the Park east of Highway 258, and light along the north boundary.

TURTLE MOUNTAIN PROVINCIAL PARK

Light injury to aspen poplar by an undetermined defoliator occurred in patches throughout the Park proper and also in the International Peace Gardens. The spruce budworm, Choristoneura fumiferana (Clem.) caused light to moderate defoliation to a shelterbelt of white spruce at the north end of the Peace Gardens. There was also light defoliation by the yellow-headed spruce sawfly, Pikonema alaskensis (Roh.) on this shelterbelt and to other spruce planted throughout the area.

Two diseases of trembling aspen, white trunk rot, Fomes igniarius (L. ex Fr.) Kickx. and Hypoxylon canker, Hypoxylon mammatum (Wahl.) Miller were recorded in the Park, although the incidence of infected trees was generally low.

Causal Agent	Host	Remarks
A red-humped oakworm, *Symmerista* poss. *canicosta* Franclemont	B. oak	Traces of defoliation in the Kitche Manitou Campground.
Colonial web-maker, *Tetralopha expandens* Walker	B. oak	Light infestation.
Disease		
A withches' broom, *Apiosporina collinsii* (Schw.) Hoehn.	Saskatoon	Light brooming of understory trees.
Heartwood rot, *Fomes fraxinophilus* (Pk.) Sacc.	G. ash	Conks common in Kiche Manitou Campground
Leaf spot, *Gnomonia ulmea* (Schw.) Thum.	W. elm	Scattered light to moderate leaf infections.
Leaf rust, *Gymosporangium* sp.	Saskatoon	Light leaf infections common.

WHITESHELL PROVINCIAL PARK

Broadleaf defoliators caused extensive defoliation in the west-central section of Whiteshell Provincial Park. Yellow-headed spruce sawfly continued to be a significant pest of young spruce in recreation areas and skeletonizing of birch foliage was widespread. There were no serious tree disease problems detected.

Forest Tent Caterpillar, Malacosoma disstria Hbn. and Large Aspen Tortrix, Choristoneura conflictana (Wlk.)

Moderate to severe defoliation occurred throughout the west central portion of the Park in an area bounded by White, Jessica, Lone Island, Whiteshell, Horseshoe, George, Dorthy and Eleanor Lakes. The infestation extended northerly, beyond the Park boundaries, east of the Winnipeg River system to Lac du Bonnet, Great Falls, and Powerview. Some isolated patches of moderate to severe defoliation also occurred approximately two to four miles southwest of Falcon Beach. Light defoliation was common throughout the remainder of the Park.

In most infestations, M. disstria was the major defoliator although in some areas C. conflictana was found to be of equal intensity. However, at all points of examination both species were found to be present in significant numbers.

Yellow-headed Spruce Sawfly, Pikonema alaskensis (Roh.)

Moderate to severe defoliation of young spruce ornamentals in cottage and recreation areas, and of roadside spruce regeneration occurred along Highway 307 from Red Rock Lake to Nutimik Lake.

Young trees were similarly affected in the White Lake Campground and in the Falcon Lake area. Light defoliation was common throughout the Park, particularly on young trees in open growing stands.

Other Noteworthy Insects and Diseases

Causal Agent	Host	Remarks
Insect		
Cooley spruce gall aphid, *Adelges cooleyi* (Gill.)	W. spruce	Moderate infestation of a few trees in the Big Whiteshell Campground.
Oak petiole gall, *Andricus petiolicola* (Osten Sacken)	B. oak	A few trees moderately to severely infested with galls in a picnic area on the south side of Falcon Lake.
Ugly nest caterpillar, *Archips cerasivoranus* (Fitch)	Chokecherry	Widely scattered nests common throughout the Park including recreation areas at Otter Falls Big Whiteshell and Falcon Lake.
Birch skeletonizer, *Bucculatrix canadensisella* Chamb.	W. birch	Patches of moderate to severe leaf skeletonizing scattered throughout the Park.
Balsam gall midge, *Dasineura balsamicola* (Lint.)	B. fir	Traces of needle infestation in the Falcon Lake area.
European spruce sawfly, *Diprion hercyniae* (Htg.)	B. spruce	Traces in the Darwin area.
European alder leaf miner, *Fenusa dohrnii* (Tischb.)	Alder	Light leaf mining common.
Green-striped looper, *Feralia jocosa* Gn.	W. spruce	Traces in the Darwin area.
Striped alder sawfly, *Hemichroa crocea* (Fourcroy)	Alder	Patches of moderate to severe defoliation about one mile west of Rennie.
Fall webworm, *Hyphantria cunea* (Drury)	Alder	Widely scattered nests causing light to moderate leaf skeletonizing of individual trees.

Causal Agent	Host	Remarks
Aspen blotch miner, *Lithocolletis salicifoliella* Cham.	T. aspen	Patches of moderate to severe leaf mining of saplings and young fringe trees in the Darwin, Meditation Lake, Falcon Lake, and Breton areas. Scattered light damage common throughout.
Western tent caterpillar, *Malacosoma californicum pluviale* Dyar	Pincherry Rose Willow	A few tents seen near Otter Falls.
Sawflies, *Neodiprion* spp.	J. pine	Some saplings moderately defoliated by *Neodiprion* sp. in the Brereton Lake Campground; by *N. pratti banksianae* Roh. near Rennie, and by *N. virginianus* complex near Toniata Beach. Larval colonies commonly observed in jack pine stands throughout causing light damage.
Pitch nodule maker, *Petrova albicapitana* (Busck)	J. pine	Traces of pitch nodules common in jack pine stands.
Poplar serpentine miner, *Phyllocnistis populiella* Cham.	T. aspen	Traces in the Falcon Lake area.
Green-headed spruce sawfly, *Pikonema dimmockii* (Cress.)	W. spruce	Traces near Darwin.
White pine weevil, *Pissodes strobi* (Peck)	J. pine	Low incidence of infested sapling tops in the Brereton, Meditiation Lake and Otter Falls areas.
Larch sawfly, *Pristiphora erichsonii* (Htg.)	Tamarack	Populations low and defoliation light in all tamarack stands examined.
Woolly alder aphid, *Prociphilus tesselatus* (Fitch)	Alder	Large masses of aphids on alder stems west of Rennie and between West Hawk and Falcon lakes.
Poplar borer, *Saperda calcarata* Say	T. aspen	Boring damage evident on a number of trees in the Falcon Lake campground.

Causal Agent	Host	Remarks
Aspen webworm, *Tetralopha aplastella* Hlst.	T. aspen	Scattered light damage common throughout.
Pine webworm, *Tetralopha robustella* Zell.	J. pine	Light infestation of saplings six miles west of Falcon Lake.
Disease		
A witches broom, *Apiosporina collensii* (Schw.) Hohn.	Saskatoon	Light brooming of understory trees in some areas.
Yellow witches' broom, *Chrysomyxa arctostaphyli* Diet.	B. spruce	Isolated single brooms at widely scattered points throughout the Park.
Poplar ink spot, *Ciborinia whetzellii* (Seaver) Seaver	T. aspen	Widely scattered traces of leaf infection.
Globose gall rust, *Endocronartium harknessii* (J.P. Moore) Y. Hiratsuka	J. pine	Light gall infections common in jack pine stands.
White trunk rot, *Fomes igniarius* (L. ex Fr.) Kickx.	T. aspen	Several infected trees noted in the Falcon Lake campground and at widely scattered points throughout the Park.
Hypoxylon canker of aspen, *Hypoxylon mammatum* (Wahl.) Miller	T. aspen	Low incidence of cankered trees throughout the Park. Some mortality in the Falcon Lake campground.
Balsam poplar leaf blight, *Linospora tetraspora* Thompson	B. poplar	Moderate to severe leaf infections of regeneration in the Falcon Lake campground. Light infections common throughout the Park.
Yellow witches broom, *Melampsorella caryophyllacearum* Schroet.	B. fir	Occasional brooms at scattered points throughout the Park. Fairly common in the Falcon Lake area.

Causal Agent	Host	Remarks
Fir needle rust, *Pucciniastrum geoppertianum* (Kuehn) Kleb.	B. fir	Up to 10 per cent of current needles infected on some trees in the Otter Falls area.
Aspen shoot blight, *Venturia macularis* (Fr.) E. Muell & V. Arx.	T. aspen	Scattered light shoot damage common in the Park.

Patterson, V.B., and G.N. Still

1973. Forest insect and disease conditions in Manitoba Provincial Parks, 1972.

Information Report NOR-X-55; 18 pp;
Northern Forest Research Centre,
Environment Canada, Edmonton, Alberta

Patterson, V.B., and G.N. Still

1973. Forest insect and disease conditions in Manitoba Provincial Parks, 1972.

Information Report NOR-X-55; 18 pp;
Northern Forest Research Centre,
Environment Canada, Edmonton, Alberta

Copies of this publication (if still in stock) may be obtained from:

Information Officer
Northern Forest Research Centre
Canadian Forestry Service
Department of the Environment
5320 - 122 Street
Edmonton, Alberta, Canada T6H 3S5