

SUMMARY OF FOREST INSECT AND DISEASE

CONDITIONS IN SASKATCHEWAN, 1976

BY

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ABSTRACT

This report presents the results of the 1976 annual survey of forest insect and diseases in Saskatchewan.

RESUME

Ce rapport présente les résultats du lever de plan des insectes et maladies forestières en 1976 dans la Saskatchewan.

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INTRODUCTION

Extension work in Saskatchewan was carried out by two field officers working out of Prince Albert on a full-time summer assignment and two on part-time assignment working out of Edmonton. The number of extension calls was slightly lower than in 1975.

The forest tent caterpillar was the most widespread defoliator of deciduous trees in the province. The infested area was slightly larger than in 1975. Populations of the fall cankerworm in the agricultural area remained relatively unchanged. An outbreak of jack pine budworm was present in most of the western half of the Nisbet Forest.

The most commonly reported disease was fire blight. There was no evidence of the Dutch elm disease outbreak in Manitoba having spread to Saskatchewan.

*INSECT CONDITIONS*Forest Tent Caterpillar, *Malacosoma disstria* (Hbn.)

An aerial survey of forest tent caterpillars was conducted in June in the area northwest of Prince Albert. The infestations in the Big River and Emma Lake areas increased slightly in intensity and size, while the defoliation at South Bay (Lac-Ile-à-la-Crosse) decreased considerably over that reported in 1975. No defoliation was observed this year between Arsenault and Canoe lakes.

Moderate to severe defoliation of aspen was recorded in the Emma-Christopher lakes area as far west as Tweedsmuir, in the vicinity of Big River from the Bodmin fire tower to Egg Lake, along the west side of Cowan Lake to the fire tower north of Heron Lake, between Hall and Delaronde lakes, immediately west of Top Lake, between Durocher Lake and the Beaver River, and along the east side of South Bay.

Ground surveys were carried out in the Emma-Christopher lakes area, from which there were many reports and inquiries from concerned homeowners and personnel in provincial government agencies. Moderate to severe defoliation occurred over a larger area than was reported in 1975.

Endemic populations were recorded in Prince Albert National Park and Duck Mountain Provincial Park but no noticeable defoliation occurred.

Moderate defoliation occurred west of Moosomin and some defoliation occurred within the townsite along with defoliation caused by the

fall cankerworm, Alsophila pometaria. Moderate defoliation was reported in Cypress Hills Provincial Park.

A few reports of tent caterpillars were received in the Prince Albert office from the east-central part of the province but no on-site inspections were made. (See map for locations of infestations.)

Jack Pine Budworm, *Choristoneura pinus pinus* Free

An outbreak of jack pine budworm occurred in the Nisbet Provincial Forest in 1976. Moderate to severe defoliation occurred throughout the area west of Highway 2 to within 5 km (3 miles) of the western boundary of the Forest and north to Indian Reserve 94A. In the narrow area northwest of IR 94A, defoliation was moderate in patches. Light defoliation extended for about 1.5 km (1 mile) east of Highway 2.

The ground survey was carried out during the third week in July after all larval feeding was completed. In some areas almost complete defoliation had occurred over 90% of the upper crown.

DISEASE CONDITIONS

Dutch Elm Disease, *Ceratocystis ulmi* (Buism.)

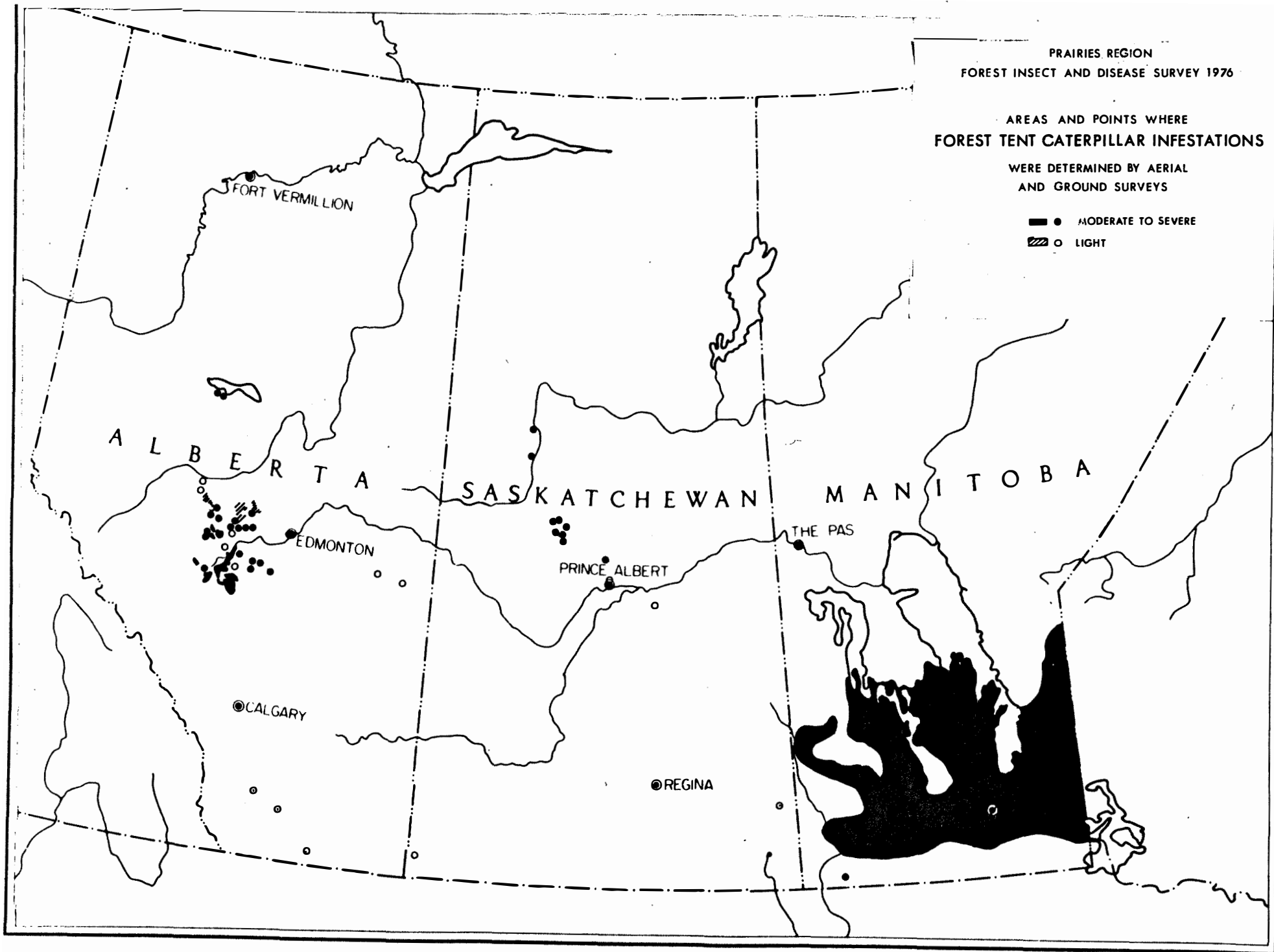
Detection surveys were carried out for the presence of this fungus in native elm stands in two areas in Saskatchewan: along Highway 123 from the Squaw Rapids Dam site to Cumberland House, and along the Kelsey Trail in the Bainbridge Lake area. The majority of elm in these

PRAIRIES REGION
FOREST INSECT AND DISEASE SURVEY 1976

AREAS AND POINTS WHERE
FOREST TENT CATERPILLAR INFESTATIONS

WERE DETERMINED BY AERIAL
AND GROUND SURVEYS

- MODERATE TO SEVERE
- LIGHT



areas are overmature and many of them are stag-topped. No evidence of the fungus was found and no elm bark beetles were present.

Another survey was conducted in the east-central agricultural area in the following centres: Humboldt, Watson, Wadena, Canora, Kamsack, Yorkton, and Duck Mountain Provincial Park. The survey was made too late in the year for symptom expression and was intended mainly to obtain a rough tally of planted elm populations.

OTHER NOTEWORTHY INSECTS AND DISEASES

Causal Agent	Host	Remarks
INSECT		
Poplar bud-gall mite, <i>Aceria parapopuli</i> (Keifer)	Poplar spp.	Moderate outbreaks in Rosetown, Outlook, and Moose Jaw areas. Generally old, well established infestations.
Spruce gall aphids, <i>Adelges</i> spp.	Spruce spp.	Generally moderate throughout agricultural and forested areas.
Fall cankerworm, <i>Alsophila pomataria</i> (Harr.)	A. elm M. maple	Moderate to severe in Moose Jaw, Assiniboia, Moosomin, Melfort, Canora, Kamsack, and Prince Albert.
Aphids on poplar	Hybrid poplars	Moderate to severe in Conquest-Milden-Dinsmore area. Yellowing and early drop of leaves in many shelterbelts by mid-August.
Pear slug, <i>Caliroa cerasi</i> (L.)	Cottoneaster	Moderate to severe in Prince Albert.
Woolly elm aphid, <i>Eriosoma americanum</i> (Riley)	A. elm	Light to moderate wherever the host species was inspected.
Birch leaf miner, <i>Fenusa pusilla</i> (Lep.)	W. birch Cutleaf birch	Severe damage to ornamental birch in Prince Albert and to native birch in the Creighton-Denare Beach area.
Lilac leaf miner, <i>Gracillaria syringella</i> (F.)	Lilac	Moderate to severe mining generally in Prince Albert area. Also reported from Ft. Qu'Appelle, Moosomin, Outlook, Nipawin, and Paynton.

Causal Agent	Host	Remarks
Willow Leaf miner, <i>Lyonetia</i> sp.	Willow sp.	Severe in the Hudson Bay-Bainbridge Lake area and along the North Saskatchewan River in the Cutwell-Prince Albert area.
Ash mirid, <i>Neoborus amoenus</i> (L.)	G. ash	Severe in the Milden-Outlook area. Moderate at Tisdale, Moose Jaw, Prince Albert, Wynyard and Runciman.
Aphids, <i>Periphyllis negundinus</i> Thos.	M. maple	High populations recorded throughout agricultural area of the province.
Pine needle scale, <i>Phenacaspis pinnifoliae</i> (Fitch)	W. spruce	Low populations in Moose Jaw, Melfort, Meadow Lake, Yorkton, Nipawin, Prince Albert and Assiniboia.
Yellow-headed spruce sawfly, <i>Pikonema alaskensis</i> (Roh.)	Spruce spp.	Low populations on planted spruce in Prince Albert, Regina, Yorkton, Milden, Tisdale, and Nipawin. Moderate defoliation to native spruce in Emma-Christopher lakes area.
Spruce spider mite, <i>Oligonychus ununguis</i> (Jac.)	W. spruce	Moderate in Prince Albert, light in North Battleford, Birch Hills, Milden, Moose Jaw, and Saskatoon.
DISEASE		
Dwarf mistletoe <i>Arceuthobium americanum</i> Nutt. ex Engelm	J. pine	Common throughout forested area north of Prince Albert.
Spruce needle rust, <i>Chrysomyxa</i> sp.	Spruce spp.	Moderate in Peesane-Hudson Bay area and at Nipawin.

Causal agent	Host	Remarks
Fire blight, <i>Erwinia amylovora</i> (Burril) Winslow	Apple Crabapple Mt. ash	Reported at 42 locations in the province--34 from Prince Albert, 3 from Melfort, and 1 each from Moose Jaw, Mazenod, Davidson, Tisdale, and Yorkton.
Leaf spots, <i>Linospora tetraspora</i> Thompson <i>Septoria populicola</i> Pk.	B. poplar	Moderate to severe discolora- tion and leaf drop by mid- August north east of a line running roughly through Canora and Shellbrook. Small outbreaks occurred southwest of this line.