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Status of Insects in the Geraldton  
District

Hall, K.C. and Constable, D.C.

Information Report                      O-X-74  
(Forest Research Laboratory, Ontario Region)

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Information Report No.	Subject	Author
O-X-57	Forest Insect & Disease Surveys --Lindsay District	M. J. Thomson
O-X-58	--Tweed District	F. Livesey
O-X-59	--Kemptville District	M. J. Applejohn
O-X-60	--Lake Simcoe District	R. L. Bowser
O-X-61	--Lake Erie District	G. T. Atkinson
O-X-62	--Lake Huron District	V. Jansons
O-X-63	--North Bay District	L. S. MacLeod
O-X-64	--Parry Sound District	C. A. Barnes
O-X-65	--Pembroke District	R. A. Trieselmann
O-X-66	--Sault Ste. Marie District	H. J. Weir
O-X-67	--Sudbury District	G. W. Cameron
O-X-68	--Chapleau District	D. Ropke
O-X-69	--Gogama District	W. Ingram
O-X-70	--Cochrane District	H. R. Foster
O-X-71	--Kapuskasing District	F. F. Foreman
O-X-72	--Swastika District	H. R. Foster L. S. MacLeod W. Ingram
O-X-73	--Port Arthur District	K. C. Hall
O-X-74	--Geraldton District	K. C. Hall D. C. Constable
O-X-75	--White River District	D. C. Constable
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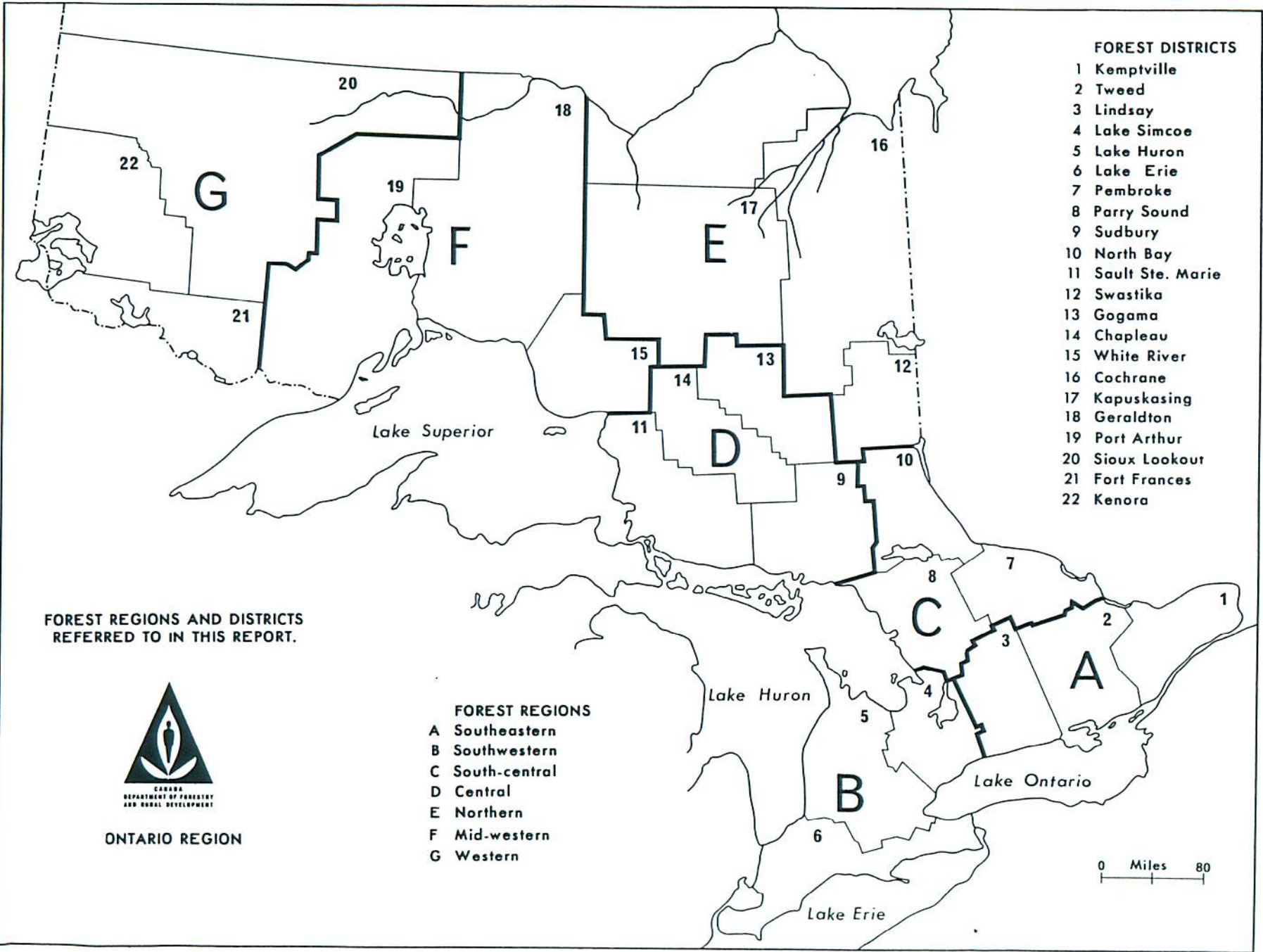
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Photographs

Regional Supervisors \*



**FOREST DISTRICTS**

- 1 Kemptville
- 2 Tweed
- 3 Lindsay
- 4 Lake Simcoe
- 5 Lake Huron
- 6 Lake Erie
- 7 Pembroke
- 8 Parry Sound
- 9 Sudbury
- 10 North Bay
- 11 Sault Ste. Marie
- 12 Swastika
- 13 Gogama
- 14 Chapleau
- 15 White River
- 16 Cochrane
- 17 Kapuskasing
- 18 Geraldton
- 19 Port Arthur
- 20 Sioux Lookout
- 21 Fort Frances
- 22 Kenora

**FOREST REGIONS AND DISTRICTS  
REFERRED TO IN THIS REPORT.**



**ONTARIO REGION**

- FOREST REGIONS**
- A Southeastern
  - B Southwestern
  - C South-central
  - D Central
  - E Northern
  - F Mid-western
  - G Western

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## FOREWORD

Population levels of the spruce budworm increased sharply in widely-separated parts of Ontario in 1967. Heavy infestations occurred in the Burchell Lake area in Port Arthur District and in woodlots in parts of Pembroke, Tweed and Kemptville districts. A light infestation persisted east of Chapleau in the Central Forest Region. The Burchell Lake infestation is of particular concern because of the nature of the forest in that area. Stands currently infested, as well as those to the north as far as Lac Des Mille Lacs, contain considerable mature balsam fir and white spruce which are highly susceptible to attack by the spruce budworm.

For the second consecutive year, weather conditions during May had a pronounced effect on infestations of the forest tent caterpillar. Mortality of eggs and newly-emerged larvae greatly reduced population levels of this pest. The only major areas of infestation remaining in the Province were in the eastern part of Fort Frances District and the southern part of Sault Ste. Marie District.

Two species of sawflies were of major importance in pine plantations. The European pine sawfly continued to extend its range in southeastern Ontario and two new centers of infestation were found on Manitoulin Island. The red-headed pine sawfly caused severe defoliation in red pine shelterbelts and plantations at numerous locations in the central and southern parts of the Province.

Intensive surveys were continued to determine the distribution and incidence of Dutch elm disease and Scleroderris-canker of pine. The discovery of Ceratocystis ulmi (Buism.) C. Moreau in Sault Ste. Marie constituted a marked westward extension of the range of the disease caused by this pathogen. Scleroderris-canker of pine continued to cause severe losses of young red pine and, to a lesser extent, jack pine in numerous plantations in central and northern Ontario. By comparison, damage in southern Ontario was negligible.

Diseases of spruce were caused by Cytospora kunzei Sacc. and Polyporus tomentosus Fr. at widely-separated points in southern Ontario and pockets of infection of Fomes annosus (Fr.) Cke. root-rot persisted in several red pine plantations in Lindsay, Lake Simcoe and Lake Erie districts. Details on the distribution and damage caused by these and other forest diseases and insects are contained in the regional and district sections of this report.

J. E. MacDonald

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K. C. Hall, D. Constable

## STATUS OF INSECTS

Larch Casebearer, Coleophora laricella (Hbn.)

Population levels of the larch casebearer remained low at all quantitative sampling points in 1967 (Table 4). High populations occurred on small regeneration larch at one location in Pic Township.

TABLE 4

Summary of Larch Casebearer Larval Counts in the Geraldton District from 1965 to 1967

Note: Counts were based on the examination of four 18-inch branch tips from each of four trees at each location.

Location (township)	Av. d.b.h. of sample trees in inches	Av. no. larvae per branch tip		
		1965	1966	1967
Pic	5	0.8	0.6	0.0
87	6	0.5	0.2	0.4
Croll	6	0.4	0.5	0.2

Wandering Sawfly, Dimorphopteryx melanognathus Roh.

This defoliator was found for the third consecutive year at Rainbow Falls Park in Township 85. Defoliation was confined to scattered small white birch trees and ranged from 5 to 20 per cent. Low populations were found at several locations in Township 86.

A Birch Leaf Miner, Fenusa pusilla (Lep.)

The small pocket of heavy infestation of this miner that occurred at Orient Bay in 1967 represents a considerable northern extension in the distribution of this introduced pest. High populations were confined to open-grown white birch trees in an area of approximately 10 acres. Quantitative sampling showed that 72 per cent of the leaves were mined. Light infestation occurred on a large number in the surrounding area. The insect has been present in infestation proportions in the vicinity of Port Arthur for a considerable number of years.

American Aspen Beetle, Gonioctena americana (Schaeff.)

Populations of this beetle declined to a very low level in 1967. The light to medium infestation that occurred in O'Meara Township in 1966, subsided in 1967. Examination of numerous stands of aspen along the Caramat road, Highway 11 and Nakina area failed to show any areas of defoliation.

Red Pine Sawfly, Neodiprion nanulus nanulus Schedl.

Population levels of this sawfly remained low in the district in 1967. The highest number of colonies occurred on young open-grown hosts in Summers Township where an average of 0.3 colonies per tree was recorded. Scattered colonies were collected along the Caramat road and in Ashmore, McQuesten and Croll townships.

A Birch Leaf Beetle, Phratora hudsonia Brown

A light infestation of this insect occurred in a small stand of open-grown white birch trees in Township 86. Defoliation was generally light and confined to the lower branches. Low numbers of this rare insect have been collected in the same general area on previous occasions, however, 1967 was the first year population levels reached infestation proportions.

Leaf-folding Sawflies, Phyllocopha spp.

Light to heavy damage caused by this insect was observed at numerous locations in 1967. The highest populations occurred at Chorus Lake and Diversion Channel where 34 and 74 per cent of the leaves respectively were damaged. Along the Caramat road quantitative sampling showed that an average of 23 per cent of the leaves were infested (Table 5). Elsewhere population levels were low and confined to trembling aspen and balsam poplar reproduction.

TABLE 5

Summary of Leaf-folding Sawfly Counts in the Geraldton District in 1967

Note: Counts are based on the examination of 100 leaves at each location.

Location	Tree species	Per cent of leaves affected 1967
Diversion Channel	tA	74
Chorus Lake	tA	34
Stevens	tA	31
Klotz Lake	tA	28
Taffy Lake	bPo	22
Pic Township	tA	19
Caramat	tA	18

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

High populations of this common pest occurred on small white spruce at numerous locations, namely in Nakina, 82, Ashmore and Pic townships. Elsewhere in the district defoliation was very light.



White Pine Weevil, Pissodes strobi (Peck)

Population levels of the white pine weevil fluctuated at two of the sampling points in the district in 1967. In the Flynn Lake area a decline was evident, in contrast at Stevens the percentage of weevilled trees increased (Table 6). Elsewhere in the district populations were low. It is interesting to note the preference for spruce trees by the insect in Geraldton District whereas in the Port Arthur District jack pine is most commonly infested.

TABLE 6

Summary of Damage by the White Pine Weevil in the Geraldton District in 1966 and 1967

Note: Counts are based on the examination of 100 trees at each location.

Location	Tree species	Average height	Per cent of trees weevilled	
			1966	1967
Flynn Lake	bS,wS	3	13	1
Stevens	bS	6	1	9
Maple Road	bS	6	0	2
Stevens	jP	4	1	0

Larch Sawfly, Pristiphora erichsonii (Htg.)

The most noteworthy change in the status of the larch sawfly occurred in Croll Township, Division 19, where infestations increased from medium to heavy intensity in 1967. Defoliation ranging from 15 to 40 per cent along Highway 11 from Polly Lake to Ashmore Township was comparable to 1966. Light infestations were observed in most stands along the north shore of Lake Superior.

Amber-marked Birch Leaf Miner, Profenusa thomsoni (Konow)

A substantial increase in the population levels of this insect was observed in 1967. The light infestation reported in the Caramat area in 1966 increased to heavy intensity. An appraisal of population levels in the area showed that 84 per cent of the leaves were mined compared with 26 per cent in 1966 (Table 7). Several new pockets of heavy infestation occurred in white birch stands at Stevens. A medium infestation persisted at Longlac and small pockets of light damage were observed at Beardmore and in townships 86 and Pic.

TABLE 7

Summary of Damage by the Amber-marked Birch Leaf Miner in the Geraldton District from 1965 to 1967

Note: 100 leaves examined at each location.

Location	Per cent of leaves mined		
	1965	1966	1967
Caramat	2	26	84
Longlac	43	38	42
Stevens	-	-	74
Beardmore	-	-	12
Pic Township	-	-	8
Township 86	-	-	5

Spruce Bud Gall Midge, Rhabdophaga swainei Felt

Light infestation of this insect persisted on white and black spruce at numerous locations in 1967. The highest number of infested buds was recorded in Pic Township where populations increased from endemic levels in 1966 to light intensity in 1967 (Table 8). The insect is widespread in the district, usually in small numbers.

TABLE 8

Summary of Damage by the Spruce Bud Gall Midge in the Geraldton District from 1965 to 1967

Note: Counts were based on the examination of five branch tips from each of ten trees.

Location	Tree species	Per cent of terminal buds infested		
		1965	1966	1967
Goldfield Road	bS	-	8.0	8.5
Township 84	bS	7.3	7.3	9.8
Jackfish Lake	wS	-	6.8	7.6
Pic Township	wS	0.7	1.3	10.6
Croll Township	bS	1.3	2.0	3.7

TABLE 9

Summary of Miscellaneous Insects Collected in Geraldton District in 1967

Insect	Host(s)	Remarks
<i>Archips cerasivorana</i> Fitch.	sSe	Small number of colonies on roadside hosts, Parent Township
<i>Argyresthia pygmaeella</i> Hbn.	W	Light populations on understory trees at Stevens
<i>Choristoneura fumiferana</i> Clem.	bF,wS	Recovered in small numbers on mat samples, Pic Township
<i>Dasineura balsamicola</i> Lintn.	bF	Light infestation, Township 92
<i>Dioryctria reniculella</i> Grt.	wS	Light populations in sample plot, Caramat road
<i>Epinotia lindana</i> Fern.	Dogwood	Common on numerous fringe trees, Township 92
<i>Epinotia momonana</i> Kft.	Al	Light damage to new shoots, Croll Township
<i>Eupithecia filmata</i> Pears.	bF,wS	Small numbers on mat samples at numerous locations
<i>Fenusa dohrnii</i> (Tischb.)	Al	Light infestation common on fringe trees, Township 87
<i>Gracillaria</i> sp.	wB	Light damage on open trees, Township 87
<i>Neodiprion abietis</i> complex	bF,bS,wS	Scattered colonies at few locations
<i>Nymphalis antiopa</i> L.	W	Scattered colonies Township 87, defoliation 40 per cent on some hosts
<i>Pikonema dimmockii</i> Cress.	wS	Light numbers on mat samples, Nakina Township
<i>Pleroneura borealis</i> Felt.	bF	Light infestation on numerous hosts, Sturgeon River
<i>Pyrrhia umbra exprimens</i> Wlk.	bPo	Common on regeneration, Kowkash Township
<i>Rhyacionia busckana</i> Heinr.	jP	Common on fringe trees, Twp. 87
<i>Semiothisa dispuncta</i> Wlk.	bF	Light populations on mat samples, Legault Township
<i>Zeiraphera canadensis</i> Mut. & Free.	wS	Light numbers, Pic Township
<i>Zeiraphera</i> sp.	wS	Small numbers, Pic Township