Status of Insects in the Lake Huron District

Bowser, R.L.

1966

Information Report O-X-39
(Forest Research Laboratory, Ontario Region)

1966

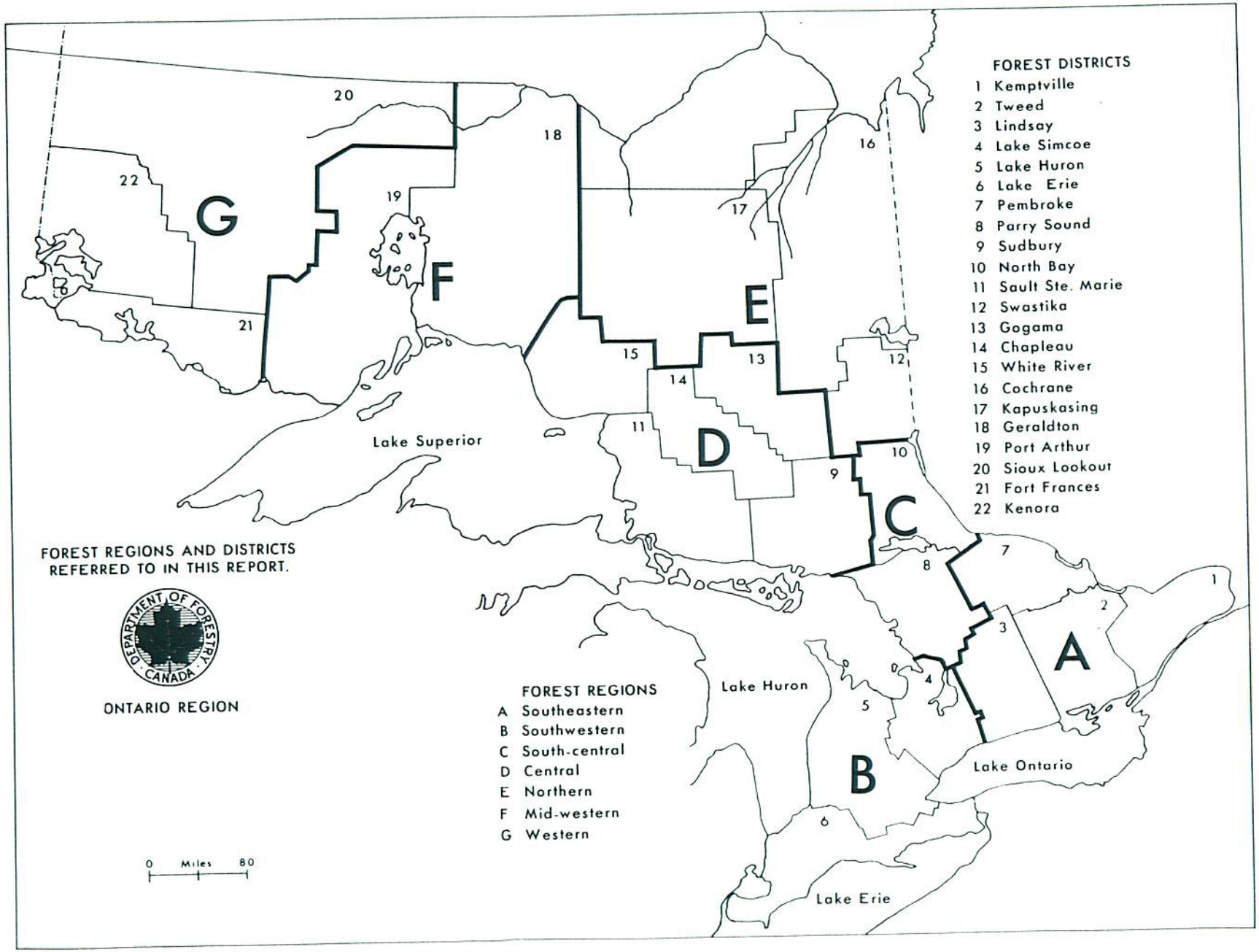
Information Report No.	Subject	Author
O-X-34	Forest Insect & Disease Surveys	
	--Lindsay District	W. J. Miller
O-X-35	--Tweed District	F. Livesey
O-X-36	--Kemptville District	J. Hook
O-X-37	--Pembroke District	R. A. Trieselmann
O-X-38	--Lake Simcoe District	A. A. Harnden
O-X-39	--Lake Huron District	R. L. Bowser
O-X-40	--Lake Erie District	J. R. Trinnell
O-X-41	--North Bay District	L. S. MacLeod
O-X-42	--Parry Sound District	C. A. Barnes
O-X-43	--Sault Ste. Marie District	H. G. McPhee
O-X-44	--Sudbury District	J. R. McPhee
O-X-45	--Chapleau District	D. Ropke
O-X-46	--Gogama District	W. Ingram
O-X-47	--White River District	D. C. Constable
O-X-48	--Cochrane District	H. R. Foster
O-X-49	--Kapuskasing District	G. T. Atkinson
O-X-50	--Swastika District	M. J. Applejohn
O-X-51	--Port Arthur District	K. C. Hall
O-X-52	--Geraldton District	V. Jansons
O-X-53	--Sioux Lookout District	P. E. Buchan
O-X-54	--Kenora District	H. J. Weir
O-X-55	--Fort Francis District	M. J. Thomson

TABLE OF CONTENTS

REPORTS OF FOREST RESEARCH TECHNICIANS

Ontario

* 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.
DEPARTMENT OF FORESTRY CANADA
ONTARIO REGION
FOREST REGIONS
A Southeastern
B Southwestern
C South-central
D Central
E Northern
F Mid-western
G Western
0 Miles 80
Lake Superior
Lake Huron
Lake Ontario
Lake Erie

FOREWORD

J. E. MacDonald

A prolonged period of drought, extending from May until August, seriously affected the growth and survival of forest stands on shallow sites and in plantations, particularly in central and southern Ontario. This was evidenced in August when hardwoods on rocky sites in many areas turned brown and shed their foliage. Serious losses of conifers planted in 1966 were reported in the Sault Ste. Marie, Lake Huron, Lake Simcoe and Lindsay districts.

Intensive surveys were carried out in 1966 to determine the distribution and incidence of Scleroderris canker of pine and of Dutch elm disease. These revealed that Scleroderris canker is widely distributed in northern Ontario. Incidence and tree mortality was highest in young red and jack pine plantations, however, significant losses of jack pine reproduction were also observed in several areas. Incidence of the disease was low in southern Ontario. Dutch elm disease is well established throughout southern Ontario and in localized areas in North Bay and Sudbury districts in northern Ontario. The incidence of infection was particularly high in the Toronto, London and Windsor areas. Over 50 per cent of the elm trees in many areas in southwestern Ontario were infected and the disease has taken a heavy toll of trees in older areas of infection.

Noteworthy changes in the extent and intensity of infestations of the forest tent caterpillar and jack pine budworm occurred in 1966. Weather conditions in the spring brought about a collapse of the forest tent caterpillar outbreak that had occurred over a vast area in Sioux Lookout, Kenora and Port Arthur districts in recent years. Heavy infestations persisted in Fort Frances District and in numerous areas in central and southeastern Ontario, but no outstanding changes in their extent and intensity occurred. Forest tent caterpillar defoliation forecasts for 1967 are contained in the district reports that follow.

Jack pine budworm infestations were reported in three widely-separated parts of Ontario. The largest of these occurred in the western part of Fort Frances and Kenora districts. Pockets of infestation occurred in the southern part of Sault Ste. Marie District and on Manitoulin Island.

The European pine sawfly continued to be a serious pest in pine plantations in southern Ontario. Since its discovery in a Scots pine plantation on Manitoulin Island in 1965, it has been found in five additional plantations on the Island. The results of control measures using virus sprays to contain the sawfly in this northern location will be followed with interest in 1967.

Expansion of the forest research program of the Department of Forestry and Rural Development in Sault Ste. Marie and the establishment of new positions in the Insect and Disease Survey Section has resulted in many changes of duties for Survey technicians. Five new district technicians will be required for the 1967 field season and numerous district re-assignments will be made. A list of technicians and their district assignments will be issued to key personnel of the Department of Lands and Forests and Industry early in the field season.

STATUS OF INSECTS IN THE LAKE HURON DISTRICT

R. L. Bowser

Ugly Nest Caterpillar, Archips cerasivoranus (Fitch)

A medium infestation occurred in several small clumps of eastern choke cherry one mile east of Morriston in Puslinch Township causing 50 per cent defoliation of infested trees. Occasional nests were observed elsewhere in the district and damage was generally confined to one or two branches.

Cedar Leaf Miners, (Argyresthia thuiella Pack., Argyresthia aureoargentella Brower, Argyresthia freyella Wlshm., Pulicalvaria thujaella Kft.)

This complex of leaf miners continued to cause severe discolouration of eastern white cedar at several points in the district (see photograph). Moderate to heavy branch tip mortality occurred locally in Grey, Bruce, Wellington, Halton, Waterloo and Huron counties. Usually two or more species were involved but a heavy infestation of one species, Argyresthia aureoargentella Brower, caused severe tip mortality and moderate stem mortality in the Greenough Point area of the Bruce Peninsula.

Jack-pine Resin Midge, Cecidomyia reeksi Vock.

High populations of this insect caused severe shoot mortality on occasional 15 to 20 foot trees in clumps of jack pine in Keppel and Normanby townships (see photograph). Moderate damage recurred in a private plantation west of Berkeley in Holland Township. Light infestations were observed at several other points in the central and northern parts of the district.

In the larval stage this midge feeds in pitch masses on the current shoots. Although damage is generally confined to leaders or occasional laterals the insect has been known to cause mortality of regeneration.

Spruce Budworm, Choristoneura fumiferana (Clem.)

Light infestations occurred more commonly in Grey, Bruce, Wellington and Waterloo counties than in 1965. A light infestation persisted for the third consecutive year in the Grey Main Tract in Glenelg Township. The highest number of larvae was recorded in a white spruce plantation in the Macton Tract in the northern part of Wellesley Township. Small numbers were collected in beating samples from balsam fir trees in Glenelg and Artemesia townships.

Jack-pine Budworm, Choristoneura pinus Free.

Light infestations occurred in jack-pine plantations in Normanby and Keppel townships and in a red pine plantation in Blenheim Township for the second consecutive year. The insect was found in small numbers on jack, red and Scots pine plantings throughout the district.

Larch Casebearer, Coleophora laricella (Hbn.)

Following increases in 1965, larval populations of this insect declined generally in 1966. The most noteworthy decreases occurred at permanent sample points in Amabel, Blandford and South Dumfries townships (Table 6). A slight increase in numbers of larvae occurred in Glenelg Township following a downward trend for four consecutive years. Moderate defoliation recurred in a stand of European larch in the Sandy Hill Tract in Woolwich Township where 69 larvae were counted on two 18-inch branch tips. The total number of larvae on two 18-inch branch tips from European larch and tamarack trees at several other points in the district varied from 12 to 31. A light infestation east of Chatsworth in Holland Township increased to medium intensity.

TABLE 6

Summary of Larch Casebearer Larval Counts at Six Points in the Lake Huron District from 1964 to 1966

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

Location (township)	Av. d.b.h. of sample trees in inches	Av. no. larvae per branch tip 1964	1965	1966
Lindsay	6	4.1	5.1	1.2
Amabel	5	11.2	21.4	13.2
Bentinck	5	3.3	7.0	6.1
Blandford	6	12.1	27.7	6.1
S. Dumfries	6	20.5	22.6	3.7
Glenelg	6	15.0	4.4	9.5

Walnut Caterpillar, Datana integerrima G. & R.

Larval populations increased generally in the district for the second consecutive year. Severe defoliation of black walnut trees occurred east of Grand Bend in Stephen Township, in the Thamesford area in East Nissouri Township, in the Tillsonburg area in Dereham Township, near Norwich in North Norwich Township, in the Hamilton-Oakville area and on a few trees in the western outskirts of Owen Sound. Moderate damage was recorded in North and East Oxford townships and in the Paris area in South Dumfries Township. One colony was found on several 20-foot trees west of Tara in Arran Township where a light to medium infestation occurred in 1965.

Yellow-necked Caterpillar, Datana ministra (Drury)

Notable increases in larval populations occurred at two points in the district. Several large white elm trees in the Thamesford area in North Oxford Township suffered 30 to 100 per cent defoliation compared with 10 to 35 per cent in 1965. Twenty-five to 30 per cent defoliation of numerous 20-foot elm trees was noted along Highway 97 in East Zorra Township. Colonies were observed commonly in the Grand Bend-Dashwood area and single colonies were found in Cape Croker, Amabel and Blenheim townships.

A Cone Worm, Dioryctria disclusa Heinr.

Moderate damage to red pine cones recurred in a private plantation near Hanover in Brant Township where thirty-five to 50 per cent of the second year cones were infested. Light damage was noted in red pine plantations in North Norwich and Ashfield townships, in jack pine plantations near Hepworth in Keppel Township and in the Derby Tract in Derby Township.

This moth appears to be more abundant in southern Ontario than elsewhere in the province. Young larvae feed in the staminate cones in the spring. When half-grown the larvae tunnel into second year cones forming a conspicuous entrance hole near the base. Damaged cones seldom produce viable seeds.

Nursery Pine Sawfly, Diprion frutetorum (Htg.)

Quantitative sampling showed minor decreases in numbers at four locations in 1966 (Table 7). Small numbers of larvae (see photograph) were found in white, red and Scots pine plantations within the known range of the insect. Unusually high numbers of pentatomid predators were observed at several sample points.

TABLE 7

Summary of Nursery Pine Sawfly Larval Counts Taken at Four Locations in the Lake Huron District from 1964 to 1966

Location (township)	Tree species	Av. d.b.h. in inches	Total no. larvae per 15-tray sample 1964	1965	1966
Keppel	scP	7	9	18	13
St. Vincent	scP	5	0	6	1
Euphrasia	scP	5	2	5	3
Woolwich	wP	6	1	9	4

European Spruce Sawfly, Diprion hercyniae (Htg.)

Larval populations of this sawfly showed little change at five of seven sampling stations (Table 8). However, a noteworthy increase occurred in St. Edmunds Township where the total number of larvae per 15-tray sample increased from 78 in 1965 to 147 in 1966. In contrast, the number of larvae decreased from 30 to 11 at a sample station in Holland Township. Random sampling of spruce trees at several other locations revealed 11 to 17 larvae per sample.

This European species was first found in Canada in 1922 near Ottawa. Although no serious outbreaks have occurred in Ontario the insect is capable of causing serious defoliation of spruce. For example, an outbreak in the Gaspe Peninsula in the 1930's caused up to 50 per cent mortality of host trees.

TABLE 8

Summary of European Spruce Sawfly Larval Counts Taken from White Spruce Trees at Seven Points in the Lake Huron District from 1964 to 1966

Location (township)	Av. d.b.h. of sample trees in inches	Total no. larvae per 15-tray sample 1964	1965	1966	Date sampled
Albemarle	6	13	62	62	Sept. 12
St. Edmunds	6	47	78	147	Sept. 12
Glenelg	6	9	3	11	Sept. 9
Holland	5	82	30	11	Sept. 9
Woolwich	5	10	5	1	Sept. 10
Euphrasia	6	43	27	33	Sept. 9
Minto	5	9	11	14	Sept. 10

Introduced Pine Sawfly, Diprion similis (Htg.)

Following a decline for two consecutive years, larval populations generally increased in 1966. The most notable increases occurred in white pine plantations in Artemesia and Woolwich townships where the total number of larvae per 15-tray sample increased from eight to 27 and 11 to 45 respectively (Table 9). The insect (see photograph) was found in small numbers at several other locations within its known range.

TABLE 9

Summary of Introduced Pine Sawfly Larval Counts Taken at Seven Locations in the Lake Huron District from 1964 to 1966

Location (township)	Tree species	Av. d.b.h. in inches	Total no. larvae per 15-tray sample 1964	1965	1966
St. Vincent	ScP	5	25	6	8
Artemesia	wP	5	7	8	27
Minto	wP	6	7	1	3
Keppel	ScP	7	26	16	17
Woolwich	wP	6	10	11	45
Beverly	wP	5	2	1	5
Euphrasia	ScP	5	14	6	13

White-pine Shoot Borer, Eucosma gloriola Heinr.

Damage caused by this shoot borer was generally higher than in 1965. The incidence of leader attack in a white pine plantation in Ashfield Township increased from 5 to 23 per cent (Table 10). A heavy infestation recurred in the Brant Tract, Brant Township. Although the number of attacks per tree increased slightly, leader damage decreased from 40 per cent in 1965 to 35 per cent in 1966. In Puslinch Township leader damage decreased from 15 to four per cent. Moderate shoot damage was noted at scattered points in Greenock and Beverly townships. Light infestations occurred commonly on various species of pine throughout the district.

TABLE 10

Summary of Shoot Damage by the White-pine Shoot Borer in Lake Huron District from 1964 to 1966

Location (township)	Host	Av. height of trees in feet	Per cent of trees infested 1964	1965	1966	Av. no. of attacks per infested tree 1964	1965	1966	Per cent of leaders attacked 1964	1965	1966
Ashfield	wP	14	85	80	100	4.0	4.0	12.0	3	5	23
Puslinch	wP	12	100	100	100	10.0	8.0	4.0	8	15	4
Brant	wP	10	-	100	100	-	12.0	14.0	-	40	35

Pine Bud Moth, Exoteleia dodecella Linn.

Light infestations, with bud damage not exceeding 10 per cent, persisted in the district for the third consecutive year (Table 11).

Since this serious pest of pine in Europe was first reported in the province in 1928 localized heavy infestations with up to 60 per cent of the buds damaged, have occurred periodically at scattered locations in southern Ontario. Scots and Mugho pine are the preferred hosts and fringe and open grown trees of all age classes are most susceptible to attack.

During the early larval period the insect mines the needles and damage is negligible. However, mid-to-late larvae feed in the buds of host trees and a single larva may destroy up to three buds.

TABLE 11

Summary of Damage Caused by the Pine Bud Moth to Scots Pine Buds at Three Points in the Lake Huron District from 1964 to 1966

Note: Samples were based on the examination of 500 buds selected at random from 10 trees at each point.

Location (township)	Total no. of buds examined in 1966	Per cent of buds infested		
		1964	1965	1966
Beverly	500	4.2	6.2	5
Glenelg	500	3.0	2.1	2
North Dumfries	500	9.1	12.0	10

Jack-pine Needle Miner, Exoteleia pinifoliella (Cham.)

Heavy infestations of this needle miner were recorded in jack pine plantings in the McIntyre Tract in Kinloss Township, the Ayton Tract in Normanby Township, the Chesney Tract in Blandford Township and in a private plantation near Orchard in Egremont Township. Infested trees suffered up to 75 per cent mining of the old foliage. Light infestations occurred more commonly than in 1965.

Fall Webworm, Hyphantria cunea (Drury)

Following two consecutive years of extremely low numbers webs of this insect were observed commonly in the district in 1966. Severe defoliation of several 8-foot white ash trees occurred near Copetown in Ancaster Township and moderate defoliation of scattered white elm trees was noted between Bright and Hickson in Blandford and East Zorra townships. Light infestations were recorded in the Galt-Paris, Hanover-Durham, Clifford-Harriston and Grand Bend areas.

Eastern Tent Caterpillar, Malacosoma americanum (F.)

Light infestations were more numerous than in 1965, especially in the southern part of the district (see map). A heavy infestation occurred on roadside apple, hawthorn and eastern choke cherry trees on the western outskirts of Salford in Dereham Township where 137 tents were counted in two-tenths of a mile. Medium infestations were recorded in Brant, Amabel and Derby townships, but marked declines were recorded at sample points in Brant, Sullivan and Arran townships (Table 12).

TABLE 12

Summary of Eastern Tent Caterpillar Colony Counts at Seven Points in the Lake Huron District from 1964 to 1966

Location (township)	Number colonies per mile of roadside		
	1964	1965	1966
Brant	95	84	54
Albemarle*	0	0	2
Derby	16	24	38
Sullivan	39	23	6
Amabel*	21	12	23
Guelph	33	19	17
Arran	24	38	12

* square chain plot

Balsam-fir Sawfly, Neodiprion abietis (Harr.)

Following three consecutive years of light to medium infestation several pockets of heavy infestation developed on balsam fir trees in the central and northern parts of the district in 1966. Seventy-five to 100 per cent defoliation occurred commonly in the upper third of the crowns of infested trees. Light infestations persisted on balsam fir in the northern part of the Bruce Peninsula and small numbers were occasionally found on white spruce trees.

Two Jack-pine Sawflies, Neodiprion pratti banksianae Roh., and N. pratti paradoxicus Ross

Jointly these two sawflies (see photographs) have caused light and occasional moderate damage in jack pine plantations in Grey and Bruce counties since 1962. In 1966 light infestations occurred commonly but larval populations were slightly lower than in 1965 (Table 13). N. pratti paradoxicus was the more abundant of the two species in 1966.

TABLE 13

Summary of Colony Counts of Two Jack-pine Sawflies and Estimates of Defoliation of Old Foliage at Four Points in the Lake Huron District from 1964 to 1966

Note: Counts were taken on ten trees at each sample point.

Location (township)	Av. d.b.h. in inches	Av. height in feet	Av. no. colonies per tree 1964	1965	1966	Estimated per cent defoliation
Amabel	5	25	2.1	1.0	1.0	5
Holland	3	20	1.0	2.1	1.0	5
Artemesia	4	20	6.0	4.1	1.0	5
Derby	4	20	-	-	2.0	5

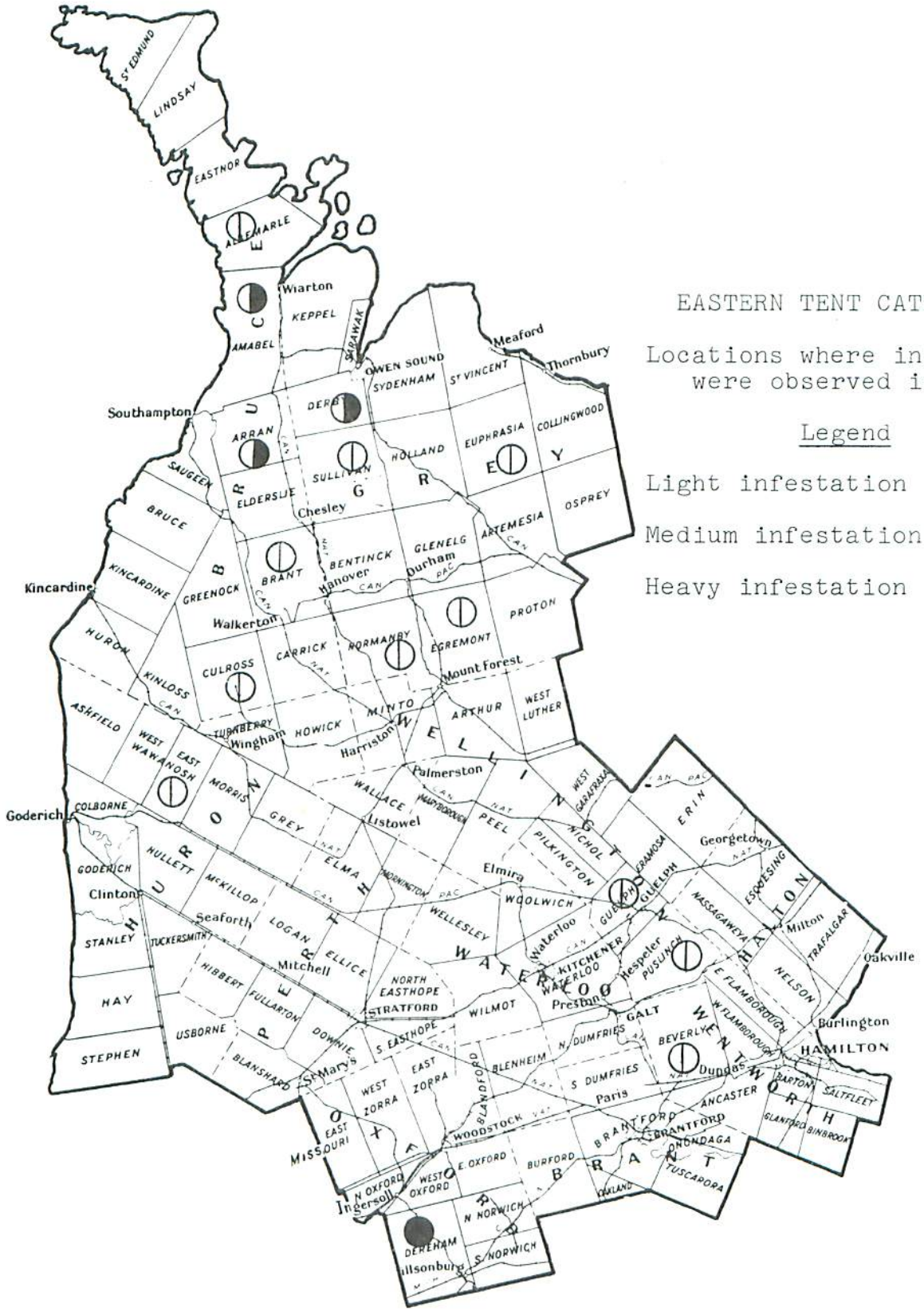
Red-headed Jack-pine Sawfly, Neodiprion virginianus complex

A light infestation of this sawfly occurred in a natural jack pine stand in the Cameron Lake Forest in St. Edmund Township where an average of five colonies per infested 20-foot tree occurred. This insect (see photograph) was last reported in the district in 1954 when a heavy infestation occurred in Lindsay Township

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

Moderate defoliation of white spruce trees recurred in the Riddell Tract in Bentinck Township and a light infestation in the Grey Main Tract increased to medium intensity. The insect was generally found in small numbers at sample points elsewhere in the district (Table 14).

LAKE HURON DISTRICT



EASTERN TENT CATERPILLAR

Locations where infestations were observed in 1966

Legend

Light infestation . . . ◐

Medium infestation . . . ◑

Heavy infestation . . . ●

MILES

20 10 0 20 40

TABLE 14

Summary of Infestations of the Yellow-headed Spruce Sawfly at Eight Points in the Lake Huron District from 1964 to 1966

Note: Counts were based on the examination of 100 white spruce trees at each point

Tract	Township	Per cent of trees infested			Degree of infestation in 1966
		1964	1965	1966	
Rennie	Euphrasia	75	60	17	L
Rocklyn	Euphrasia	15	8	3	L
Riddell	Bentinck	90	95	50	M
Crawford	Bentinck	50	62	30	L
Main	Glenelg	75	50	35	M
Kenny	Glenelg	35	52	46	L
Minto	Minto	16	4	2	L
Victory	Arthur	4	0	3	L

White Pine Weevil, Pissodes strobi Peck.

Medium to high weevil populations persisted for the third consecutive year in the Riddell Tract in Bentinck Township. Leader damage varied from five to 40 per cent. Increases in the incidence of attack occurred in a section of the Grey Main Tract in Glenelg Township and in the Moir Tract in Cullross Township (Table 15). Light and moderate damage was observed commonly in white pine plantations in the southern part of Bruce County. Damage was generally light elsewhere in the district.

TABLE 15

Summary of Shoot Damage by the White Pine Weevil in Plantations at Two Points in the Lake Huron District from 1964 to 1966

Note: Counts were based on the examination of 100 trees at each point.

Location (township	Av. d.b.h. of sample trees in inches	Per cent of trees infested			Per cent of trees infested all years
		1964	1965	1966	
Brant Private Plantation	6	3	4	2	65
Culross Moir Tract	4	5	15	24	26

Eastern Subterranean Termite, Reticulitermes flavipes Kollar

An isolated pocket of infestation was first discovered near the C.N.R. station in Kincardine in 1954. In 1966 single colonies were observed on July 5 and August 25 in scattered pieces of timber and slabwood partially buried in the ground. Approximately 100 insects were counted in each colony. Several specimens were preserved and identified at the Forest Research Laboratory in Sault Ste. Marie. Although no intensive surveys were conducted to determine its presence in adjacent buildings no damage was observed.

European Pine Shoot Moth, Rhyacionia buoliana (Schiff.)

A very destructive pest in the 1950's, larval populations of this insect have generally decreased to low levels in the district.

A medium infestation persisted in a four-acre Scots pine plantation near Roseville in North Dumfries Township for the third consecutive year. Light damage recurred in the Kiwanis plantation in Keppel Township and trace populations were observed in red pine plantations in the Bruce Peninsula. All trees were removed from a red pine plantation near Port Elgin where a medium infestation was reported in 1965.

Spruce Bud Moth, Zeiraphera ratzeburgiana Ratz.

Heavy infestations persisted in clumps of fringe and open-grown white spruce trees in St. Edmund Township where up to 90 per cent of the new growth was damaged in many instances. Elsewhere in the Bruce Peninsula light and medium infestations were noted commonly. Light infestations were observed at several locations throughout the remainder of the district.

TABLE 16

Summary of Miscellaneous Insects Collected in Lake Huron District

Insect	Host(s)	Remarks
Acleris variana Fern.	wS	Few larvae collected in beating samples at four locations
Anisota senatoria A. & S.	bO	Moderate defoliation of scattered trees in Blenheim Township. Light infestations occurred in the Ingersoll, Woodstock and Galt areas
Aphrophora parallela Say	jP, ScP, wP	Medium infestation on jack pine in Lindsay Township. Low populations common elsewhere
Argyresthia laricella Kft.	tL, eL	Low populations persisted in the district
Caulocampus acericaulis MacG.	sM	Light infestations occurred commonly in Grey County

TABLE 16 (continued)

Insect	Host(s)	Remarks
Coleophora betulivora McD	wB	Light infestation occurred in Amabel Township
Coleophora fuscedinella Zell.	wB	Found in small numbers in St. Edmund Township
Coleophora ulmifoliella MacD.	wE	Medium infestation in Saugeen Township. Low populations common
Elaphidionoides parallelum Newn.	rO	Light damage in Ancaster and N. Dumfries townships
Epinotia aceriella Clem.	sM	Light infestations common
Epinotia corylana McD.	Al	Light infestation infesting male catkins in Puslinch Township
Epinotia solandriana Linn.	wB	Light and medium infestations in St. Edmund and Lindsay townships respectively
Eucordylea ducharmei Free.	wS	Found on occasional lower branch of small trees in the Patterson Tract
Fenusa pusilla (Lep.)	wB	Small pocket of heavy infestation in Euphrasia Township. Light elsewhere
Fenusa ulmi Sund.	E	Heavy localized infestations in Grey County
Gonioctena americana (Schaeff.)	tA	Light infestation on small trees in Glenelg Township
Gracillaria syringella F.	Lilac	Medium infestations of this leaf miner in Bentinck Township
Monoctenus fulvus (Nort.)	eC	Light infestations common
Neodiprion nanulus nanulus Schedl.	jP, rP	A light infestation persisted in St. Edmund Township
Nymphalis antiopa Linn.	W, wE	Widely scattered colonies in the district
Olethreutidae	wB, yB	Commonly found boring in male catkins in Grey, Bruce and Wellington counties
Paraclemensia sp.	wB	Low population of this leaf cutter in St. Edmund Township
Pikonema dimmockii (Cress.)	wS	Scattered low populations
Pineus similis Gill.	wS	Heavy infestation on occasional trees in the Greenough Point area

TABLE 16 (continued)

Insect	Host(s)	Remarks
Pineus strobi (Htg.)	wP	Heavy infestation on occasional tree in mixed pine plantation
Pleroneura borealis Felt	bF	Bud damage did not exceed five per cent in Grey County
Podapion gallicola Riley	rP	Caused severe branch deformation to large, natural trees in St. Edmund Township
Pristiphora geniculata (Htg.)	Mo	Localized light and medium infestation occurred commonly
Profenusa sp.	bO	Light mining noted on several large trees in Beverly Township
Profenusa thomsoni Konow	wB	Heavy infestation on small trees in Amabel Township
Protoboarmia porcelaria indicataria Wlk.	bF, wS, jP	Found commonly in beating samples
Pseudexentera oregonana Wlshm.	tA	Light infestations occurred in Beverly Township
Pulicalvaria piceaella (Kft.)	wS, nS	Medium infestations in Eramosa, Ashfield and Normanby townships. Light elsewhere
Pulvinaria innumerabilis Rath.	siM	Localized heavy infestations
Recurvaria new sp.	wS	Low population of this needle miner in the Collins Tract, Grey Township
Recurvaria sp (new)	wB	Common in male catkins of this tree species at several locations
Rhabdophaga swainei Felt	wS	Caused light bud damage in Grey and Bruce counties
Scolytus multistriatus Marsh.	E	Adult feeding caused severe branch tip mortality of occasional trees
Tetrastichus sp	wS	Caused moderate and light bud damage in Glenelg and West Luther townships respectively
Tetrastichus strobilus Burks	bF	Light bud damage in Glenelg and Artemesia townships
Trisetacus grosmanni Keifer	bF	Light bud damage in Grey and Bruce counties