

CAN
Fo
46-14
O-X
69

ADEU

Status of Insects in Gogama District

Ingram, W.

Information Report O-X-69
(Forest Research Laboratory, Ontario Region)

1967

Information Report No.	Subject	Author
0-X-57	Forest Insect & Disease Surveys --Lindsay District	M. J. Thomson
0-X-58	--Tweed District	F. Livesey
0-X-59	--Kemptville District	M. J. Applejohn
0-X-60	--Lake Simcoe District	R. L. Bowser
0-X-61	--Lake Erie District	G. T. Atkinson
0-X-62	--Lake Huron District	V. Jansons
0-X-63	--North Bay District	L. S. MacLeod
0-X-64	--Parry Sound District	C. A. Barnes
0-X-65	--Pembroke District	R. A. Trieselmann
0-X-66	--Sault Ste. Marie District	H. J. Weir
0-X-67	--Sudbury District	G. W. Cameron
0-X-68	--Chapleau District	D. Ropke
0-X-69	--Cogama District	W. Ingram
0-X-70	--Cochrane District	H. R. Foster
0-X-71	--Kapuskasing District	F. F. Foreman
0-X-72	--Swastika District	H. R. Foster L. S. MacLeod W. Ingram
0-X-73	--Port Arthur District	K. C. Hall
0-X-74	--Geraldton District	K. C. Hall D. C. Constable
0-X-75	--White River District	D. C. Constable
0-X-76	--Sioux Lookout District	P. E. Buchan
0-X-77	--Kenora District	P. E. Buchan J. Hook
0-X-78	--Fort Francis District	J. Hook

TABLE OF CONTENTS

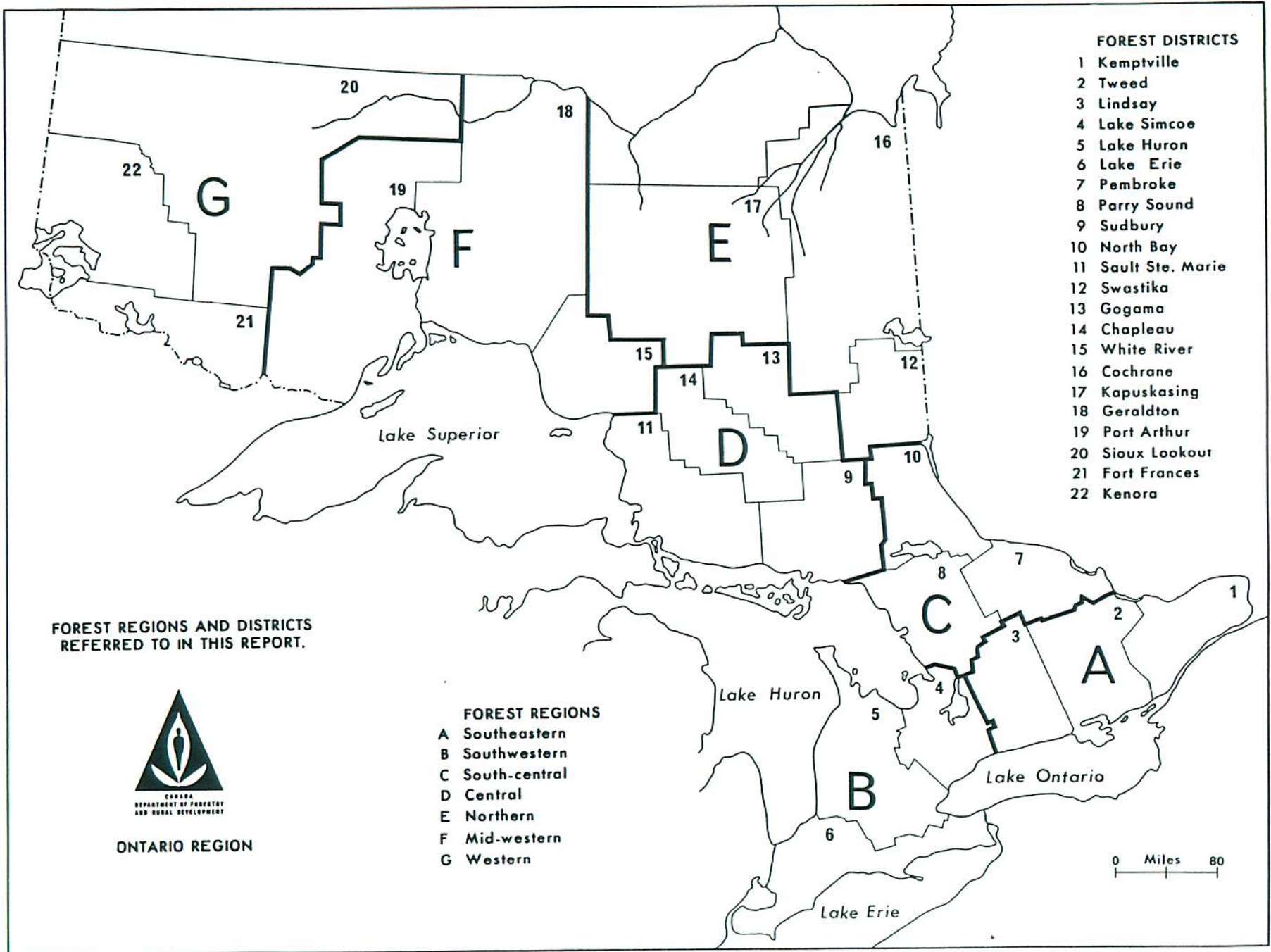
REPORTS OF FOREST RESEARCH TECHNICIANS

Ontario

	Page
Foreword, J. E. MacDonald	
A. <u>SOUTHEASTERN FOREST REGION</u>	<u>A1-51</u>
Lindsay District, M.J. Thomson*	A 8
Tweed District, F. Livesey	A 19
Kemptonville District, M.J. Applejohn	A 36
B. <u>SOUTHWESTERN FOREST REGION</u>	<u>B1-46</u>
Lake Simcoe District, R.L. Bowser*	B 9
Lake Erie District, G.T. Atkinson	B 24
Lake Huron District, V. Jansons	B 36
C. <u>SOUTH-CENTRAL FOREST REGION</u>	<u>C1-49</u>
North Bay District, L.S. MacLeod*	C 8
Parry Sound District, C.A. Barnes	C 19
Pembroke District, R.A. Trieselmann	C 33
D. <u>CENTRAL FOREST REGION</u>	<u>D1-49</u>
Sault Ste. Marie District, H.J. Weir*	D 7
Sudbury District, G. Cameron	D 21
Chapleau District, D. Ropke	D 27
Gogama District, W. Ingram	D 34
E. <u>NORTHERN FOREST REGION</u>	<u>E1-45</u>
Cochrane District, H.R. Foster*	E 12
Kapuskasing District, F. Foreman	E 25
Swastika District, H.R. Foster, L.S. MacLeod, W. Ingram	E 36
F. <u>MIDWESTERN FOREST REGION</u>	<u>F1-27</u>
Fort Arthur District, K.C. Hall*	F 7
Geraldton District, K.C. Hall, D. Constable	F 14
White River District, D. Constable	F 19
G. <u>WESTERN FOREST REGION</u>	<u>G1-36</u>
Sioux Lookout District, P.E. Buchan*	G 11
Kenora District, P.E. Buchan, J. Hook	G 20
Fort Frances District, J. Hook	G 29

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



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 Folyporus 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

STATUS OF INSECTS IN GOGAMA DISTRICT IN 1967

	Page
Ugly-nest Caterpillar	<u>Archips cerasivoranus</u> D 34
Birch Skeletonizer	<u>Bucculatrix canadensisella</u> D 34
Spruce Budworm	<u>Choristoneura fumiferana</u> D 35
Larch Casebearer	<u>Coleophora laricella</u> D 35
A Bark Beetle in Jack-pine Twigs.	<u>Conophthorus</u> sp. D 36
The Pill Beetle	<u>Cytilus alternatus</u> <u>Tylicus subcanus</u> D 36
European Spruce Sawfly	<u>Diprion hercyniae</u> D 37
Eastern Pine Shoot Borer	<u>Eucosma gloriola</u> D 37
A Root Weevil	<u>Hylobius warreni</u> D 38
Aspen Blotch Miner	<u>Lithocolletis salicifoliella</u> D 38
Western Tent Caterpillar	<u>Malacosoma pluviale</u> D 39
Cedar Sawfly	<u>Monoctenus fulvus</u> D 39
Balsam Fir Sawfly	<u>Neodiprion abietis</u> complex D 39
Red-pine Sawfly	<u>Neodiprion nanulus nanulus</u> D 40
Red-headed Jack-pine Sawfly	<u>Neodiprion virginianus</u> complex D 40
Leaf-folding Sawflies on Poplars and Willows.....	<u>Phyllocolpa</u> spp. D 41
White-pine Weevil	<u>Pissodes strobi</u> D 41
Balsam Shoot-boring Sawfly	<u>Pleroneura borealis</u> D 42
Larch Sawfly	<u>Pristiphora erichsonii</u> D 42
Mountain-ash Sawfly	<u>Pristiphora geniculata</u> D 43
Amber-marked Birch Leaf Miner ...	<u>Profenusa thomsoni</u> D 43
Spruce Bud Midge	<u>Rhabdophaga swainei</u> D 44
Summary of Miscellaneous Insects	D 44

W. Ingram

Ugly-nest Caterpillar, Archips cerasivoranus (Fitch)

The highest populations in several years was recorded in Ivanhoe and Jack townships in 1967 (Table 3). Lightly infested choke cherry and pin cherry shrubs were observed along roadsides more frequently than in 1966. High larval populations occurred in a square chain plot in Ivanhoe Township on willow, pin cherry and ground cover.

TABLE 3

Summary of Ugly-nest Caterpillar Colony Counts in the Gogama District from 1965 to 1967

Location (township)	Host	No. of colonies per square chain plot		
		1965	1966	1967
Gouin	W	2	0	1
Ivanhoe	pCh, W	4	2	92
Jack	pCh, W	4	4	13

Birch Skeletonizer, Bucculatrix canadensisella Cham.

Population levels declined generally in the district and negative results were obtained at many sample points (Table 4). The heaviest defoliation occurred on overstory trees in Togo Township where 42 per cent of the leaves were infested. Elsewhere in the district small areas of light defoliation were observed.

TABLE 4

Summary of Birch Skeletonizer Counts at Ten Sample Points in the Gogama District from 1965 to 1967

Note: Counts were based on a total of 100 leaves from 3 branches from each of four trees at each location.

Location (township)	Host	D.b.h. of sample trees in inches	Per cent of leaves infested		
			1965	1966	1967
Cabot	wB	1.5	71	30	14
Horwood	wB	2.0	17	46	0
Ivanhoe	wB	2.0	29	39	21
MacMurchy	wB	2.5	78	39	18
Middleboro	wB	5.5	12	21	5
Middleboro	yB	7.0	1	22	12
Montcalm	wB	2.0	16	20	18
Pinogami	wB	3.0	21	82	0
Silk	wB	2.0	11	26	4
Sothman	wB	2.0	27	46	31
Togo (overstory)	wB	6.0	-	61	42
Togo (understory)	wB	2.5	-	34	18

Spruce Budworm, Choristoneura fumiferana (Glem.)

This insect was found more commonly in 1967 than in 1966. The results of systematic sampling along Highway 101 are shown in Table 5. Because of the general increase in numbers of this insect in Ontario and the presence of an infestation to the west in Chapleau District, close surveillance of susceptible stands will be maintained in the Gogama District.

TABLE 5

Summary of Spruce Budworm Larval Counts in the Gogama District in 1967

Note: All samples (2.5 miles apart) were 10-tray samples from five white spruce trees.

Location	No. larva per 10-tray sample
Hellyer Twp. 2.5 miles east of the Shawmere River	3
5.0 miles east of the Shawmere River	6
Evans Twp. 7.5 miles east of the Shawmere River	0
Pinogami Twp. 10.0 miles east of the Shawmere River	1
12.5 miles east of the Shawmere River	0
15.0 miles east of the Shawmere River	0
Carty Twp. 17.5 miles east of the Shawmere River	2
Ivanhoe Twp. 20.0 miles east of the Shawmere River	0
22.5 miles east of the Shawmere River	3
Foleyet Twp. Turnoff to Ivanhoe Provincial Park	7
2.5 miles east of the turnoff to Ivanhoe Provincial Park	1
5.0 miles east of the turnoff to Ivanhoe Provincial Park	2

Larch Casebearer, Coleophora laricella (Hbn.)

Population levels of this insect increased in the district in 1967. Light infestations occurred at sample points where negative larval counts were obtained in 1966. The highest number occurred at a sample point in Groves Township where a count of 6.5 larva per 18-inch branch tip was recorded (Table 6).

TABLE 6

Summary of Larch Casebearer Larval Counts in the Gogama District in 1967

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

Location (township)	Average d.b.h. of sample trees in inches	Average no. of larva per branch tip in 1967
St. Louis	5	6.5
Garvey	4	3.3
Noble	4	1.8

A Bark Beetle in Jack-pine Twigs, Conophthorus sp.

Population levels of this insect continued to fluctuate throughout the district and one new infestation was recorded in Noble Township. Heaviest damage was recorded in Chester Township where 43 per cent of the shoots of one tree were infested. Very little change was noted at permanent sample stations (Table 7).

TABLE 7

Summary of Jack-pine Shoot Damage by Conophthorus sp. in the Gogama District in 1966 and 1967

Note: Counts were taken on 100 jack-pine trees at each location.

Location (township)	Av. d.b.h. of sample trees in inches	Average height in feet	No. infested trees		No. infested shoots	
			1966	1967	1966	1967
Benneweis	1.5	12	6	2	23	3
Garvey	2.0	12	6	5	37	32
Horwood	2.0	15	1	3	9	14
Jack	2.0	12	8	3	23	19
Vrooman	1.5	10	6	3	44	3
Westbrook	2.0	10	6	11	30	17
Noble	2.0	15	-	8	-	9

The Pill Beetle, Cytilus alternatus Say; Tylicus subcanus Lec.

Mortality of seedlings in the Gogama Nursery was first noted on July 24th when approximately 50 per cent mortality of 2-0 red pine seedlings occurred in an area of 100 square feet. A search revealed that two species of pill beetles (Cytilus alternatus Say and Tylicus subcanus Lec.) were destroying the root systems of the small seedlings. Damage was restricted to low-lying areas that had a dense moss cover. Numerous adult beetles were found throughout the infested area in late

fall and control measures will be necessary if the infestation persists in 1968. An effective control measure would be a broadcast of DDT powder directly on the seed beds following irrigation.

European Spruce Sawfly, Diprion hercyniae (Htg.)

Population levels of this insect remained low in the district as a whole. A light infestation occurred on white spruce adjacent to the ranger cabin in Noble Township. Larval counts at sample points in Division 72 are shown in Table 8.

TABLE 8

Summary of European Spruce Sawfly Larval Counts in Gogama District from 1965 to 1967

Location (township)	Host	Av. d.b.h. of sample trees in inches	Total no. of larva per 15-tray sample		
			1965	1966	1967
Benneweis	wS	10	0	2	3
Jack	bS	5	1	1	1
Jack	wS	9	0	2	0
Noble	wS	12	3	0	2

Eastern Pine Shoot Borer, Eucosma gloriola Heinr.

Population levels remained low throughout the district. The heaviest damage again occurred in Garvey Township (Table 9) where six per cent of the leaders were affected.

TABLE 9

Summary of Eastern Pine Shoot Borer Damage on Jack Pine Trees at Six Points in the Gogama District from 1965 to 1967

Location (township)	Av. d.b.h. of sample trees in inches	Av. height of sample trees in feet	No. infested leaders per 100-tree sample		
			1965	1966	1967
Garvey	2	12	11	4	6
Vrooman	1	10	1	2	0
Westbrook	3	10	6	4	3
Champagne	2	10	-	3	1
Benneweis	2	10	-	2	1
Noble	2	15	-	-	2

A Root Weevil, Hylobius warreni Wood

An increase in host tree mortality was recorded in one infested area in Noble Township in 1967. Seven per cent of the Scots pine in a mixed plantation of red pine and Scots pine in this area was killed. Adults were collected up to five miles away from the infested area in 1967. Adults lay eggs in pockets in the bark at the base of the tree. The larva feed into the cambium region at the base of the tree or in the larger roots near the trunk and eventually girdle the tree, causing mortality. Pupation takes place one to two inches below the soil in a dark pitchy mass formed by the exudation of pitch from the injured portion of the tree. The insect takes from one to three years to complete its life cycle. Adults may live for several years (at least two) and continue to lay eggs, causing an overlap of generations. Adults feed at night on the bark of smaller branches and twigs and overwinter in the forest litter. This insect is especially important in sandy areas with an abundance of Scots pine.

Aspen Blotch Miner, Lithocolletis salicifoliella Chamb.

A decline in population levels of this insect was recorded in 1967 (Table 10). Heaviest defoliation was recorded along the shore of Ivanhoe Lake in Ivanhoe Township where 93 per cent of the foliage on willow and trembling aspen regeneration was mined. Insect populations remained low throughout the remainder of the district.

TABLE 10

Summary of Leaf Damage Caused by the Aspen Blotch Miner at Thirteen Points in the Gogama District in 1966 and 1967

Note: Counts were based on a total of 100 leaves at each location.

Location (township)	Per cent leaves infested		No. mines per infested leaf		Av. no. mines per leaf	
	1966	1967	1966	1967	1966	1967
Carter	5	0	1.0	0	.05	0
Champagne	-	4	-	1.0	-	.04
Coppell	5	2	1.2	1.0	.06	.02
Garabaldi	4	2	1.2	1.5	.05	.03
Hellyer	11	4	1.0	1.0	.11	.04
Invergarry	8	2	1.2	1.0	.10	.02
Mattagami	5	3	1.2	1.0	.06	.03
Pinogami	23	9	1.3	1.0	.29	.09
St. Louis	6	2	1.0	1.0	.06	.02
Silk	5	4	1.0	1.0	.05	.04
Jack	-	4	-	1.0	-	.04
Groves	-	4	-	1.0	-	.04
Montcalm	10	2	1.0	1.5	.10	.02

Western Tent Caterpillar, Malacosoma pluviale (Dyar)

Population levels increased throughout the district in 1967 (Table 11). Light to medium infestations were observed more frequently than in 1966.

TABLE 11

Summary of Western Tent Caterpillar Colony Counts in the Gogama District from 1965 to 1967

Location (township)	Host	No. colonies per measured mile of roadside		
		1965	1966	1967
Kelvin	w, pCh	8	2	3
Mattagami	pCh	3	1	4
Noble	pCh	2	0	3
Roblin	w, pCh	11	4	6
Silk	pCh	18	12	11
Togo	pCh	4	0	0
Ivanhoe	w, pCh	-	-	7

Cedar Sawfly, Monoctenus fulvus Nort.

Population levels of this insect increased throughout the district in 1967. The highest populations were observed on cedar along lakeshores in Foleyet and Benneweis townships (Table 12).

TABLE 12

Summary of Cedar Sawfly Counts in the Gogama District in 1967

Location (township)	Av. d.b.h. of sample trees in inches	Total no. of larvae per 15-tray sample in 1967
Foleyet	3	14
Ivanhoe	3	6
Jack	3	8
Chester	4	7
Benneweis	2	9

Balsam Fir Sawfly, Neodiprion abietis complex

A decline in population levels was recorded throughout the district in 1967. A pocket of light defoliation occurred on 40-foot white spruce trees in Jack Township (Table 13). Single colonies were observed at numerous locations in Benneweis, Noble and St. Louis townships.

TABLE 13

Summary of Balsam Fir Sawfly Larval Counts in Gogama District from 1965 to 1967

Location (township)	Host	Av. d.b.h. of sample trees in inches	Total no. of larva per 15-tray sample		
			1965	1966	1967
Benneweis	wS	11	0	0	1
Jack	bF	6	11	6	0
Noble	bF	5	-	3	1
Jack	wS	13	1	10	7
St. Louis	bS	3	2	0	2

Red-pine Sawfly, Neodiprion nanulus nanulus Schedl

A general increase in the abundance of this sawfly occurred throughout the district in 1967. Light infestations were observed on jack pine in Noble, Jack and Middleboro townships and on both jack pine and red pine in Mattagami Township.

Red-headed Jack-pine Sawfly, Neodiprion virginianus complex

A further increase in numbers of this sawfly occurred in 1967 (Table 14). Heavy defoliation was recorded in Groves Township where three of the sample trees were stripped of old foliage. Numerous infestations were observed on single trees throughout the remainder of the district.

TABLE 14

Summary of Red-headed Jack-pine Sawfly Colony Counts on Jack Pine Trees in the Gogama District in 1966 and 1967

Location (township)	Av. d.b.h. of sample trees in inches	Average number of colonies per tree	
		1966	1967
Benneweis	2.0	.2	.2
Chester	4.0	.5	.2
Foleyet	3.0	.1	.3
Groves	2.0	2.5	9.0
Ivanhoe	3.0	.7	.3
Jack	4.0	.9	.6
Silk	1.5	.1	.2
Reeves	1.0	.5	2.1
Horwood	1.0	.1	.4
Noble	3.0	.1	1.1

Leaf-folding Sawflies on Poplars and Willows, Phyllocolpa spp.

Low populations of this insect were widely distributed in the district in 1967. The highest numbers occurred in Groves Township where 19 per cent of the leaves of trembling-aspen regeneration were infested (Table 15).

TABLE 15

Summary of Leaf-folding Sawfly Counts at Several Locations in the Gogama District in 1966 and 1967

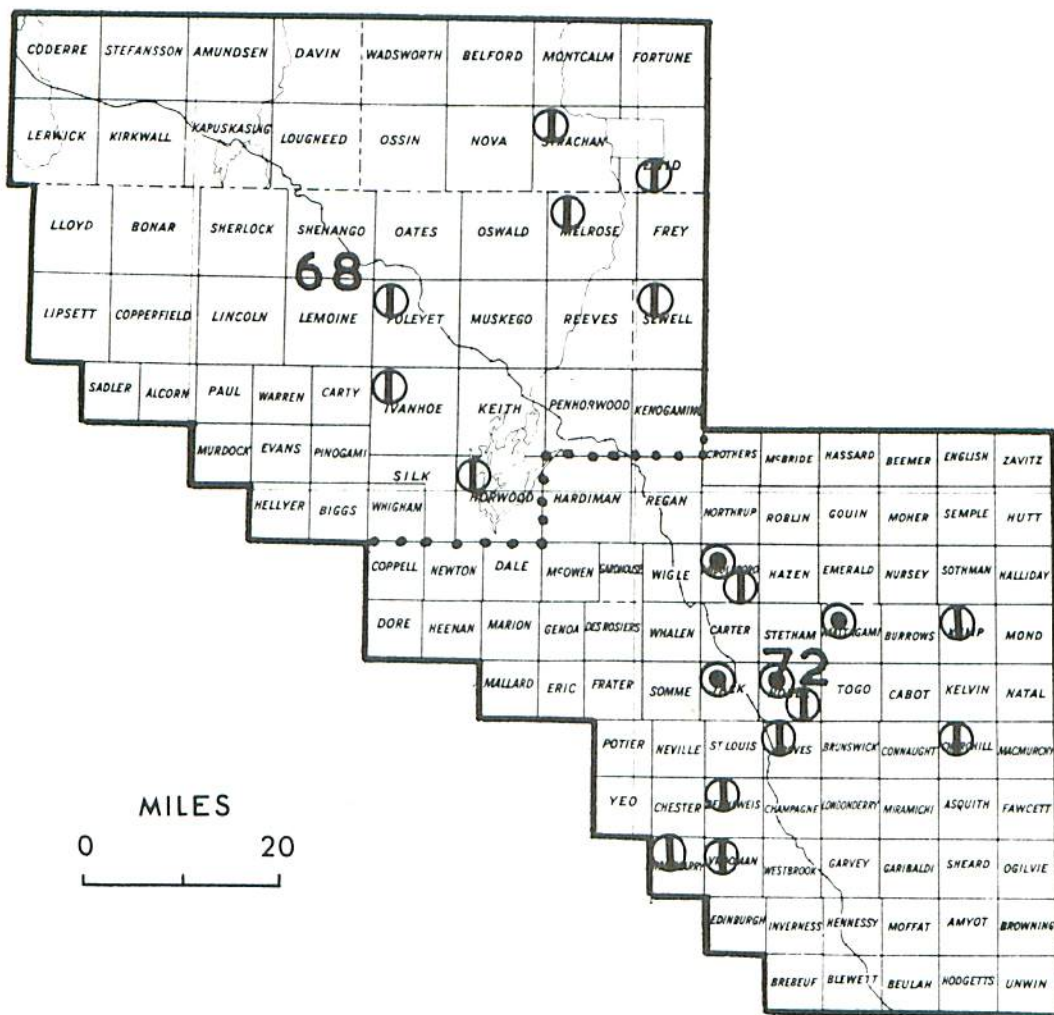
Note: Counts were based on a total of 100 leaves from 3 branches from each of four trees at each location.

Location (township)	Host	Av. height of sample trees in feet	Per cent of leaves folded		Av. no. of folds per leaf	
			1966	1967	1966	1967
Carter	tA	10	3	9	1.3	1.1
Ivanhoe	bPo	6	17	6	1.0	1.0
Ivanhoe	W	5	11	5	1.0	1.0
Ivanhoe	tA	12	17	5	1.7	1.0
Coppell	tA	10	8	2	1.4	1.5
Groves	tA	8	48	19	1.4	1.2
Hellyer	tA	10	12	5	1.2	1.0
Pinogami	tA	12	17	5	1.0	1.2
St. Louis	tA	12	9	14	1.0	1.1
Jack	tA	20	-	6	-	1.1
Champagne	tA	14	-	9	-	1.0
Strachan	tA	12	-	5	-	1.2

White-pine Weevil, Pissodes strobi (Peck)

High population levels of this weevil persisted in white pine stands throughout Division 72. A heavy infestation occurred in Kemp Township where 23 per cent of the leaders of sample trees were infested (Table 16). Light-to-moderate damage was observed on planted jack pine, white pine and red pine throughout the district. A light infestation occurred on black spruce in Noble Township where five per cent of the trees were weevilled.

GOGAMA DISTRICT



SAWFLIES ON PINE

Locations where two species of pine sawflies were observed in 1967

Legend

- Red-headed Jack-pine Sawfly ⊖
- Red-pine Sawfly ●

TABLE 16

Summary of Leader Damage by the White-pine Weevil in the Gogama District in 1967

Location (township)	Tree species	Av. d.b.h. of sample trees in inches	Number of trees examined	Per cent of trees weevilled in 1967
Vrooman	jP	1.5	100	14
Benneweis	jP	2.0	100	2
Westbrook	jP	3.0	100	8
Noble	jP	2.5	100	0
Noble	rP	1.5	100	0
Noble	bS	3.0	20	5
Kemp	wP	2.0	100	23
Kemp	rP	2.0	100	4
Garvey	jP	3.5	100	7
Horwood	jP	2.0	100	5
Jack	jP	4.0	50	4
Champagne	jP	1.5	100	9

Balsam Shoot-boring Sawfly, Pleroneura borealis Felt.

Population levels of this sawfly declined for the second consecutive year. Light infestations were observed on roadside regeneration in Jack, Noble, Groves and McBride townships in Division 72 (Table 17).

TABLE 17

Summary of Balsam Shoot-boring Sawfly Damage in the Gogama District in 1967

Location (township)	Av. height of sample trees in feet	Number of new buds examined	Percentage of buds mined in 1967
Jack	25	157	7.0
Noble	20	171	2.9
Groves	30	163	3.1
McBride	40	212	1.4

Larch Sawfly, Pristiphora erichsonii (Htg.)

Population levels of the larch sawfly have been high in the district since 1965. Heavy infestations persisted in Montcalm, Enid, Strachan and Kemp townships. Moderate infestations were observed in Vrooman, Benneweis, Noble and Foleyet townships. Light defoliation was observed on small open-grown larch throughout the remainder of the district.

Mountain-ash Sawfly, Pristiphora geniculata (Htg.)

Population levels increased throughout the district. Scattered roadside trees around Duke Lake in Invergarry Township were stripped before the larva were full grown. Light to moderate defoliation occurred commonly throughout the district. A second generation of larvae in Noble and Groves townships in early September completely defoliated 8-to-10-foot trees.

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

Populations of this leaf miner increased in the district in 1967. Heavily infested trees were observed through Shenango, Noble and Togo townships (Table 18). In Togo township 100 per cent of the leaves of several 35-foot trees were mined. Numerous light infestations were observed on open-grown or fringe trees in the remainder of the district.

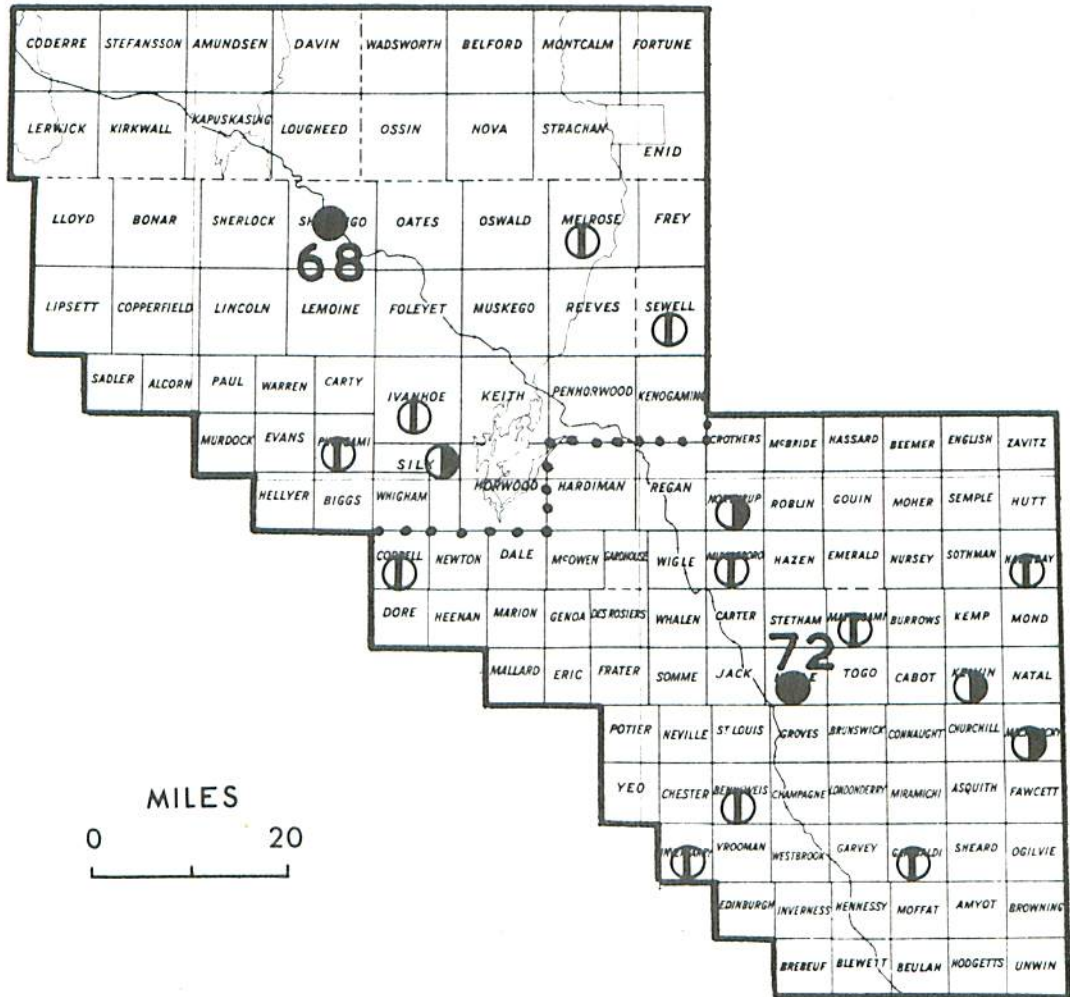
TABLE 18

Summary of Damage Caused by the Amber-marked Birch Leaf Miner in the Gogama District in 1967

Note: Counts were based on a total of 100 leaves from three branches from each of four trees at each location.

Location (township)	Av. d.b.h. of sample trees in inches	Host	Per cent leaves infested	Total no. of mines	Av. no. of mines per infested leaf
Horwood	2.0	wB	11	11	1.0
Pinogami	1.5	wB	12	17	1.4
Silk	1.0	wB	8	8	1.0
Coppell	2.0	wB	6	8	1.3
Invergarry	2.5	wB	11	13	1.2
Groves	1.0	wB	13	14	1.1
Mattagami	2.0	wB	13	14	1.1
Middleboro	5.5	wB	17	23	1.4
Middleboro	7.0	yB	13	13	1.0
Northrup	5.0	wB	23	72	3.1
Northrup	9.0	yB	4	4	1.0
Shenango	4.0	wB	53	103	1.9
Noble	3.0	wB	56	81	1.4
Togo	4.0	wB	78	123	1.6

GOGAMA DISTRICT



AMBER-MARKED BIRCH LEAF MINER

Locations where infestations were observed
in 1967

Legend

- Light infestation ○
- Medium infestation ◐
- Heavy infestation ●

Spruce Bud Midge, *Rhabdophaga swainei* Felt

Population levels of this insect remained low throughout the district in 1967. A decline in the number of infested buds was recorded on black spruce in St. Louis and Noble townships and on white spruce in Foleyet and Jack townships (Table 19).

TABLE 19

Summary of Damage Caused by the Spruce Bud Midge on Spruce Trees in the Gogama District in 1966 and 1967

Location (township)	Av. d.b.h. of sample trees in inches	Host	Per cent of shoots infested	
			1966	1967
St. Louis	6	bS	6.6	1.8
St. Louis	2	wS	.3	2.4
Noble	4	bS	1.3	.6
Noble	5	wS	0	3.0
Foleyet	6	wS	2.1	.9
Jack	5	wS	2.4	1.7

TABLE 20

Summary of Miscellaneous Insects Collected in Gogama District in 1967

Insect	Host(s)	Remarks
<i>Acleris variana</i> Fern.	bF ₉ wS	Commonly found throughout the district in beating tray samples for Spruce Budworm
<i>Acmaeops proteus</i> Kby.	wS	Obtained from trap logs in Noble Township
<i>Acrionicta lepusculina</i> Gn.	tA	Collected in Strachan and Noble townships
<i>Altica ambiens alni</i> Harr.	Do ₉ W	Observed commonly throughout the district, particularly on willow catkins
<i>Anacamptis innoculella</i> Zell.	tA	Affected 23 per cent of the foliage on small tA regeneration in Ivanhoe Township
<i>Anomogyna elimata</i> Gn.	bS ₉ bF	Collected from bF plots in Jack and Noble and bS plot in St. Louis Township
<i>Aphrophora pallelala</i> Say	jP	Light infestation in Jack and Chester townships

TABLE 20 (continued)

Insect	Host(s)	Remarks
<i>Archippus strianus</i> Fern.	wS	Hand picked from wS foliage in Stetham Township
<i>Arge pectoralis</i> Leach	wB	Further decline noted with two small infestations in Ivanhoe and Kelvin townships
<i>Campaea perlata</i> Gn.	bF,tL	Small numbers in larch mortality plot in Noble Township and bF plot in Jack Township
<i>Choristoneura conflictana</i> Wlk.	tA	Single collection from Groves Township
<i>Choristoneura pinus pinus</i> Free.	jP	Observed commonly along the northwest shore of Lake Minisinakwa in Jack and Noble townships. One clump of approximately 150 trees was lightly defoliated in Jack Township
<i>Chlorochroa uhleri</i> Say	Sweet gale	Light infestation on lakeshore of Ivanhoe Lake and Minisinakwa Lake
<i>Coleophora betulivora</i> M.D.	Al,wB Mo	Found throughout Division 72
<i>Coleophora prunella</i> Clem.	wB	Found in low numbers throughout the district
<i>Compsolechia niveopuluella</i> Cham.	tA	Leaf roller found commonly throughout the district
<i>Groesus latitarsus</i> Nort.	wB	Light infestation on open-grown wB regeneration in Ivanhoe Provincial Park
<i>Dioryctria abietivorella</i> Grt.	bF	Cones lightly infested near V.H.F. tower in Noble Township
<i>Dioryctria reniculella</i> Grt.	wS	Obtained while sampling for spruce budworm in Hazen, Sewell and Jack townships
<i>Disonycha alternata</i> Ill.	wS	Leaf beetle found commonly throughout Division 72
<i>Epinotia corylana</i> McD.	Al	Affected 26 per cent of the cone crop in Noble Township
<i>Epinotia lindana</i> Fern.	Do	Light infestations in Jack Township

TABLE 20 (continued)

Insect	Host(s)	Remarks
<i>Erynnis icelus</i> Scud. and Burg.	bPo, tA	Pupae found in rolled leaves in Noble Township
<i>Eucordylea atrupictella</i> Dietz.	wS	Hand picked from wS foliage in Stetham Township
<i>Euodinus monticola</i> Rand.	wS	Obtained from trap logs in Noble Township
<i>Eupithecia filmata</i> Pears.	bF	Obtained from third visit to bF plots in Jack and Noble townships
<i>Eupithecia gibsonata</i> Tayl.	eC	Obtained in sample for cedar sawfly in Foleyet Township
<i>Fenusa dohrnii</i> Tischb.	Al	Approximately 20 per cent of the foliage affected on roadside regeneration in Lemoine Township
<i>Fenusa pusilla</i> Lep.	wB	Moderate defoliation in MacMurchy and Middleboro townships and light throughout Noble, Invergarry and Kelvin townships
<i>Feralia jocosa</i> Gn.	wS	Larva obtained in sample for spruce budworm in McBride Township
<i>Gonioctena americana</i> Schaeef.	tA	Insect populations down with light defoliation recorded in Noble, Keith and Lemoine townships
<i>Gracillaria alnivorella</i> Cham.	Al	Leaf roller found commonly throughout the district
<i>Gracillaria syringella</i> Fabr.	bAs	Light defoliation at poplar point in Jack Township
<i>Gretchena semialba</i> McD.	Al	Bud miner on alder, found commonly in the southeastern portion of Division 72
<i>Hypagyrtis piniata</i> Pack.	bF	Collected in 4th visit to bF plot in Jack Township
<i>Ichthyura albosigma</i> Fitch	lA	Single collection from Noble Township
<i>Lambdina fiscellaria</i> <i>fiscellaria</i> Gn.	bF	Obtained in beating sample in Halliday Township

TABLE 20 (continued)

Insect	Host(s)	Remarks
<i>Lithocelletes aceriella</i> Clem.	rM	Leaf miner affecting rM foliage in Noble Township
<i>Lobophora nivigerata</i> Wlk.	tA	Single collection from Noble Township
<i>Macremphytus intermedius</i> Dyar	Do	Light infestation in Noble Township
<i>Macremphytus varianus</i> (Nort.)	Do	Small areas heavily infested along the shore of Lake Minisinakwa in Jack and Noble townships
<i>Mordwilkoja vagabunda</i> Walsh	tA	Light infestations occurred throughout the district on fringe trees
<i>Neodiprion maurus</i> Roh.	JP	Light infestation occurred on open-grown JP along the shore of Minisinakwa Lake in Jack Township
<i>Neodiprion pratti banksianae</i> Roh.	JP	Light infestations occurred in Jack, Noble and Strachan townships
<i>Neodiprion swaini</i> Midd.	JP	Second year of a light infestation in Noble Township
<i>Nyctobia limitaria</i> Wlk.	wS,bF	Collected in second visit to wS plot in Jack Township and third visit to bF plot in Jack Township
<i>Okanagana canadensis</i> Prov.	tA	Numerous singing males heard and collected from Noble and Burrows townships
<i>Okanagana rimosa</i> Say	tA	Singing males heard throughout the district and collected from Ivanhoe, Vrooman, Noble and Foleyet townships
<i>Orthosia hibisci</i> Gn.	pCh,tA	Numerous larva observed on small regeneration in Carter and Lemoine townships
<i>Orthosia revicta</i> Morr.	bF	Obtained in last visit to bF plot in Jack Township
<i>Pachysphinx modesta</i> Harr.	tA	Frequently found on open-grown tA regeneration in Noble Township

TABLE 20 (continued)

Insect	Host(s)	Remarks
<i>Pareophora minuta</i> MacG.	bAs	Light infestations throughout Jack, Middleboro and Ivanhoe townships
<i>Parorgyia plagiata</i> Wlk.	bF, wS	Collected in Jack, Noble and Foleyet townships
<i>Pegohylemyia anthracina</i> Mall.	wS	Light infestation on wS cones in Roblin Township
<i>Petrova albicapitana</i> Busck.	jP	Light infestations throughout Jack, Hazen and Strachan townships
<i>Phyllocnistis populiella</i> Chamb.	lA	Observed occasionally in Noble Township
<i>Pikonema alaskensis</i> Roh.	wS	Light infestations in Jack, Stetham and Sewell townships
<i>Pikonema dimmockii</i> Cress.	wS	Obtained from beating tray samples in Jack, Noble and Ivanhoe townships
<i>Pristiphora lena</i> King.	wS	Collections from Noble and Grothers townships
<i>Prociphilus tessellatus</i> (Fitch)	Al	Branch mortality was common throughout the central and north-central portion of Division 72
<i>Protoboarmia porcelaria</i> <i>indicataria</i> Wlk.	bF	Collected in balsam-fir plot in Jack Township
<i>Pulicalvaria laricis</i>	tL	Light infestation on larch in Garvey Township
<i>Pusillus neacanthocinus</i> Kirby	wS	Obtained from trap logs in Noble Township
<i>Raphia frater</i> Grt.	tA	Light infestation in Strachan Township
<i>Rhagium inquisitor</i>	wS	Obtained from trap logs in Noble Township
<i>Rheumaptera subhastata</i> Nolck.	Sweet gale	Light infestations observed along the shorelines of Ivanhoe and Minisinakwa Lakes
<i>Sciaphila duplex</i> Wlshn.	tA	Light infestations in Lemoine and Keith townships

TABLE 20 (concluded)

Insect	Host(s)	Remarks
<i>Semiothisa dispuncta</i> Wlk.	bF	Obtained in third and fourth visit to the balsam-fir plot in Jack Township
<i>Semiothisa orillata</i> Wlk.	eC	Obtained in beating samples for cedar sawfly in Chester Township
<i>Tetralopha aplastella</i> Hlst.	tA	Found on trembling-aspen regeneration in Jack Township
<i>Tibicen canicularis</i> Harr.	bPo	Single collection from Ivanhoe Provincial Park along the sandy beach where numerous singing males could be heard in the bPo regeneration
<i>Trichiocampus irregularis</i> Dyar	W	Sawfly found commonly on foliage in Noble Township
<i>Zeiraphera diniana</i> Gn.	tL	Collected in Garvey Township