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> Status of Insects in the Gogama District in 1966

Ingram, W.

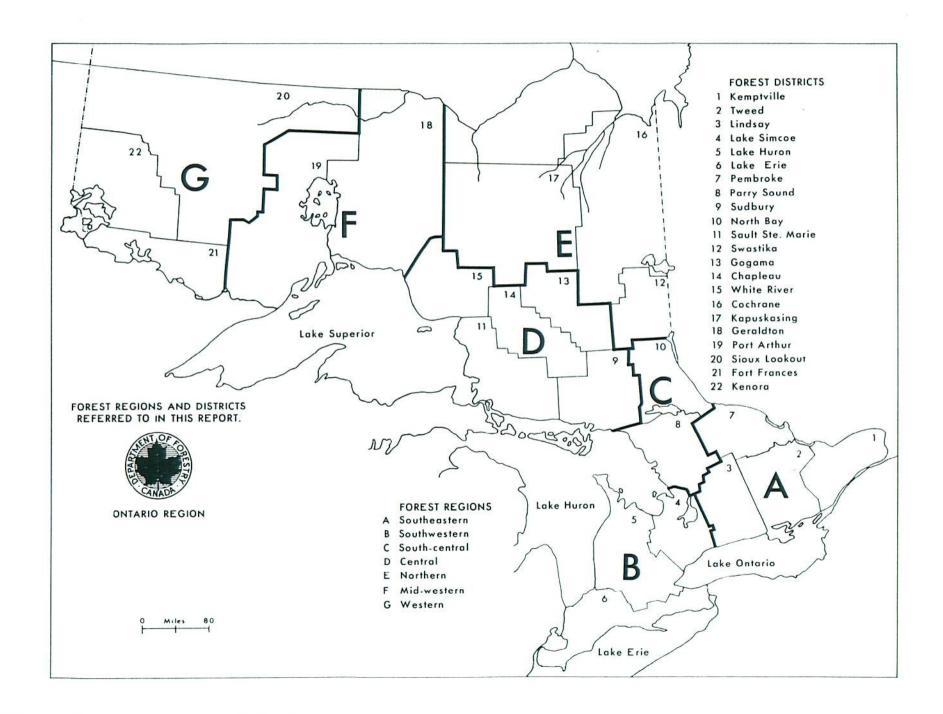
Information Report O-X-46 (Forest Research Laboratory, Ontario Region)

Information Report No.	Subject	Author
0-X-34	Forest Insect & Disease Surveys	
	Lindsay District	W. J. Miller
0-X-35	Tweed District	F. Livesey
0-X-36	Kemptville District	J. Hook
U-X-37	Pembroke District	R. A. Trieselmann
0-X-38	Lake Simcoe District	A. A. Harnden
0-X-39	Lake Huron District	R. L. Bowser
0-X-40	Lake Erie District	J. R. Trinnell
0-X-41	North Bay District	L. S. MacLeod
0-X-42	Parry Sound District	C. A. Barnes
0-X-43	Sault Ste. Marie District	H. G. McPhee
0-X-1+4	Sudbury District	J. R. McPhee
0-X-45	Chapleau District	D. Ropke
0-X-46	Gogema District	W. Ingram
0-X-47	White River District	D. C. Constable
0-X-48	Cochrane District	H. R. Foster
0-X-49	Kapuskasing District	G. T. Atkinson
0-X-50	Swastika District	M. J. Applejohn
0-X-51	Port Arthur District	K. C. Hall
0-X-52	Geraldton District	V. Jansons
0-X-53	Sioux Lookout District	P. E. Buchan
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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 GOGAMA DISTRICT IN 1966

	F	age	
Ugly-nest Caterpillar	Archips cerasivoranus (Fitch	D 39	9
Birch Sawfly	Arge sp.	D 39	9
Birch Skeletonizer		D' 39	9
A Bark Beetle in Jack-pine Twigs	Conophthorus sp.	D 40	63
European Spruce Sawfly	Diprion hercyniae (Htg.)	D 40	
White-pine Shoot Borer	Eucosma gloriola Heinr.	D 40	
American Poplar Leaf Beetle	Gonioctena americana (Schaeff.)	D 4	
A Leaf-tier on Alder		D 4	
A Root Weevil		D 4	
	Lithocolletis salicifoliella Chamb.		
Western Tent Caterpillar		D 4	
Balsam-fir Sawfly		D 4	
Red-pine Sawfly			
Red-headed Jack-pine Sawfly		D 4	
Leaf-folding Sawflies on Poplars and Willows		D 4	542
Balsam Shoot-boring Sawfly	The state of the s	D 4	
Alder Woolly Aphid	The second secon	D 4	
Amber-marked Birch Leaf Miner	Profenusa thomsoni (Konow)	D 4	
Summary of Miscellaneous Insects		D 4	

W. Ingram

Ugly-nest Caterpillar, Archips cerasivoranus (Fitch)

This insect was less abundant in the district in 1966 than in 1965. Lightly infested clumps of pin cherry and willow were observed in Jack and Ivanhoe townships. The decrease in population levels that occurred throughout the district is reflected in Table 5.

Summary of Ugly-nest Caterpillar Colony Counts in Gogama District from 1964 to 1966

Location by township	Paragram 1961	Hoston	il bed la 1966 1	No. of	colonies	per square	chain plot
Gouin		W	A /	2	IO.I	2	2/00
Groves		p Ch	- 8	õ		1	0
Ivanhoe			Ch	3	3 [1.	0
Jack			h a	lí		1	Į,
Kelvin		c Ch) O		2	Õ

Birch Sawfly, Arge sp., formerly Arge pectoralis (Leach)

Population levels of this insect remained low. Small pockets of light infestations occurred in Garvey and Westbrook townships in Division 72 and in Ivanhoe and Pinogami townships in Division 68. Several pockets of light infestations persisted in Cabot and Togo townships.

Birch Skeletonizer, Bucculatrix canadensisella Chamb.

Population levels of this insect increased throughout the district. White birch was heavily infested in Horwood and Pinogami townships in Division 68 (Table 6). Light infestations were observed in Invergarry, Noble, Togo and Jack townships in Division 72.

TABLE 6

Summary of Birch Skeletonizer Counts at Ten Sample Points in Gogama District from 1964 to 1966

NOTE: Counts based on a total of 100 leaves taken from three trees at each sample point.

Location by township	Host	D.b.h. of sample trees in inches	Per cer	nt of leaves	infested
Cabot	wB	m litelingo Joseph sim	100	i (belevit	forth City
Horwood	wB	2		71	30
Ivanhoe	wB	2	98	17	46
		2	61	29	39
MacMurchy	wB	2.5	96	78	39
Middleboro	wB	5	94	12	21
Middleboro	yВ	6	1	1	22
Montcalm	wB	2	100	16	20
Pinogami	wB	3	74	21.	
Silk	wB	5			82
Sothman	wB	~	84	11	26
DO OTHIGHT	WD	2	100	27	46

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

Population levels of this insect have been low for the past two years (Table 7). Light damage was observed at scattered locations in the district.

TABLE 7 JidaT ni bedoeller ai Jairjath eas suo

Summary of Jack-pine Shoot Damage by Conophthorus sp. in Gogama District in 1965 and 1966

NOTE: Counts were taken on 100 jack pine trees at each sample point.

Location by	Average d.b.h.	Average	No. in	fested	No. in shoots	fested	No. in leader	fes ted
township	in inches	in feet	1965	1966	1965	1966	1965	1966
Benneweis	1 8	10	2 7	6	41	23	0	0
Garvey	2	12	8	6	53	37	0	2910
Horwood	2	15	5	1.	129	9	0	0
Jack	1.5	12	14	8	169	23	1	1.
Vrooman	ī	10	6	6	22	- 44	0	3
Westbrook	2	10	36	6	189	30	1	1

European Spruce Sawfly, Diprion hercyniae (Htg.)

Populations remained low and only small numbers of larvae were collected at quantitative sampling locations (Table 8).

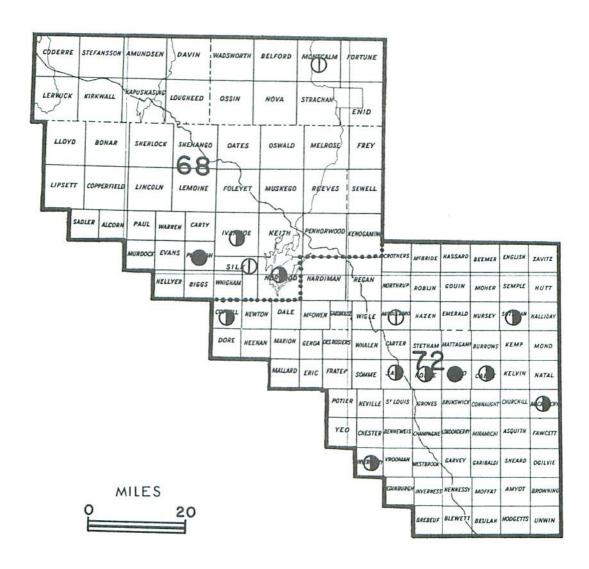
TABLE 8
Summary of European Spruce Sawfly Larval Counts
in Gogama District from 1964 to 1966

Location by township	Host	Av. d.b.h. of sample trees in inches	Total no 1964	of larvae per 15-tray 1965	sample 1966
Benneweis	wS	10	7	a fasti New EDO to see a rest	2
Jack	bS	1 5 Light 80 17 1 12 40 12 6 7 1	4	to amove at	1
Jack	wS	9	14	0	2
Noble	wS	taken 21om three	1000leav	o Istof a n3 beasd atmo	0

White-pine Shoot Borer, Eucosma gloriola Heinr.

Small jack pine trees in Garvey, Vrooman and Westbrook townships in Division 72 were lightly infested by this insect. Population levels were low throughout the district (Table 9).

GOGAMA DISTRICT



BIRCH SKELETONIZER

Locations where pockets of this insect occurred in 1966

Legend

Light infestation		•	•				•	•	1
Medium infestation	•			•	٠	•		٠	
Heavy infestation				• 7					

TABLE 9

Summary of White-pine Shoot Borer Damage on Jack pine Trees at Five Points in Gogama District from 1964 to 1966

Location by township	Average d.b.h. of sample trees in inches	Average height of sample trees in feet			leaders sample 1966
Garvey	2	12	Counts		CONTRACTOR STREET
Vrooman	1	70	14	11	4
Westbrook	2	10	2	1	2
Champagne	2	10	9	6	4
Benneweis	2	7		CO	3
permemera		10	-	6200	2

American Poplar Leaf Beetle, Gonioctena americana (Schaeff.)

Small pockets of heavy infestation were observed on willow and trembling aspen in Keith, Muskego and Foleyet townships in Division 68. Light to moderate defoliation of roadside trembling aspen occurred at several locations elsewhere in the district. Larvae were frequently found feeding in association with a leaf roller Pseudexentera oregonoma Wishm.

A Leaf-tier on Alder, Gretchena semialba McD

Increasing numbers of this leaf-tier have occurred since 1964. In 1966 pockets of medium infestation were observed in Benneweis, Noble and Mattagami townships where up to 30 per cent of the terminal buds of alder was mined. Light infestations occurred at numerous points in the remainder of the district.

A Root Weevil, Hylobius warreni Wood

This weevil was found for the first time in the Gogama District in 1966 (see photograph). Scots pine trees were heavily infested in Noble Township causing light tree mortality. Mortality occurs when the larvae have girdled the tree at the root collar.

Aspen Blotch Miner, Lithocolletis salicifoliella Chamb.

Population levels of this insect declined for the third consecutive year, however, pockets of moderate to severe defoliation of roadside regeneration occurred in Ivanhoe and Silk townships. Light infestations occurred on larger trees throughout the remainder of the district. Quantitative sampling data are shown in Table 10.

TABLE 10

Summary of Leaf Damage Caused by the Aspen Blotch Miner at Thirteen Points in Gogama District in 1965 and 1966

NOTE: Counts were based on samples of 100 leaves at each location.

Location by	Per cen infeste	t leaves	No. min infeste	d leaf	Average mines pe	er leaf
township	1965	1966	1965	1966	1965	1966
2	47	5	1.5	1.0	.72	.05
Carter	18	_	1.4	43	.31	No.
Champagne	12	5	1.3	1.2	.16	.06
Coppell	1	37	1.0	1.2	.Ol	.043
Garabaldi*	73	11	4.2	1.0	3.05	.11
Hellyer		8	2.1	1.2	1.69	.10
Invergarry	79 78	5	4.9	1.0	3.82	.05
Lemoine	2	5	1.3	1.2	.03	.060
Mattagami#		10	1.4	1.0	.57	.10
Montcalm	41	8	2.3	1.1	.36	.09
Oates	16	1	2.1	1.3	1.03	.29
Pinogami	48	23	1.5	1.0	.54	.05
St. Louis Silk	35 67	5	3.5	1.0	2.32	.05

^{*} Based on 1000 leaves as in last year's table.

Western Tent Caterpillar, Malacosoma pluviale (Dyar)

A decline in population levels of this insect has occurred in the district for the past three years (Table 11). Light infestations were observed on roadside willow and pin cherry at numerous locations.

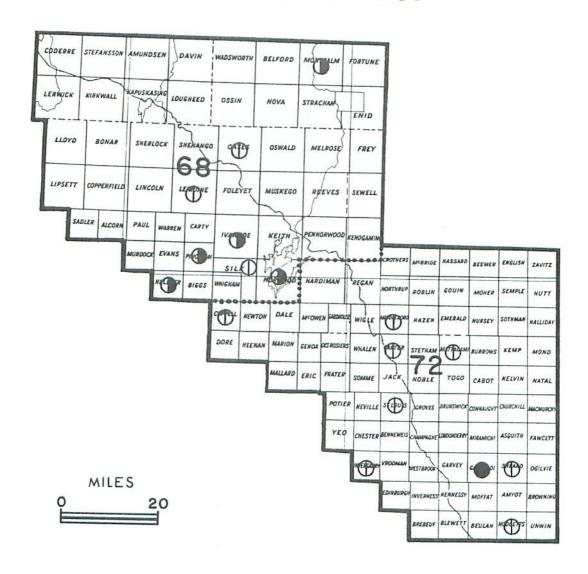
Summary of Western Tent Caterpillar Colony Counts in Gogama District from 1964 to 1966

Location by	Host		per measured mile	of roadside
township		1964	1965	2700
TEST SYLTES	ounce bring and 's	of beningen Joseph	8	2
Kelvin	w, p Ch	olightot n spaves	93 831 18 3	1
Mattagami	w, p Ch	ne dright a sqiner	med pille Sus souve	0
Noble	p Ch	18 th and	to mebalamen end Ji	CHANCATE LE
Roblin	w, p Ch	14		The month
	p Ch	22	18	12
Silk	OI.	11	4	0
Togo	p Ch	******		

Balsam-fir Sawfly, Neodiprion abietis complex

Quantitative samples taken at four locations for the past several years show very little change in population levels of this insect (Table 12). Small numbers were collected at numerous locations in the district.

GOGAMA DISTRICT



ASPEN BLOTCH MINER

Locations where infestations were observed in 1966

Legend

Light infestation				٠	\Box
Medium infestation				٠	
Heavy infestation		27	10.98		

TABLE 12
Summary of Balsam Fir Sawfly Larval Counts
in Gogama District from 1964 to 1966

Location by township	Host	Average d.b.h. of sample trees in inches	Total no. of	larva per l	5-tray sample
	-	The state of the s	1964	1965	1966
Benneweis	wS	11	0		
Jack	wS	13	2	40	0
Jack	bF	-6	10	1	10
St. Louis	bS	3	12	11	6
Noble	bF	5	3	2	0
-)	III •	45	3

Red-pine Sawfly, Neodiprion nanulus nanulus Schedl.

Population levels of this sawfly have declined since 1964. Quantitative samples at seven points in the district showed an average of 1.7 colonies per sample in 1964, 0.3 in 1965 and 0.2 in 1966.

Red-headed Jack-pine Sawfly, Neodiprion virginianus complex

Although population levels declined at all sample points, this sawfly was still found at numerous locations in the district. Jack pine was the predominant host, but the insect was observed on red pine stands in Ivanhoe and Mattagami townships (Table 13).

TABLE 13
Summary of Red-headed Jack-pine Sawfly Colony Counts on Jack Pine Trees in Gogama District in 1965 and 1966

Location by township	Average d.b.h. of sample trees	Average no. of per 10 tree sa	colonies
	in inches	1965	1966
Benneweis Chester	2	1.1	.2
Foleyet		blishs Ca.6.	•5
Groves	2	7.07	.1
Ivanhoe	and the second s	4.7	2.5
Ivanhoe*	and the second of the second o	3.4	.7
Jack	alian and spiral actions and	disalest appeted to the	.1
Silk	1 5	1.3	•9
Reeves	1 · · ·	1.5	.1
Horwood	i	-	•5
Mattagami*	5	-	.1
Noble	3		.8
# Ca1 - 1 - 1	J	-	.1

^{*} Sample taken on red pine

Leaf-folding Sawflies on Poplars and Willow, Phyllocolpa spp. formerly Nematus spp.

These sawflies were collected more commonly than in 1965, even though this is not reflected in Table 14 below. Heavy infestations occurred on willow and trembling aspen regeneration along roadsides and lakeshores in Ivanhoe, Silk and Whigham townships.

TABLE 14

Summary of Leaf-folding Sawfly Counts at Seven Locations in Gogama District in 1966

NOTE: Counts are based on the examination of 100 leaves taken at random from each of three trees at each location.

Location	Average height of Host sample trees		Per cent of leaves folded		Average no. of folds per leaf	
township	Host	in feet	1965	1966	1.965	1966
Hellyer Groves Ivanhoe Pinogami St. Louis Silk Hodgetts	tA tA bPo bPo tA tA	10 10 9 9 12 9	74 7 19 19 10 60	12 48 15 17 6	1.4 1.1 1.2 1.1 1.3	1.2

Balsam Shoot-boring Sawfly, Pleroneura borealis Felt.

This sawfly is usually abundant in alternate years but severe late frosts in 1965 interrupted this cycle. Data obtained at sample locations in 1966 are shown in Table 15.

TABLE 15 o . d.d.b egame vi

Summary of Balsam-fir Shoot Damage Caused by the Balsam Shoot-boring Sawfly in Gogama District in 1966

Location by township	D.b.h. of sample trees in inches	Percentage o	of shoots	infeste
Foleyet Jack Noble St. Louis McBride Groves	2 6 2 1 2 3	3 2 T T - 2 T - 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	40.0 9.1 5.0 4.5 2.0 1.6	

Alder Woolly Aphid, Prociphilus tesselatus (Fitch)

Heavy infestations of this aphid occurred on pockets of alder throughout the district. Branch mortality was common in the central and north-central portions of Division 72 where high populations have been observed for the past several years. Light to medium infestations occurred elsewhere in the district.

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

Although a decline in population levels occurred, light to moderate defoliation occurred in numerous areas in the district. Damage was restricted to suppressed or shaded trees. Data from quantitative samples are summarized in Table 16.

Summary of Damage Caused by the Amber-marked Birch Leaf Miner to the Foliage of White Birch in Gogama District in 1966

by	lverage d.b.h. of sample trees n inches	Per cent leaves infested	Total no. of mines	Average no. of mines per infested leaf
Montcalm	2	0	-10323	1 003 104
Oates	2	277	0	0
Pinogami	3	27	28	1.0
Horwood	2	10	11	1.1
Coppell	2	11	11	1.0
Middleboro	2	4	4	1.0
	2	0	0	
Middleboro	6	4	4 .	1.0
Jack	. 3	5	6	
Togo (understo	ry) 2.5	7	8	1.2
Togo(overstor	y) 6	3	3	1.1
Invergarry	2	· ·	70	1.0
Sothman	2	7	10	1.1
MacMurchy	2.5	2	2	1.0
31.7	~•/	6	7	1.1

TABLE 17
Summary of Miscellaneous Insects Collected in Gogama District in 1966

Insect	Host(s)	Remarks	
Acleris calignosana Wlk.	Al	Lightly infested clumps of alder in north east corner of divisions 68 and 72.	
Acleris variana Fern.	wS, bS, bF	Small numbers in beating samples in Division 72.	
Argyresthia pygmaella Hbn.	W	High numbers in Keith and Groves townships.	

TABLE 17 (continued)

Insect and a large of the large	lost(s)	Remarks defended to the second
Choristoneura fumiferana (Clem.)	wS, bF	Common in beating samples in central portion of Division 72.
Control of the Contro	aMo, pCh	Found in Stetham and MacMurchy town- ships in Division 72.
	w, tA, bPo	Occasional larva found in Noble, Burrows and Horwood townships.
Cinara canatra H & B	jP tadžinamp	Medium infestation near Cabot Lake in Cabot Township.
Coleophora fuscedinella	wB	Found at numerous points throughout the district.
	tA	Birch casebearer found feeding on foliage of trembling aspen in Garvey and Coppell townships.
Compsolechia niveopulvella Chamb.	tA on semis Da	Light infestations found throughout the district.
Corythucha elegans Drake	Al, W	Heavy feeding on trees in Jack Twp.
Croesus latitarsus Nort.	Al, wB	Defoliation was heavy on white bird in Noble Twp. and light on alder in Mattagami Township in Division 72.
Disonycha alternata Ill.	W	Medium infestation in Noble Townshi
Epinotia crusiana Linn.	W	Light infestations on willow in Jac. Township.
Epinotia solandriana Linn.	sB, tA	Light infestations observed in Nobl and Keith townships.
Gracillaria alnivorella Cham.	Al	Alder throughout the district had from 10 to 30 per cent of the foliage affected.
Gracillaria invariabilis Braun.	pCh	Found commonly throughout the district.
Hydriomena renunciata Wlk.	Alegoemi a	Up to 10 per cent defoliation in Jack, Groves and Togo townships.
Hyphantia cunea Dru.	Al, cCh, pCh, Wb, W	Relatively low numbers throughout the district.
Melenagromyza schineri (Gin)		Common in Churchill, Ivanhoe, MacMurchy and Keith townships.
Monoctenus fulvus Nort.	eC SV bna	Large numbers obtained in beating samples from Ivanhoe Township.
Mordwilkoja vagabunda Walsh	tA	Medium infestations in Noble and Cabot townships.
Neodiprion swainei Midd.	jP	Light infestation in Noble Townshi (.2 colonies per tree).

D 47
TABLE 17 (concluded)

Insect	Host(s)	Remarks
Nycteola frigidana Wlk.	W	Found in small numbers in Div. 68.
Parornix conspicuella Dietz.	wB	Light infestations in Stetham and Zavitz townships.
Phratora pupurea pupurea Brown	bPo	Single tree heavily infested in Horwood Township.
Phyllocolpa agama (Roh.)	W	Common around Marne Lake in Div. 72 and along Spruce Falls Road in Division 68.
Pikonema alaskensis (Roh.)	wS, bS	Numerous larvae found in beating samples in Jack, St. Louis and Noble townships.
Pikonema dimmockii (Cress.)	wS, bS	Found in association with Pikonema alaskensis (Roh.) in Jack Township.
Pineus similis (Gill.)	wS, bS	Light infestations in Asquith, Ivanhoe and Halliday townships.
Pineus strobi (Htg.)	wP	Trees heavily attacked in Asquith, Noble and MacMurchy townships.
Pissodes affinis Rand	jP	Occurred on weakened and dying trees along management Unit Road.
Pissodes approximatus Hopk.	wP, jP	Infestation on small trees in Noble Township.
Protoboarmia porcellaria indicataria Wlk.	bF	Collected three times during season at balsam fir sample plots in Noble Township.
Pseudexentera oregonana Wlshm.	tA	Light infestations were quite frequently associated with Gonioctena americana (Schaeff,) in the central portion of the district.
Rhabdophaga stobiloides (Walsh)	W	Observed throughout the district on open grown willow.
Rhabdophaga swainei Felt	bS	2.4 to 6.6 per cent of the buds were mined on black spruce trees in Division 72.
Sciaphila duplex Wlshm.	tA	A leaf roller found commonly throughout Division 68.
Semiothisa dispuncta Wlk.	bS, bF	Light infestations occurred throughout Division 72.
Trichotaphe levisella Fyles	Aster	Light infestations on aster in Stetham Township.
Xylomyges dolosa Grt.	bPo, LtA, tA, W	Found commonly throughout the district.