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Status of Insects in the Parry Sound
District

1966

Barnes, C.A.

Information Report O-X-42
(Forest Research Laboratory, Ontario Region)

1966

Information Report No.	Subject	Author
O-X-34	Forest Insect & Disease Surveys	
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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
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O-X-43	--Sault Ste. Marie District	H. G. McPhee
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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
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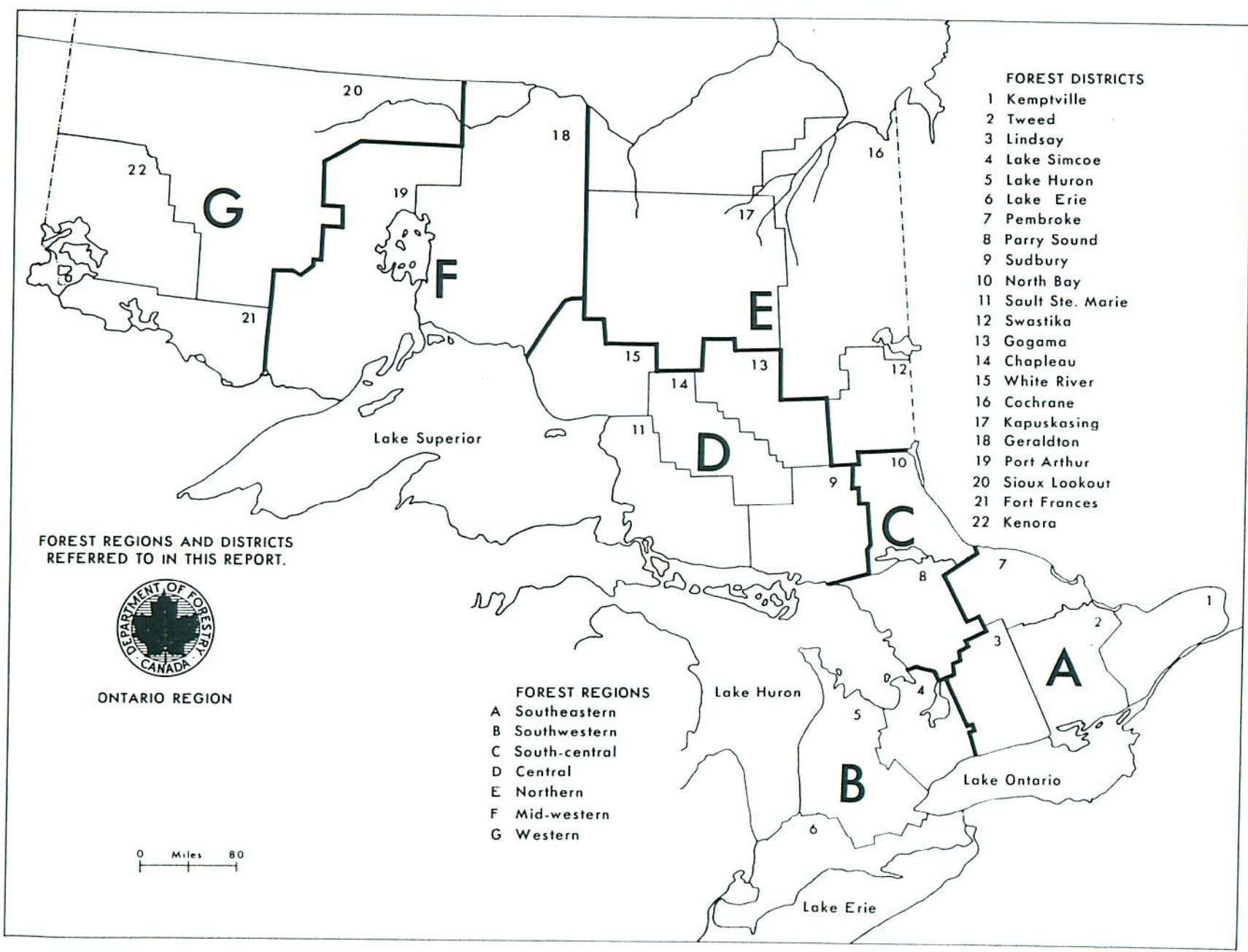
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* Regional Supervisors



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
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- 18 Geraldton
- 19 Port Arthur
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- 21 Fort Frances
- 22 Kenora

FOREST REGIONS

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

FOREST REGIONS AND DISTRICTS REFERRED TO IN THIS REPORT.



ONTARIO REGION



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 PARRY SOUND DISTRICT

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C. A. Barnes

STATUS OF INSECTS

Larch Casebearer, Coleophora laricella Hbn.

A decline in population levels of this insect occurred in all but three sample plots in 1966 (Table 4). The decline was most pronounced at a sample point in Ridout Township, where only 4.2 larvae per 18 inch branch tip was recorded in 1966 compared with 14.8 larvae per tip in 1965. A threefold increase was recorded in larval counts in Chisholm Township, but defoliation did not exceed five per cent.

TABLE 4

Summary of Larval Counts of the Larch Casebearer
in the Parry Sound District, 1964-1966

Location (township)	Tree species	Av. no. of larvae per 18-inch branch tip		
		1964	1965	1966
Ridout	eL	6.7	14.8	4.2
Wallbridge	tL	1.2	0.5	0.0
Chapman	tL	0.4	1.0	1.4
Perry	tL	0.4	0.2	0.1
McLean	tL	0.6	0.2	0.4
Gurd	tL	0.3	0.3	0.1
Chisholm	tL	1.5	0.8	3.5
Stephenson	tL	0.7	0.6	0.2

European Spruce Sawfly, Diprion hercyniae (Htg.)

Except in Joly and Ryerson townships, little change in population levels of this insect occurred in the district in 1966 (Table 5). Generally, larval counts were lower than in 1965. Defoliation was negligible at all sample points.

TABLE 5

Summary of European Spruce Sawfly Larval Counts Taken on White Spruce Trees in the Parry Sound District 1964-1966

Location (township)	Av. d.b.h. of sample trees in inches	Total no. of larvae per 15-tray sample		
		1964	1965	1966
Ryerson	8	24	43	27
Chapman	6	6	24	18
Gurd	10	11	51	63
McMurrich	7	5	19	10
Monteith	7	26	37	31
Perry	8	17	40	36
Croft	6	14	4	6
Joly	8	38	87	29
Machar	12	6	11	14
McLean	11	10	13	8

White-pine Shoot Borer, Eucosma gloriola Heinr.

Heavy infestations of this shoot-boring insect persisted for the third consecutive year in a Scots-pine plantation near Huntsville in Stisted Township. No appreciable change occurred in the medium infestation that has persisted for the past four years in a red and Scots pine plantation near Katrine in Armour Township. Elsewhere in the district populations declined to the lowest level in recent years (Table 6).

TABLE 6

Summary of Shoot Damage Caused by the White-pine Shoot Borer in the Parry Sound District, 1964-1966

Note: One hundred trees were examined at each location.

Location (township)	Host species	Av. height of trees in feet in 1966	Per cent of trees infested			Per cent of trees with leaders infested in 1966
			1964	1965	1966	
McLean	rP	10	9	2	3	0
Stisted	rP	19	6	3	0	0
Armour	scP	14	15	8	7	1

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

Moderate to heavy infestations were observed in clumps of jack-pine near Parry Sound in McDougall Township and Pointe au Baril in Harrison Township and along the Brunel Road south of Huntsville, where up to 40 per cent of the 1965 foliage was infested. Light infestations were common in Boulter, Monteith and Mowat townships.

Birch Leaf Miner, Fenusa pusilla (Lep.)

Medium to heavy infestations of this leaf miner were common throughout the district in 1966. Heavy infestations were observed in pockets of white birch in Henvy, Mowat, Chapman and Strong townships. Severe mining of leaves occurred on ornamentals and native white birch in the towns of Huntsville, Parry Sound and Bracebridge. Light infestations were observed at numerous other locations in the remainder of the district.

Fall Webworm, Hyphantria cunea Dru.

Since 1960, population levels of the fall webworm have been relatively low in the district. In 1966, increases in larval colonies occurred along highways 69 and 103 in Freeman, Gibson and Medora townships. Numerous webs were observed on choke cherry, alder and white birch trees at several locations in these townships.

Eastern Tent Caterpillar, Malacosoma americanum F.

For the second consecutive year heavy infestations occurred along highway 69 from the Parry Sound - Lake Simcoe district boundary north to the French River. The highest colony count was obtained in Harrison Township, where 164 primary nests were recorded along a measured mile of roadside. Total defoliation of choke, pin and black cherry trees occurred commonly in this area. A decline in population levels occurred in the eastern part of the district where counts at sample points were generally lower than in 1965 (Table 7). A Polyhedral virus disease was observed in larval populations near Footes Bay in Medora Township.

TABLE 7

Summary of Eastern Tent Caterpillar Colony Counts
in the Parry Sound District 1964-1966

Location (township)	Sampling area	No. of primary tents		
		1964	1965	1966
Franklin	square chain plot	8	3	0
McAulay	" " "	3	7	4
Chisholm	" " "	1	2	1
Boulter	" " "	2	3	2
McLean	mile of roadside	28	31	3
Brunel	" " "	7	2	1
Stephenson	" " "	14	2	2
Wood	" " "	29	27	41
McDougall	" " "	17	14	22
MacKenzie	" " "	8	6	11
Harrison	" " "	-	181	164

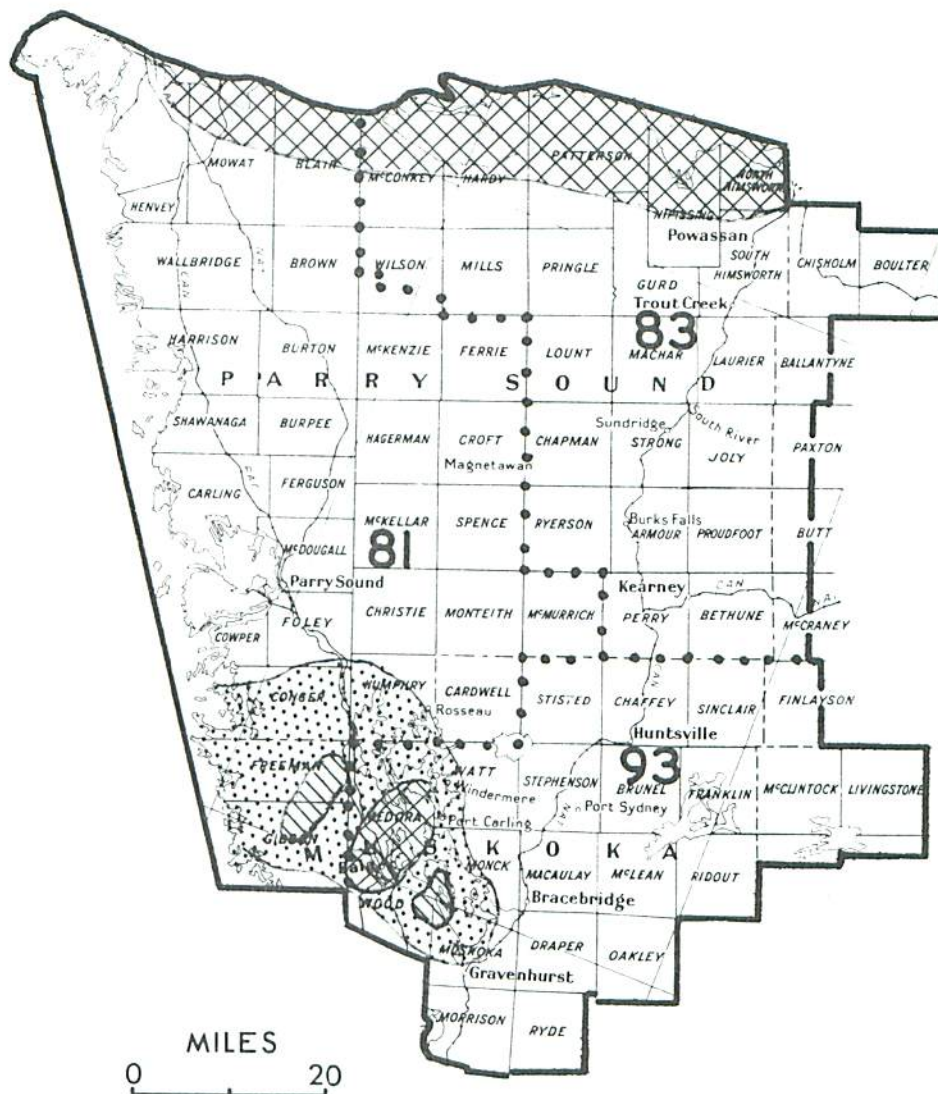
Forest Tent Caterpillar, Malacosoma disstria Hbn.

Population levels of this insect on trembling aspen, sugar maple, red oak and white elm trees increased in intensity in the northern and decreased in the southern part of the district. In the northern part of the district, a band of heavy infestation extended from Highway 69 eastward to North Himsworth Township, covering an area of approximately 550 square miles (see map).

Population levels declined in parts of the Muskoka infestation. However, pockets of moderate to heavy infestation persisted along Highway 103 in Gibson and Freeman townships, near Gravenhurst in Muskoka Township and near Footes Bay in Medora Township. The heavy infestation that had persisted for four years near Port Carling, declined in intensity and only small pockets of light to moderate infestation were observed in 1966. Early hatch and late development of foliage caused a high degree of mortality in early instar larvae in this area. Seventy-six per cent of a mass collection of late instar larvae were infected by an Entomothera fungus and a Polyhedral virus and five per cent were parasitized.

Mass collections of cocoons were made to determine the percentage of parasitism, predation, disease and moth emergence (Table 8).

PARRY SOUND DISTRICT



FOREST TENT CATERPILLAR

Areas in which defoliation occurred in 1966

Legend




- Light defoliation 
- Moderate defoliation 
- Severe defoliation 

TABLE 8

Summary of Dissections of Forest Tent Caterpillar Cocoons
in the Parry Sound District 1965-1966

Location	Per cent adult emergence		Per cent parasitized		Per cent dead from other causes	
	1965	1966	1965	1966	1965	1966
Nipissing	16	26	84	67	0	7
*Medora	-	-	63	5	3	76
North Himsworth	-	24	-	56	-	20
Mowat	-	33	-	54	-	13
Medora	-	-	-	-	-	-

* Collected in larval stage.

On the basis of egg band counts, heavy infestations are expected to persist in a band from Highway 69 to North Himsworth Township (Table 9). Except in Wood and Medora townships, the Muskoka infestation should decline to light intensity in 1967.

TABLE 9

Summary of Egg Band Counts of the Forest Tent Caterpillar
in the Parry Sound District, 1965-1966

Location (township)	Av. d.b.h. of sample trees in inches	No. of trees sampled 1966	Total no. of egg bands		Defoliation forecast 1967
			1965	1966	
Nipissing	6	3	24	30	Severe
French River	5	3	30	21	"
Mowat	5	3	3	1	Light
Medora	6	3	27	4	"
Wood	6	1	22	15	Severe
Boulter	6	3	1	0	Nil
North Himsworth	4	1	-	27	Severe
Gibson	6	3	32	0	Nil
Ridout (light trap)	5	3	0	0	"

A light trap has been operated in Ridout Township since 1961 to capture forest tent caterpillar adults. Results show that the number of moths reached a peak in 1962, then declined each year until 1965. However, a marked increase was recorded in the number of adults recovered in 1966 (Table 10).

TABLE 10

Summary of Malacosoma disstria Hbn. Moths Recorded in a Light Trap
in the Parry Sound District for the Years 1961-1966

Location (township)	Total no. of female and male moths					
	1961	1962	1963	1964	1965	1966
Ridout	13	71	56	31	19	207

Cedar Sawfly, Monoctenus fulvus Nort.

This insect was collected in small numbers throughout the district. However, a decline in numbers was recorded at three of four quantitative sample locations (Table 11).

TABLE 11

Summary of Cedar Sawfly Counts in the Parry Sound District
from 1964 to 1966

Location (township)	Av. d.b.h. of sample trees in inches	Total no. of larvae per 15-tray sample		
		1964	1965	1966
Machar	4	28	24	11
Humphrey	5	11	9	8
McKonkey	6	4	7	18
Shawanaga	4	54	41	21

Red-headed Pine Sawfly, Neodiprion lecontei (Fitch)

Heavy infestations of this sawfly persisted for the third consecutive year in red and Scots pine plantations in Ridout, Stevenson, Gibson, McAulay and Freeman townships. Total defoliation of red pine trees occurred in the plantations in Ridout and McAulay townships causing heavy tree mortality. A Polyhedral virus caused considerable mortality of late instar larvae in the McAulay infestation but occurred too late to prevent severe defoliation.

Medium infestations were observed commonly on hedgerow and individual red and jack-pine trees along roadsides in Ballantyne, Wilson, Machar, McLean and Pringle townships. Light infestations were observed at numerous other locations.

Colony counts based on the examination of 100 trees at each location are summarized in Table 12.

TABLE 12

Summary of Red-headed Pine Sawfly Colony Counts
in the Parry Sound District in 1965 and 1966

Location (township)	Tree species	Av. height of sample trees in feet	No. of trees infested		Av. no. of colonies per infested tree	
			1965	1966	1965	1966
Henry	rP	7	6		1.0	1.0
Mowat	jP	20	3		0.0	1.0
Wilson	rP	11	5		1.4	1.0
Ridout	rP	10	100		1.2	2.5
Livingstone	rP	7	11		1.2	1.0
Wood	rP	21	7		4.7	1.1
Stephenson	scP	7	51		1.2	2.2
McAulay	rP	9	100		-	1.7

Red-pine Sawfly, Neodiprion nanulus nanulus Schedl.

With one exception, little change in population levels of this insect occurred at sample points in the district in 1966 compared with 1965 (Table 13). For the first time in the past three years no colonies were observed at the sample point in Perry Township.

TABLE 13

Summary of Red-pine Sawfly Colony Counts in
the Parry Sound District in 1965 and 1966

Note: Ten trees examined at each location.

Location (township)	Av. d.b.h. of sample trees in inches	No. of trees infested		Av. no. of colonies per tree	
		1965	1966	1965	1966
McDougall	5	3	3	1.0	1.0
Franklin	5	4	5	1.7	1.0
South Himsworth	6	5	8	1.0	1.1
Perry	-	3	0	1.0	0.0

Black-headed Jack-pine Sawfly, Neodiprion pratti banksianae Roh

No appreciable change in population levels of this insect occurred in the district in 1966 compared with 1965 (Table 14). Defoliation did not exceed five per cent at sample points.

TABLE 14

Summary of Black-headed Jack-pine Sawfly Colony Counts
in the Parry Sound District in 1965 and 1966

Note: Ten trees examined at each location.

Location (township)	No. of trees infested		Av. no. of colonies per infested tree	
	1965	1966	1965	1966
Monck	0	1	0.0	1.0
Draper	3	3	1.0	1.0
Ryerson	10	10	1.4	1.4
McDougall	1	2	1.0	1.5
McLean	2	0	1.5	0.0
Medora	4	7	1.0	1.1
Monteith	10	10	2.2	1.4

Red-headed Jack-pine Sawfly, Neodiprion virginianus complex

Population levels of this insect remained at a low level in 1966 (Table 15).
Since 1959 only small numbers of colonies have been found in the district.

TABLE 15

Summary of Red-headed Jack-pine Sawfly Colony Counts
in the Parry Sound District in 1965 and 1966

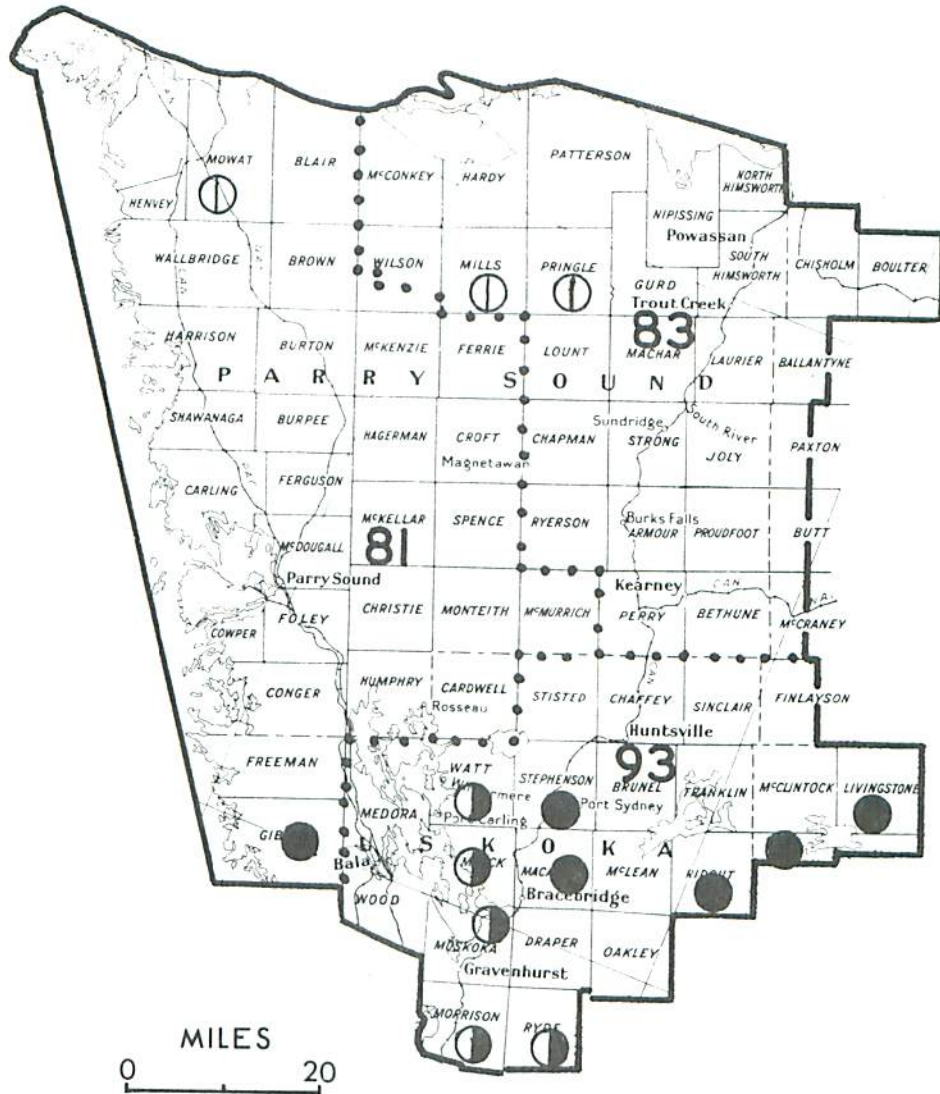
Note: Ten trees examined at each location.

Location (township)	Av. d.b.h. of sample trees in inches	Av. no. of colonies per tree	
		1965	1966
Pickerel River	4	0.0	0.1
French River	5	0.9	0.8
Henry	5	2.1	2.7
Shawanaga	5	0.5	0.3

Swaine Jack-pine Sawfly, Neodiprion swainei (Midd.)

Only one colony of this insect was collected in the district between 1960 and 1965. In 1966, light infestations were observed in the French, Pickerel and Still river areas. Counts based on the examination of ten trees at each location are summarized in Table 16.

PARRY SOUND DISTRICT



RED-HEADED PINE SAWFLY

Locations where infestations
were observed in 1966

Legend

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

TABLE 16

Summary of Swaine Jack-pine Sawfly Colony Counts
in the Parry Sound District in 1965 and 1966

Location (township)	No. of trees infested		Av. no. of colonies per infested tree	
	1966		1965	1966
Pickereel River	2		0.0	1.0
French River	3		1.0	1.0
Still River	1		0.0	1.0

Bruce Spanworm, Operophtera bruceata Hlst.

Infestations of this insect on sugar maple increased from light to heavy intensity near Fletcher Lake in McClintock and Livingstone townships where defoliation approximated 70 per cent (see photograph). Light infestations were observed in Sinclair and Finlayson townships.

White-pine Weevil, Pissodes strobi Peck

A sharp decline in population levels of this insect occurred at all but one sample point in 1966 (Table 17). However, populations increased in a stand of white-pine regeneration near Huntsville, where 20 of 100 trees examined were infested. Elsewhere, control measures kept populations at a low level.

TABLE 17

Summary of Damage by the White-pine Weevil in the Parry
Sound District in 1965 and 1966

Location (township)	Tree species	Per cent trees infested		Per cent cumulative damage all years	
		1965	1966	1965	1966
McLean	jP	0	0	41	41
McLean	rP	0	0	18	18
McMurrich	jP	2	0	56	56
McAulay	jP	0	1	57	58
Armour	scP	12	2	53	55
Chaffey	wP	22	20	43	63

Balsam Bud-mining Sawfly, Pleroneura borealis Felt.

In 1966 infestation intensities were expected to approximate those of 1964, but populations declined to the lowest level recorded in recent years. Counts based on the examination of 20, 18-inch branch tips at seven locations are summarized in Table 18.

TABLE 18

Summary of Balsam Bud-mining Sawfly Larval Counts
in the Parry Sound District in 1964 and 1966

Location (township)	Av. height of sample trees in feet	No. of new buds examined	Per cent buds infested	
			1964	1966
Joly	23	217	5.8	0.6
McLean	25	305	17.0	1.2
MacKenzie	30	289	8.1	0.0
Ferguson	26	332	7.1	0.6
Chaffey	35	391	7.8	1.3
Franklin	30	290	13.7	0.3
Laurier	35	311	11.3	0.0

Larch Sawfly, Pristiphora erichsonii Htg.

Population levels of this sawfly on tamarack and European larch have declined since 1962. In 1966 light infestations persisted at numerous locations throughout the district. Defoliation of host trees did not exceed ten per cent at any location.

Mountain-ash Sawfly, Pristiphora geniculata Htg.

Light to moderate infestations persisted at several locations in the district in 1966. The most noteworthy of these were located in Gurd, McClintock, Perry, Muskoka and McDougall townships. Defoliation of host trees did not exceed 25 per cent. Light infestations were common on roadside trees at numerous other locations.

A Poplar Leaf Roller, Pseudexentera oregonana Wlshmn.

Heavy infestations persisted for the fourth consecutive year in the northwest part of the district where defoliation of trembling aspen trees ranged from 50 to 70 per cent. In the remainder of the district infestations declined to moderate or light intensity.

TABLE 19

Summary of Miscellaneous Insects Collected in the Parry Sound District

Insect	Host(s)	Remarks
Abbotana clemataria A. & S.	eH	Small numbers
Acronicta dactylina Grt.	Al	Small numbers
Adelges abietis Linn.	wS	Heavy infestations in Ridout, Sherbourne and Chisholm twps.
Adelges lariciatus (Patch)	wS	Small numbers on one tree in Perry Twp.
Altica populi Brown	bPo	Light infestation in Perry Twp.
Anomogyna elimata Gn.	bF	Small numbers at one location
Aphrophora parallela Say	wP	Moderate infestation at one location in Franklin Twp.
Arge sp.	Se	One colony on roadside trees in Stephenson Twp.
Argyresthia laricella Kft.	tL	Small numbers in McLean Twp.
Campaea perlata Gn.	wP	Small numbers in beating tray samples.
Caripeta divisata Wlk.	bF	Small numbers from balsam fir plot 632.
Caripeta divisaria Wlk.	bF	Small numbers from balsam fir plot 632.
Cenopsis acerivorana Mack.	sM, rM	Moderate infestation north of Port Carling in Medora Twp., and on occasional red maple in Cardwell Twp.
Choristoneura fumiferana Clem.	wS	Collected in small numbers at one location.
Coccidae	sM	Heavy infestation on sugar maple at one location in Peck Twp.
Coleophora fuscadinella Zell.	wB	Casebearers collected in small numbers in Machar Twp.
Corthylus punctatissimus Zimm.	sM	Common on regeneration throughout the district.
Dasyneura balsamicola (Lintn.)	bF	Observed commonly throughout the district.
Epinotia corylana McD.	Al	Alder catkins moderately infested at one location in Croft Twp.
Epinotia solandriana Linn.	wB	Common in Shawanaga, Machar and Laurier twps.
Eucosma tocullionana Heinr.	wP	White pine cones lightly infested in Ridout Twp.
Euura hospes (Walsh)	W	Heavy infestation at one location in McLean Twp.
Fenusa dohrnii (Tischb.)	Al	Small numbers at several locations.

TABLE 19 (continued)

Insect	Host(s)	Remarks
<i>Feralia jocosa</i> Gn.	eH, bF	Small numbers at four locations in the district.
<i>Galerucella decora</i> Say.	W	Heavy infestation along Aspden Road in Cardwell Twp.
<i>Gonioctena americana</i> Schaeff	tA	Moderate to heavy infestations on trembling aspen saplings in Laurier, Franklin and Stephenson twps.
<i>Gracillaria alnivorella</i> Cham.	Al	Common on alder at one location in Perry Twp.
<i>Halisidota maculata</i> (Harr.)	Al	Small numbers at two locations.
<i>Lapara bombycoides</i> Wlk.	wP	Small numbers.
<i>Melanagromyza schineri</i> (Gir)	tA	Common on this host at one location in Boulter Twp.
<i>Nematus limbatus</i> Cress	W	Occasional colonies observed at several locations throughout the district.
<i>Neurotoma inconspicua</i> (Nort.)	pCh	Common at one location in Muskoka Twp.
<i>Nymphalis antiopa</i> Linn.	W	Colonies common on this host in Shawanaga and McClintock twps.
<i>Ocnerostoma</i> sp.	rP	Needle mining common at one location in Perry Twp.
Pamphiliidae	rP	Common at one location near Hollow Lake in Sherbourne Twp.
<i>Papilio glaucus</i> Linn.	W, Mo	Small numbers at two locations.
<i>Phratora purpura purpura</i> Brown	tA	Common on small aspen near park boundary in Ballantyne Twp.
<i>Phyllocolpa</i> sp	tA	Moderate to heavy infestations common on understory aspen at several locations throughout the district.
<i>Pikonema alaskensis</i> Roh	wS	Collected in small numbers at three locations.
<i>Pikonema dimmockii</i> (Cress)	wS	Small numbers at three locations.
<i>Pineus floccus</i> Patch	rS, bS	Red spruce trees at Swan Lake heavily infested.
<i>Pineus similis</i> Gill.	wS, bS	Common at several locations in McAulay and Franklin twps.
<i>Profenusa thomsoni</i> (Konow)	wB	Common on smaller trees in Mowat and Cardwell twps.
<i>Pseudexentera cressoniana</i> Clem	rO	Moderate infestation at one location in Humphrey Twp.
<i>Schizura concinna</i> A. & S.	W, tA	Common in Strong, Carling, Wilson, Mowat, Patterson and Chaffey twps.

TABLE 19

Summary of Miscellaneous Insects Collected in the Parry Sound District

Insect	Host(s)	Remarks
<i>Abbotana clemataria</i> A. & S.	eH	Small numbers
<i>Acronicta dactylina</i> Grt.	Al	Small numbers
<i>Adelges abietis</i> Linn.	wS	Heavy infestations in Ridout, Sherbourne and Chisholm twps.
<i>Adelges lariciatus</i> (Patch)	wS	Small numbers on one tree in Perry Twp.
<i>Altica populi</i> Brown	bPo	Light infestation in Perry Twp.
<i>Anomogyna elimata</i> Gn.	bF	Small numbers at one location
<i>Aphrophora parallela</i> Say	wP	Moderate infestation at one location in Franklin Twp.
<i>Arge</i> sp.	Se	One colony on roadside trees in Stephenson Twp.
<i>Argyresthia laricella</i> Kft.	tL	Small numbers in McLean Twp.
<i>Campaea perlata</i> Gn.	wP	Small numbers in beating tray samples.
<i>Caripeta divisata</i> Wlk.	bF	Small numbers from balsam fir plot 632.
<i>Caripeta divisaria</i> Wlk.	bF	Small numbers from balsam fir plot 632.
<i>Cenopsis acerivorana</i> MacK.	sM, rM	Moderate infestation north of Port Carling in Medora Twp., and on occasional red maple in Cardwell Twp.
<i>Choristoneura fumiferana</i> Clem.	wS	Collected in small numbers at one location.
Coccidae	sM	Heavy infestation on sugar maple at one location in Peck Twp.
<i>Coleophora fuscedinella</i> Zell.	wB	Casebearers collected in small numbers in Machar Twp.
<i>Corthylus punctatissimus</i> Zimm.	sM	Common on regeneration throughout the district.
<i>Dasyneura balsamicola</i> (Lintn.)	bF	Observed commonly throughout the district.
<i>Epinotia corylana</i> McD.	Al	Alder catkins moderately infested at one location in Croft Twp.
<i>Epinotia solandriana</i> Linn.	wB	Common in Shawanaga, Machar and Laurier twps.
<i>Eucosma tocullionana</i> Heinr.	wP	White pine cones lightly infested in Ridout Twp.
<i>Euura hospes</i> (Walsh)	W	Heavy infestation at one location in McLean Twp.
<i>Fenusa dohrnii</i> (Tischb.)	Al	Small numbers at several locations.

TABLE 19 (continued)

Insect	Host(s)	Remarks
<i>Feralia jocosa</i> Gn.	eH, bF	Small numbers at four locations in the district.
<i>Galerucella decora</i> Say.	W	Heavy infestation along Aspdin Road in Cardwell Twp.
<i>Gonioctena americana</i> Schaeff	tA	Moderate to heavy infestations on trembling aspen saplings in Laurier, Franklin and Stephenson twps.
<i>Gracillaria alnivorella</i> Cham.	Al	Common on alder at one location in Perry Twp.
<i>Halisidota maculata</i> (Harr.)	Al	Small numbers at two locations.
<i>Lapara bombycoides</i> Wlk.	wP	Small numbers.
<i>Melanagromyza schineri</i> (Gir)	tA	Common on this host at one location in Boulter Twp.
<i>Nematus limbatus</i> Cress	W	Occasional colonies observed at several locations throughout the district.
<i>Neurotoma inconspicua</i> (Nort.)	pCh	Common at one location in Muskoka Twp.
<i>Nymphalis antiopa</i> Linn.	W	Colonies common on this host in Shawanaga and McClintock twps.
<i>Ocnerostoma</i> sp.	rP	Needle mining common at one location in Perry Twp.
Pamphiliidae	rP	Common at one location near Hollow Lake in Sherbourne Twp.
<i>Papilio glaucus</i> Linn.	W, Mo	Small numbers at two locations.
<i>Phratora purpura purpura</i> Brown	tA	Common on small aspen near park boundary in Ballantyne Twp.
<i>Phyllocolpa</i> sp	tA	Moderate to heavy infestations common on understory aspen at several locations throughout the district.
<i>Pikonema alaskensis</i> Roh	wS	Collected in small numbers at three locations.
<i>Pikonema dimmockii</i> (Cress)	wS	Small numbers at three locations.
<i>Pineus floccus</i> Patch	rS, bS	Red spruce trees at Swan Lake heavily infested.
<i>Pineus similis</i> Gill.	wS, bS	Common at several locations in McAulay and Franklin twps.
<i>Profenusa thomsoni</i> (Konow)	wB	Common on smaller trees in Mowat and Cardwell twps.
<i>Pseudexentera cressoniana</i> Clem	rO	Moderate infestation at one location in Humphrey Twp.
<i>Schizura concinna</i> A. & S.	W, tA	Common in Strong, Carling, Wilson, Mowat, Patterson and Chaffey twps.

TABLE 19 (continued)

Insect	Host(s)	Remarks
<i>Sphinx chersis</i> Hbn.	wAs	Small numbers at one location.
<i>Thera juniperata</i> L.	juniper	Light infestation near MacTier in Freeman Twp.
<i>Trisetacus alborum</i> Keifer	wP	Found commonly in new twigs of white pine at several locations throughout the district.
<i>Vasates quadripes</i> Shim	rM, sM	Heavy infestations observed at several locations throughout the district.
<i>Zale helata</i> Sm.	wP	Small numbers.
<i>Zeiraphera diniana</i> Gn.	tL	Moderate infestation near Alderdale in Chisholm Twp.
<i>Zeiraphera fortunana</i> Kft.	wS	Small numbers.
<i>Zeiraphera ratzeburgiana</i> Ratz.	wS	Found in varying degrees of intensity at three locations in the district.