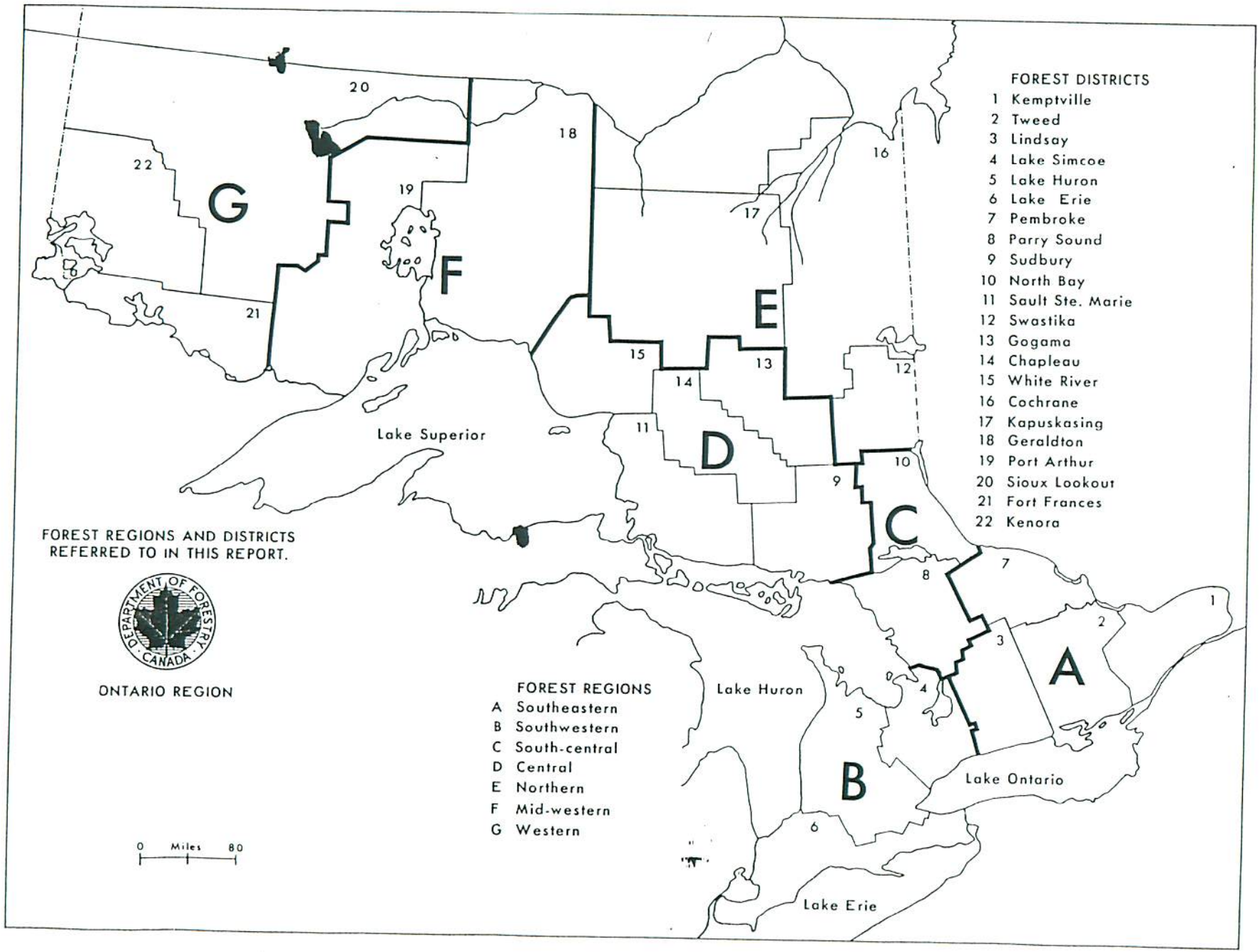
Status of Insects in the Kemptville District

Hook, J.

Information Report O-X-7
(Forest Research laboratory, Ontario Region)


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

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REPORTS OF FOREST RESEARCH TECHNICIANS

Ontario

* Regional Supervisors

1965

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O-X-5	Forest Insect & Disease Surveys	
	--Lindsay District	W. J. Miller
O-X-6	--Tweed District	F. Livesey
O-X-7	--Kemptville District	J. Hook
O-X-8	--Pembroke District	H. J. Weir
O-X-9	--Lake Simcoe District	A. A. Harnden
O-X-10	--Lake Huron District	R. L. Bowser
O-X-11	--Lake Erie District	J. R. Trinnell
O-X-12	--North Bay District	L. S. MacLeod
O-X-13	--Parry Sound District	C. A. Barnes
O-X-14	--Sault Ste. Marie District	H. G. McPhee
O-X-15	--Sudbury District	J. R. McPhee
O-X-16	--Chapleau District	D. Ropke
O-X-17	--Gogama District	R. A. Trieselmann
O-X-18	--White River District	D. C. Constable
O-X-19	--Cochrane District	H. R. Foster
O-X-20	--Kapuskasing District	G. T. Atkinson
O-X-21	--Swastika District	M. J. Applejohn
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O-X-24	--Sioux Lookout District	P. E. Buchan
O-X-25	--Kenora District	G. G. Jackson
O-X-26	--Fort Francis District	M. J. Thomson

STATUS OF INSECTS IN KEMPTVILLE DISTRICT

J. Hook

STATUS OF INSECTS

Cedar Leaf Miners, Argyresthia spp.

A further decline in population levels of cedar leaf miners (four species) occurred in 1965. The medium infestations which were reported in Leeds, Grenville, Dundas, Carleton, and Lanark counties in 1964, subsided in 1965.

Light infestations persisted on roadside hosts in Dalhousie Township and on cedar windbreaks in the Kemptville Nursery in Oxford Township.

Pine Tube Maker, Argyrotaenia pinatubana Kft.

The pocket of heavy infestation which occurred on white pine reproduction in a privately-owned woodlot in Mountain Township in 1964, declined to light intensity in 1965. Small numbers were observed in the Larose and Limerick forests and in Beckwith and Goulbourn townships.

Birch Leaf Skeletonizer, Bucculatrix canadensisella Cham.

In 1964, pockets of heavy infestation occurred in Lanark and Carleton counties, and light infestations were observed west of Brockville, and along the shorelines of the Ottawa River between Ottawa and Hawkesbury. However, in 1965 numbers declined to such low levels that larvae could not be found.

A Miner on Ironwood, Chrysopeleia ostryaella Cham.

Pockets of light to medium infestation of this miner on ironwood were observed commonly in the district, but population levels were generally lower than in 1964. Medium infestations occurred in Nepean, Mountain, and Wolford townships. Light infestations were recorded in Goulbourn, Oxford, Finch, North Gower, and Beckwith townships.

Larch Casebearer, Coleophora laricella (Hbn.)

This introduced pest of tamarack and European larch maintained its low incidence that has prevailed over the past decade since the introduction and establishment of at least two European parasites (Table 8).

TABLE 8

Summary of Larch Casebearer Counts in the Kemptville District in 1964 and 1965

Location (township)	Av. d.b.h. of trees in inches	Av. no. of larvae per 18-inch branch tip	
		1964	1965
Dalhousie	3	0.6	0.5
Montague	4	8.0	9.2
Oxford	4	1.8	2.0
N. Plantagenet	4	0.5	1.6

Pitted Ambrosia Beetle, Corthylus punctatissimus (Zimm.)

This beetle continued to cause mortality in sugar maple reproduction. Sample points were established at locations in Beckwith, Goulbourn, Mountain, and Wolford townships, to study population trends (Table 9).

TABLE 9

Summary of Damage by the Pitted Ambrosia Beetle in the Kemptville District in 1965

Note: Each sample consisted of sugar maple reproduction per square yard quadrat (deep shade).

Location (township)	Av. basal diameter in inches	No. of trees examined	No. of trees infested
Beckwith	1/4"	30	1
	1/4"	27	2
Goulbourn	1/2"	37	3
	1/2"	40	4
Mountain	1/4"	36	2
	1/2"	23	1
Wolford	1/4"	29	1
	1/4"	19	1

Lace Bug, Corythucha spp.

Noteworthy infestations of these sucking insects occurred in the west and central parts of the district, where light to severe browning of the foliage occurred on deciduous trees. Elsewhere in the district varying degrees of infestations were observed, particularly on ornamental and shade trees in towns and villages.

European Spruce Sawfly, Diprion hercyniae (Htg.)

Larval populations of this sawfly remained at a low level. Although no visible defoliation of host trees occurred, small numbers of larvae were recovered in tray samples (Table 10).

TABLE 10

Summary of European Spruce Sawfly Larval Counts in the Kemptville District in 1964 and 1965

Location (township)	Av. d.b.h. of trees in inches	No. of larvae per 15-tray samples 1964	1965
Beckwith	6	0	9
Mountain	6	2	6
Oxford	5	0	0
Ramsay	6	0	0
South Crosby	5	18	2
Cambridge	5	4	2

Pine Bud Moth, Exoteleia dodecella Linn.

A marked decline in population levels of this insect occurred in 1965. Medium infestations recorded in Kitley, Huntley, Goulbourn, and Gloucester townships in 1964 subsided in 1965 (Table 11)

Adults of this insect lay their eggs on Scots pine needles in late June or early July. In approximately two weeks the eggs hatch and the young larvae enter the needles where they remain throughout the summer and winter. The larvae leave the needles in the spring and enter the buds where they pupate and emerge as adults in June.

TABLE 11

Summary of Pine Bud Moth Counts in the Kemptville District in 1964 and 1965

Note: Counts were based on the examination of 50 bud clusters from each of four Scots pine trees at each location.

Location (township)	Av. d.b.h. of trees in inches	Per cent of bud clusters infested	
		1964	1965
Elizabethtown	4	18	4
Kitley	7	35	12
Cumberland	3	23	3
Goulbourn	6	41	5
Oxford	5	12	2

Birch Leaf Miner, Fenusa pusilla (Lep.)

Increases in population levels of this leaf miner occurred in all birch stands in the central part of the district. The heavy infestations which occurred in Wolford, Front of Leeds and Lansdowne, Prescott and Oxford townships in 1964 increased in extent and intensity in 1965. Heavy infestations were recorded in Carleton, Russell, Grenville, Dundas, Stormont, and Glengarry counties (see map). Withering, discoloration and premature shedding of the foliage of white birch trees on privately-owned properties resulted in a number of extension calls.

Fall Webworm, Hyphantria cunea (Drury)

Small numbers of colonies were observed on roadside hosts at seven locations. Highest numbers of colonies per mile of roadside were recorded in Mountain Township (Table 12).

TABLE 12

Summary of Fall Webworm Counts in the Kemptville District in 1964 and 1965

Location (township)	Tree species	Number of tents per mile of roadside	
		1964	1965
Beckwith	wE, bAs	4	3
Drummond	wE	4	0
Mountain	wE	2	6
North Elmsley	bAs	5	2
Nepean	wE	0	3
Oxford	wE	0	1
South Crosby	wE	12	2

Eastern Tent Caterpillar, Malacosoma americanum (F.)

An increase in population levels of this insect occurred at all sample points except in Goulbourn Township where a decline resulted from the removal of roadside hosts by the Department of Highways (Table 13). The greatest increase was recorded in Drummond Township where severe defoliation of cherry shrubbery occurred.

TABLE 13

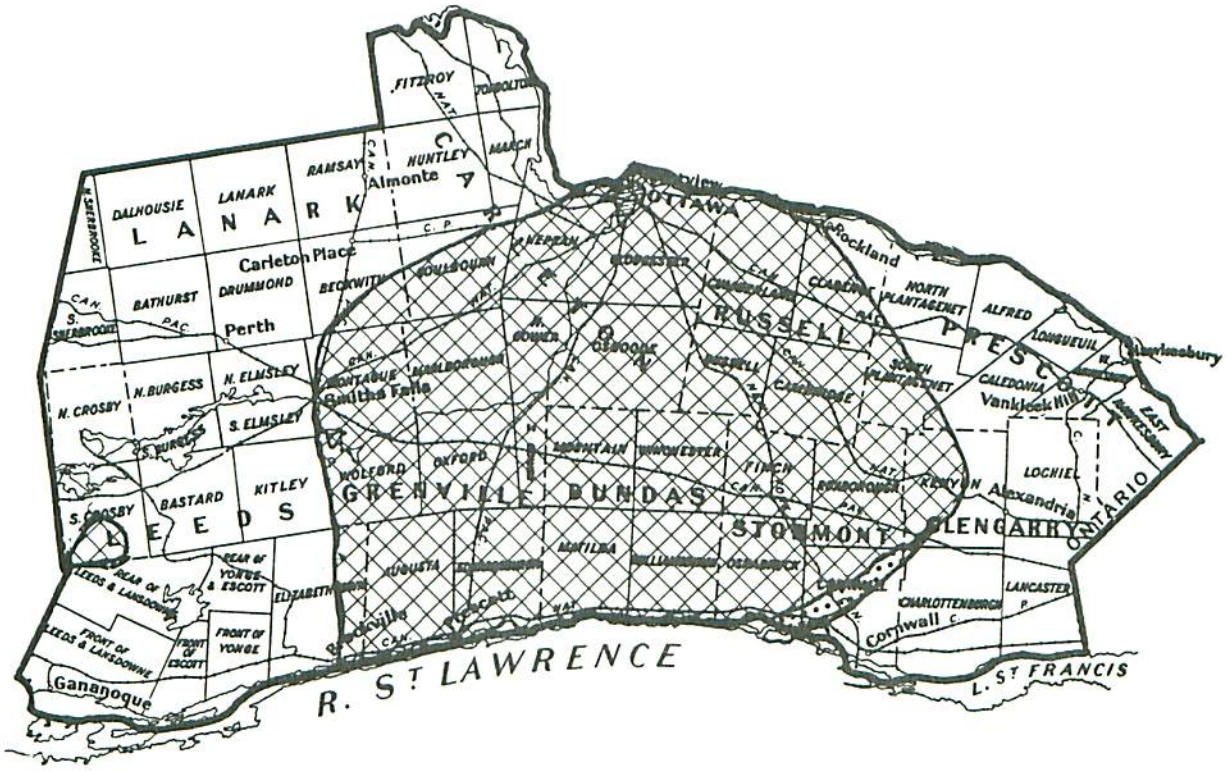
Summary of Eastern Tent Caterpillar Colony Counts in the Kemptville District in 1964 and 1965

Location (township)	Number of tents observed per mile of roadside	
	1964	1965
Bathurst	10	21
Beckwith	0	6
Drummond	12	153
Goulbourn	118	73
Kitley	29	40
Lanark	0	3
Montague	23	33
N. Elmsley	6	48
N. Sherbrooke	4	-
Oxford	16	60

Cedar Sawfly, Monoctenus fulvus Nort.

Very low numbers of this cedar defoliator occurred for the third consecutive year at sample points in Huntley, Ramsay, and Goulbourn townships. No larvae were found elsewhere in the district.

KEMPTVILLE DISTRICT



MILES

20 10 0 20 40

BIRCH LEAF MINER

Areas in which infestations occurred in 1965

Legend

Light infestation.....

Heavy infestation.....

TABLE 14

Summary of Cedar Sawfly Larval Counts in the Kemptville District in 1964 and 1965

Location (township)	Av. d.b.h. of trees in inches	Total number of larvae per 15-tray sample	
		1964	1965
Goulbourn	3	3	1
Huntley	3	11	4
Ramsay	4	19	3

Red-headed Pine Sawfly, Neodiprion lecontei (Fitch)

Little change in population levels of this sawfly was observed in 1965 (Table 15). A medium infestation persisted on a clump of jack pine trees near the town of Perth. Scattered colonies were observed on red, Scots, and jack pine trees in the Larose and Limerick forests. At one location in the Limerick Forest colonies were observed on the upper crown of red pine trees thirty feet in height. Chemical control measures have been used effectively against this sawfly in most of the district.

TABLE 15

Summary of Red-headed Pine Sawfly Colony Counts in the Kemptville District in 1964 and 1965

Location (township)	Tree species	No. of trees examined	Av. height in feet	No. of trees infested	Av. no. of colonies per infested tree	
					1964	1965
Bathurst	jP	50	14	6	7.8	2.0
Dalhousie	rP	100	14	10	1.1	3.6
N. Elmsley	rP	25	14	2	2.0	1.5
Oxford	rP	100	14	2	2.1	1.5
South Crosby	rP	50	14	4	.0	2.0

Jack-pine Sawfly, Neodiprion pratti paradoxicus Ross

Little change in population levels of this jack pine defoliator occurred in 1965. A heavy infestation persisted for the third consecutive year near the town of Perth in Drummond Township. Scattered colonies were observed in Oxford, Cambridge, and Goulbourn townships (see photograph).

Maple Leaf Cutter, Paraclemensia acerifoliella (Fitch)

This insect was again widely distributed in 1965. A pocket of heavy infestation persisted in a mixed hardwood stand in Mountain Township, causing severe defoliation of sugar maple trees and light defoliation of ironwood trees. A medium infestation occurred on second-story trees in the Limerick Forest, Wolford Township. Hard maple reproduction in this stand was severely defoliated. Light infestations were found commonly in most woodlots elsewhere in the district.

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

Groups of white spruce at numerous locations along highways were lightly to severely defoliated by this insect in 1965. The largest area of heavy infestation occurred along the Ottawa River, near Rockland. Pockets of moderate defoliation was observed in plantations in the Larose and Limerick forests. Elsewhere in the district varying degrees of defoliation were observed on ornamental and shade trees.

White-pine Weevil, Pissodes strobi (Peck)

Little change in population levels of this insect occurred in 1965 (Table 16). Light infestations were observed commonly on roadside reproduction in Lanark County and small numbers occurred in the Larose and Limerick forests. The highest incidence of damage was recorded in a privately-owned white pine plantation in Cambridge Township where 23 per cent of the leaders were damaged. Individual white spruce trees were weevilled at several locations in the district. Control measures carried out by Lands and Forests personnel in county forests have been effective.

TABLE 16

Summary of Damage to White-pine by the White-pine Weevil in the Kemptville District in 1964 and 1965

Note: One hundred white pine trees were examined at each location.

Location (township)	Av. d.b.h. of trees in inches	Degree of shade	Per cent of trees weevilled	
			1964	1965
Augusta	4	0	8	4
Bathurst	3	25	1	1
Cambridge	3	0	1	1
Dalhousie	3	10	4	5
Oxford	3	0	3	4
Stormont	3	0	6	6
N. Sherbrooke	2	0	7	6

A Leaf Folding Sawfly, Phyllocolpa sp. (formerly Nematus sp.)

A decline in larval populations of this insect (formerly known as Nematus sp.) occurred in 1965. Counts taken on trembling aspen trees at six locations showed an average of 47.5 folds per 100 leaves in 1964, compared with 26.3 in 1965. The highest incidence of leaf folds occurred in Oxford Township (Table 17).

TABLE 17

Summary of Damage by a Leaf Folding Sawfly on Trembling Aspen in the Kemptville District in 1964 and 1965

Location (township)	No. of folds per 100 leaf sample	
	1964	1965
Alfred	30	22
Dalhousie	57	27
Goulbourn	51	31
Longeuill	42	23
N. Crosby	47	15
Oxford	58	40

Larch Sawfly, Pristiphora erichsonii (Htg.)

Population levels of this defoliator were low for the third consecutive year in the district. Scattered colonies and light defoliation occurred on small clumps of tamarack in Marlborough, South Plantagenet, Cambridge, Oxford, and Montague townships.

Pine Tip Moth, Rhyacionia adana Heinr.

A decline in population levels of this tip moth occurred in 1965. For example, 48 per cent of small Scots pine trees at a sample point in Oxford Township were infested in 1964, compared with 14 per cent in 1965. Very low numbers were observed on red pine trees in Marlborough Township, and on Scots pine seedlings in the Kemptville Nursery.

TABLE 18

Summary of Miscellaneous Insects Collected in the Kemptville District

Insect	Host(s)	Remarks
Acleris variana (Fern.)	bF, wS	Small numbers in Beckwith and Marlborough twps.
Adelges abietis Linn.	wS	Light defoliation in plantations in Oxford and Dalhousie twps.
Adelges lariciatus (Patch)	wS	Light infestation in Dalhousie Twp.
Aphrophora parallela Say	jP	Light infestation in the Limerick and Larose forest areas.
Archips cerasivoranus (Fitch)	pCh	Small numbers throughout the district.
Arge pectoralis (Leach)	wB	First colony of larvae observed in the past five years.
Baliosus ruber Web.	wB	Small numbers observed on nursery stock Oxford Twp.
Dasyneura communis Felt	sM	Heavy infestation in privately-owned woodlot in Mountain Twp.

TABLE 17 (continued)

Insect	Host(s)	Remarks
Dryocosmus palustris (O.S.)	rO	Light infestation of galls on foliage in Torbolton Twp.
Fenusa dohrnii (Tischb.)	Al	Light infestation of miners along the shorelines of the Rideau River, Oxford Twp.
Fenusa ulmi Sund.	wE	Medium infestation of miners on roadside hosts Wolford Twp.
Gonioctena americana (Schaef.)	tA	Small numbers on roadside hosts in Marlborough Twp.
Grossyparia spuria (Modeer)	wE	Scale insects causing branch mortality in Kemptville and Lanark areas.
Nematus hyalinus (Nort.)	W	Galls common on nursery stock.
Neodiprion pinetum (Nort.)	wP	Low numbers in Mountain Twp.
Pemphigus populicaulis Fitch	Po	Light infestation of galls on roadside hosts in Front of Leeds Lansdowne Twp.
Phenacaspis pinifoliae Fitch	wS	Heavy infestation on wS reproduction, Marlborough Twp.
Phlocosinus canadensis Sw.	eC	Bark beetles collected from cedar poles in Oxford Twp.
Phyllocnistis populella Cham.	Po	Small numbers in Torbolton and Mountain twps.
Pleroneura borealis Felt	bF	Light damage in Beckwith and Marlborough twps.
Pristiphora geniculata (Htg.)	mO	Small numbers observed on ornamental hosts in Perth, Kemptville and Richmond.
Profenusa thomsoni (Konow)	wB	Small numbers observed in the Limerick Forest and Kemptville Nursery.
Pseudexentera oregonana Wlshm.	tA	Light infestation of leaf rollers in Beckwith, Cambridge, and S. Plantagenet twps.
Rhyacionia frustrana Comst.	jP	Light defoliation observed in Beckwith and Oxford twps.
Thera juniperata L.	rC	Heavy infestation of loopers on hosts three feet high in Oxford Twp.
Triplax thoracica Say	sM	Numerous adults on dead tree in Crosby Twp.
Vasates quadripes Shim.	sM	Light infestation in the Rideau Provincial Park.
Zellaria haimbachi Busck.	jP	Low numbers collected from a small clump of trees severely defoliated by N. paradoxicus, Bathurst Twp.