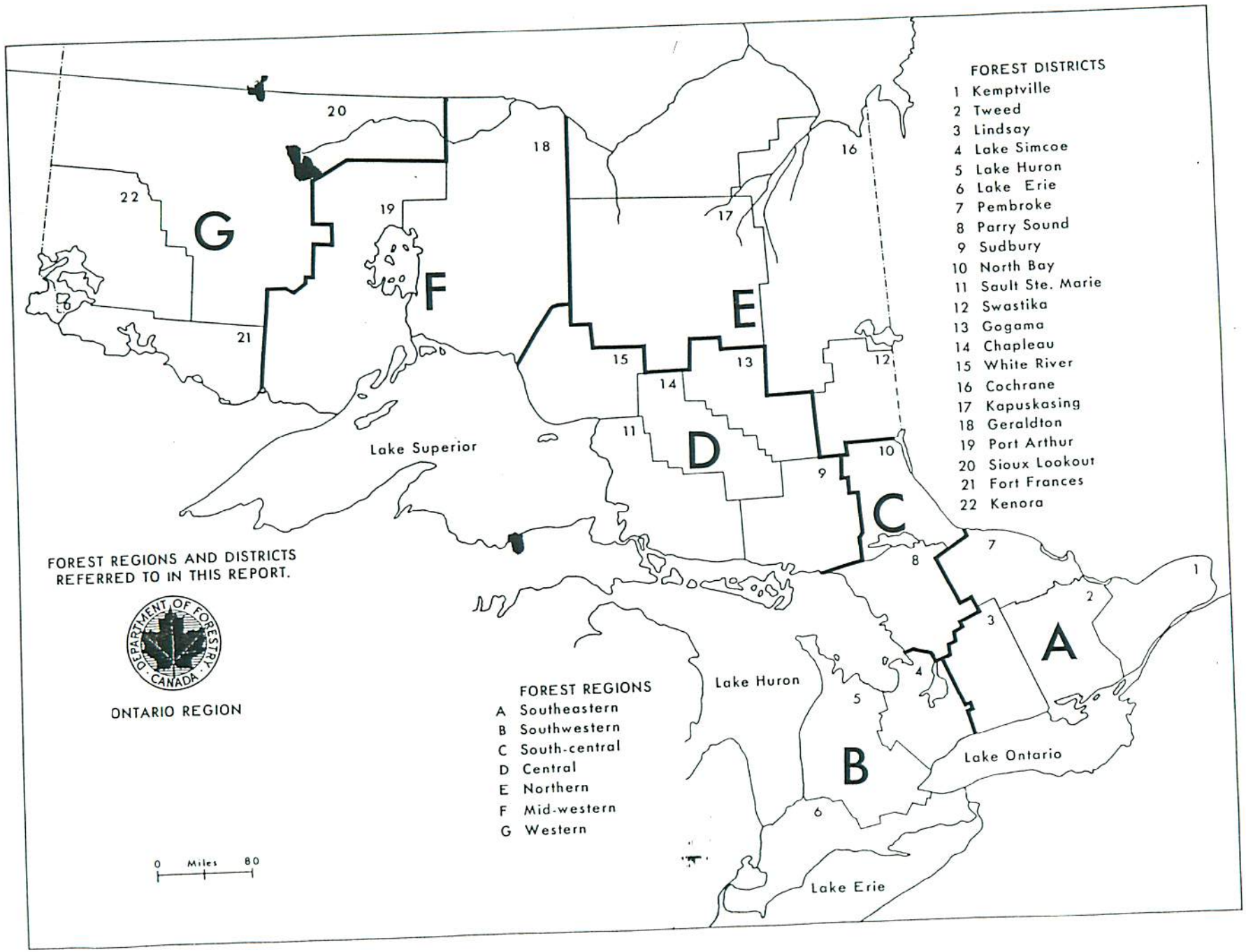
Status of Insects in the Geraldton District

Jansons, V.

Information Report O-X-23
(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

Information Report No.	Subject	Author
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
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O-X-21	--Swastika District	M. J. Applejohn
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STATUS OF INSECTS IN THE GERALDTON DISTRICT

V. Jansons

STATUS OF INSECTS

Birch Skeletonizer, Bucculatrix canadensisella Chamb.

Heavy infestations reported in the central part of the district in 1964 collapsed in 1965. This outbreak originated south of Lake Nipigon in 1962 and by 1964 pockets of white birch were heavily infested from the central part of the district to the Kapuskasing boundary. Since defoliation occurs in late summer after the growth of host trees is completed no permanent damage results. Because of below normal temperatures in 1964, larval development was retarded and the feeding was incompleted when the leaves were shed in September. Larval mortality that resulted probably contributed to the collapse of the outbreak in 1965.

Larch Casebearer, Coleophora laricella (Hbn.)

A further decline in population levels of this insect occurred at three quantitative sample points along Lake Superior in 1965 (Table 8). Three new distribution points were recorded in the central part of the district representing a five-to ten-mile east and westward spread from the initial collection point at Kenogamisis Dam road in Croll Township. Small numbers of larvae were found in Oakes Township two miles west of Longlac, at Eldees road and Highway 11 Junction in Croll Township, and Pipeline road in Ashmore Township.

TABLE 8

Summary of Larch Casebearer Larval Counts in the Geraldton District from 1963 to 1965

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

Location (township)	Av. d.b.h. of trees in inches in 1965	Av. no. of larvae per branch tip		
		1963	1964	1965
Pic	5	10.9	4.6	0.8
87	5	2.1	3.8	0.5
81	4	1.8	0.0	0.0
Croll	6	-	0.0	0.4

Spruce Budworm, Choristoneura fumiferana (Clem.)

In recent years heavy balsam fir mortality was observed in the southern part of the district. Most of the mortality is occurring among trees that have survived severe defoliation during the spruce budworm outbreak which originated in the Nipigon-Pays Plat area in 1952. By 1961 this infestation had extended north to Chorus and Steel lakes and eastward to Ruffle Lake. Budworm populations declined sharply in 1962 and have remained at an extremely low level since 1963. Examination of balsam fir trees has shown that mortality ranged upwards to 91 per cent.

Aspen Leaf Beetle, Chrysomela crotchi Brown

Populations of this insect declined to very low levels in 1965. In 1964 pockets of light to moderate defoliation of small aspen were recorded in the district in Rupert Township and scattered colonies were observed in Nakina, Exton, Walters, and Lindsley townships.

American Poplar Leaf Beetle, Gonioctena americana (Schaeff)

A light infestation of this insect occurred for the third consecutive year on fringe trees in a young trembling aspen stand at Hillsport. However, the numbers of colonies declined from an average of 8.4 per sample tree in 1964 to 4.7 colonies per tree in 1965. A light infestation was observed two miles west of Nakina where an average of 1.6 colonies per tree was recorded on roadside aspen reproduction.

Forest Tent Caterpillar, Malacosoma disstria Hbn.

In 1965 a light infestation of this insect (see photograph) was observed in Blacksand Park in Kilkenny Township where several overstory aspen trees were lightly defoliated. In June hatched egg bands were found at five locations on islands in Lake Nipigon. Although 89 per cent of the eggs had hatched, early instar larvae may have succumbed because of low temperatures in May. Egg band counts made in the fall of 1965 indicate that pockets of light to medium infestation will occur on islands in Lake Nipigon and in the MacDiarmid area (Table 9).

TABLE 9

Summary of Forest Tent Caterpillar Egg Band Counts and Infestation Forecasts for 1966 in the Geraldton District

Location	Av. d.b.h. of sample trees in inches	Av. no. of egg bands per tree in 1965	Forecast for 1966
Murchison Island	7	5.5	Moderate
Bell Island	5	4.0	Light
Macoun Islands	17	3.0	Light
Geikie Island	6	0	Nil
MacDiarmid	6	0.3	Light
Blacksand Park	7	0.3	Light
Lake Helen	7	0.3	Light

Western Tent Caterpillar, Malacosoma pluviale (Dyar)

A decline in the number of tents made by this insect occurred in the district (Table 10). Seven colonies were found on shrubs along one mile of roadside at White Sand Lake in Township 85 and single colonies were observed at scattered points along Camp 81 road and at Chorus Lake.

TABLE 10

Summary of Western Tent Caterpillar Colony Counts in the Geraldton District from 1963 to 1965

Location	Host(s)	Sample unit	Total no. of tents 1963	1964	1965
White Sand Lake	pCh, wB	One mile of roadside	-	-	7
Irwin Township	wB, pCh, Se	" " " "	-	16	5
Hillsport	pCh	" " " "	-	13	3
Pamela Lake	pCh	One square chain plot	-	-	3
Stevens	pCh	" " " "	-	4	1
Polly Lake	pCh	" " " "	2	1	0
Marathon	pCh	" " " "	3	1	1

A Leaf-folding Sawfly, Phyllocolpa spp.

Population levels of this insect (formerly known as Nematus sp.) have gradually increased since 1963. An increase in numbers occurred at Klotz Lake (Table 11) and new pockets of light infestation were observed at Taffy and MacLeod lakes. Small numbers occurred on balsam poplar reproduction along Pagwachuan Lake road, on small aspen around Killala Lake, in the Goldfield road area and in Ashmore Township.

TABLE 11

Summary of Leaf-folding Sawfly Counts in the Geraldton District in 1964 and 1965

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

Location	Tree species	Av. no. of folds per leaf 1964	1965
Klotz Lake	tA	.09	.38
Taffy Lake	bPo	-	.23
MacLeod Lake	tA	-	.19

White-pine Weevil, Pissodes strobi (Peck)

Incidence of weevilling declined for the first time since 1962, and was lower than in recent years in the Stevens-Caramat area and in Rupert Township (Table 12). Damage was confined to young open-grown black and white spruce except at one location south of Stevens where a light infestation was observed on small jack pine trees. Few trees were infested elsewhere in the district.

TABLE 12

Summary of Damage by the White-pine Weevil in the Geraldton District from 1963 to 1965

Note: One hundred open-grown trees were examined at each location.

Location	Tree species	Av. height of trees in feet	Per cent of trees weevilled 1963	1964	1965
Legault Twp.	bS	6	-	16	11
Rupert Twp.	bS	8	-	9	6
Maple Rd.	bS	6	6	8	4
Stevens	bS	6	5	7	4
McComber Twp.	bS	8	4	7	4
Creelman Creek	bS	6	4	7	2
Peterson Creek	bS, wS	4	4	3	2
Stevens	jP	3	3	3	1
Fairloch Lake	bS	8	1	3	0

Woolly Alder Aphid, Prociphilus tesselatus (Fitch)

A considerable increase in numbers of this insect occurred in the district. In 1964 the aphids were abundant in the Auden road area. In 1965 pockets of alder were heavily infested throughout most of the district. The dense colonies were concentrated on the current shoots and caused light discolouration of the foliage.

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

Infestations of this leaf miner declined in intensity in the Longlac infestation and at Pays Plat (Table 13). Small numbers were found for the first time in Ashmore Township and north of Lake Helen in Ledger Township.

TABLE 13

Summary of Damage by the Amber-marked Birch Leaf Miner in the Geraldton District from 1963 to 1965

Note: Counts are based on the examination of 100 white birch leaves at each location.

Location	No. of mined leaves 1963	1964	1965	Av. no. of mines per leaf 1963	1964	1965
Longlac	91	70	43	4.59	2.64	1.26
Pays Plat	38	26	6	.68	.47	.08
Caramat	0	0	2	0	0	.02

Spruce Bud Gall Midge, Rhabdophaga swainei Felt

Population levels of this insect were similar to those reported in 1964 (Table 14) with the highest numbers of infested buds being observed on small scattered black spruce along Highway 17 and in the area south of Caramat.

TABLE 14

Summary of Damage by the Spruce Bud Gall Midge in the Geraldton District from 1963 to 1965

Note: Counts were based on the examination of five branch tips from each of ten trees.

Location	Tree species	Av. d.b.h. in inches	No. of shoots examined	Per cent of terminal buds infested 1963	1964	1965
Terrace Bay	bS	1	171	5.0	8.0	7.3
Rainbow Falls	wS	2	164	10.3	2.0	0.7
Beardmore	bS	1	152	1.8	1.3	0.6
Pic Twp.	wS	1	159	2.8	1.2	0.7
Flynn Lake	bS	1	149	0.8	0	0
Croll Twp.	bS	1	153	0.6	0	1.3
Cp. 81 Rd.	bS	2	156	0	0	0.7

Bark Beetles, Scolytidae

In 1964 and 1965 an intensive bark beetle survey was carried out to determine the distribution of different species in Ontario. Bark beetles usually attack and breed in various parts of dead and dying trees, windfalls, slash and freshly-cut logs. The species collected in the district in 1965 are listed in Table 15.

TABLE 15

Summary of Bark Beetles Collected in the Geraldton District in 1965

Species	Host(s)	Remarks
Dendroctonus obesus Mann.	wS	Collected in a windfall, Twp. 88.
Dendroctonus simplex Lec.	tL	Common in dead trees in the Castlebar Lake area; not found in the western part of the district.
Dryacoetes affaber Mann	wS	Township 88.
Ips borealis Sw	wS	Freshly cut tree, Burrows Lake.
Ips perturbatus Eich.	wS	Freshly cut tree.
Ips pini Say	jP	In freshly cut trees and stumps east of Longlac.
Orthotomicus caelatus Eich.	jP, bS	Freshly cut stumps, Longlac.
Orthotomicus latidens (Lec.)	bS	Rare species in Ontario, found in Croll Twp.
Phloeasinus canadensis Sw.	wS, eCe	In dead trees, Kilkenny Twp.
Pitiogenes plagiatus (Lec.)	jP	Dead tree, south of Stevens.

TABLE 15 (continued)

Species	Host(s)	Remarks
Pitiokteines sparsus Lec.	bF	Collected in spruce budworm killed tree, Chorus Lake.
Pityophthorus sp.	jP, rP, bS	Common in dead trees.
Polygraphus rufipennis Kby.	bS, wS	In lower trunk of a windfall, Ashmore Township.
Scolytus piceae Sw.	bS	Dead tree top, Houck Twp.
Trypodendron lineatum (Oliver)	wS, rP	In wood of a freshly cut red pine at Orient Bay and in a windfall in Twp. 88.

TABLE 16

Miscellaneous Insects Collected in Geraldton District in 1965

Insect	Host(s)	Remarks
Acleris variana Fern.	wS, bF	Small numbers in beating samples throughout the district.
Adelges lariciatus (Patch)	wS	Found in spruce plots.
Altica corni Woods	Do	Light defoliation of shore shrubs at Chipman Lake.
Ancylis mediofasciana Clem.	Se	Small numbers of leaf tiers in Vincent Twp. and along LeMay road.
Anoplonyx canadensis Hgt.	tL	Av. of one larva per beating tray in Colter Twp.
Archips cerasivoranus (Fitch)	Se	Eight colonies in a sq. chain plot east of Longlac; general population decline in the district.
Badebecia urticana Hbn.	wB	One lightly infested tree.
Chrysomela mainensis mainensis Bechyne	Al	Light leaf skeletonizing on several shrubs at Castlebar Lake; first record for the district.
Clepsis persicana Fitch	bF, wB	Small numbers at widely scattered collection points.
Compsolechia niveopulvella Chamb	tA	Light leaf roller activity at Postagoni Lake.
Conophthorus sp.	jP	Number of infested shoots declined from 29 in 1964 to 13 shoots in 1965 on sample trees in Twp. 91; no damage observed elsewhere in the district.
Croesus latitarsus Nort.	Al, wB	Numerous early instar colonies on a clump of alders on Murchison Island; single colonies at other collection points.

TABLE 16 (continued)

Insect	Host(s)	Remarks
Depressaria heracliana Linn.	Milkweed	Common on this host at Wawong Lake, Esnagami Twp.
Dimorphopteryx pinguis (Nort.)	wB	Light defoliation of small birch in Rainbow Falls Park; small numbers of larvae in 87 and Pic twps.
Dioryctria reniculella Grt.	wS	Small numbers at widely-scattered points.
Diprion hercyniae (Htg.)	wS	One larva in beating samples in Pic Twp.
Epinotia momonana Kft.	Al	Endemic populations through the area south of Caramat.
Epinotia solandriana Linn.	tA	Light leaf roller populations north of Postagoni Lake.
Epinotia corylana McD.	Al	Staminate catkins lightly infested throughout the district.
Eupithecia filmata Pears	wS, bS, bF	In beating samples at widely-separated collection points.
Fenusa dohrnii Tischb.	Al	Light to moderate leaf miner infestation on fringe alders in twps 87 and Kilkenny, also south of Beardmore.
Galerucella decora Say	W	Light infestation at Turkey Lake, Colter Twp.; populations declined at Chorus Lake.
Gonioctena notmani (Schaeff.)	W	Light defoliation of roadside willows in Davies Twp.
Gracillaria invariabilis Braun	pCh	Small numbers of leaf rollers on scattered trees.
Hemichroa crocea (Four)	Al	Colonies at widely-scattered points.
Lambdina fiscellaria fiscellaria (Guen)	bF, Al	Small numbers
Lithocolletis salicifoliella Chamb.	tA	Populations extremely low throughout the district.
Macremphytus varianus (Nort.)	Do	Several heavily infested shore shrubs at Wildgoose Lake; light populations at three other sampling points.
Monoctenus fulvus Nort.	eCe	Small numbers in beating samples.
Nematus limbatus Cress.	W	Solitary colonies at widely-distributed points.
Neodiprion abietis complex	bF, wS	Collected in beating samples.
Neodiprion compar (Leach)	jP	Two larvae in beating samples, first collection since 1956.
Neodiprion maurus Rohwer	jP	Two colonies at Klotz Lake.
Neodiprion nanulus nanulus Schedl	jP	Scattered colonies.
Neodiprion nigroscutum Midd.	jP	Two larvae in Twp. 91; uncommon insect.

TABLE 16 (continued)

Insect	Host(s)	Remarks
Neodiprion pratti banksianae Roh.	jP	One colony in Twp. 90.
Nycteola cinereana N. & D.	bPo	In 1965 populations declined to low levels at all locations where infestations were reported in 1964.
Nycteola frigidana Wlk.	W	Light populations on scattered trees in the McKay and Klotz Lake areas, and in Ruper Twp.
Nymphalis antiopa Linn.	bPo	General population decline.
Pareophora minuta (MacG.)	bAs	Light defoliation at one location in Houck Twp.
Petrova albicapitana Busck.	jP	Small numbers of pitch nodules on young trees at two collection points.
Phratora americana canadensis Brown	W	Light populations on scattered shrubs in Twp. 87.
Phratora purpurea purpurea Brown	W	Light leaf skeletonizing on shore shrubs at Lake Helen.
Pikonema alaskensis (Roh.)	wS	Light population on one tree in Nakina Twp; small numbers at other widely-scattered sampling points.
Pikonema dimmockii (Cress.)	wS	Highest av. of 1.1 larvae per mat sample in Twp. 88.
Pineus similis Gill.	wS	Light twig gall infestation on several scattered trees in Pic Twp.
Pineus strobi (Hgt.)	wP	Heavy pine bark aphid populations on small frost injured trees in white pine plantings in Sandra Twp.
Pissodes similis Hopk.	bF	One adult was found in a witches' broom submitted to the laboratory for examination from the Owl Lake area. This, and a collection from the White River District are the first records of this bark weevil in Canada.
Pristiphora cadma W. & R.	wB	One colony of sawflies found in Vivian Twp.; first district records.
Pristiphora lena Kincaid	wS	Solitary colony in Rupert Twp.; uncommon insect.
Pseudexentera oregonana Wlshm.	tA	Pockets of light leaf roller activity in aspen stands through Sandra and Eva twps., in the Diversion Channel area and at Postagoni Lake.

TABLE 16 (continued)

Insect	Host(s)	Remarks
Phyrria umbra exprimens Wlk.	bPo	General population decline; pockets of light new shoot defoliation in Summers Twp., at Goldfield road and at Pamela Lake.
Rhabdophaga strobiloides (Walsh)	W	Small numbers of leaf galls in Colter Twp.
Sciaphila duplex Wlshm.	tA	Found in association with other leaf rollers.
Sternochetus lapathi (Lin.)	W	One collection from Eva Twp.; new distribution point for the district.
Tenthredinidae #12	W	Numerous colonies on a clump of willows at Killala Lake road and on one tree in Ledger Twp.
Trichiocampus irregularis (Dyar)	W	Two colonies at widely-separated collection points.
Zeiraphera ratzeburgiana Ratz.	wS	Eight per cent of current shoots infested on ten sample trees in Pic Twp.