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Status of Insects in the Geraldton  
District

Jansons, V.

Information Report O-X-52  
(Forest Research Laboratory, Ontario Region)

1966

| Information<br>Report No. | Subject                         | Author            |
|---------------------------|---------------------------------|-------------------|
| O-X-34                    | Forest Insect & Disease Surveys |                   |
|                           | --Lindsay District              | W. J. Miller      |
| O-X-35                    | --Tweed District                | F. Livesey        |
| 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     |
| O-X-42                    | --Parry Sound District          | C. A. Barnes      |
| O-X-43                    | --Sault Ste. Marie District     | H. G. McPhee      |
| O-X-44                    | --Sudbury District              | J. R. McPhee      |
| 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   |
| O-X-51                    | --Port Arthur District          | K. C. Hall        |
| O-X-52                    | --Geraldton District            | V. Jansons        |
| O-X-53                    | --Sioux Lookout District        | P. E. Buchan      |
| O-X-54                    | --Kenora District               | H. J. Weir        |
| O-X-55                    | --Fort Francis District         | M. J. Thomson     |

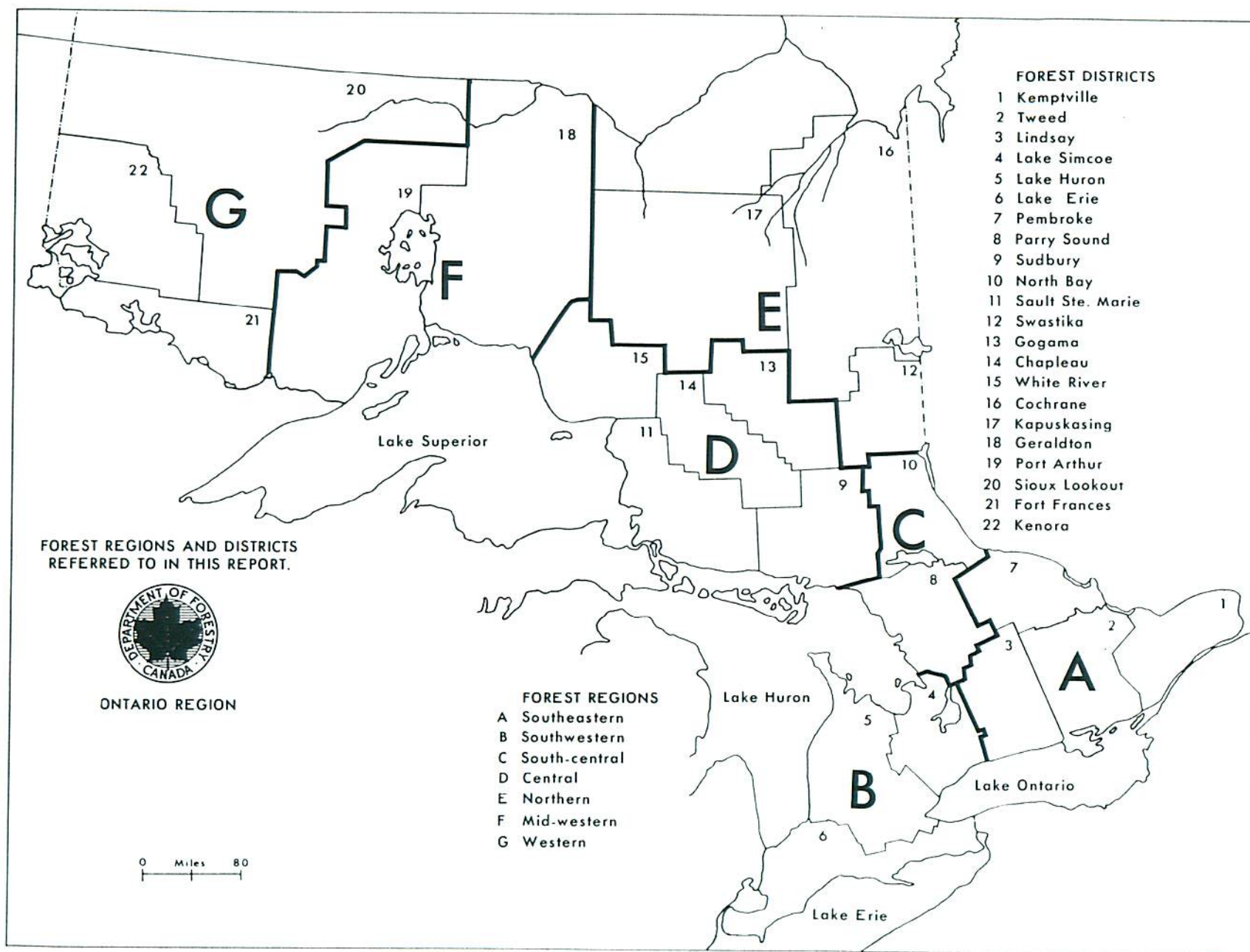
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Photographs

\* Regional Supervisors





## 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.



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V. Jansons

## STATUS OF INSECTS

Larch Casebearer, Coleophora laricella (Hbn.)

Population levels of this insect remained low in the district as indicated in Table 6.

TABLE 6

Summary of Larch Casebearer Larval Counts in the Geraldton District from 1964 to 1966

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

| Location<br>(township) | Av. d.b.h. of sample<br>trees in inches | Av. no. of larvae per branch tip |      |      |
|------------------------|---|----------------------------------|------|------|
|                        |   | 1964                             | 1965 | 1966 |
| Pic                    | 5                                       | 4.6                              | 0.8  | 0.6  |
| 87                     | 6                                       | 3.8                              | 0.5  | 0.2  |
| Groll                  | 6                                       | -                                | 0.4  | 0.5  |

Wandering Sawfly, Dimorphopteryx pinguis (Nort.)

Light defoliation of white birch was observed for the second consecutive year on scattered trees in Rainbow Falls Park, Township 85. Defoliation was mainly confined to small diameter trees and did not exceed 15 per cent. Low populations were found on open-grown trees at several locations in Pic Township.

European Spruce Sawfly, Diprion hercyniae (Htg.)

Small numbers of this pest were collected at three locations in the district. The highest numbers occurred on open-grown white spruce in Pic Township where a total of 12 larvae were collected in a 15-tray sample. Prior to 1966, small numbers had been collected in 1960, 1964 and 1965.

Severe outbreaks of this introduced sawfly occurred in eastern Canada in the 1930's and 1940's. The insect was found in Ontario in 1936 and it has gradually spread throughout the province.

American Aspen Beetle, Gonioctena americana (Schaeff)

A new medium infestation of this insect was observed on scattered clumps of young trembling aspen in a large area two miles east of Chipman Lake road in O'Meara Township. The number of colonies averaged 8.2 per sample tree. Populations declined to a low level in a 3-year-old infestation at Hillsport, Division 23, and at Nakina.



Forest Tent Caterpillar, Malacosoma disstria Hbn.

Partly because of low temperatures in May forest tent caterpillar eggs failed to hatch. This resulted in a collapse of the light infestation observed in the Blacksand Park area in 1965.

Leaf-folding Sawflies, Phyllocolpa spp.

Infestations of this insect have increased in extent and intensity in the district since 1963. In 1966 light to medium infestations were common on aspen reproduction throughout most of the district. The highest numbers of infested leaves were recorded on young aspen at Chorus Lake where 28 folds were counted on one hundred sample leaves (Table 7). Light to medium numbers of infested leaves were observed on small balsam poplar trees in Sandra and in Kowkash townships, at Klotz Lake and in the area south of Caramat.

TABLE 7

Summary of Leaf-folding Sawfly Counts in the Geraldton District  
in 1965 and 1966

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

| Location     | Tree species | Av. d.b.h.<br>in inches | Av. no. of folds per leaf |      |
|--------------|--------------|-------------------------|---------------------------|------|
|              |              |                         | 1965                      | 1966 |
| Chorus Lake  | tA           | 2                       | -                         | .28  |
| Rupert Twp.  | tA           | 2                       | -                         | .23  |
| Klotz Lake   | tA           | 2                       | .38                       | .23  |
| MacLeod Lake | tA           | 1                       | .19                       | .17  |
| Taffy Lake   | bPo          | 1                       | .23                       | .14  |
| Davies Twp.  | tA           | 2                       | -                         | .13  |

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

This insect was more abundant than in recent years. Small black spruce and white spruce were heavily defoliated in the Town of Geraldton and at Marathon in Pic Township. Light defoliation was observed on several black spruce trees on the south shore of Killala Lake and on scattered small white spruce in McLeod Park in Ashmore Township.



White-pine Weevil, Pissodes strobi (Peck)

For the second consecutive year a general decline in population levels was observed in the district. However, a new infestation occurred in a clump of roadside trees at Highway 11 three miles east of Flynn Lake where 13 per cent of small black and white spruce trees were weevilled. Elsewhere in the district the incidence of attack was low (Table 8).

TABLE 8

Summary of Damage by the White-pine Weevil in the Geraldton District  
from 1964 to 1966

Note: Counts are based on examination of 100 trees at each location.

| Location         | Tree species | Av. height of trees in feet | Per cent of trees weevilled |      |      |
|------------------|--------------|-----------------------------|-----------------------------|------|------|
|                  |              |                             | 1964                        | 1965 | 1966 |
| Flynn Lake       | bS, wS       | 3                           | -                           | -    | 13   |
| Legault Twp.     | bS           | 7                           | 16                          | 11   | 4    |
| Goldfield rd.    | jP           | 6                           | -                           | -    | 3    |
| Rupert Twp.      | bS           | 8                           | 9                           | 6    | 1    |
| Stevens, Div. 23 | bS           | 6                           | 7                           | 4    | 1    |
| McComber Twp.    | bS           | 8                           | 7                           | 4    | 1    |
| Maple rd.        | bS           | 6                           | 8                           | 4    | 0    |
| Stevens, Div. 23 | jP           | 4                           | 3                           | 1    | 1    |
| Creelman Creek   | bS           | 6                           | 7                           | 2    | 0    |
| Peterson Creek   | bS           | 4                           | 3                           | 2    | 1    |

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

Populations of this insect increased in two areas. The number of infested leaves increased from 2 per cent in 1965 to 26 per cent in 1966 in an extensive young white birch stand at Caramat (Table 9). Small pockets of severe leaf mining were observed on understory trees at Pamela Lake and along the north-east shore of Lukinto Lake. A medium infestation continued at Longlac.

The second population increase occurred at Leonard Lake, Kilkenny Township, where about 90 per cent of the foliage of small understory was infested. Small numbers of infested leaves were found on scattered trees in the Auden road area, at Castlebar Lake, south of Caramat, in Sandra, Ledger and Pic townships and in townships 87, 86, and 83.

TABLE 9

Summary of Damage by the Amber-marked Birch Leaf Miner in the  
Geraldton District from 1964 to 1966

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

| Location  | No. of mined leaves |      |      | Av. no. of mines per leaf |      |      |
|-----------|---------------------|------|------|---------------------------|------|------|
|           | 1964                | 1965 | 1966 | 1964                      | 1965 | 1966 |
| Longlac   | 70                  | 43   | 38   | 2.64                      | 1.26 | 1.33 |
| Caramat   | 0                   | 2    | 26   | 0                         | .02  | .31  |
| Pays Plat | 26                  | 6    | 0    | .47                       | .08  | 0    |

Spruce Bud Gall Midge, Rhabdophaga swainei Felt

Populations of this insect increased in 1966. Pockets of new light infestations were observed on small open-grown white spruce at Jackfish Lake in Township 82 and along the Goldfield road in Division 17. A light infestation persisted for the third consecutive year in Township 84. Population levels at sample points are shown in Table 10.

TABLE 10

Summary of Damage by the Spruce Bud Gall Midge in the  
Geraldton District from 1964 to 1966

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 |      |      |
|---------------|--------------|----------------------|------------------------|------------------------------------|------|------|
|               |              |                      |                        | 1964                               | 1965 | 1966 |
| Goldfield rd  | bS           | 1                    | 157                    | -                                  | -    | 8.0  |
| Township 84   | bS           | 1                    | 162                    | 8.0                                | 7.3  | 7.3  |
| Jackfish Lake | wS           | 2                    | 159                    | -                                  | -    | 6.8  |
| Pic Twp.      | wS           | 1                    | 164                    | 1.2                                | .7   | 1.3  |
| Croll Twp.    | bS           | 1                    | 153                    | .0                                 | 1.3  | 2.0  |
| Rainbow Falls | wS           | 2                    | 161                    | 2.0                                | .7   | .0   |



TABLE 11

Miscellaneous Insects Collected in Geraldton District  
in 1966

| Insect                                     | Host(s)         | Remarks   |
|--|-----------------|---|
| <i>Acleris variana</i> Fern.               | wS, bF          | Small numbers in beating samples in the south-eastern part of the district  |
| <i>Adelges abietis</i> Linn.               | wS              | Light populations on scattered trees at Steel Lake  |
| <i>Adelges lariciatus</i> (Patch)          | wS              | Small numbers   |
| <i>Altica corni</i> Woods                  | Do              | Light defoliation of shore shrubs continued at Chipman Lake; severe defoliation of scattered shrubs in Croll Twp. |
| <i>Altica tombacina shoemakeri</i> Schffr. | fireweed        | Light populations on several plants at Marshall Lake, Div. 80   |
| <i>Ancyliis mediofasciana</i> Clem.        | pCh, Se         | Small numbers of leaf tiers at two collection points; uncommon insect   |
| <i>Anomogyna elimata</i> Gn.               | wS              | Small numbers in spruce plot  |
| <i>Anoplonyx luteipes</i> (Cress.)         | tL              | Collected in beating samples  |
| <i>Aphrophora parallela</i> Say            | wS              | Small numbers in Pic Twp.   |
| <i>Archips cerasivoranus</i> (Fitch)       | tA              | Five colonies in a sq. chain plot east of Longlac; generally populations very low                                 |
| <i>Badebecia urticana</i> Hbn.             | wB              | Small numbers on scattered trees in Sandra Twp.   |
| <i>Brephos infans</i> Moesch.              | wB              | Small numbers in beating samples at Hourglass Lake and in Twp. 87; rare insect in Ontario                         |
| <i>Campaea perlata</i> Gn.                 | Al, wB<br>W, bF | Small numbers in beating samples at widely scattered points; first collection since 1961                          |
| <i>Caripeta angustiorata</i> Wlk.          | jP              | Small numbers in beating samples; rare insect   |
| <i>Choristoneura fumiferana</i> (Clem.)    | wS              | Small numbers in beating samples at eight widely separated collection points                                      |
| <i>Chrysomela crotchii</i> Brown           | tA              | Light defoliation of small trees at three locations in the western part of the district                           |
| <i>Cimbex americana</i> Leach.             | Al, wB,<br>W    | Small numbers in beating samples  |
| <i>Compsolechia niveopulvella</i> Chamb    | tA              | Light leaf roller populations on scattered trees in Exton, Kilkenny, and Chipman twps. and in the Auden road area |



TABLE 11 (continued)

| Insect                                 | Host(s) | Remarks  |
|--|---------|--|
| <i>Dasyneura balsamicola</i> (Lint)    | bF      | Small numbers on scattered trees   |
| <i>Deilinia erythemaria</i> Gn.        | W, Al   | One larva in each of four beating samples; first record for the district   |
| <i>Depressaria betulella</i> Busck.    | wB      | Small numbers in beating samples   |
| <i>Depressaria heracliana</i> Linn.    | Wild    | Found feeding in seeds of this plant at one location in Twp. 80  |
| <i>Dioryctria reniculella</i> Grt.     | parsnip | Small numbers common at Nakina   |
| <i>Ectropis crepuscularia</i> Schiff   | wS      | Collected in beating samples   |
| <i>Epinotia corylana</i> McD.          | W       | Sixty six per cent of sampled cones infested in Sandra Twp.; light incidence in Chipman Twp.   |
| <i>Epinotia cruciana</i> Linn.         | Al      | First record for the district  |
| <i>Epinotia lindana</i> Fern.          | W       | Light leaf tier population on small shrubs in MacLeod Park, Ashmore Twp., first record for the district                                      |
| <i>Eufidonia notataria</i> Wlk.        | Do      | Small numbers in beating samples at three locations; first record for the district   |
| <i>Eupithecia filmata</i> Pears        | jP      | Common insect in beating samples   |
| <i>Eupithecia gelidata</i> Moesch      | wS, bF  | Small numbers in beating samples   |
| <i>Eupithecia palpata</i> Pack         | wB, W   | Small numbers in beating samples   |
| <i>Eupithecia ravocastaliata</i> Pack. | jP      | Small numbers in beating samples   |
| <i>Eupithecia transcanadata</i> McK.   | W       | One larva in beating samples, first record for the district  |
| <i>Feralia jacosia</i> (Grt.)          | wS      | Small numbers in beating samples   |
| <i>Gonioctena notmani</i> (Schaeff.)   | wS      | Small numbers in beating samples   |
| <i>Gracillaria alnivorella</i> Cham.   | W       | Light to medium populations on scattered willow clumps through the Castlebar and Klotz Lake area   |
| <i>Gracillaria invariabilis</i> Braun  | Al      | Light populations at Castlebar Lake tower road, Div. 23  |
| <i>Gracillaria</i> sp.                 | pCh     | Leaf rollers collected on small trees in Ashmore Twp.  |
| <i>Grapholita prunivora</i> Walsh      | wB      | Light infestation of leaf rollers on understory trees at Hourglass Lake, Div. 23   |
| <i>Hemichroa crocea</i> (Four)         | pCh     | Found in cherry black knot cankers   |
| <i>Hydriomena divisaria</i> Wlk.       | Al      | Occasional colony  |
| <i>Hypagirtis piniata</i> Pack.        | Al      | Uncommon insect  |
| <i>Hyperetis amicaria</i> H.S.         | bF      | Collected in balsam fir plot   |
| <i>Lithocolletis salicifoliella</i>    | Al      | Rare insect in the district  |
| Chamb                                  | W, tA   | Light infestation of blotch miners on small roadside willows at Longlac; populations remained extremely low on aspen throughout the district |



TABLE 11 (continued)

| Insect   | Host(s)     | Remarks   |
|--|-------------|---|
| <i>Macremphytus varianus</i> (Nort.)                             | Do          | Defoliation decreased from severe in 1965 to light in 1966 on shore shrubs at Wildgoose Lake, Colter Twp.   |
| <i>Malacosoma pluviale</i> (Dyar)                                | pCh, wB, Se | Populations declined at all sample points; highest counts 3 tents per one mile of roadside in Twp. 85   |
| <i>Meadoris lateralis</i> Say                                    | Al          | Numerous adults in beating samples at one location in Twp. 87   |
| <i>Mindarus abietinus</i> Koch.                                  | bF          | Light populations of twig aphids common in Summers and in Kilkenny townships  |
| <i>Nadata gibbosa</i> A. & S.<br><i>Nematus hyalinus</i> (Nort.) | wB, Se<br>W | Small numbers in beating samples<br>One small tree heavily infested by this gall-making sawfly in Summers Twp.  |
| <i>Neodiprion abietis</i> complex                                | wS, bS, bF  | Scattered colonies on shore black spruce at Killala Lake; small numbers in beating samples at ten widely scattered collection points through the district |
| <i>Neodiprion compar</i> (Leach)                                 | jP          | Single larvae in beating samples at three collection points   |
| <i>Neodiprion nanulus nanulus</i> Schedl                         | jP          | Two colonies on ten sample trees in Summers Twp.  |
| <i>Neodiprion nigroscutum</i> Midd.                              | jP          | Small numbers in beating samples  |
| <i>Neodiprion pratti banksianae</i> Roh.                         | jP          | Single colonies   |
| <i>Neodiprion virginianus</i> complex                            | jP          | Numerous colonies on one tree in Kitto Twp., small numbers at other collection points   |
| <i>Nycteola cinereana</i> N. & D.                                | bPo         | Light infestation of small shore trees at Pijitawabik Bay, Kilkenny Twp. and at Lucy Lake in Kowkash Twp.   |
| <i>Nycteola frigidana</i> Wlk.                                   | W           | Light population on shore shrubs at Killala Lake  |
| <i>Nyctobia limitaria</i> Wlk.                                   | wS, bF      | Small numbers in beating samples  |
| <i>Nymphalis antiopa</i> (Linn.)                                 | W           | One infested clump of willows at Coldwell, Twp. 78  |
| <i>Pachysphinx modesta</i> Harr.                                 | tA          | Two larvae, first district record   |
| <i>Papilio glaucus</i> Linn.                                     | wB          | Small numbers in beating samples  |

TABLE 11 (continued)

| Insect  | Host(s)   | Remarks  |
|---|-----------|--|
| <i>Phratora americana canadensis</i><br>Brown | W         | Small scattered colonies on roadside trees at Caramat; rare insect                               |
| <i>Phratora hudsonia</i> Brown                | wB        | Light populations of this rare insect on several understory trees in Rainbow Falls Park, Twp. 85 |
| <i>Phyllocnistis populiella</i> Chamb.        | tA, bPo   | Small numbers of leaf miners at two collection points  |
| <i>Pikonema dimmockii</i> (Cress.)            | WS, bS    | Small numbers common in beating samples throughout the district                                  |
| <i>Pineus similis</i> Gill.                   | WS        | One heavily infested tree in Twp. 88   |
| <i>Plagodis alcoolaria</i> Gn.                | wB, Al, W | Small numbers in beating samples at widely scattered points                                      |
| <i>Pleroneura borealis</i> Felt               | bF        | Light populations in Summers and Legault twps.   |
| <i>Pristiphora lena</i> Kincaid               | WS        | Small numbers in beating samples   |
| <i>Pseudexentera oregonana</i> (Wlshm)        | tA        | Light leaf roller activity in Exton and Chipman townships and in the Auden road area             |
| <i>Pyrrhia exprimens</i> Wlk.                 | bPo       | Pockets of lightly defoliated small trees in Kowkash and Coltham twps.                           |
| <i>Rhabdophaga batatas</i> (Walsh)            | W         | One infested twig  |
| <i>Rheumaptera hastata</i> Linn.              | Al        | Populations at an extremely low level  |
| <i>Saperda moesta</i> Lec.                    | tA        | Poplar borer infested small trees occur in Croll Twp., in the Caramat area and at Hillspport     |
| <i>Sciaphila duplex</i> Wlshm.                | tA        | Small numbers  |
| <i>Scoliopteryx libatrix</i> Linn.            | W, Al     | Two parasitized larvae in beating samples; first district record                                 |
| <i>Semiothisa bicolorata</i> Fabr.            | jP        | Occur in beating samples   |
| <i>Semiothisa dispuncta</i> group             | WS        | Small numbers in beating samples   |
| <i>Semiothisa sexmaculata</i> Pack.           | tL        | Conifer loopers collected in beating samples   |
| <i>Tenthredinidae</i> #9                      | Al, wB    | Small numbers  |
| <i>Tenthredinidae</i> #14                     | W         | Solitary feeding larvae collected on a small shrub   |
| <i>Tenthredinidae</i> #29                     | W         | Small numbers in beating samples   |



TABLE 11 (continued)

| Insect                           | Host(s) | Remarks   |
|----------------------------------|---------|---|
| Tenthredinidae #40               | Al      | Small numbers   |
| Trichiocampus irregularis (Dyar) | W       | Several colonies found on shade trees in the town of Geraldton; occasional feeding at other sample points |
| Trichiosoma triangulum Kby.      | W       | Small numbers in beating samples  |
| Zeiraphera ratzeburgiona Ratz.   | WS      | Light numbers of infested shoots at MacDiarmid  |