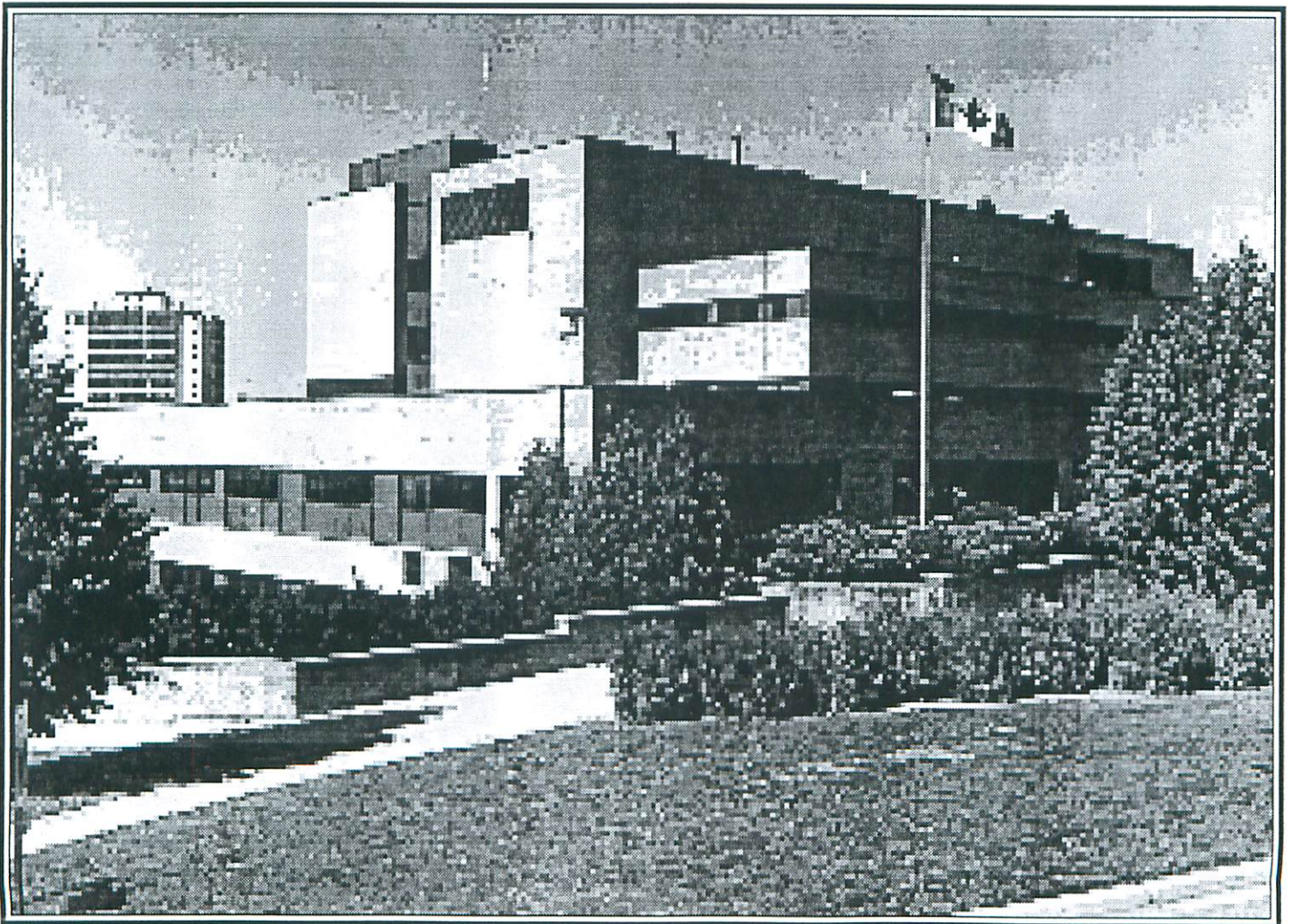




# FILE REPORT

**AUTHOR FILE**

## A Review of Important Forest Insect and Disease Problems in the Owen Sound District of Ontario, 1950 – 1980



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A REVIEW OF IMPORTANT FOREST  
INSECT AND DISEASE PROBLEMS  
IN THE OWEN SOUND DISTRICT  
OF ONTARIO, 1950 - 1980

Compiled by

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FORESTRY CANADA  
ONTARIO REGION  
GOVERNMENT OF CANADA  
1990

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## FOREWORD

The first forest insect surveys in Ontario were carried out in 1936 from the Dominion Entomological Laboratory in Ottawa and continued from this location until 1944, when the province of Ontario was divided, for the purpose of these surveys, into northern and southern Ontario. In 1945, personnel from Ottawa continued to conduct and report on surveys in the area south of Algonquin Park and Parry sound forest districts, while personnel from the Forest Insect Laboratory in Sault Ste. Marie carried out surveys in the area to the north. In 1950 responsibility for reporting insects for all of Ontario fell to the Sault Ste. Marie laboratory. In 1952 the Forest Disease Survey was initiated with headquarters in Maple, Ontario, then was moved to Sault Ste. Marie in 1967. The results of these surveys of insects and diseases are reported in the Annual Report of the Forest Insect and Disease Survey (FIDS) published by Forestry Canada headquarters in Ottawa. In addition, annual district and regional reports, begun in 1948, are prepared by FIDS technicians (Rangers) in Sault Ste. Marie. In 1980 a new provincial report was released in Ontario. The contents of the following review have been abstracted from these reports and compiled in alphabetical order by the scientific names of species in each of the following three categories:

*Major Insects or Diseases*

Capable of causing serious injury to or death of living trees or shrubs.

*Minor Insects or Diseases*

Capable of causing sporadic or localized injury but not usually a serious threat to living trees or shrubs.

*Abiotic Damage*

Damage caused by non-living factors.

All measurements in this review are in metric form and conversions from Imperial measurements from the earliest reports are taken to the second decimal point, i.e., [sq. mi. to km<sup>2</sup> = area (sq. mi.) x 2.59 = area km<sup>2</sup>]. Infestation maps in this review were copied from the original maps in the FIDS technicians' reports. Abbreviations for the common names of the host tree species, along with the scientific names, are shown in Appendices A and B. To facilitate the location of hosts, deciduous and coniferous species have been separated and listed alphabetically under the common names.

Appendix C is a series of maps for southern Ontario grouped alphabetically by insect species or disease pathogen and showing the location of infestations within a region or infestation boundaries that extend beyond regions.

## ACKNOWLEDGMENTS

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We wish to acknowledge the following authors of the annual FIDS district and regional reports from which this review was abstracted.

1950	A.G. Donaldson, A.S. Danard
1951-1953	A.S. Danard
1954-1958	D.F. Lynn
1959-1966	R.L. Bowser
1967-1975	V. Jansons
1976	M.J. Applejohn
1977-1979	D.C. Constable
1980	C.A. Barnes



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Large Aspen Tortrix, *Choristoneura conflictana*

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European Pine Sawfly, *Neodiprion sertifer*

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## APPENDICES

## INTRODUCTION

This report is a review of significant forest insects and diseases that have occurred in the Owen Sound District throughout the period 1950 to 1980. Owen Sound became a district in 1973 and prior to this period was part of the old Lake Huron District. In the selection of pests for this report particular attention was paid to major working groups of host species in the area, namely oak, maple, birch, pines, spruce, balsam fir and larch as well as shade and ornamental trees. The insect and diseases included are capable of causing, or have caused, tree mortality or a reduction in tree growth. Also, included are abiotic problems that cause damages, i.e., frost, wind, hail and winter drying, etc.

## SUMMARY

## FOREST INSECTS

Cedar Leafminers, *Argyresthia aureoargentella* Brower [Major]  
*A. canadensis* Free., *A. thuiella* Pack  
*Coletechnites thujaella* (Kft.)  
 pages

These serious pests of eastern white cedar can cause tree mortality after a number of years of severe defoliation. High populations have occurred over the past sever years at numerous locations in the district.

Birch Skeletonizer, *Bucculatrix canadensisella* Clem. [Major]  
 pages

Defoliation by this insect seldom caused mortality of the host but weakened trees are subject to attack by secondary insects and diseases. Large outbreaks of this insect usually last 3 to 4 years, then decline rapidly. Moderate-to-severe defoliation occurred from 1961 to 1962 and from 1970 to 1973 mainly on the Bruce Peninsula.

Large Aspen Tortrix, *Choristoneura conflictana* (Wlk.) [Major]  
 pages

No tree mortality has been recorded as caused by this defoliator, which affects primarily aspen and poplar. Moderate-to-severe defoliation occurred in 1961, 1973 and 1974 on the Bruce Peninsula.

Spruce Budworm, *Choristoneura fumiferana* (Clem.) [Major]  
 pages

This insect is considered the most destructive insect pest of several coniferous hosts in eastern Canada, the main hosts being white spruce and balsam fir. Though not major hosts, black spruce, eastern hemlock, and tamarack are attacked and considerable tree mortality can occur. Moderate-to-severe defoliation occurred from 1967 to 1971 and again from 1974 to 1980. These infestations were mainly confined from Amabel Township north to St. Edmunds Township on the Bruce Peninsula.



Eastern Pine Shoot Borer, *Eucosma gloriola* Heinr.  
pages

[Major]

This insect usually infests lateral shoots and causes only aesthetic damage. When high populations develop, some leaders are infested and killed causing deformity of infested trees. Varying degrees of damage occurred from 1952 to 1980, with up to 40% of leaders damaged in 1965, in Brant Township.

Birch Leafminer, *Fenusa pusilla* (Lep.)  
pages

[Major]

Defoliation by this miner can weaken trees and leave them susceptible to secondary insects and diseases, and may be a predisposing factor in birch decline. As a rule, these insects attack single trees but when population build up, stands of trees are severely defoliated. Moderate-to-severe defoliation occurred at widely scattered locations during the period from 1951 to 1980.

Saddled Prominent, *Heterocampa guttivitta* (Wlk.)  
pages

[Major]

Two or three successive years of severe defoliation may cause significant tree mortality in yellow birch. During droughts or on poor sites, trees of other species may die, and yields of sap from sugar maples may be reduced. Moderate-to-severe damage occurred from 1967 to 1970.

Hemlock Looper, *Lambdina fiscellaria fiscellaria* Gn.  
pages

[Major]

This destructive pest of hemlock, cedar and balsam fir can cause serious mortality of mature trees after one year of severe defoliation. Severe defoliation occurred in 1951 in Albemarle and Eastnor townships.

Forest Tent Caterpillar, *Malacosoma disstria* Hbn.  
page

[Major]

This caterpillar is widely distributed through North America. Infestations usually last an average of five years and high populations denude large areas of susceptible stands. The principal host attacked is aspen, however, many other deciduous species also suffer severe defoliation. Repeated defoliation retards tree growth and vigor leaving the susceptible to attack by other pests. Varying degrees of defoliation have been reported since 1950 throughout the district.

Balsam Fir Sawfly, *Neodiprion abietis* complex  
pages

[Major]

Severe defoliation can cause mortality of balsam fir and white spruce trees when an infestation persists over a period of years. Over the past 30 years this sawfly was widely distributed over the district and caused varying degrees of defoliation.

Redheaded Pine Sawfly, *Neodiprion lecontei* (Fitch) [Major]  
pages

This destructive pest of pine plantations can cause mortality after several years of severe defoliation. The preferred hosts are Scots pine, red pine and jack pine planted in pure stands. Moderate-to-severe defoliation persisted from 1951 to 1961 at several locations in the district.

Jack Pine Sawfly, *Neodiprion pratti banksianae* Roh. [Major]  
pages

Repeated infestations by this sawfly can result in growth reduction and some branch mortality. Varying degrees of foliar damage have occurred during the past 30 years in the district.

European Pine Sawfly, *Neodiprion sertifer* (Geoff.)  
pages

This sawfly prefers the old foliage of pines, and trees of all sizes are defoliated, causing growth reduction but rarely tree mortality. The first reported record in the district occurred in 1952 in Greenock Township. Since this time, moderate-to-severe defoliation was found at numerous locations in the district.

Yellowheaded Spruce Sawfly, *Pikonema alaskensis* (Roh.) [Major]  
pages

This destructive insect has been categorized as a serious pest of young spruce plantations and open-growing ornamentals. High mortality can occur after successive years of severe defoliation. Varying degrees of defoliation occurred in the past 30 years.

White Pine Weevil, *Pissodes strobi* (Peck.) [Major]  
pages

This weevil is considered the most destructive pest of white pine in North America. Successive weeviling over a period of years results in multiple-stemmed trees. Leader damage ranged from a low of 1% to a high of 50% in the district.

Larch Sawfly, *Pristophora erichsonii* (Htg.) [Major]  
pages

The larch sawfly is the primary defoliating insect of native and most exotic species of larch. On good sites, larch trees can withstand six to nine years of severe defoliation before mortality occurs; on less favourable sites, mortality may follow three or more years of complete defoliation. Moderate-to-severe defoliation occurred in 1969, 1971, 1975 and again in 1978 in the district.

Mountain Ash Sawfly, *Pristophora geniculata* (Htg.) [Major]  
pages

Although mountain-ash trees are not considered as merchantable, there are a great number utilized as shade trees and ornamentals in rural and urban areas. This insect can weaken trees when prolonged severe defoliation occurs and subsequent borer infestations can cause mortality. Populations of varying degrees had been recorded since 1950.

European Pine Shoot Moth, *Rhyacionia buoliana* (D. & S.) [Major]  
pages

Young open-grown pines are not susceptible to attack and damage. The most significant damage occurs in the spring when larvae tunnel the shoots sometimes bend but continue growing resulting in crooked stems. Infestations have been reported at numerous locations over the past 30 years.

Other Noteworthy Insects [Major and Minor]  
pages

Insects that have the potential for causing damage to stands, regeneration and plantations.

#### FOREST DISEASES

Dwarf Mistletoe, *Arceuthobium pusillum* Peck [Major]  
page

Infection by dwarf mistletoe reduces tree growth and causes tree mortality. Control is usually through silvicultural operations involving the removal of all infected trees during harvesting. This disease was most commonly observed at several locations on the Bruce Peninsula. Upwards of 20% of trees were infected at one location in Lindsay Township in 1969.

Dutch Elm Disease, *Ceratocystis ulmi* (Buism.) C. Moreau [Major]  
pages

This major disease organism, which affects all species of elm, was first recorded in Ontario in Prescott County in 1946, and has gradually spread throughout most of the known range of elm in Ontario. In 1960, this disease was found near Durham and Collingwood, and continued to kill elms during the next 20 years.

Pine Needle Rust, *Coleosporium asterum* (Dietel) Sydow [Major]  
pages

Repeated medium-to-heavy needle infection weakens trees, causes a loss of increment and predisposes them to secondary insect attack and disease. Varying degrees of damage has occurred during the past 30 years.

White Pine Blister Rust, *Cronartium ribicola* J.C. Fisch. [Major]  
page

White pine blister rust is the most serious disease of eastern white pine. The disease caused top killing and mortality in trees of all ages. Varying degrees of infections have occurred in the district since 1955.

Anthraco-nose, *Discula campestris* (Pass.) v. Arx. [Major]  
pages

Heavy infections by this disease can result in early defoliation of the host but the disease is usually not considered serious. Since 1963 moderate-to-severe infections have occurred at widely scattered locations.

Western Gall Rust, *Endocronartium harknessii* (J.P. Moore) [Major]  
Y. Hirats.  
page

This pathogen infects trees in all age classes; however, serious damage generally occurs in small diameter regeneration trees in stands or plantations. When stems are girdled by the gall, partial or whole-tree mortality results. Varying degrees of infection have occurred since 1953.

Eutypella Canker, *Eutypella parasitica* Davidson and Lorenz [Major]  
page

In some stands in Ontario, up to 40% of the trees have been found to be infected by this canker. The deformation caused reduces the value of infected trees and smaller trees can be killed by the fungus. Since 1973, incidence of trees affected has not exceeded 8% in the district.

Hypoxylon Canker, *Hypoxylon mammatum* (Wahlenb.) J. Miller [Major]  
page

This disease usually attacks the stems of immature trees in the 8 to 13 cm diameter class but also attacks the upper stems and branches of larger trees. Varying degrees of damage have occurred since 1955.

Shoot Blight, *Sirococcus conigenus* (DC.) P. Cannon & Minter [Major]  
page

This pathogen is capable of killing trees outright in many age classes and especially young understory regeneration. The principal host is red pine although other pines are susceptible to attack. This disease has been reported since 1973.

Other Noteworthy Diseases [Major and Minor]  
page

These are diseases with the potential for causing damage to natural stands, regeneration and plantations.

ABIOTIC DAMAGE  
pages

Abiotic damage is caused by a variety of influences, i.e. frost, winter drying, salt, etc. Weakened trees are susceptible to a number of diseases.

I N S E C T S



Cedar Leafminers, *Argyresthia aureoargentella* Brower,  
*A. canadensis* Free., *A. thuiella* Pack.,  
*Coleotechnites thujaella* (Kft.)

Host(s): eC

[Major]

<u>Year</u>	<u>Remarks</u>
1950	not reported
1951	High populations reported in Amabel, Keppel, Arran, Derby, Elderslie and Sullivan twps.
1952	low populations
1953	Moderate-to-severe defoliation occurred along the east shore of Boat Lake in Amabel Twp.
1954	not reported
1955	Moderate-to-severe defoliation continued on the east shore of Boat Lake in Amabel Twp.
1956	Moderate-to-severe leafmining occurred in Big Pike Bay in Eastnor Twp and Albemarle Twp and light damage in the Dornoch and Durham areas.
1957	light defoliation throughout the district
1958	Light damage occurred in Sullivan Twp.
1959	low populations
1960	not reported
1961	high populations reported in Grey and Bruce counties
1962-1963	low populations
1964	moderate-to-severe defoliation at Greenough Point in Lindsay Twp, and in Holland and Brant twps
1965	moderate numbers collected on the Bruce Peninsula and in Holland Twp
1966	Moderate-to-severe defoliation occurred in Grey and Bruce counties.
1967	high numbers reported at scattered points in Grey and Bruce counties
1968	high numbers reported throughout the district
1969	low populations
1970	light populations in the extreme southwestern portion of the district
1971	high numbers obtained in the northern portion of the district

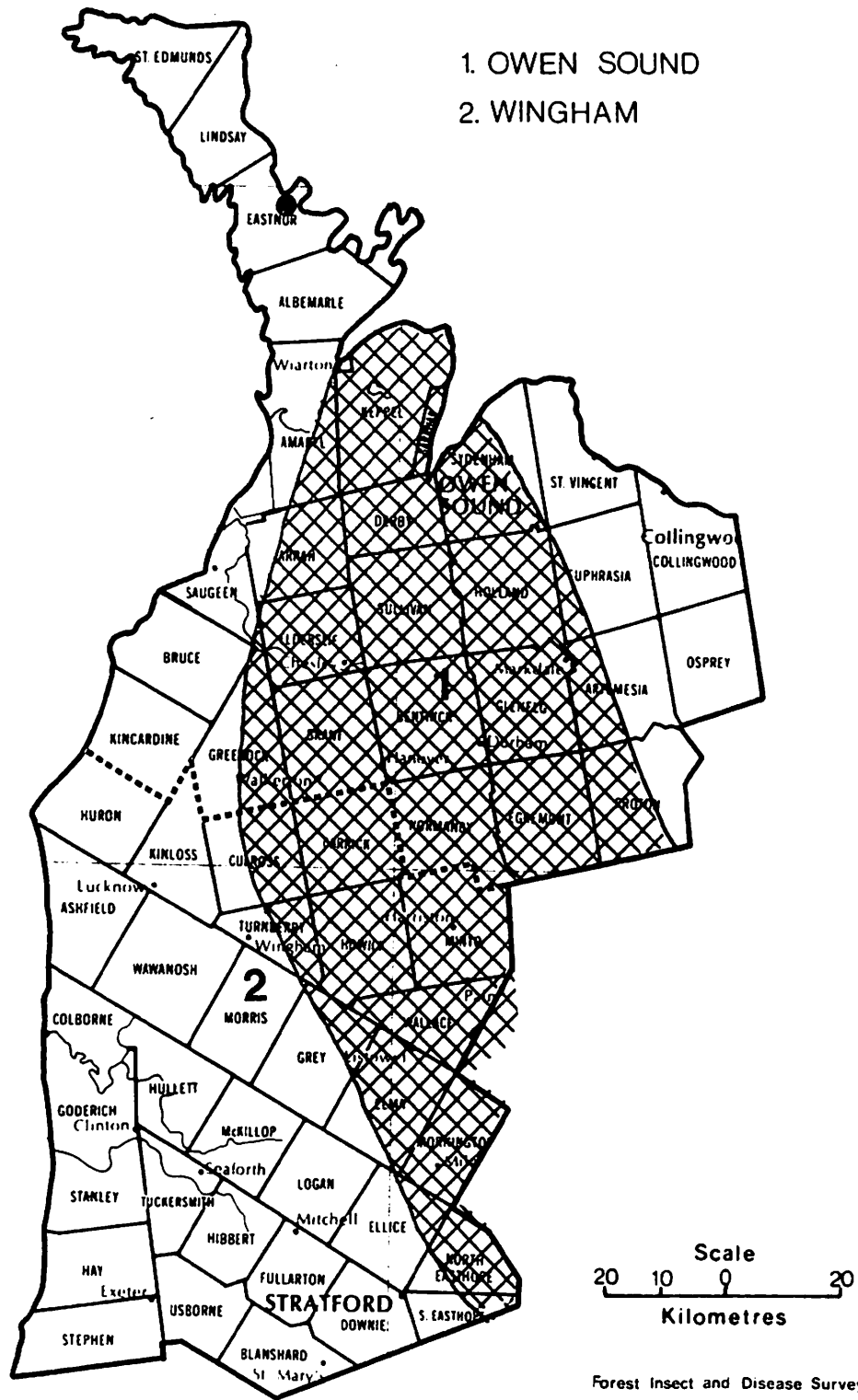
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Cedar Leafminers, *Argyresthia aureoargentella* Brower,  
*A. canadensis* Free., *A. thuiella* Pack.,  
*Coleotechnites thujaella* (Kft.) (concl.)

<u>Year</u>	<u>Remarks</u>
1972	Moderate-to-severe defoliation was common in cedar stands and hedgerows in Grey County and in the southern part of Bruce County.
1973	Moderate-to-severe defoliation continued in areas north of Owen Sound.
1974	Moderate-to-severe damage was recorded near Lions Head and Barrow Bay in Eastnor Twp.
1975	Moderate-to-severe damage continued throughout the district (see map, page ). As a result of repeated infestations in the past few years, considerable top mortality has occurred in the Owen Sound, Chatsworth, Durham and Markdale areas.
1976	Infestations collapsed with only trace levels reported.
1977	Small pockets of moderate numbers occurred in Osprey, Artemesia and Holland twps.
1978	Moderate-to-severe infestations occurred throughout the townships of St. Edmunds, Lindsay and the north half of Eastnor Twp. High numbers also occurred in Keppel, Osprey and Sydenham twps.
1979	Moderate-to-severe defoliation continued in the district.
1980	moderate-to-severe leafmining throughout the entire district (see map, page ).


# OWEN SOUND and WINGHAM DISTRICTS



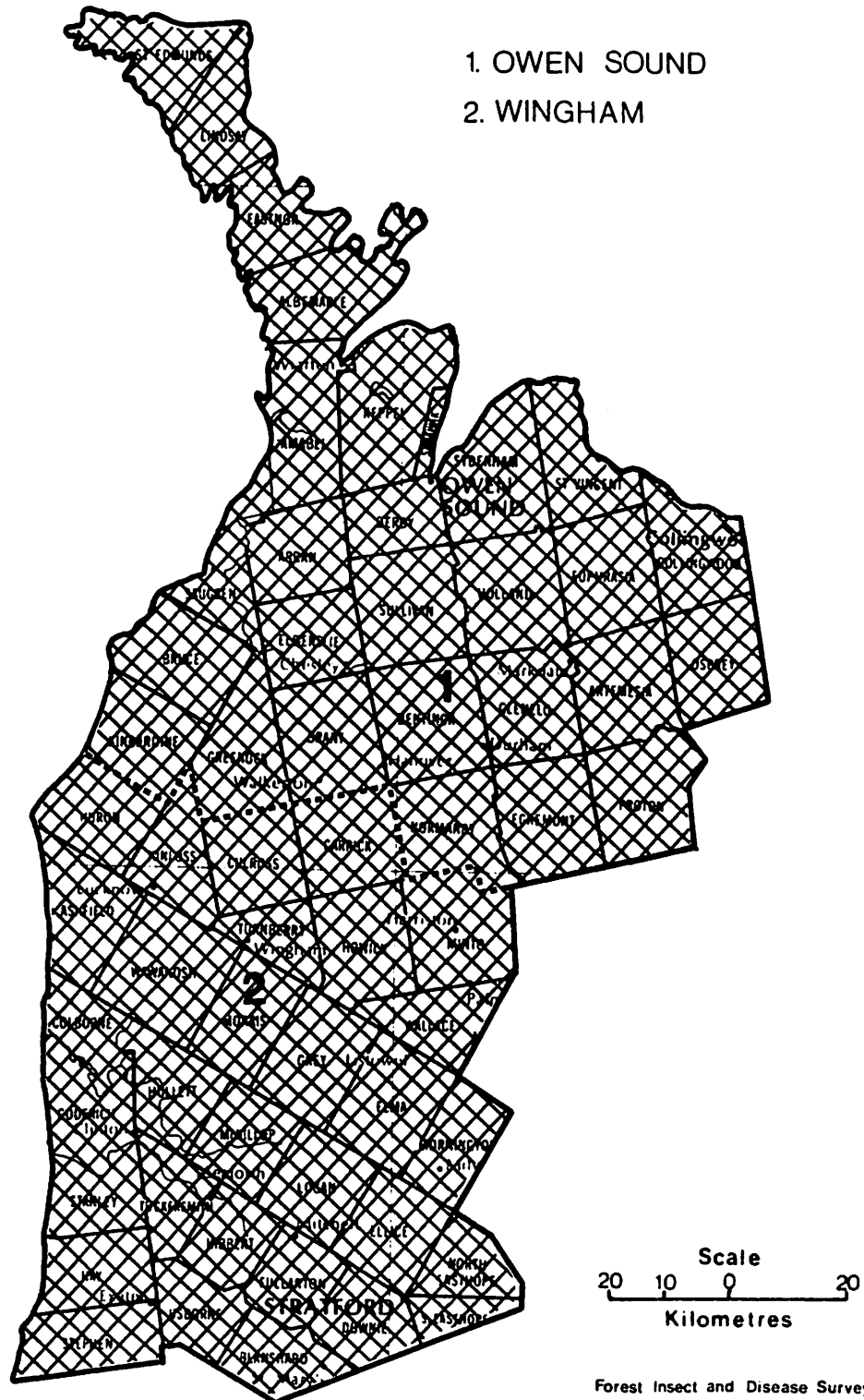
Cedar Leafminer

Areas within which defoliation occurred in 1975

## LEGEND

Moderate-to-severe defoliation ● or 

# OWEN SOUND and WINGHAM DISTRICTS



Cedar Leafminer

Areas within which defoliation occurred in 1980

LEGEND

Moderate-to-severe defoliation



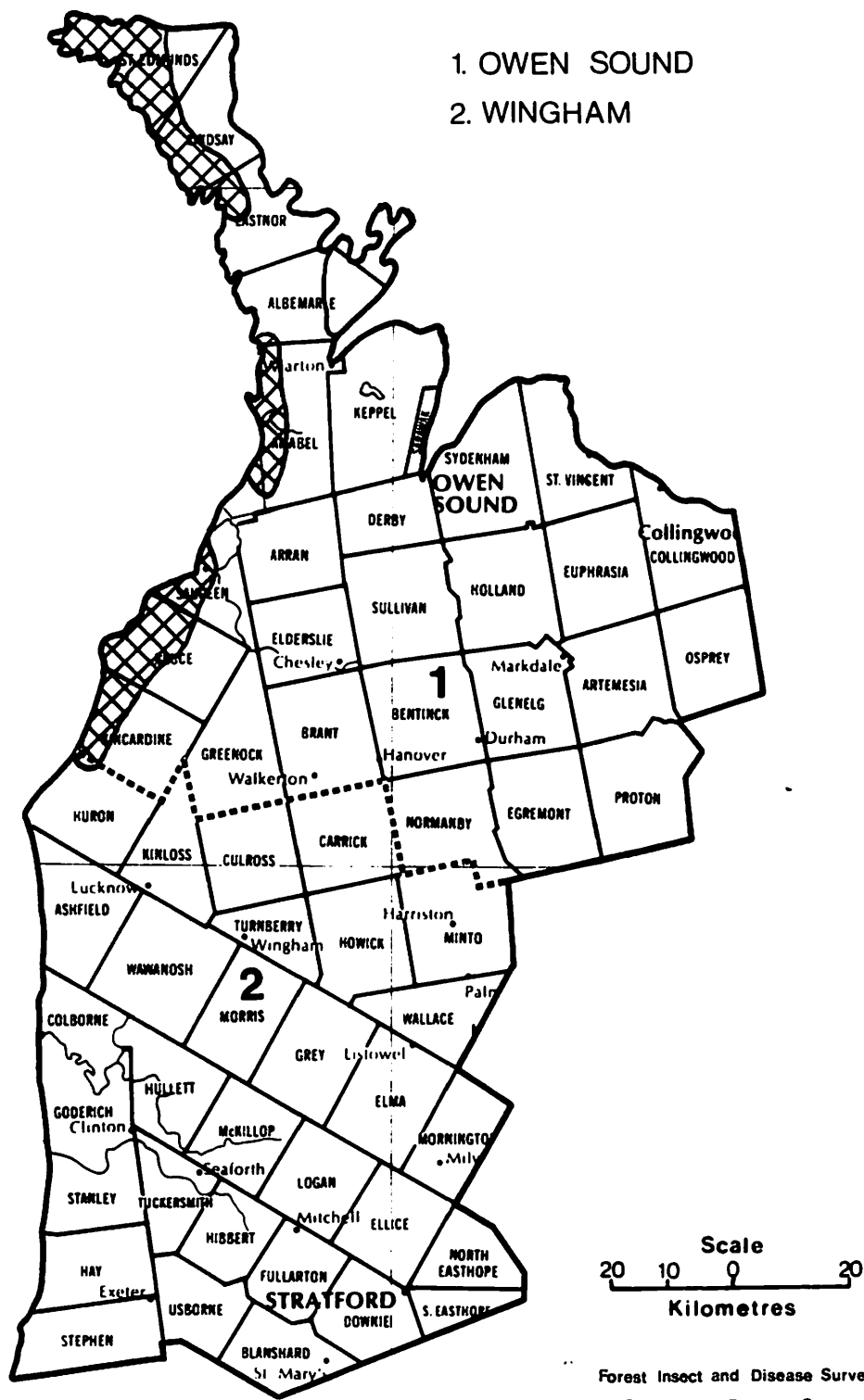
Birch Skeletonizer, *Bucculatrix canadensisella* Cham.

Host(s): birch

[Major]

<u>Year</u>	<u>Remarks</u>
1950-1957	not reported
1958-1959	Low numbers occurred at scattered point on the Bruce Peninsula.
1960-1961	Populations increased. Moderate-to-severe defoliation occurred throughout the counties of Grey and Bruce.
1962-1963	Population levels declined in the district. Low numbers were reported throughout the counties of Grey and Bruce.
1964-1969	not reported
1970	Moderate-to-severe defoliation occurred along the west shoreline of Lake Huron from Kincardine Twp north to St. Edmunds Twp on the Bruce Peninsula (see map, page ).
1971	Localized areas of severe skeletonizing occurred for the second year on the Bruce Peninsula.
1972	Small pockets of moderate-to-severe defoliation occurred north of Lion's Head in Eastnor Twp and near Hepworth in Keppel Twp (see map, page ).
1973	One small pocket of severe damage occurred near Lion's Head in Eastnor Twp (see map, page ).
1974-1980	not reported

# OWEN SOUND and WINGHAM DISTRICTS



Birch Skeletonizer

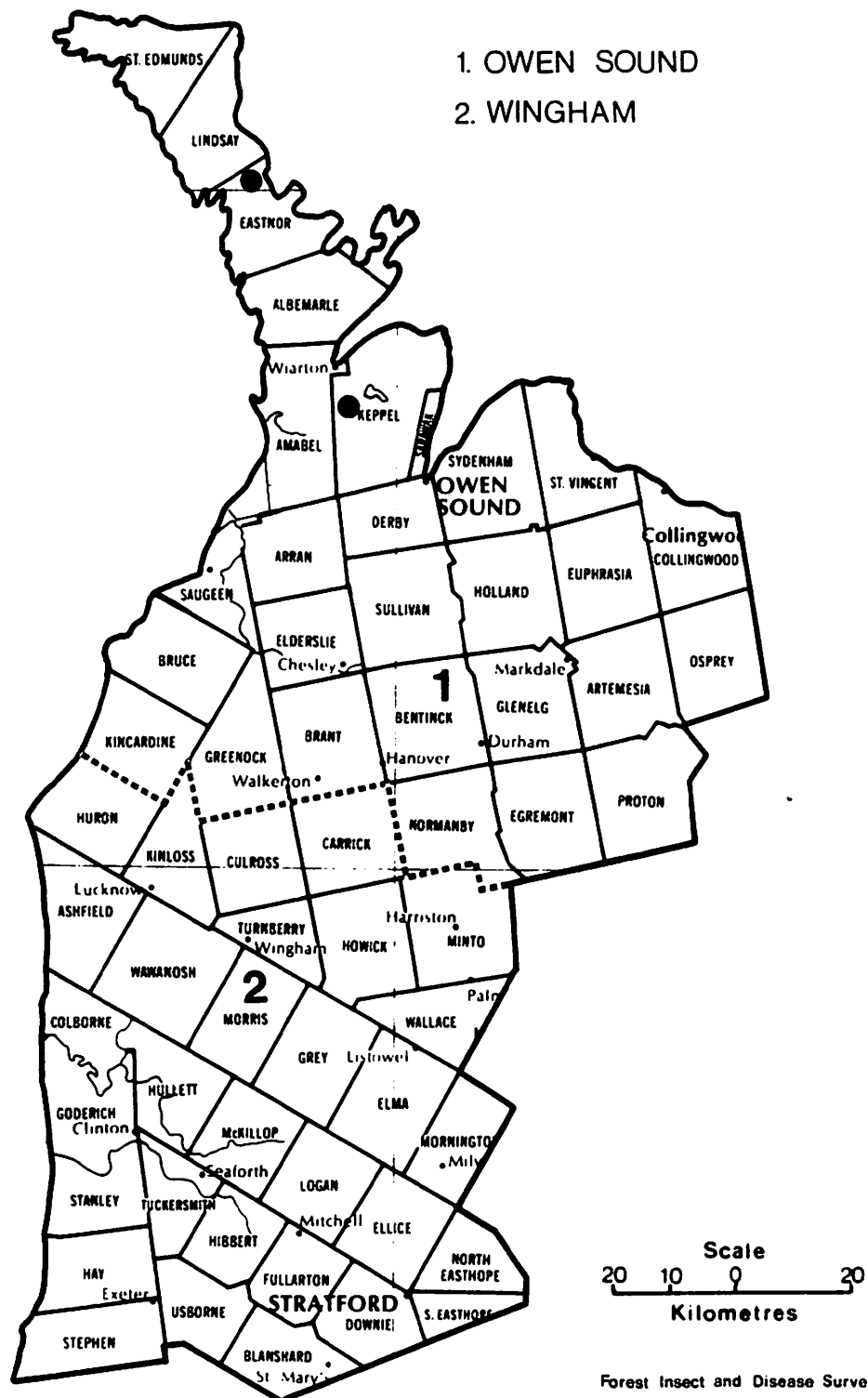
Areas within which defoliation occurred in 1970

LEGEND

Moderate-to-severe defoliation



# OWEN SOUND and WINGHAM DISTRICTS



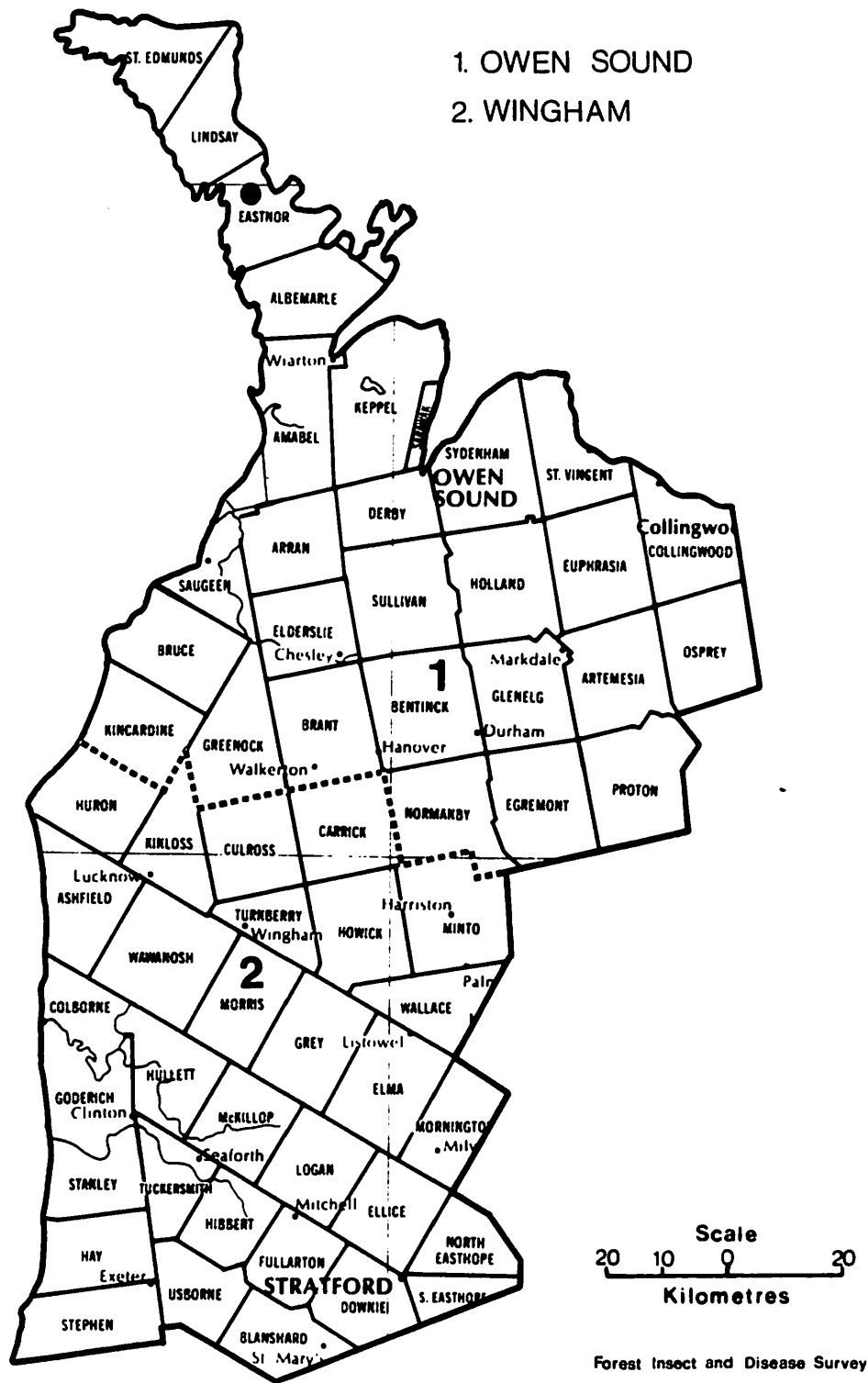
Birch Skeletonizer

Areas within which defoliation  
occurred in 1972

LEGEND

Moderate-to-severe defoliation ●

# OWEN SOUND and WINGHAM DISTRICTS



Birch Skeletonizer

Areas within which defoliation  
occurred in 1973

LEGEND

Moderate-to-severe defoliation



Large Aspen Tortrix, *Choristoneura conflictana* (Wlk.)

Host(s): aspen [Major]

<u>Year</u>	<u>Remarks</u>
1950-1959	not reported
1960	Low populations occurred in St. Edmunds Twp.
1961	Small pockets of moderate-to-severe defoliation occurred in the northern part of the Bruce Peninsula.
1962	Low populations reported in Amabel Twp.
1963-1971	not reported
1972	light defoliation in the northern part of the Bruce Peninsula
1973	moderate-to-severe defoliation observed in Lindsay Twp and in the vicinity of Lion's Head in Eastnor Twp
1974	Moderate populations occurred in the Johnston Harbour Road area in St. Edmunds Twp. Trace populations occurred elsewhere in the district.
1975	Light defoliation occurred in Lindsay and St. Edmunds twps.
1976	Light defoliation occurred at Crane River, St. Edmunds Twp.
1977-1980	not reported

Spruce Budworm, *Choristoneura fumiferana* (Clem.)

Host(s): bF, spruce [Major]

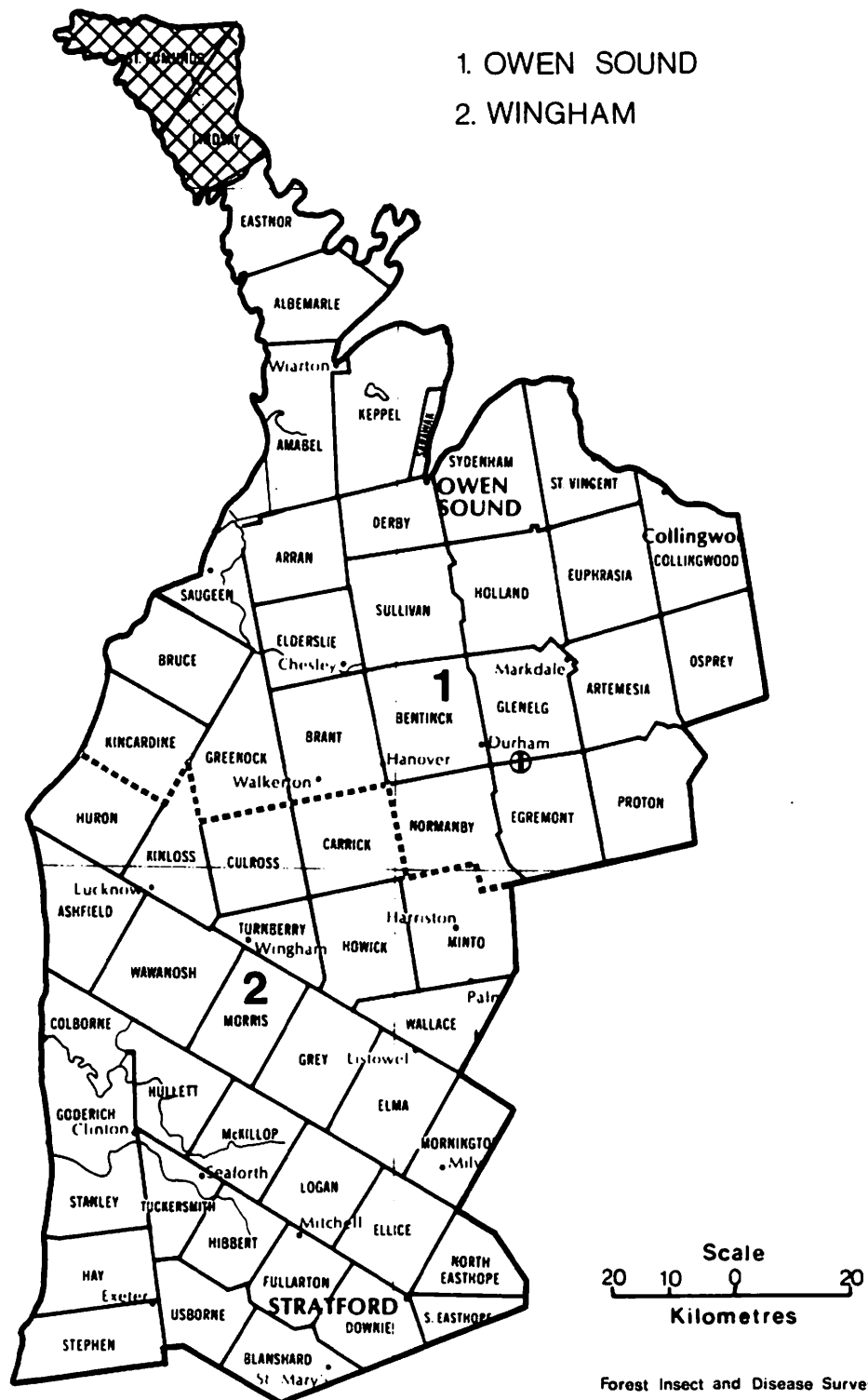
<u>Year</u>	<u>Remarks</u>
1950-1951	not reported
1952	trace levels found in Glenelg Twp
1953-1958	not reported
1959-1960	trace populations
1961-1962	Trace populations occurred in Grey and Bruce counties.
1963	small pockets of medium infestation in the Grey Main Tract, Glenelg Twp
1964	light defoliation reported in Glenelg Twp
1965	Light defoliation persisted for the second consecutive year on white spruce plantings in Glenelg Twp. Trace levels were also found on the Bruce Peninsula and in Artemesia Twp.

(cont'd)

Spruce Budworm, *Choristoneura fumiferana* (Clem.) (concl.)

<u>Year</u>	<u>Remarks</u>
1966	Light defoliation persisted for the third consecutive year in Glenelg Twp.
1967	Moderate-to-severe defoliation occurred throughout St. Edmunds and Lindsay twps. Light damage still persisted near Durham in Glenelg Twp (see map, page ).
1968	Population levels declined on the northern part of the Bruce Peninsula.
1969	Population levels increased in Lindsay and St. Edmunds twps.
1970	Moderate-to-severe defoliation occurred throughout St. Edmunds Twp.
1971	Moderate-to-severe defoliation continued in St. Edmunds Twp and along the east shore of Lake Huron in Lindsay Twp.
1972	low populations
1973	not reported
1974	Small pockets of moderate-to-severe defoliation occurred in St. Edmunds, Lindsay and Amabel twps (see map, page ).
1975	Moderate-to-severe defoliation continued throughout St. Edmunds and Lindsay twps on the Bruce Peninsula and smaller pockets of moderate-to-severe damage occurred in Sullivan and Glenelg twps (see map, page ).
1976	High populations continued throughout St. Edmunds and Lindsay twps (see map, page ).
1977	Moderate-to-severe defoliation continued in St. Edmunds and Lindsay twps; a small pocket was observed in Kincardine Twp (see map, page ).
1978	A slight decline in area occurred in St. Edmunds and Lindsay twps (see map, page ). Moderate-to-severe damage also occurred in single pocket locations in Amabel and Glenelg twps.
1979	High populations occurred from Red Bay in Albemarle Twp to Tobermory in St. Edmunds Twp. Pockets of medium-to-heavy infestations also occurred in Glenelg and Osprey twps (see map, page ). Balsam fir whole-tree mortality is now occurring in many stands on the Bruce Peninsula.
1980	Little change has occurred in the current infestation (see map, page ). The small pocket in Osprey Twp recorded in 1979 has collapsed. Balsam fir mortality continued throughout the Bruce Peninsula.



# OWEN SOUND and WINGHAM DISTRICTS



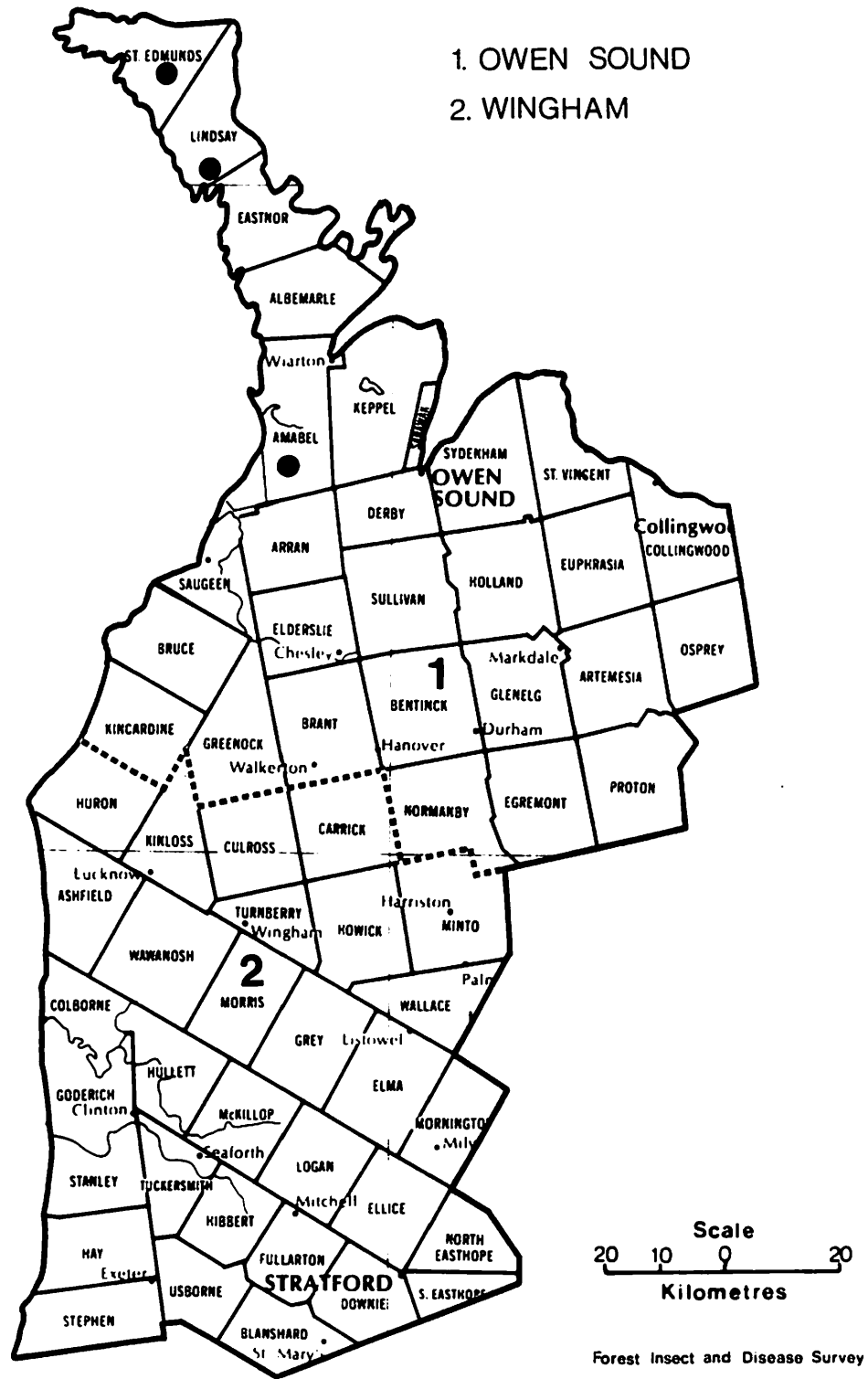
## Spruce Budworm

Areas within which defoliation occurred in 1967

### LEGEND

Light defoliation   
Moderate-to-severe defoliation 

# OWEN SOUND and WINGHAM DISTRICTS



Spruce Budworm

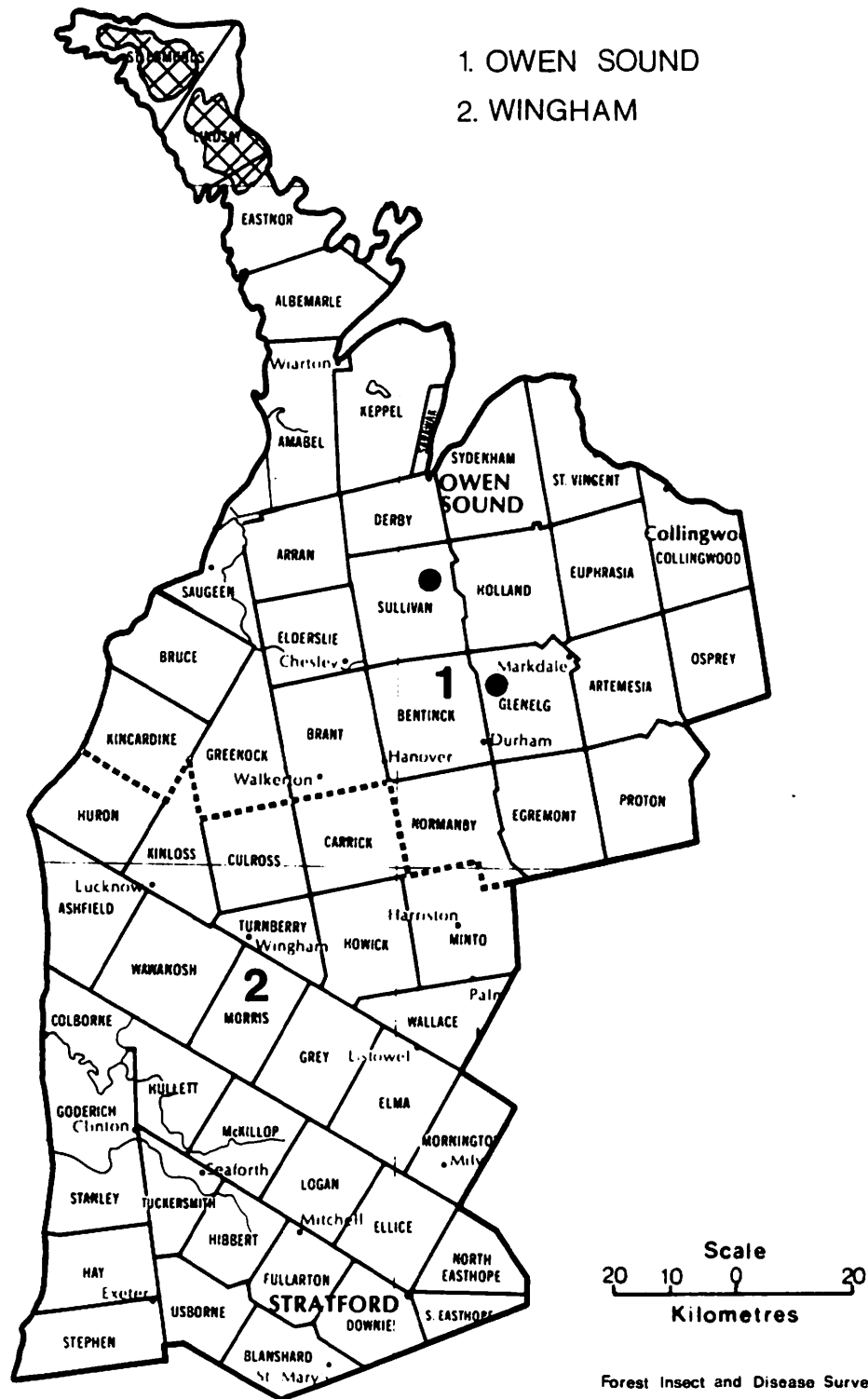
Areas within which defoliation  
occurred in 1974

LEGEND

Moderate-to-severe defoliation ●

# OWEN SOUND and WINGHAM DISTRICTS


1. OWEN SOUND
2. WINGHAM



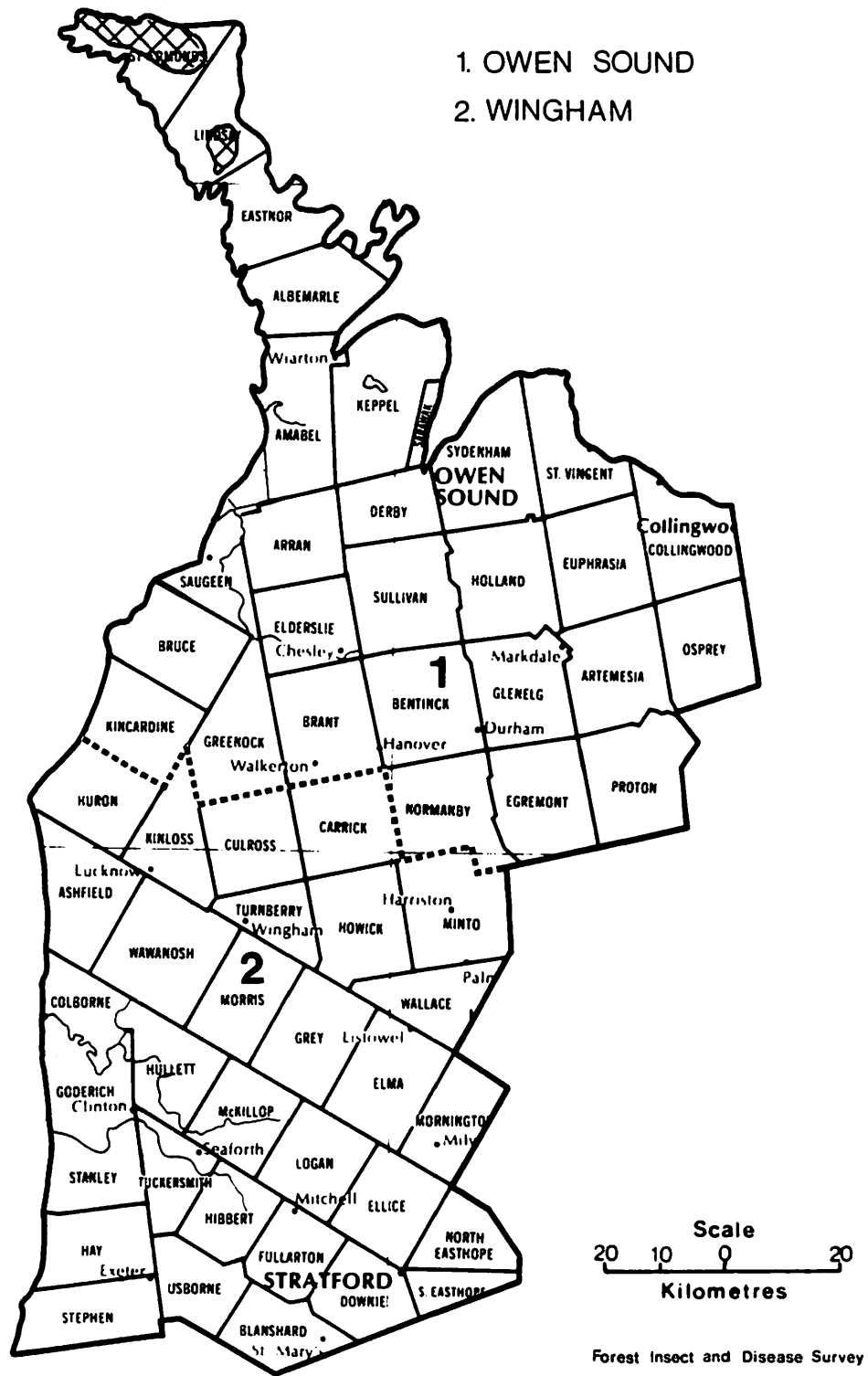
## Spruce Budworm

Areas within which defoliation occurred in 1975

### LEGEND

Moderate-to-severe defoliation ● or 

# OWEN SOUND and WINGHAM DISTRICTS



Spruce Budworm

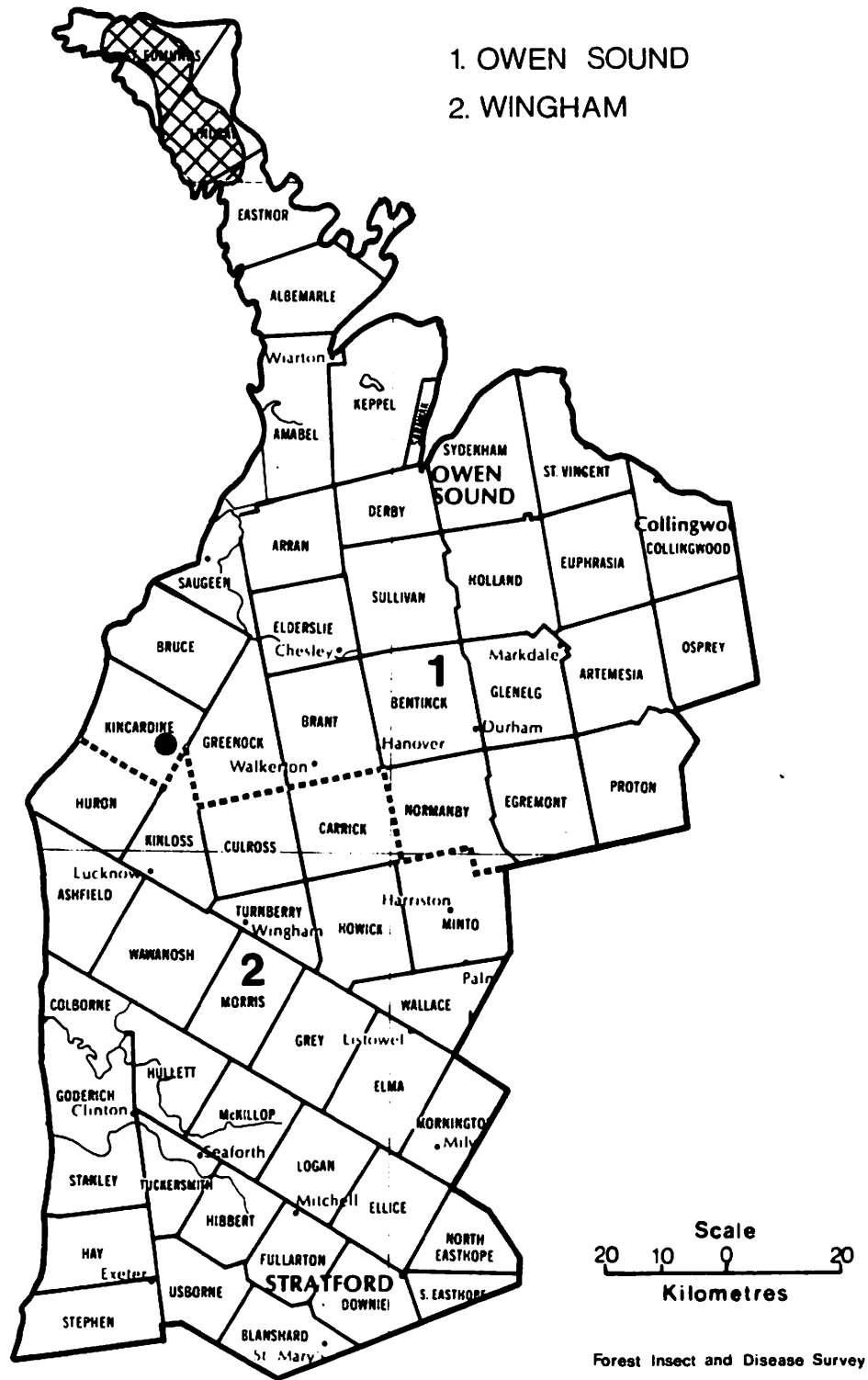
Areas within which defoliation  
occurred in 1976

LEGEND

Moderate-to-severe defoliation




# OWEN SOUND and WINGHAM DISTRICTS



## Spruce Budworm

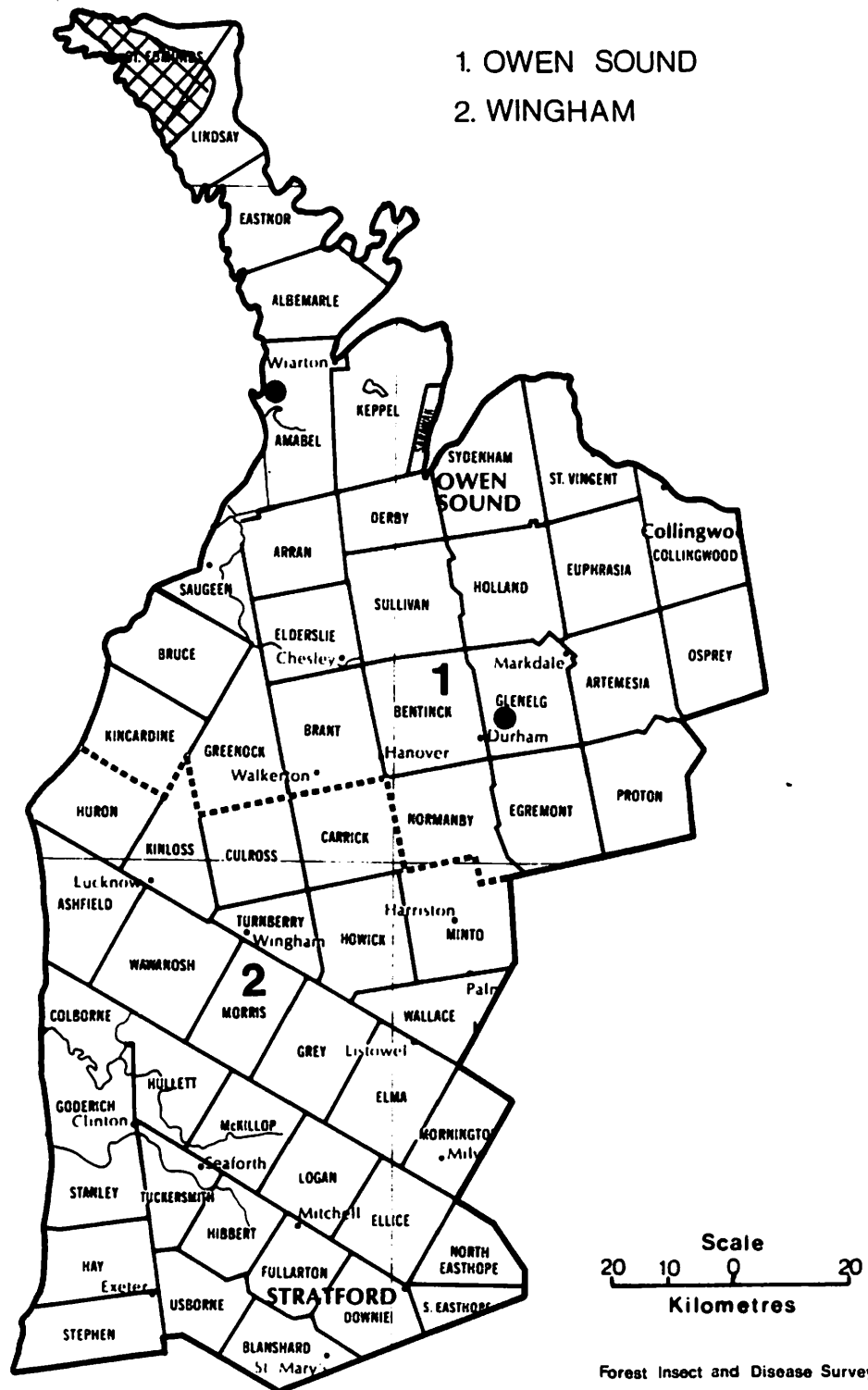
Areas within which defoliation occurred in 1977

### LEGEND

Moderate-to-severe defoliation ● or 




# OWEN SOUND and WINGHAM DISTRICTS



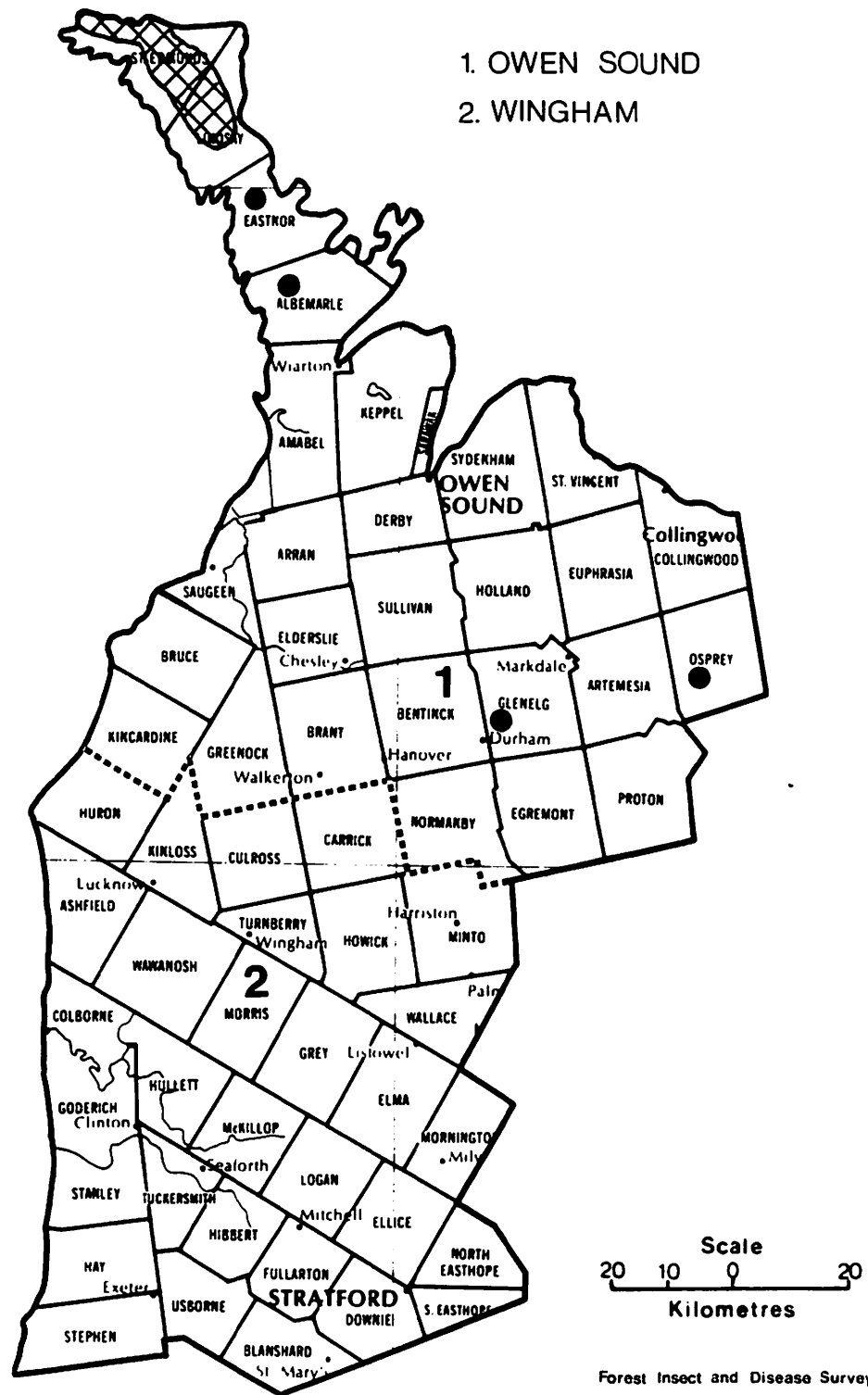
## Spruce Budworm

Areas within which defoliation occurred in 1978

### LEGEND

Moderate-to-severe defoliation ● or 


# OWEN SOUND and WINGHAM DISTRICTS



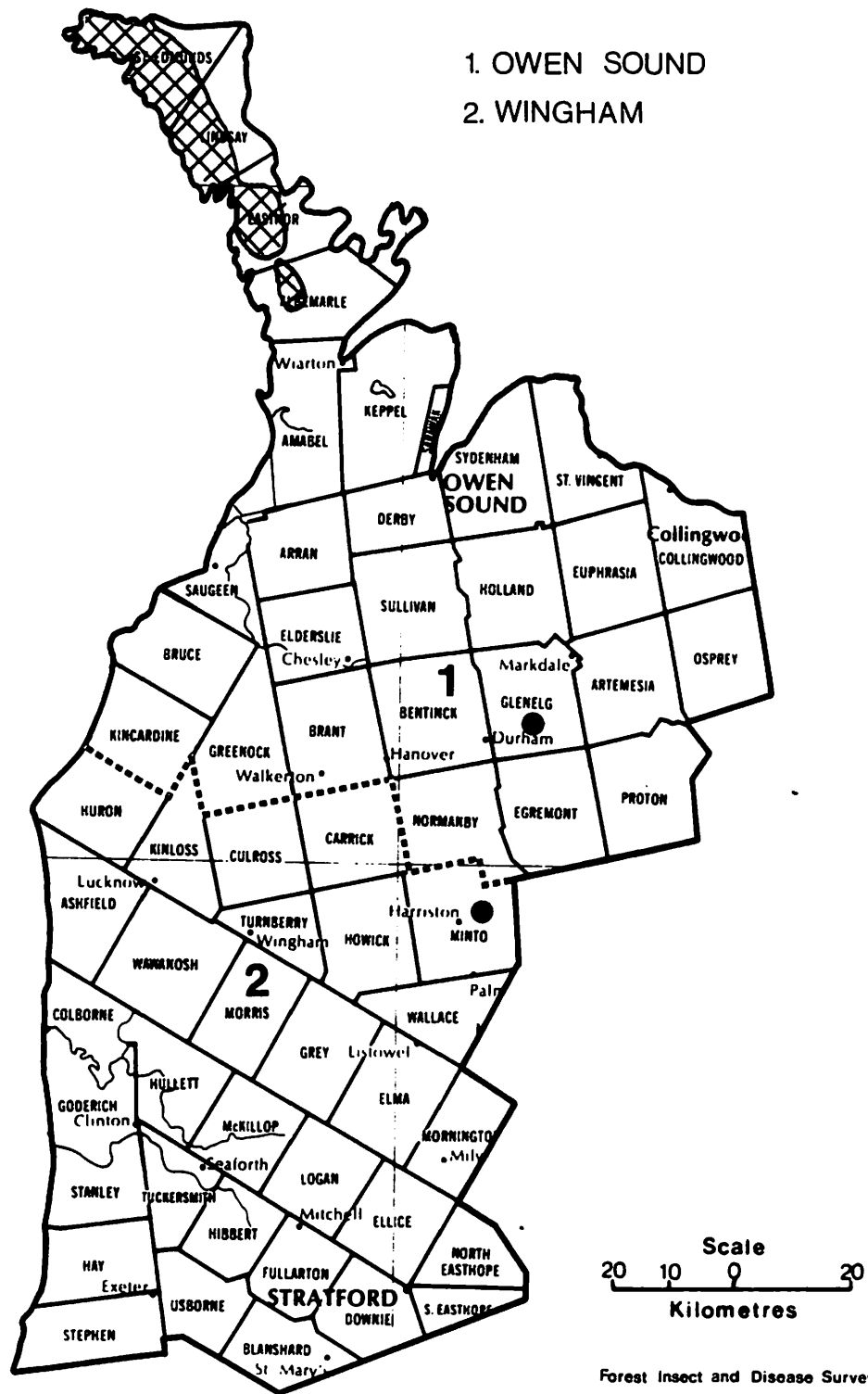
## Spruce Budworm

Areas within which defoliation occurred in 1979

### LEGEND

Moderate-to-severe defoliation ● or 

# OWEN SOUND and WINGHAM DISTRICTS



## Spruce Budworm

Areas within which defoliation occurred in 1980

### LEGEND

Moderate-to-severe defoliation ● or

Eastern Pine Shoot Borer, *Eucosma gloriola* Heinr.

Host(s): pine

[Major]

<u>Year</u>	<u>Remarks</u>
1950-1951	not reported
1952	20% of trees attacked at one location in the Williamsford Tract, Holland Twp
1953	trace damage reported in the Main Tract, Glenelg Twp, and in the Williamsford Tract, Holland Twp
1954	low populations
1955-1956	not reported
1957	low populations
1958-1964	not reported
1965	40% of leaders attacked in Brant Twp
1966	moderate damage reported in Greenock Twp and 35% leader damage in Brant Twp
1967	30% of leaders were attacked in Normandy Twp
1968	low levels of infested shoots found in Normandy and Brant twps
1969	17% of shoots affected in Normandy Twp
1970	low populations reported; less than 5% leaders attacked at sample points
1971-1974	13% of leaders attacked at one location in Brant Twp
1975	less than 2% leaders attacked at 4 sample points
1976	15% of leaders attacked in Euphrasia Twp
1977	8% of leaders attacked in Sullivan Twp
1978-1979	not reported
1980	small numbers throughout the district

Birch Leafminer, *Fenusa pusilla* (Lep.)

Host(s): birch

[Major]

<u>Year</u>	<u>Remarks</u>
1950	not reported
1951-1952	Moderate-to-severe defoliation occurred throughout the Bruce Peninsula and along Lake Huron and in the townships in Georgian Bay.
1953	commonly found in St. Edmunds, Lindsay, Eastnor and Albemarle twps and along the shoreline of Georgian Bay
1954-1956	not reported
1957	light leafmining observed at Dyers Bay
1958	Moderate populations were observed along the shore of the Saugeen River in Southampton and light damage south of Port Elgin in Saugeen Twp.
1959	not reported
1960	Moderate numbers occurred in Proton Twp.
1961	not reported
1962	moderate populations
1963	not reported
1964	75% leafmining occurred at one location in Artemesia Twp.
1965	not reported
1966	A small pocket of heavy infestation occurred in Euphrasia Twp.
1967	Light defoliation occurred in Amabel Twp.
1968	Moderate populations occurred in Bruce and Amabel twps.
1969-1971	not reported
1972-1973	trace populations
1974	severe browning of foliage at widely scattered locations in the district
1975	severe leafmining in the Eugenia Lake area, Artemesia Twp
1976	severe leafmining at MacGregor Provincial Park, Saugeen Twp
1977	not reported
1978	Severe leafmining occurred in the towns of Owen Sound and Kincardine and in Osprey Twp.
1979	Moderate-to-severe defoliation persisted in Osprey Twp.
1980	severe defoliation throughout the town of Owen Sound

Saddled Prominent, *Heterocampa guttivitta* (Wlk.)

Host(s): deciduous

[Major]

<u>Year</u>	<u>Remarks</u>
1950-1966	not reported
1967	Moderate-to-severe defoliation occurred in a 30-ha stand of sugar maple at the Camp Meaford Tank Range in St. Vincent Twp. Light damage also occurred along the Bruce Trail in Keppel Twp and southeast of Lion's Head in Eastnor Twp.
1968	infestation increased in area; at Lion's Head, in Eastnor Twp approximately 5 sq. km of sugar maple was moderate-to-severely defoliated. Moderate-to-heavy infestations also occurred at Barrow Bay in Eastnor Twp and from Hope Bay south to Colpoys Bay in Albemarle Twp and across the bay into the northern portion of Keppel Twp (see map, page ).
1969	Populations declined to low levels at Lion's Head in Eastnor Twp and in Keppel Twp. However, a new pocket approximately 2 ha in size occurred at Cape Chin in Lindsay Twp, and caused moderate-to-severe defoliation.
1970	Moderate-to-severe defoliation occurred in Lindsay and St. Edmunds twps.
1971	low populations
1972-1980	not reported

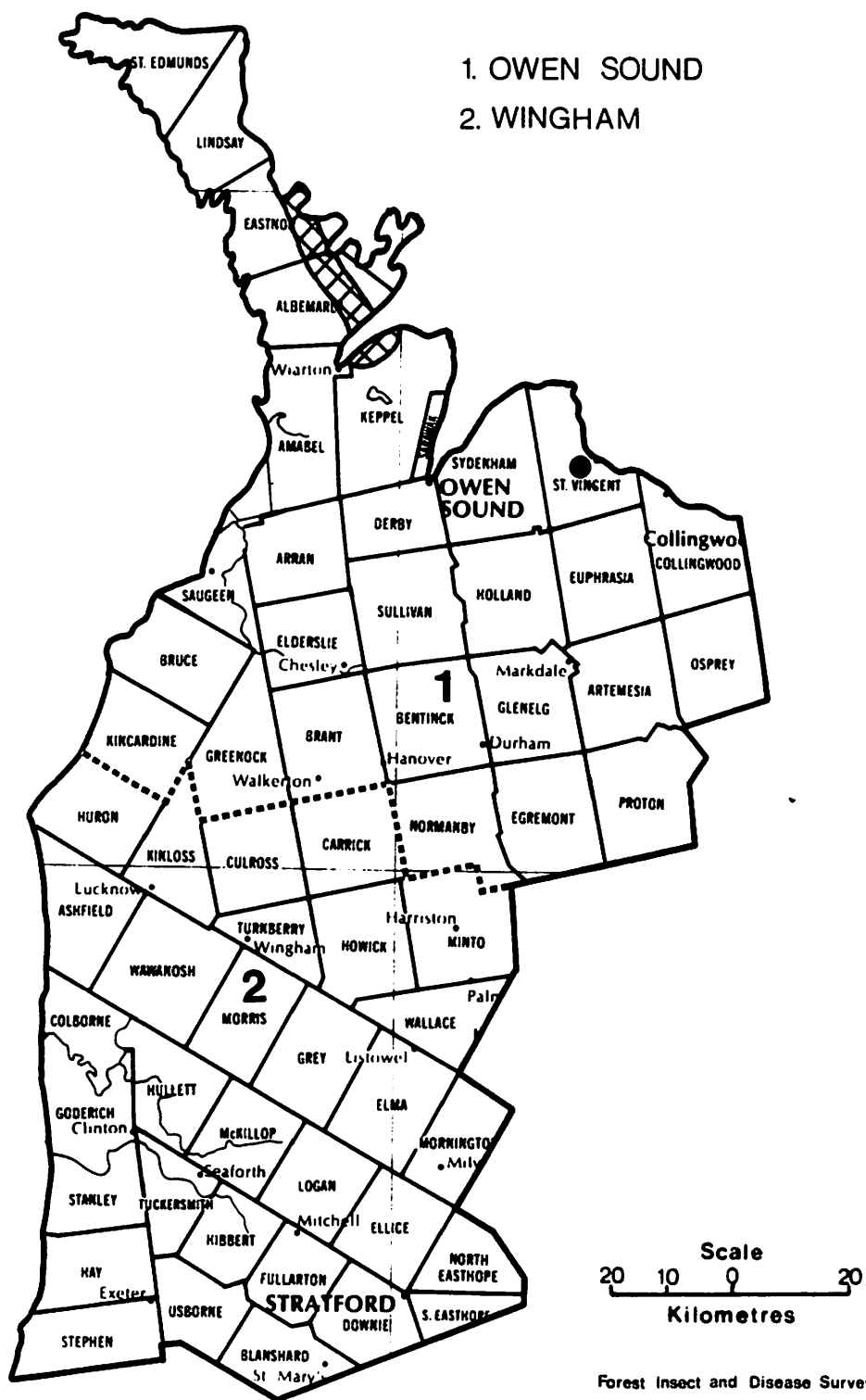
Hemlock Looper, *Lambdina fiscellaria fiscellaria* (Gn.)

Host(s): general feeder

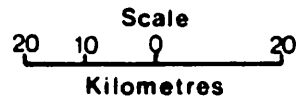
[Major]

<u>Year</u>	<u>Remarks</u>
1950	Light defoliation occurred over 5 ha on Lyal Island on the Bruce Peninsula.
1951	Severe defoliation occurred throughout Albemarle and Eastnor twps bordering Lake Huron.
1952	Populations declined to trace levels on the Bruce Peninsula.
1953-1960	not reported
1961	Trace populations obtained in beating tray samples in St. Edmunds Twp.
1962-1963	not reported
1964	found in small numbers in beating samples in St. Edmunds and Artemesia twps
1965-1980	not reported

# OWEN SOUND and WINGHAM DISTRICTS



- 1. OWEN SOUND
- 2. WINGHAM



Forest Insect and Disease Survey  
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Saddled Prominent

Areas within which defoliation occurred in 1968

LEGEND

Moderate-to-severe defoliation ● or



Forest Tent Caterpillar, *Malacosoma disstria* Hbn.

Host(s): aspen, deciduous

[Major]

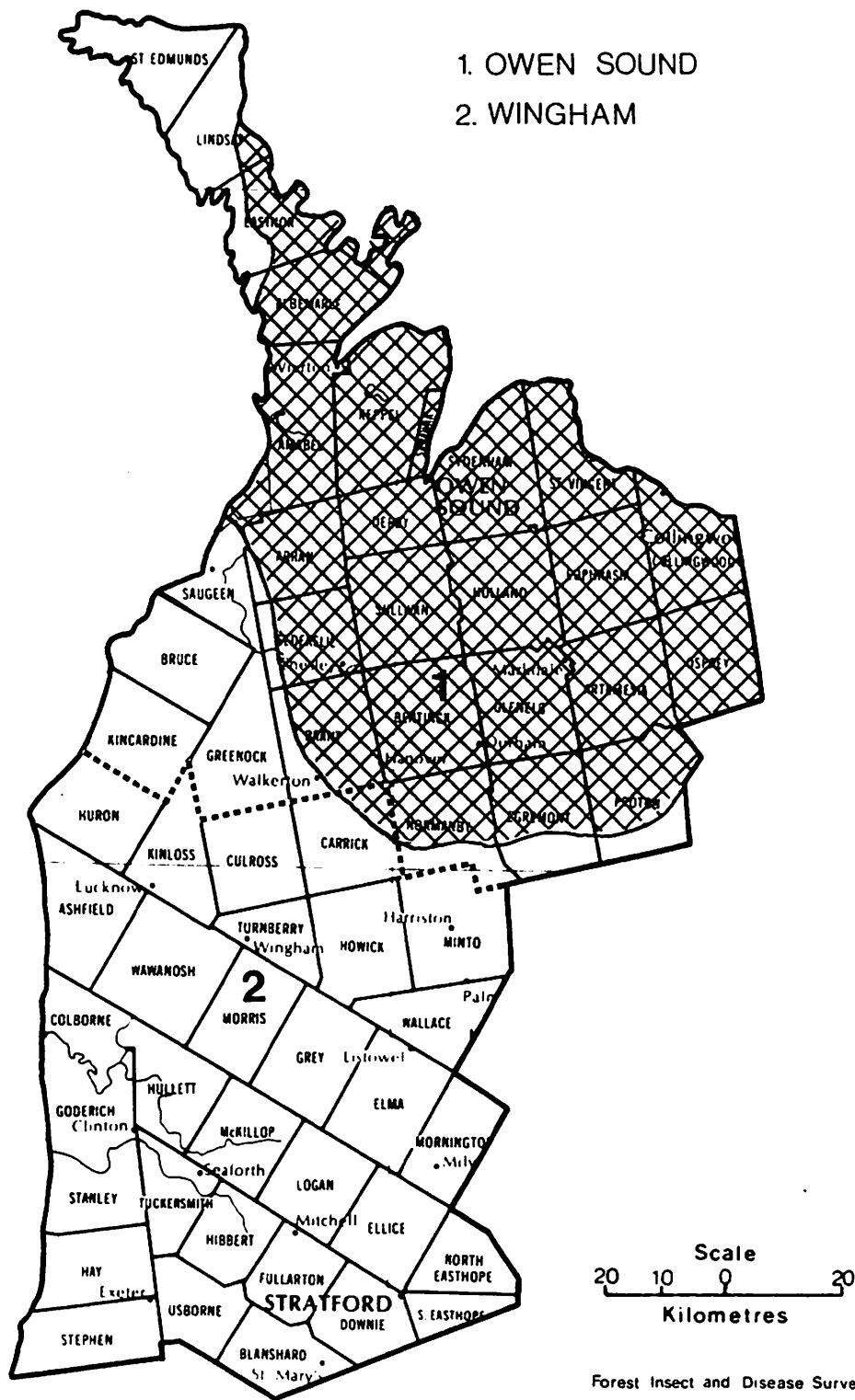
<u>Year</u>	<u>Remarks</u>
1950	trace populations
1951	Increased populations; heavy damage with up to 100% defoliation occurred in a small area of Bentinck Twp and low numbers were reported in many other areas of the district.
1952	Moderate-to-severe defoliation occurred over most of Grey County and the eastern half of Bruce County (see map, page ).
1953	The intensity of the infestation declined to light in much of Grey County but remained at the medium-to-heavy level in much of Bruce County (see map, page ).
1954	The infestation continued to decline generally, however, sizeable areas remained defoliated (see map, page ).
1955	Infestation collapsed; one small pocket of light infestations remained in Amabel Twp.
1956-1958	not reported
1959	trace population, Proton Twp
1960	not reported
1961	low numbers at three locations, Grey County
1962	low populations at a few locations
1963	trace populations, Sullivan and Holland twps
1964	trace population, Holland Twp
1965-1966	not reported
1967-1968	trace populations
1969-1973	not reported
1974	small infestations occurred on sugar maple stands in Normanby, Sullivan and Holland twps (see map, page )
1975	area of moderate-to-severe defoliation increased dramatically (see map, page )
1976	infested area again increased in size to include most of Grey County and in several townships of Bruce county (see map, page )
1977	Moderate-to-severe defoliation recurred through most of the district (see map, page ).

(cont'd)

Forest Tent Caterpillar, *Malacosoma disstria* Hbn. (concl.)

<u>Year</u>	<u>Remarks</u>
1978	The infestation collapsed in the south half of the district; areas of infestation persisted in the north half (see map, page ).
1979	Populations continued to decline; a small pocket of moderate-to-severe defoliation persisted at Cape Croker Indian Reserve.
1980	not reported

# OWEN SOUND and WINGHAM DISTRICTS



Forest Tent Caterpillar

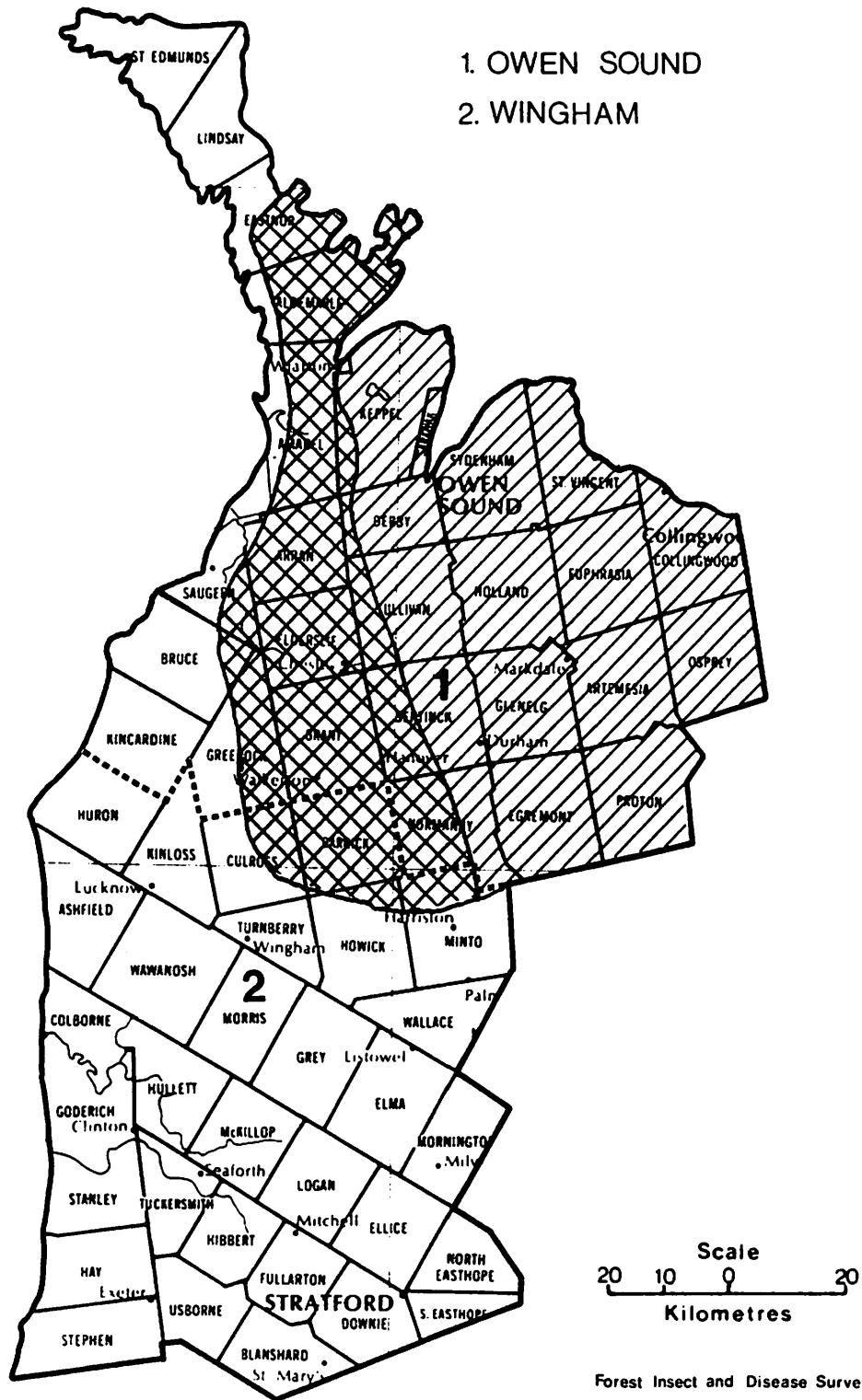
Areas within which defoliation  
occurred in 1952

LEGEND

Moderate-to-severe defoliation



# OWEN SOUND and WINGHAM DISTRICTS



## Forest Tent Caterpillar

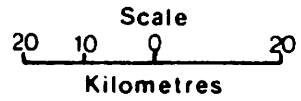
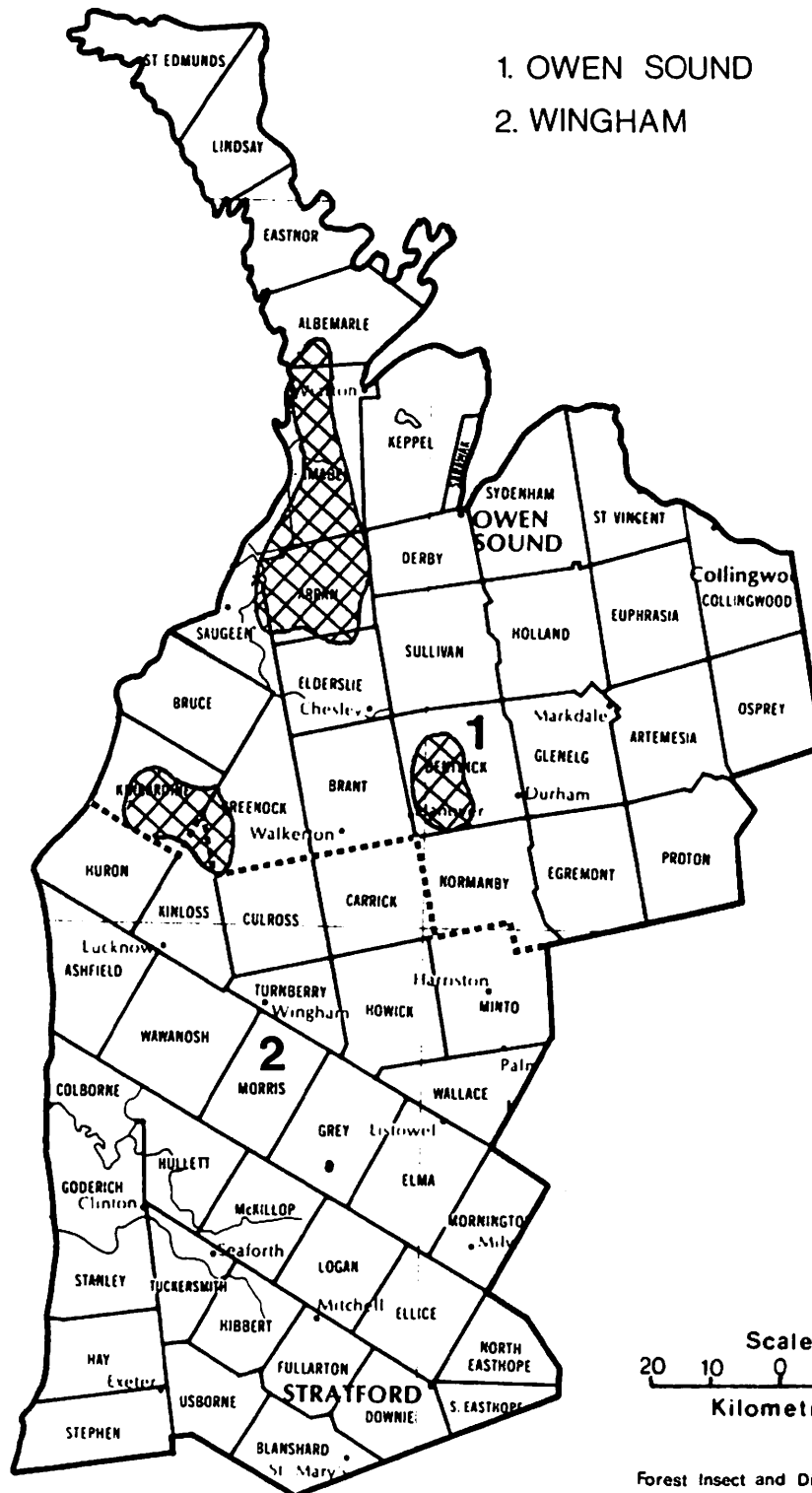
Areas within which defoliation occurred in 1953

### LEGEND

- Light defoliation 
- Moderate-to-severe defoliation 

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## Forest Tent Caterpillar

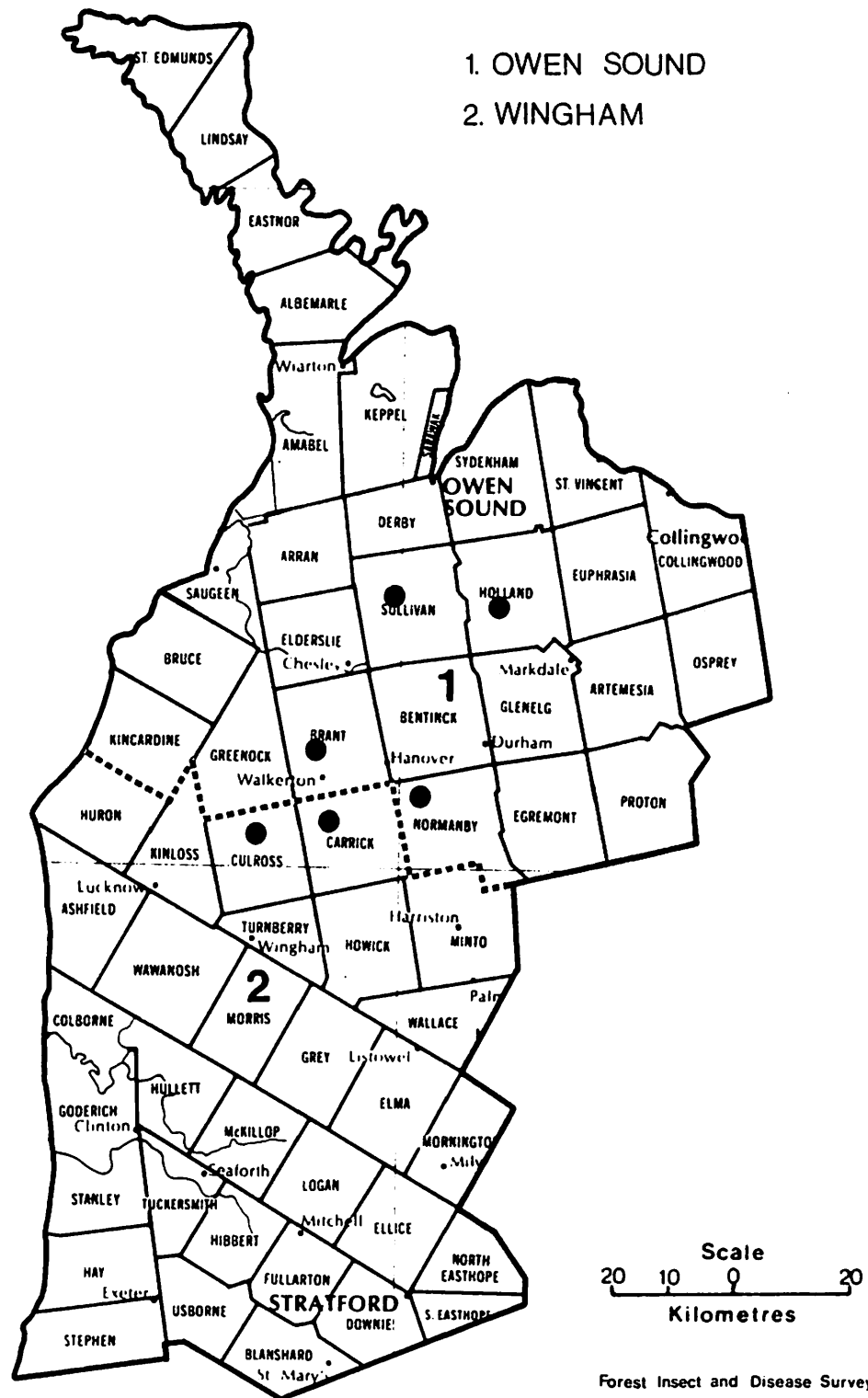
Areas within which defoliation occurred in 1954

### LEGEND

Moderate-to-severe defoliation



# OWEN SOUND and WINGHAM DISTRICTS



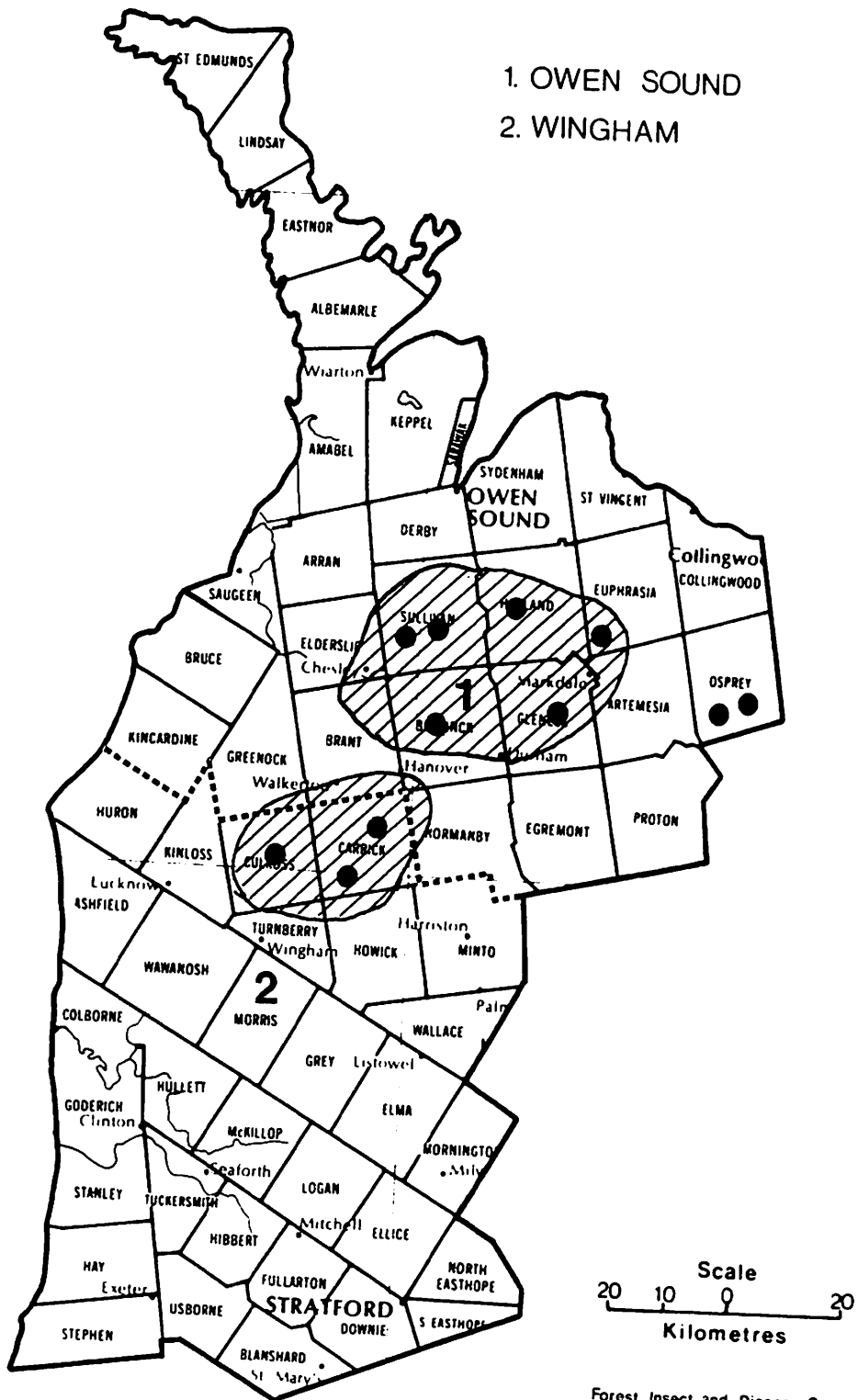
## Forest Tent Caterpillar

Areas within which defoliation occurred in 1974

### LEGEND

Moderate-to-severe defoliation ●

# OWEN SOUND and WINGHAM DISTRICTS



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Forest Tent Caterpillar

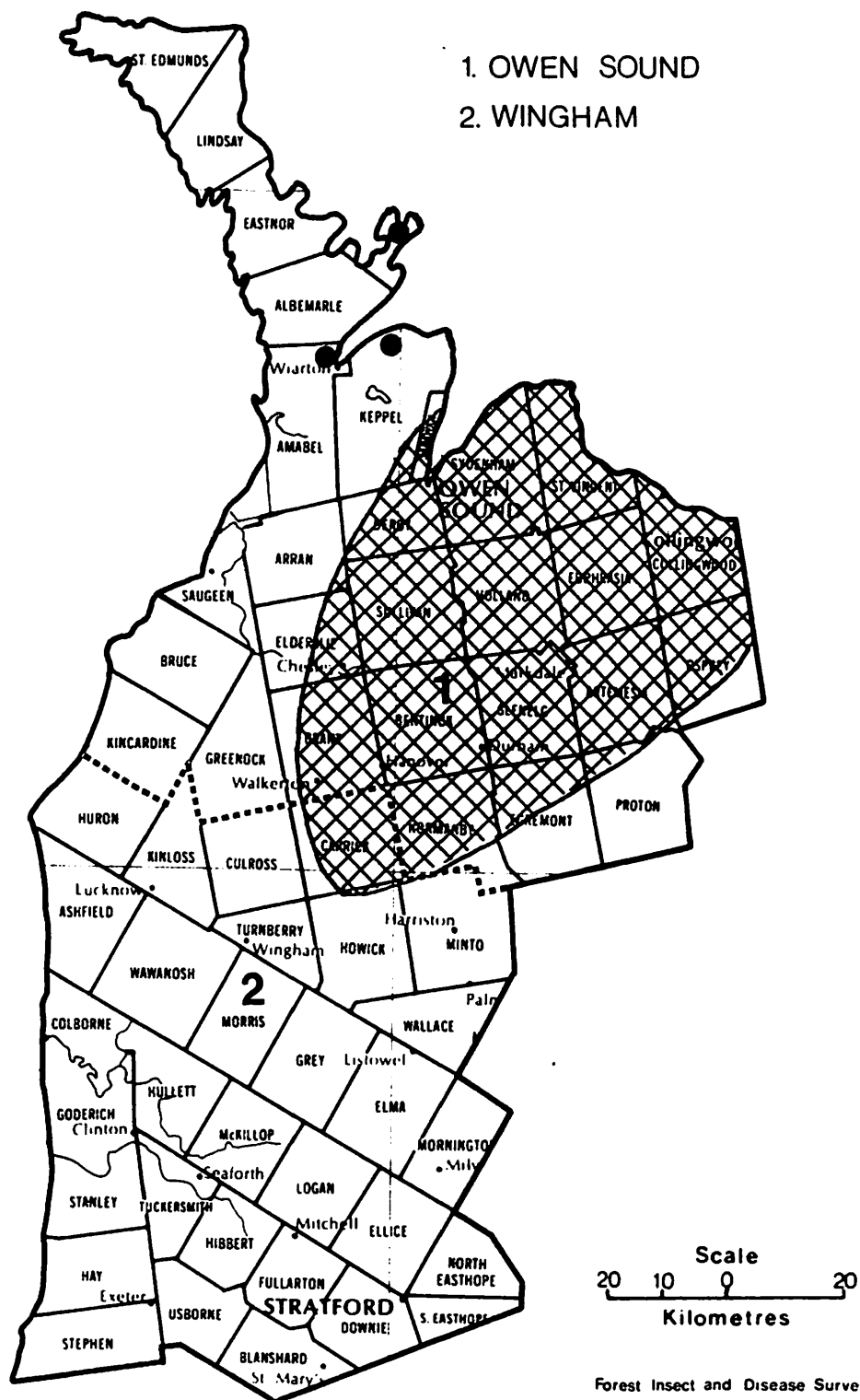
Areas within which defoliation  
occurred in 1975

LEGEND

Light defoliation



# OWEN SOUND and WINGHAM DISTRICTS



Forest Tent Caterpillar

Areas within which defoliation occurred in 1976

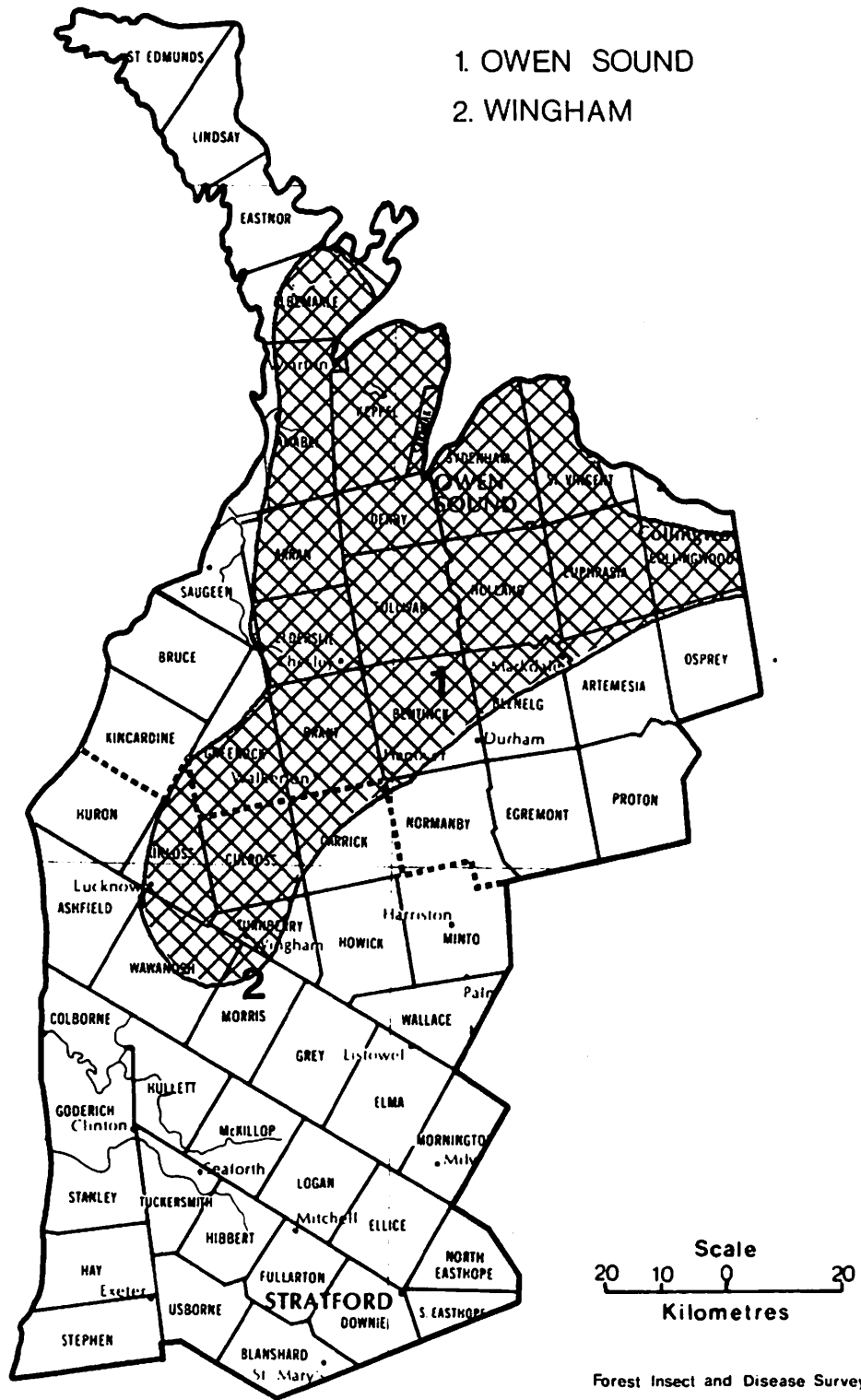
LEGEND

Moderate-to-severe defoliation ● or





# OWEN SOUND and WINGHAM DISTRICTS



## Forest Tent Caterpillar

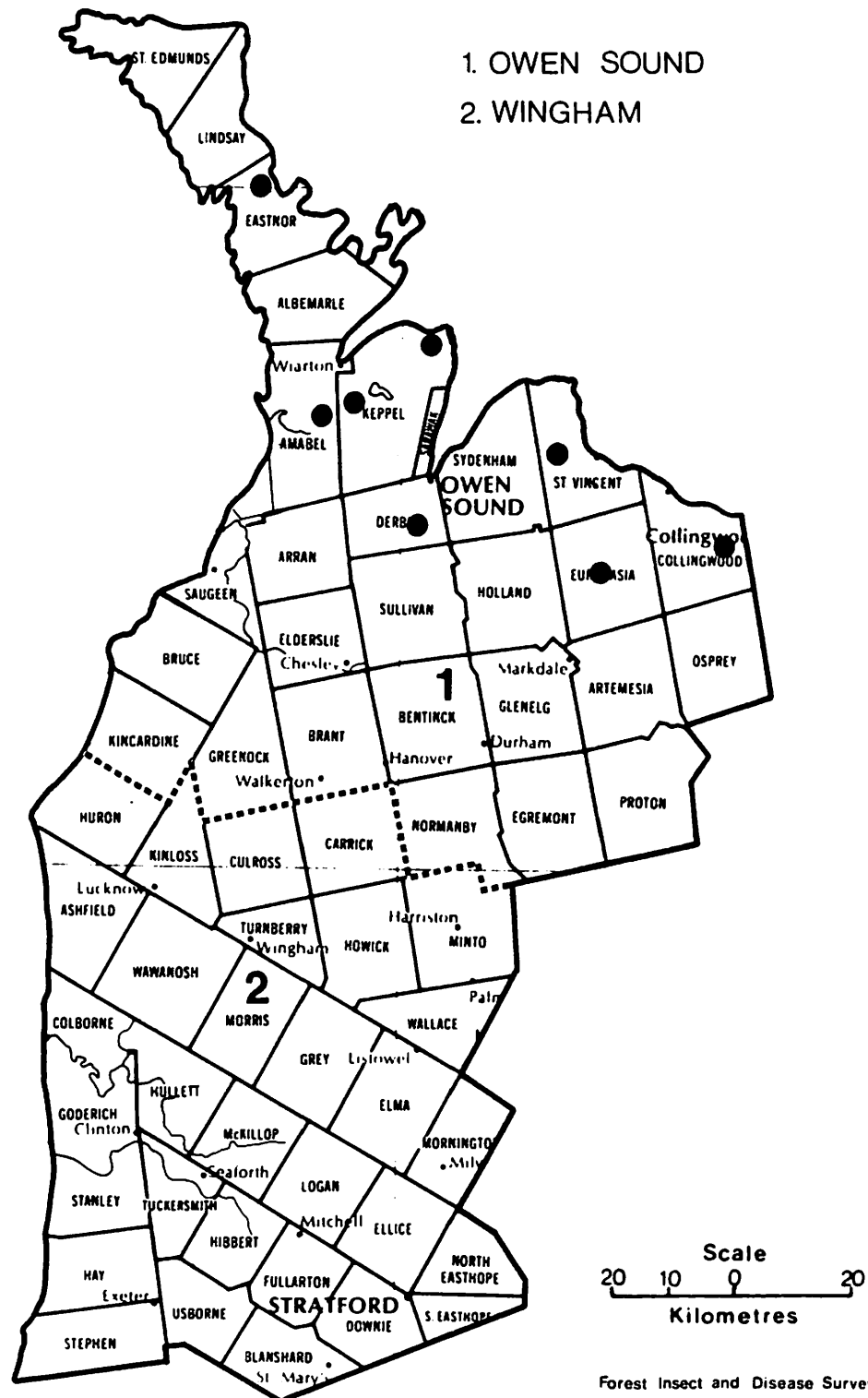
Areas within which defoliation occurred in 1977

### LEGEND

Moderate-to-severe defoliation



# OWEN SOUND and WINGHAM DISTRICTS



## Forest Tent Caterpillar

Areas within which defoliation occurred in 1978

### LEGEND

Moderate-to-severe defoliation ●

Balsam Fir Sawfly, *Neodiprion abietis* complex

Host(s): bF, spruce

[Major]

<u>Year</u>	<u>Remarks</u>
1950	Light feeding on balsam fir was noted on the Fishing Islands and near Rockford in Grey County.
1951	Moderate-to-severe defoliation was observed along Lake Huron in Amabel, Albemarle, Eastnor and Lindsay twps.
1952	High populations continued along the west shore and islands on the Bruce Peninsula.
1953	Moderate-to-severe defoliation occurred on white spruce along Lake Huron in Eastnor Twp.
1954	Light damage occurred on white spruce shelterbelt trees at Chatsworth Fish Hatchery.
1955	Moderate-to-severe defoliation occurred in a 4-ha stand of balsam fir trees in Brant Twp. Moderate numbers also persisted along the west shore of the Bruce Peninsula while light infestations occurred in Sullivan and Osprey twps.
1956	Moderate-to-severe defoliation continued along the west shore and islands of the Bruce Peninsula.
1957	Moderate numbers occurred in Brant Twp while light damage was reported in Amabel and Glenelg twps.
1958	Light damage occurred in Brant Twp.
1959	Moderate-to-severe defoliation occurred at one location in Osprey Twp. Moderate numbers occurred in Brant, Glenelg and Artemesia twps and low numbers were observed in Normanby, Proton and Sullivan twps.
1960	Population levels declined in the district. Only light damage was reported at Greenough Point in Lindsay Twp and trace numbers were observed in Brant Twp.
1961	Pockets of moderate-to-severe defoliation occurred on the Bruce Peninsula from Greenough Point north to Tobermory.
1962	Moderate-to-severe defoliation continued in the Greenough area north to Tobermory. Light defoliation also occurred near Chesley.
1963	For the third year moderate-to-severe defoliation recurred in small pockets of balsam fir between Greenough Point and Dorcas Bay on the Bruce Peninsula. Trace numbers occurred in Normanby and Glenelg twps.
1964	Population levels declined to light intensity on the Bruce Peninsula. In the Durham area 50% to 75% defoliation occurred on scattered balsam fir trees.

(cont'd)

Balsam Fir Sawfly, *Neodiprion abietis* complex (concl.)

<u>Year</u>	<u>Remarks</u>
1965	Light and moderate populations occurred throughout Grey and Bruce counties.
1966	Light infestations persisted on balsam fir in the northern portion of the Bruce Peninsula with trace levels occurring on white spruce.
1967	Trace populations occurred in Glenelg, Artemesia and St. Edmunds twps. A light infestation continued on the Greenough Point Road area in Lindsay Twp.
1968	small numbers collected at Bells Lake, Glenelg Twp
1969-1974	not reported
1975	trace populations
1976	Moderate populations were reported in Normanby Twp.
1977	Moderate populations occurred in Holland Twp.
1978	moderate-to-severe defoliation reported at one location in Glenelg Twp
1979	light defoliation reported at scattered locations in Holland Twp
1980	Moderate-to-severe defoliation occurred in Keppel and Amabel twps with moderate populations occurring in Glenelg, Osprey and Holland twps.

Redheaded Pine Sawfly, *Neodiprion lecontei* (Fitch)

Host(s): rP, jP, scP [Major]

<u>Year</u>	<u>Remarks</u>
1950	Light infestations were present throughout Grey and Bruce counties.
1951	Moderate-to-severe defoliation occurred at one location in the Bruce County Forest, however, the infestation was partially controlled by hand spraying. Light damage also occurred near Port Elgin and to red pine on Chief's Point Indian Reserve.
1952	In Saugeen Twp, 5 ha of mixed pine was 90% defoliated. Light defoliation also occurred near Sauble Falls, and in St. Edmunds Twp.
1953	Moderate-to-severe defoliation occurred in a 2 ha plantation east of Port Elgin and light damage occurred in the Sauble Forest and near Holland Centre.
1954	Moderate-to-severe defoliation occurred in Glenelg, Elderslie and Sullivan twps.

(cont'd)