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Western Forest Region, 1967
Status of Insects in the Sioux Lookout
District

Buchan, P.E.

Information Report O-X-76
(Forest Research Laboratory, Ontario Region)

1967

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O-X-63	--North Bay District	L. S. MacLeod
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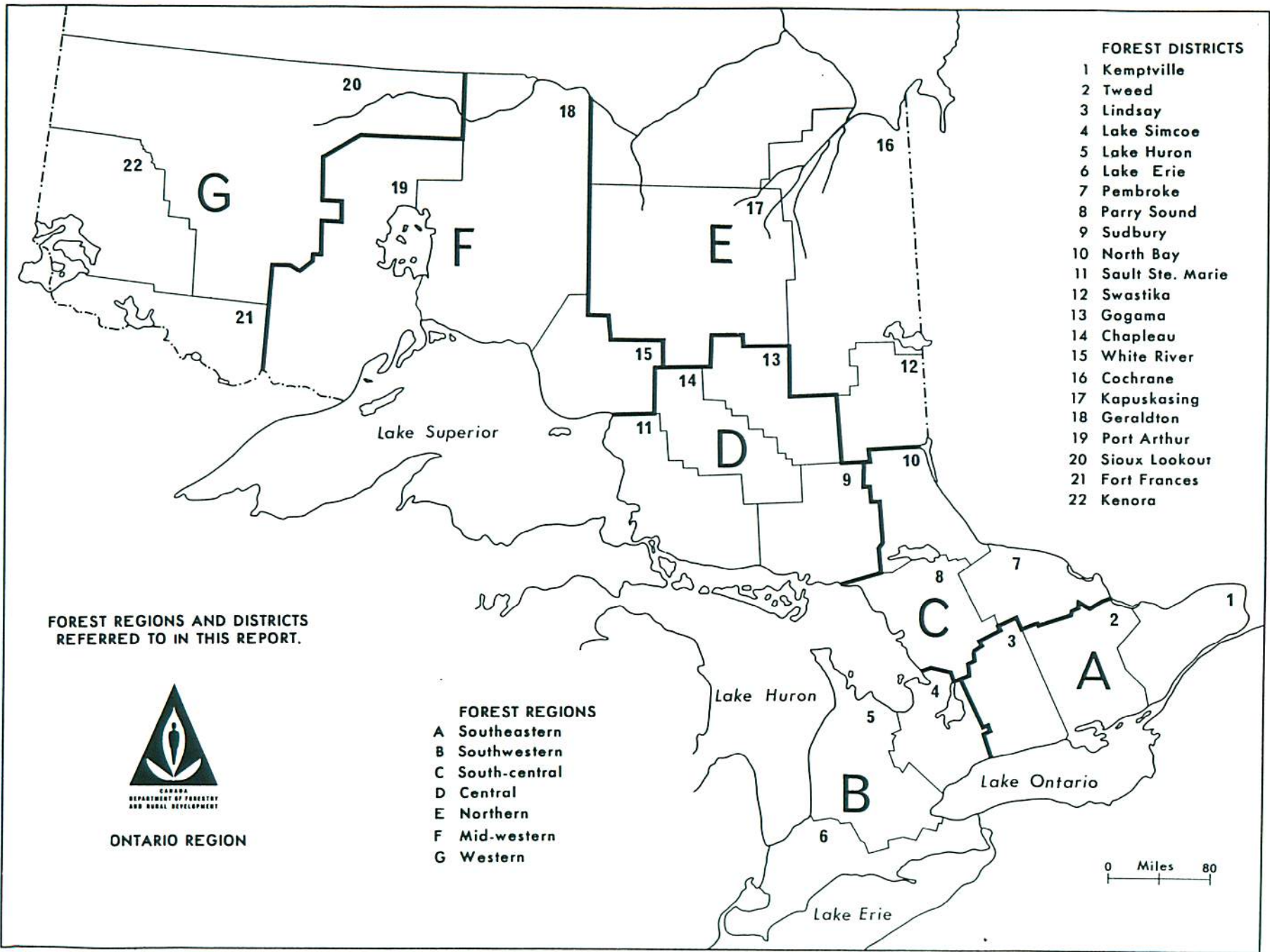
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Regional Supervisors *

FOREST DISTRICTS

- 1 Kemptville
- 2 Tweed
- 3 Lindsay
- 4 Lake Simcoe
- 5 Lake Huron
- 6 Lake Erie
- 7 Pembroke
- 8 Parry Sound
- 9 Sudbury
- 10 North Bay
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**FOREST REGIONS AND DISTRICTS
REFERRED TO IN THIS REPORT.**



ONTARIO REGION

FOREST REGIONS

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

0 Miles 80

FOREWORD

Population levels of the spruce budworm increased sharply in widely-separated parts of Ontario in 1967. Heavy infestations occurred in the Burchell Lake area in Port Arthur District and in woodlots in parts of Pembroke, Tweed and Kemptville districts. A light infestation persisted east of Chapleau in the Central Forest Region. The Burchell Lake infestation is of particular concern because of the nature of the forest in that area. Stands currently infested, as well as those to the north as far as Lac Des Mille Lacs, contain considerable mature balsam fir and white spruce which are highly susceptible to attack by the spruce budworm.

For the second consecutive year, weather conditions during May had a pronounced effect on infestations of the forest tent caterpillar. Mortality of eggs and newly-emerged larvae greatly reduced population levels of this pest. The only major areas of infestation remaining in the Province were in the eastern part of Fort Frances District and the southern part of Sault Ste. Marie District.

Two species of sawflies were of major importance in pine plantations. The European pine sawfly continued to extend its range in southeastern Ontario and two new centers of infestation were found on Manitoulin Island. The red-headed pine sawfly caused severe defoliation in red pine shelterbelts and plantations at numerous locations in the central and southern parts of the Province.

Intensive surveys were continued to determine the distribution and incidence of Dutch elm disease and Scleroderris-canker of pine. The discovery of Ceratocystis ulmi (Buism.) C. Moreau in Sault Ste. Marie constituted a marked westward extension of the range of the disease caused by this pathogen. Scleroderris-canker of pine continued to cause severe losses of young red pine and, to a lesser extent, jack pine in numerous plantations in central and northern Ontario. By comparison, damage in southern Ontario was negligible.

Diseases of spruce were caused by Cytospora kunzei Sacc. and Polyporus tomentosus Fr. at widely-separated points in southern Ontario and pockets of infection of Fomes annosus (Fr.) Cke, root-rot persisted in several red pine plantations in Lindsay, Lake Simcoe and Lake Erie districts. Details on the distribution and damage caused by these and other forest diseases and insects are contained in the regional and district sections of this report.

J. E. MacDonald

INTRODUCTION

Western Forest Region

The following report contains information on insects and tree diseases in the Region in 1967. Unlike recent years when major insects were frequently dealt with in the regional section of the report all data on insects is now presented on a district basis.

Two major forest pests were of particular importance in the western region in 1967. Jack pine budworm infestations showed a further increase in extent and intensity, particularly in Kenora District. Although heavy infestations of forest tent caterpillar persisted in aspen stands over approximately one-half of the Fort Frances District, the area infested decreased substantially compared with 1966. Heavy infestations are expected to recur in Fort Frances District in 1968.

Winter drying of conifers was widespread in the region. One of very few records of Arceuthobium pusillum on jack pine was confirmed from a collection made in Sioux Lookout District. Several first herbarium records and rare species of tree diseases were recorded in 1967. Needle rusts on black spruce declined and needle casts on balsam fir increased.

Because of the temporary technician vacancy in the Kenora District the work for that area was shared by technicians assigned to Fort Frances and Sioux Lookout districts for the 1967 field season. Survey personnel in the Western Region again express appreciation for the cooperation and assistance extended by the Department of Lands and Forests and other agencies in 1967.

P. E. Buchan

WESTERN FOREST REGION

1967

Introduction

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Eastern Dwarf Mistletoe, Arceuthobium pusillum Peck.

This parasitic plant is found on black spruce throughout the western forest region. It has also been recorded on jack pine at White Otter Lake in the Sioux Lookout District. Tree mortality occurred in Jaffray Township near Kenora, near Hudson, at Hilltop and around White Otter Lake, Sioux Lookout District. At each of these points poor growing sites, resulting from boggy conditions occurred.

The conspicuous witches' brooms that occur on infected trees, is the most prominent manifestation of the disease (see photograph).

Needle Rusts of Spruce, Chrysomyxa ledicola Lagerb.
Chrysomyxa ledi de Bary

These two needle rusts were found on black and white spruce and on an alternate host, labrador tea, in 1967. Of the two tree species affected, black spruce was usually more heavily defoliated in the Western region. The outbreak reported in 1966 along Highway 599 decreased considerably in 1967 but centres of heavy infection persisted in young black spruce stands in this area. Elsewhere defoliation ranged from two to 23 per cent (Table 1).

TABLE 1

Summary of Incidence of Infected White Spruce Shoots by C. ledicola Lagerb. or C. ledi de Bary in the Western Region in 1967

Note: Counts are based on the examination of the current year's shoots on ten 18-inch branch sections from five sample trees at each point.

Location	Tree species	Av. d.b.h. in inches	Number trees infected	Number shoots examined	Per cent shoots infected
Sioux Lookout District					
Wenasaga Road	wS	3	5	360	23
Drayton Twp.	wS	6	2	211	2
Centrefire Lk.	wS	5	4	319	8
Sturgeon Lake	wS	5	5	391	18
Hooker Lake	bS	4	5	386	21
Savant Lake	bS	3	5	372	22
Vermilion Add. Twp.	bS	4	2	334	6
Kenora District					
Redvers Twp.	wS	3	4	376	11
Luther Village	wS	5	2	326	15
Willington Twp.	wS	5	5	391	19

Cone Rusts, Chrysomyxa pirolata Wint. and Pucciniastrum sp.

In 1967 many tree species bore unusually high numbers of cones. Small numbers of black spruce cones were infected by C. pirolata Wint. at Pikangikum Lake 50 miles north of Red Lake and in Hodgson Township west of Ignace. A rust caused by Pucciniastrum sp. was found on balsam fir cones at four locations in the Sioux Lookout District (Table 2).

TABLE 2

Summary of Balsam Fir Cones Infected by Pucciniastrum sp. at Four Points in the Sioux Lookout District in 1967

Location	Av. d.b.h. in inches	No. cones examined	Per cent cones infected
Stone River	2	250	1.2
Block 10	4	363	7.1
Chukuni River	2	182	3.3
Centrefire Lake	3	200	1.0

Black-Knot of Cherry, Dibotryon morbosum (Schw.) Theiss. & Syd.

The black-knot disease of cherry, caused by D. morbosum was found on cherry throughout the region. Incidence and severity of the disease were generally low to medium, centres of heavy infection (approximately 70 per cent) were observed in Drayton Township, Block 10 and at Barrel Lake in the Sioux Lookout District, along Highway 11 in Mutrie Township west of Kenora, and near Sioux Narrows in the Kenora District, at Wesaw Lake, Highway 11 east of Atikokan and along the road to Clear Lake in the Fort Frances District.

Foliage Rust of Mountain Ash, Gymnosporangium cornutum Arth.

This leaf rust on mountain ash was widespread throughout the region. Generally, the incidence of the fungus was low. Heaviest infections occurred at Fry Lake and in Drayton Township in the Sioux Lookout District. Light to moderate infection occurred commonly in the region. The results of quantitative sampling are shown in Table 3.

TABLE 3

Summary of Infection of Mountain Ash Caused by Gymnosporangium cornutum Arth. in the Western Region in 1967

Location	Average height in feet	No. of leaflets examined	Per cent of leaflets infected
<u>Sioux Lookout District</u>			
Fry Lake	4	250	99
Drayton Township	5	206	97
Highway 559	6	224	1
White Otter Lake	5	216	18
<u>Kenora District</u>			
Contact Bay Wabigoon Lake	5	219	18
Jones Road	4	211	39
<u>Fort Frances District</u>			
Rainy Lake	5	100	40
Oliphant Lake	6	100	5
Calm Lake	5	100	15

Hypoxylon Canker of Poplar, Hypoxylon mammatum (Wahl.) Miller

Little change in the status of this disease occurred in poplar stands throughout most of the region. However in the Fort Frances District the incidence of mortality increased substantially in some of the permanent plots (Table 4). Highest per cent mortality attributed to H. mammatum occurred at Northeast Bay Rainy Lake. During 1967 high winds caused considerable blown down in the same permanent plot.

TABLE 4

Summary of New Infection and Per Cent Mortality in Sample Plots in Trembling Aspen Stands at Nine Locations in the Western Region in 1967

Location	Average d.b.h. in inches	Site Quality	Per cent incidence new mortality	Total per cent mortality	Total per cent mortality all causes
Fort Frances District					
Redgut Bay	4	Good	11	15	19
Rainy Lake					
Northeast Bay	6	Poor	16	28	44
Rainy Lake					
Northwest Bay	4	Fair	7	20	43
Rainy Lake					
Eltrut Lake	5	Fair	6	12	13
Kingsford Twp.	3	Good	11	12	24
Claxton Twp.	3	Good	8	8	13
Dobie Twp.	2	Good	0	2	3
Sioux Lookout District					
Red Lake	6	Fair	1	26	31
Ear Falls	7	Good	0	0	18

Eastern Gall Rusts, Peridermium sp.

No significant change in the incidence of this disease was noted in the region in 1967. This rust which forms conspicuous galls on jack pine of all age classes was found throughout the region. Mortality occurs when galls occur at ground level on regeneration or plantation trees. On larger trees, branch mortality is more common. Results of quantitative sampling is shown in Table 5.

TABLE 5

Summary of Infection of Peridermium sp. on Jack-pine Trees in 1967

Note: Counts were based on the examination of 50 trees at each location.

Location	Av. d.b.h. in inches	Av. height in feet	Per cent of trees infected
<u>Sioux Lookout District</u>			
Echo Twp.	3	16	10
Camp 411 Gulliver Lake	2	11	32
Baird Twp.	2	9	10
Norway Lake	2	11	10
Vermilion Add Twp.	1	4	8
Block 10	3	18	22
<u>Kenora District</u>			
Entwine Lake	3	18	4
Van Horne Twp.	3	17	36
Mutrie Twp.	2	10	18

Balsam Fir Needle Rust, Pucciniastrum epilobii Otth.

An increase in the incidence of this needle rust was evident throughout the region in 1967. Centres of high infection were recorded in Aubrey and Redvers townships in Kenora District and in Dewan Township and near Snake Falls on the Chukuni River in Sioux Lookout District. Quantitative sampling results from recent years showed a range of 7 to 57 per cent infection in comparison to 25 to 95 per cent infection in 1967 (Table 6).

TABLE 6

Summary of Infection of Balsam Fir Foliage by P. epilobii Otth. at Eight Points in the Western Region

Location	Av. d.b.h. in inches	No. of shoots examined	No. of shoots infected	Per cent shoots infected
<u>Sioux Lookout District</u>				
Chukuni R.	5	253	184	73
Highway 105	3	382	153	40
Drayton Twp.	4	294	151	52
Dewan Twp.	4	392	373	90
<u>Kenora District</u>				
Aubrey Twp.	5	269	256	95
Cedar Lake	4	380	94	25
Redvers Twp.	4	281	179	64
Willingdon Twp.	3	297	121	41

Scleroderris Canker of Pine, Scleroderris lagerbergii Gremmen

Intensive surveys were carried out in the region in 1967 to determine the distribution of this canker of pine. The disease was found at one location near Ignace, but negative results were obtained at 11 additional locations.

Needle Cast, Isthmiella faullii (Darker) Darker

This fungus which infects and kills the needles of balsam fir was widespread in the region in 1967. Varying degrees of infection were observed, the heaviest needle cast occurring in Cathcart Township and Hidden Lake, Sioux Lookout District, and in Redvers Township, Kenora District. Elsewhere infections were light.

Winter Drying of Conifers

Abnormal winter conditions caused severe damage in the Western Forest Region in 1967. At many points almost 100 per cent of the trees in mixed red and white pine plantations were affected. In Kenora District, plantations in Jaffary, Willingdon, Zealand and Van Horne townships were severely damaged. Foliage loss was most evident in red pine plantings through the J. A. Mathieu cut east of Atikokan and near Emo in Fort Frances District. Red and white pine near Sioux Lookout were heavily defoliated. Heavy defoliation occurred on a number of white spruce in the vicinity of Sioux Lookout. Branch tip mortality was particularly common on white pine throughout the region. Small numbers of white pine were killed south of Dryden and in the vicinity of Sioux Lookout.

Winter drying occurs in mid-winter or early spring during alternating periods of warm and cold temperatures. The damaged needles turn red in the spring and are shed prematurely. Bud and shoot mortality occurs under extreme conditions.

TABLE 7

Other Noteworthy Diseases in the Western Region in 1967

Organism	Host(s)	Remarks
<i>Chrysomyxa</i> sp.	wS,bS	Centres of heavy infestation throughout the region
<i>Giborinia whetzellii</i> (Seav.) Seav.	tA	Common on reproduction hosts north of Atikokan
<i>Coleosporium solidaginis</i> (Schw.) Thuem	ground plant	Rust spots on underside of leaves Sioux Lookout District
<i>Cladosporium</i> sp.	Burr oak	Seventy per cent of leaves affected at one location near Ignace
<i>Cladosporium subsessile</i> Ell. & Barth.	tA	Leaf spot heavy in Corman Township
<i>Contharellus</i> sp.	ground	Heavy centre of infection near Sioux Lookout
<i>Coryneum rhoinum</i> (Dearn. and Barth) Hughes	smooth sumac	Occurred 2 miles south of Sioux Narrows
<i>Cronartium ribicola</i> J. C. Fischer	wP	Widely spread throughout the region
<i>Cyphella</i> sp.	pCH	Branch mortality occurred at Highstone Lake
<i>Cytospora friesii</i> Sacc.	bF	Fruiting on dead branches occurred at Carling Lake and Minaki
<i>Cytospora pini</i> Desm.	wP	Light to moderate infection near Wabigoon, Kenora District
<i>Cytospora</i> sp.	W	Fruiting observed on branches along Savant River
<i>Dothiorella betulina</i> (Fr.) Sacc.	wB	Rare species occurred at three locations in Sioux Lookout District
<i>Erysiphe aggregate</i> (Pk.) Farlow	A1	Light infestation of rust occurred in Sioux Lookout District
<i>Favolus alveolaris</i> (Dc. ex Fr.) Quel	ground	Light infection, small fruiting bodies
<i>Fomes fomentarius</i> (L. ex Fr.) Kickx	wB	Pockets of light infection throughout the region

TABLE 7 (continued)

Organism	Host(s)	Remarks
<i>Fomes ignarius</i> (L. ex Fr.) Kickx	tA	Light infections common in the northern part of region
<i>Fomes pini</i> (Thore) Lloyd	jP	Centres of infection occurred throughout the region
<i>Fomes pinicola</i> (Sev.) Cke.	bF	Conks widely spread
<i>Fomes roseus</i> (Alb. & Schw. ex Fr.) Cke.	bS	Light infections in Kenora District
<i>Fomes viticola</i> (Schw.) Lowe	jP	Infection observed on one tree, Kenora
<i>Ganoderma applanatum</i> Var. <i>Brownii</i> (Murr.)	wB	Collected from old stump, Moonlite Falls Camp
<i>Gymnosporangium clavipes</i> (Cke. and Pk.) Cke. and Pk.	serviceberry	Occurred at Chase Lake, Kenora District
<i>Gymnosporangium</i> sp.	Saskatoon	Occurred in Kenora District
<i>Hemimyragium betulae</i> J. Reid & Pirozynski	wB	Fruiting on small white birch stems
<i>Hypodermella ampla</i> (J.J. David) Dearn.	jP	Needle cast observed on two trees, Heyson Township
<i>Hysterium pulicare</i> Pers. ex Fr.	wB	Black fruiting on bark occurred in Sioux Lookout District
<i>Leptosphaeria faullii</i>	bF	Very rare species found associated with <u><i>I. faullii</i></u>
<i>Leptosphaeria lycopodium</i> (Mont.) Sacc.	moss	Rare species submitted from Churchill Lake, Sioux Lookout District
<i>Linospora tetraspora</i> G. F. Thomps.	bPo	Leaf disease light near Tot Lake
<i>Lirula mirabilis</i> (Darker) Darker	bF	Associated with other balsam fir needle casts
<i>Lophodermium piceae</i> (Fckl.) Hoehn.	wS	Single collection near Sioux Lookout
<i>Melampsora epitea</i> Thuem.	W	Centres of high infection occurred in the Rainy Lake area

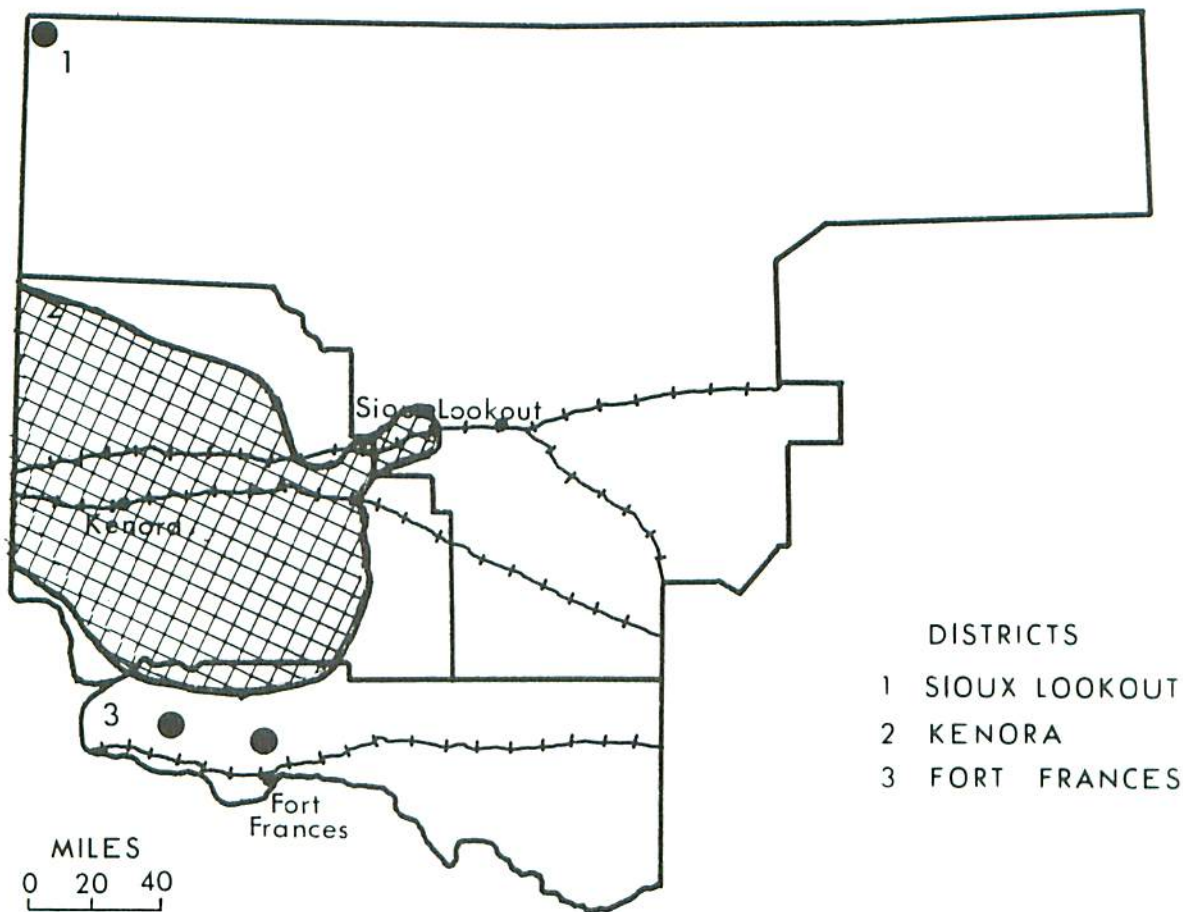
TABLE 7 (continued)

Organism	Host(s)	Remarks
<i>Melampsorella</i> <i>caryophyllacearum</i> Schroet.	bF	Witches broom on bF common in region
<i>Melanconis alni</i> var <i>Marginalis</i> (Pk.) Wehm.	Al	Single collection west of Hudson, Sioux Lookout District
<i>Mycosphaerella chimaphilina</i> (Sacc.) House	Princess pine	Blight common in Sioux Look- out District
<i>Nectria galligena</i> Bres.	wB	Occurred near Pickle Lake
<i>Nyssopsora clavellosa</i> (Berk.) Arth.	nudicaulis	Every leaf in area affected
<i>Phoma</i> sp.	ground juniper	Black fruiting observed on needles
<i>Phragmidium americanum</i> (Pk.) Diet.	wild rose	First herbarium record found near Sioux Lookout
<i>Phyllactina corylea</i> Pers. ex Korst	wB	Leaf mildew observed near Pickle Lake
<i>Podosphaera oxycanthae</i> (DC.) d By	prunis	Mildew collected from Gidley Township
<i>Pollaccia elegans</i> Serv.	bPo	Centres of light infections in Sioux Lookout and Kenora districts (see photograph)
<i>Pollaccia radiosa</i> (Lib.) Bald. & Clif.	tA	Occurs commonly and in vary- ing degrees throughout region
<i>Polyporus abietinus</i> Dicks ex Fr.	bS	Wood rotting fungus occurred throughout the region
<i>Polyporus betulinus</i> Bull. ex Fr.	wB	Very common in region
<i>Polyporus dichrous</i> Fr.	jP	Single tree infected south of Dryden
<i>Polyporus pargamenus</i> Fr.	wB	Occurs in association with <i>P. betulinus</i>
<i>Polyporus sericeomollis</i> Romell	jP	Single fruiting body at Papaonga Lake near Red Lake
<i>Poria ferruginosa</i> (Schrad. ex Fr.)	jP	Light infection observed near Ignace
<i>Puccinia asteris</i> Duby.	aster	This rust found throughout region

TABLE 7 (concluded)

Organism	Host(s)	Remarks
<i>Puccinia caricina</i> Dc.	ribes	Rust on leaves occurred in Tweedsmuir Township
<i>Puccinia dioicae</i> P. Magn.	fireweed	Rust spots on leaves in Kenora District
<i>Puccinia linkii</i> Klotzsch.	squash berry	Observed near Ear Falls, Sioux Lookout District
<i>Puccinia mesomajalis</i> Berk. and Curt. ex Peck	tA	Centres of light infection common in the region
<i>Puccinia</i> sp.	ribes	Leaf rust on underside of leaves
<i>Rhizinia inflata</i> (Schaeff.) Sacc.	bS	Not common, was found in newly burned over area near Hudson
<i>Rhytisma punctatum</i> Pers. ex Fr.	MoM	Occurs commonly in Sioux Lookout District
<i>Rhytisma salicinum</i> (Pers.) Fries	MoM,W	Leaf spots common in Sioux Lookout District
<i>Sarcotrochila piniperda</i> (Rehm) Korf	wS	Found at Mile 21 south of Sioux Lookout
<i>Scolecnectria cucurbitula</i> (Tode ex Fr.) Booth	jP,rP,wP,scP	Low incidence of rust on needle in Sioux Lookout District
<i>Septoria ribis</i> Desm.	goose- berry	Leaf spots occurred near Red Lake
Sphaeropsidales discellaceae	wP	Occurred on one tree in Echo Twp. south of Sioux Lookout
<i>Stereum hirsutum</i> (Willd. ex Fr.)	tA	Collected from skidway of logs, Sioux Lookout
<i>Stigmatas rubicola</i> (Ell. & Ex) Th.	raspberry	First herbarium record collect- ed near Sioux Lookout
<i>Trametes odorata</i> Fr.	old burn	Conks from old burn Heyson Twp.
<i>Trichocladium</i> sp.	wC	Fruiting on foliage and stems, Pickle Lake
<i>Uncinula salicis</i> (Dc. ex Merat)	W	Mold submitted from shrubs, Churchill Lake
<i>Uromyces fabae</i> (Grev.) Dby. ex Cke.	wild sweet-pear	Light infection on leaves occurred north of Minaki, Kenora District

WESTERN FOREST REGION



- DISTRICTS
- 1 SIOUX LOOKOUT
 - 2 KENORA
 - 3 FORT FRANCES

JACK-PINE BUDWORM

Area where defoliation occurred
in 1967

Legend

Moderate to severe defoliation ● or 

STATUS OF INSECTS IN THE SIOUX LOOKOUT DISTRICT

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	<u>Neodiprion pratti banksianae</u> G 13
Red-headed Jack-pine Sawfly.	<u>Neodiprion virginianus</u> complex G 14
Pitch Nodule Make	<u>Petrova albicapitana</u> G 15
White-pine Weevil	<u>Pissodes strobi</u> G 15
Larch Sawfly	<u>Pristiphora erichsonii</u> G 16
Summary of Miscellaneous Insects Collected	G 16

Black-headed Budworm, Acleris variana (Fern.)

A further decline in population levels of this insect occurred in 1967 when only three collections containing one larva per sample were recorded. From 1961 to 1965 high numbers were observed throughout the district, notably on black spruce where in 1963, 1964 and 1965 respectively a total of 118, 136 and 71 larvae were recorded in 15 beating mat samples. High populations had previously been recorded in 1953 and 1954 in the district.

Jack-pine Budworm, Choristoneura pinus pinus Free

An area of moderate to heavy infestation occurred west of Hudson in the Sioux Lookout District in 1967. This area, comprising approximately 275 square miles, was an extension of a large outbreak in the Kenora District (see map). Small pockets of heavy defoliation were observed around Moar Lake in the northwest corner of the district and light defoliation occurred in the southwest corner of Ignace Division.

Examination of jack pine branch samples from Lomond Township revealed about 45 per cent defoliation of the current year's foliage. A total of 49 egg clusters were counted on six 24-inch branch samples indicating that high larval populations could recur in 1968.

A Bark Beetle, Conophthorus sp.

Light to moderate infestations of this beetle persisted on open-grown jack pine in Revell and Vermilion Additional townships. Quantitative sampling at these points showed sixty-seven and thirty-six per cent respectively of the trees were affected. Elsewhere in the district population levels varied widely (Table 8).

TABLE 8

Summary of Damage Caused by Conophthorus sp. on Jack Pine Trees in Sioux Lookout District from 1965 to 1967

Note: Counts based on examination of 100 jack pine trees in 1967 at each location and 50 jack pine trees in 1965 and 1966.

Location	Av. d.b.h. of sample trees in inches	Number of trees attacked			Total no. of damaged shoots		
		1965	1966	1967	1965	1966	1967
Vermilion Add. Twp.	3	9	16	36	11	21	46
Sandbar Lake	2	1	3	5	1	3	5
Echo Twp.	4	0	1	10	0	1	14
Pickereel Twp.	3	-	25	18	-	37	23
Revell Twp.	5	19	24	67	29	35	79
Centrefire Lake	2	-	-	13	-	-	21
Martin	2	-	-	5	-	-	6
Highway 105	3	3	2	8	5	2	10

Eastern Pine Shoot Borer, Eucosma gloriola Heinr.

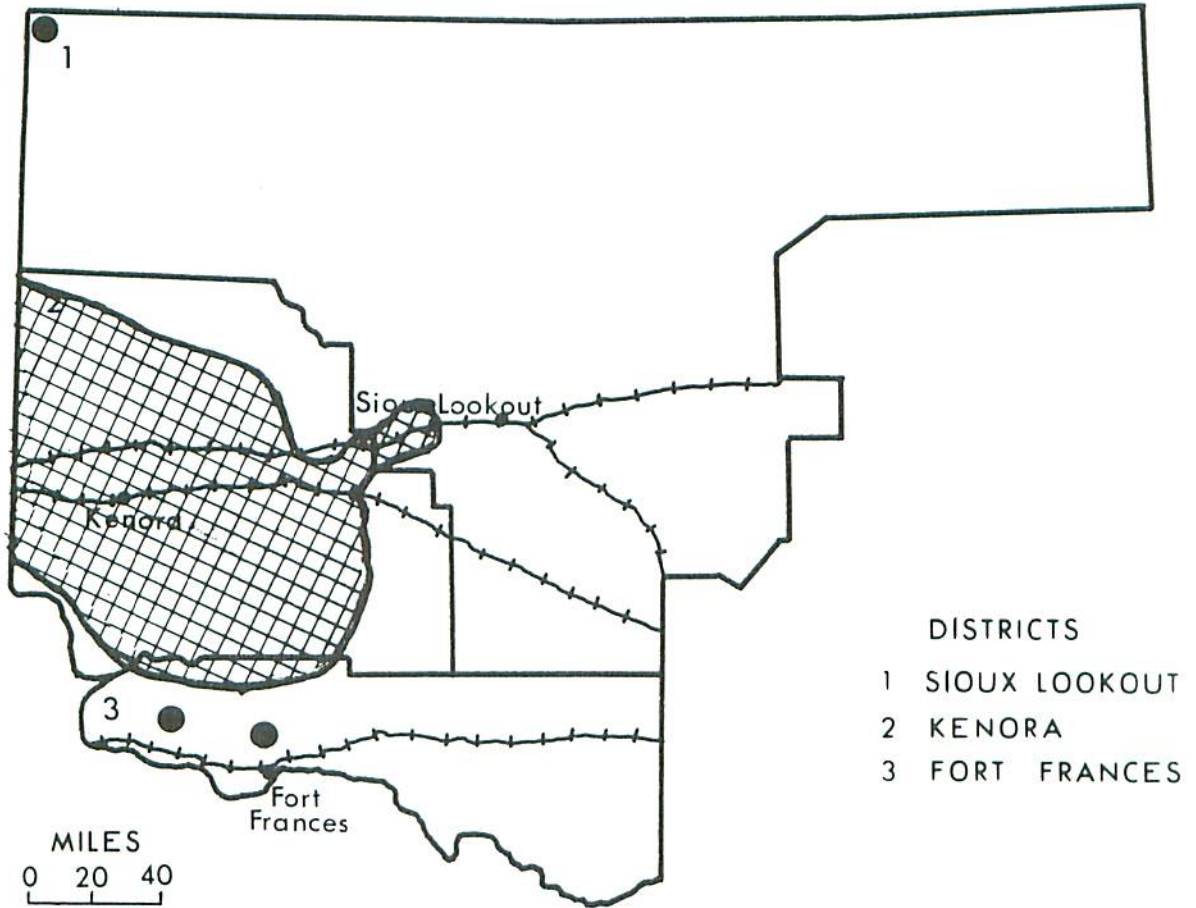
Intensive surveys throughout the district revealed a marked decline in population levels of this shoot borer in 1967 (Table 9). This decline follows a period of comparatively high populations during the three preceding years.

TABLE 9

Summary of Terminal and Lateral Shoot Damage by the Eastern Pine Shoot Borer on 100 Jack-pine Trees at Each Point in the Sioux Lookout District from 1965 to 1967

Location	Av. d.b.h. of sample trees in inches	No. of trees attacked			No. of shoots attacked					
		1965	1966	1967	Laterals			Leaders		
		1965	1966	1967	1965	1966	1967	1965	1966	1967
McIlraith Twp.	2	14	1	0	8	0	0	9	1	0
Corman Twp.	2	1	17	1	0	0	1	1	17	1
Sandbar Lake	2	23	23	5	8	8	1	18	19	5
Vermilion Add. Twp.	2	7	19	3	1	3	0	6	17	3
Echo Twp.	3	6	5	0	2	1	0	4	5	0
Norway Lake Road	2	-	2	0	-	1	0	-	1	0
Valora Road	1	-	1	1	-	-	0	-	-	1


WESTERN FOREST REGION



JACK-PINE BUDWORM

Area where defoliation occurred
in 1967

Legend

Moderate to severe defoliation ● or 

Hemlock Looper, Lambdina fiscellaria fiscellaria Gn.

Quantitative sampling results showed an increase in numbers of this insect from 1964 to 1966. In 1967, negative results were obtained at eleven of twelve permanent sample points in the district.

Forest Tent Caterpillar, Malacosoma disstria Hbn.

Following the collapse of the outbreak of this insect in 1966, only a few larval colonies were observed in Drayton Township near Sioux Lookout and southeast of this area near Ignace.

A light trap has been operated in July at Sioux Lookout since 1960 to measure adult population levels (Table 10). The increase in the number of moths captured in 1967 compared with 1966 was probably due in part to the absence of the parasitic fly Sarcophaga aldrichi Park.

TABLE 10

Summary of Forest Tent Caterpillar Adults Captured in the Light Trap Over an Eight Year Period at Sioux Lookout

Location	No. of adults captured							
	1960	1961	1962	1963	1964	1965	1966	1967
Sioux Lookout	37	1252	1988	4527	1961	211	13	131

Western Tent Caterpillar, Malacosoma pluviale Dyar

No appreciable change in the numbers of this insect was noted in the district in 1967. A light infestation occurred on red cherry along the Great Lakes Pulp and Paper Company road north of Ignace. Small numbers of tents were observed west of Hudson and north of Sioux Lookout.

Pine Sawflies: Neodiprion maurus Rohwer., Neodiprion nanulus nanulus Schedl., Neodiprion pratti banksianae Roh.

These three sawflies have caused light and occasionally moderate damage in jack pine and red pine stands in the district in recent years. In 1967 very light defoliation occurred at several points, but generally larval populations were low (Table 11). N. nanulus nanulus was the most abundant of the three species in 1967.

TABLE 11

Summary of Colony Counts of Three Pine Sawflies on Ten Jack-pine Trees at Each Location in Sioux Lookout District in 1967

Location	Av. d.b.h. of sample trees in inches	Total no. of colonies			
		<u>N. maurus</u>	<u>Neodiprion nanulus</u>	<u>Neodiprion nanulus</u>	<u>Neodiprion pratti banksianae</u>
Drayton Twp	3	1			
Chukuni River Dam	2	1			
Ilsley Twp.	3	3			7
Savant	2		3		
Vermilion Twp.	2		2		
Dewan Twp.	4				3
Martin Road South	2				8
Pickerel Twp.	3				1
Mameigwess Lake	2				1
Gulliver Lake	3				5
White Otter Lake	3				8
Corman Twp.	2				1

Red-headed Jack-pine Sawfly, Neodiprion virginianus complex

Populations of this sawfly remained at approximately the same level as in 1966. In most instances the number of colonies per tree was low (Table 12). Defoliation was confined to open-grown or small trees along the fringes of stands.

TABLE 12

Summary of Red-headed Jack-pine Sawfly Colony Counts on Jack Pine Trees in Sioux Lookout District

Note: Counts were based on the examination of 10 trees at each point.

Location	Av. d.b.h. of sample trees in inches	Total no. of colonies found		
		1965	1966	1967
Martin Road South	2	23	2	3
Corman Township	3	-	-	1
Drayton Township	2	12	1	1
Moonlite Falls Road	3	2	1	2
Pickerel Township	1	69	2	1
Ilsley Township	2	-	8	2
Echo Township	2	19	16	4

Pitch Nodule Maker, Petrova albicapitana Busck.

A Notable increase in population levels of this twig borer occurred throughout the district in 1967. The highest numbers of larvae were found on jack pine regeneration approximately 6 miles north of Pickle Lake in Division 32. Quantitative sampling results are shown in Table 13.

TABLE 13

Summary of Larval Counts of P. albicapitana from 100 Jack Pine Trees at Each Point in the Sioux Lookout District 1967

Location	Av. d.b.h. of sample trees in inches	No. of trees attacked	Total no. larvae found
Pickle Lake	1	31	41
Bradshaw Township	2	8	9
Norway Lake Road	1	25	29
Corman Township	2	27	33
Mile 38 Williams Bay	1	10	12

White-pine Weevil, Pissodes strobi Peck

No significant changes in population levels of the white-pine weevil occurred in 1967 (Table 14). Open-grown trees were much more severely attacked than those in partial shade. Most natural stands of young jack pine in the district suffered damage. Small numbers of black spruce trees were weevilled in Echo Township south of Sioux Lookout.

TABLE 14

Summary of Damage by White-pine Weevil to 100 Jack Pine at Each Point in Sioux Lookout District from 1965 to 1967

Location	Av. height in feet	Per cent of trees weevilled		
		1965	1966	1967
McIlraith Township	7	8	10	3
Norway Lake Road	9	2	6	1
Corman Township	6	2	3	5
Ignace Township	6	10	15	7
Echo Township	5	2	1	3
Pickle Lake	5	-	-	2

Larch Sawfly, Pristiphora erichsonii Htg.

Population levels of this insect were comparable to 1966. As in 1966 infestations were more common in the lower third of the district. Heavy infestations occurred along Highway 17, at Wapesi, Savant and Brightsand lakes and near Sioux Lookout. Moderate infestations were observed near Ear Falls, Wesley Lake and east of Sioux Lookout. Light infestations were noted near Red and Pickle lakes (see map).

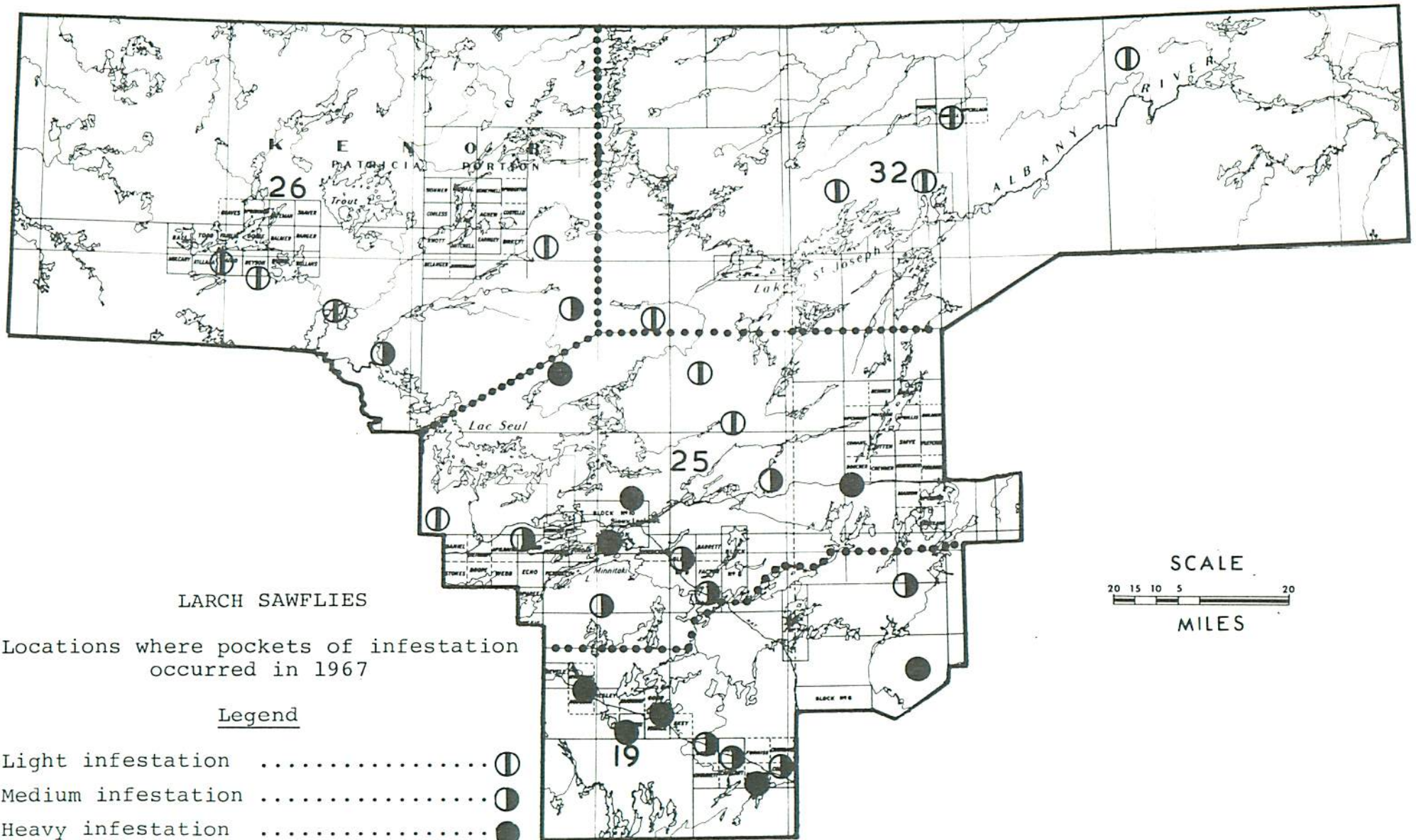
Larch sawfly cocoons from infestations in Sioux Lookout District were submitted to the Forest Insect Laboratory in late summer of 1966 to determine the effect of biological control factors on adult emergence. Examination revealed that 54 per cent of the insects were killed by the parasite Bessa harveyi (Tns.), 18 per cent died from a fungus disease and 8 per cent from unknown causes. The remaining 20 per cent of the cocoons contained healthy insects capable of emerging as adults.

TABLE 15

Summary of Miscellaneous Insects Collected in the Sioux Lookout District

Insect	Host(s)	Remarks
<i>Adelges strobilobius</i> Kalt.	bS	Low numbers near Pickle Lake
<i>Anchylopera nubeculana</i> Clem.	rCh	Light defoliation in Drayton Township
<i>Aphrophora parallela</i> Say	jP	Declined to low numbers in past few years
<i>Argyrotaenia quadrifasciana</i> Fern.	saskatoon	Three larvae from one bush near Red lake
<i>Campaea perlata</i> Gn.	bF	Found in beating sample at balsam plot
<i>Caripeta divisata</i> Wlk.	bF	Low numbers on beating mat sample
<i>Choristoneura fumiferana</i> Clem.	bF, wS, bS	Small numbers of larvae at ten locations
<i>Chrysomela crotchii</i> Brown	tA	Low populations Echo Township
<i>Chrysomela mainensis mainensis</i> Bech.	A1	One tree moderately infested Velos Lake
<i>Cimbex americana</i> Leach.	w	Collected in burn west of Hudson
<i>Dasineura balsamicola</i> (Lintn.)	bF	Very prevalent and in varying degrees

SIoux LOOKOUT DISTRICT



LARCH SAWFLIES

Locations where pockets of infestation occurred in 1967

Legend

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

TABLE 15 (continued)

Insect	Host(s)	Remarks
<i>Diacrisia virginica</i> Fabr.	fireweed	One larva Ponsford Twp. Pickle Lake
<i>Dioryctria abietivorella</i> Grt.	bS	Cone insects abundant as was the host site
<i>Dioryctria reniculella</i> Grt.	bS	Fruit abundant cone insects also in high numbers
<i>Dioryctria zimmermani</i> Grt.	jP	This boring insect found near Hudson low numbers
<i>Diprion hercyniae</i> (Htg.)	wS	Low numbers at Raleigh Falls Ilesley Township
<i>Epinotia corylana</i> McD.	A1	Found boring in fruit from Sioux Lookout to Berens River
<i>Epinotia septemberana</i> Kft.	labrador tea	Occurred near Red Lake in 1961 burn area
<i>Epinotia solandriana</i> Linn.	wB	Found with associated leaf rollers
<i>Epinotia sollicitana</i> Wlk.	wB	Stem boring insects found along Valora Road
<i>Eucordylea atrupictella</i> Dietz	jP	Found in cut over area on regeneration jack pine McIlraith Township
<i>Eupithecia filmata</i> Pears.	wS	Collected in beating mat sample McAree Township
<i>Euura hospes</i> Walsh	w	Galls numerous on a few bushes
<i>Feralia jocosu</i> Gn.	bS, bF, wS, jP	Up to seven larvae found in 15-mat quantitative samples at 15 points
<i>Gonioctena americana</i> Schaefer.	tA	Light infestation along Madsen Road from Red Lake
<i>Hydriomena divisaria</i> Wlk.	bF	Found while beating balsam fir in Dewan Township
<i>Hypagyrtis piniata</i> Pack.	bF, bS	Collected in beating samples south of Sioux Lookout
<i>Limenitis arthemis</i> Dru.	bPo	Occurred on regeneration trees along lake shore

TABLE 15 (continued)

Insect	Host(s)	Remarks
<i>Lithocolletis salicifoliella</i> Cham.	tA, lA, W	This and other sp. submitted to Dr. Freeman for study
<i>Megastigmus piceae piceae</i> Roh.	wS	Found in cones near Chukuni River Dam
<i>Metallus rohweri</i> MacG.	wild raspberry	Leaf miners in low numbers Wapesi Lake
<i>Mulsantina hudsonica</i> Csy.	bF	Adults collected in Dewan Township
<i>Nadata gibbosa</i> J. E. Smith	wB	Occurs in small numbers Pickerel Township
<i>Nematus populi</i> Marl.	tA	Collected near Valora on regeneration trees
<i>Nematus salicisodoratus</i> Dyar	w	Two colonies 10 miles north of Pickle Lake along highway
<i>Neodiprion abietis</i> complex	bF, wS, bS	Eight collections made all in southern portion of district
<i>Neurotoma inconspicua</i> (Nort.)	rch	One colony at Savant, two colonies at Split Lake
<i>Nycteola cinereana</i> N. & D.	bPo	Leaf tiers plentiful along shore of Otatakan Lake
<i>Nycteola frigidana</i> Wlk.	W	Most numerous at Sandybeach Lake McAree Township
<i>Nyctobia limitaria</i> Wlk.	bF	Found in beating mat samples
<i>Oligonychus ununguis</i> Jac.	bS, bF	One tree heavily infested near Norway Lake
<i>Olthreutes costimaculana</i> Fern.	labrador tea	numerous bushes lightly infested in Heyson Twp.
<i>Paralobesia piceana</i> Free.	bS	Cone boring insect found near Dymont

TABLE 15 (concluded)

Insect	Host(s)	Remarks
<i>Phyllocnistis populiella</i> Cham.	wB	Small numbers collected near Savant Lake
<i>Phratora americana canadensis</i> Brown	W	These beetles found at Badesdawa Lake north of Pickle Lake
<i>Phratora purpurea purpurea</i> Brown	tA	One colony of leaf eating beetles Savant River
<i>Pineus pinifoliae</i> Fitch	bS	Aphids in low numbers at Savant River
<i>Pineus similis</i> Gill.	bS	Small numbers in area around Tot Lake
<i>Plagioderia versicolor</i> Laich.	W	One shrub infested in Bradshaw Township
<i>Polygonia faunus</i> Edw.	wB,w	Two collections widely separated numbers low
Pollen collections	rP,wP,jP	Submitted to Forest Insect Survey for study
<i>Pristiphora lena</i> Kinc.	bS,wS	Highest number in five quantitative samples was 13 larvae
<i>Profenusa thomsoni</i> (Konow)	wB	Light to medium at English River Corman Township
<i>Protoboarmia porcelaria indicateria</i> Wlk.	bF,wS	Occurs yearly in beating mat samples
<i>Rhabdophaga salicinodulus</i> O. S.	w	Larvae cause swellings along twigs on near Sioux
<i>Rhabdophaga swainei</i> Felt	bS	Generally populations were comparable to preceding years occurs throughout district
<i>Semiothisa dispuncta</i> Wlk.	bF	Found while beating only occurs in low numbers
<i>Syngrapha selecta</i> Wlk.	bF	Found at balsam plot in quantitative sampling procedure
<i>Trichiosoma triangulum</i> Kby.	ecCh	Three larvae taken in beating sample along Wenesaga Road
<i>Trisetacus grosmanni</i> Keifer	bF	One branch affected near Frog Rapids