FOREST INSECT AND DISEASE SURVEYS IN THE NORTHEASTERN REGION OF ONTARIO, 1975

K. C. HALL, W. D. BIGGS and L. S. MacLEOD

GREAT LAKES FOREST RESEARCH CENTRE

SAULT STE. MARIE, ONTARIO

CANADIAN FORESTRY SERVICE

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Information Office,
Great Lakes Forest Research Centre,
Canadian Forestry Service,
Department of the Environment,
Box 490, Sault Ste. Marie, Ontario.
P6A 5M7

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Frontispiece. Forest tent caterpillars, *Malacosoma disstria* Hbn., which have migrated to white birch from trembling aspen.

SURVEY HIGHLIGHTS

The status of all important forest insects and tree diseases in the Northeastern Region are presented in the following report.

The unusually high spring and summer temperatures proved beneficial to many forest insect pests. The most important example of this was the recurrence of high populations of spruce budworm in all areas of previous damage and the spread of heavy infestation into other areas in the Region. Other insect defoliators showing a similar trend were the forest tent caterpillar on trembling aspen in Sudbury and North Bay districts, the basswood looper on white and yellow birch in Wawa and Sault Ste. Marie districts and the oak leaf shredder on red oak in the Blind River and Sault Ste. Marie districts. Small, isolated, heavy infestations of larch needleworm, greenstriped mapleworm and Bruce spanworm occurred and colonies of European and redheaded pine sawflies were more numerous in Scots pine and red pine plantations, respectively.

Dutch elm disease continued to cause high crown damage and mortality of elm throughout the southern part of the Region. A physiological condition brought on by drought in the summer of 1974 caused extensive needle droop in a number of red pine plantations, particularly in the Blind River District. An impact survey of jack pine stands showed that damage by the sweetfern blister rust was generally at a low level.

K. C. Hall
Supervisor
Northeastern Region

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INSECTS

Luna Moth, *Actias luna* Linn.

This is one of the largest larvae occurring in the forest: it is 3 in. (7.62 cm) long when full grown. Although it occurs quite commonly in its natural habitat rarely does it reach infestation proportions. It was first found in the Northeastern Region along one mile (1.6 km) of road in Rose Township in Blind River District. Damage in excess of 50% occurred on white birch (*Betula papyrifera* Marsh.) and yellow birch (*B. alleghaniensis* Britton) trees. Larval counts ranged from 3 to 12 per tree.

Pine Spittle Bug, *Aphrophora parallela* (Say)

Population trends varied in 1975. In Espanola District, infestation intensities in Scots pine (*Pinus sylvestris* L.) plantations declined from heavy to moderate in Gordon and Carnarvon townships and from moderate to light in Dawson, Billings and Sandfield townships. In contrast, population levels increased to light and moderate in Thessalon and Patton townships in Blind River District. Small numbers were observed elsewhere in the Region.

Uglynest Caterpillar, *Archips cerasivoranus* (Fitch)

Generally, populations increased and were more widely distributed. Numerous unsightly tents occurred commonly in Rose, Kirkwood, Bridgland, Haughton and Galbraith townships in Blind River District; in Hodgins, Hilton and Herrick townships in Sault Ste. Marie District; and in Peever Township (Twp 28, Rge 15) in Wawa District. Small populations were found at several other locations in the Region.

Large Aspen Tortrix, *Choristoneura conflictana* Wlk.

Population levels of this aspen (*Populus* spp.) defoliator fluctuated considerably. In the Sudbury District, where populations have been low for the past 2 years, a marked increase resulted in a moderate-to-severe infestation in approximately 500 sq. miles (1,300 km^2) in the northwestern part of the district. In addition, small pockets of heavy damage occurred in Sweeny and Beaumont townships, and north of Wanapitei Lake. Increases were also evident on Manitoulin Island, Espanola District, where many more pockets of infestation were found. In North Bay District, populations declined to low levels in areas infested in 1974, but increased at seven other locations (see Appendix, Fig. A1). Populations declined to light throughout the Temagami District.

Spruce Budworm, *Choristoneura fumiferana* (Clem.)

The results of damage surveys, population sampling, and egg-mass counts have been included with those of other survey regions in a special report by G. M. Howse et al. (Report O-X-250). This report provides a

complete description and analysis of developments in the spruce budworm situation in Ontario in 1975 and gives infestation forecasts for the province for 1976.

Jack Pine Budworm, *Choristoneura pinus pinus* Free.

The light populations present in 1974 in Rose and Kirkwood townships in Blind River District and in Lastheels Township (Twp 28, Rge 23) in Wawa District declined to very light intensity. Despite these reductions, small populations were more widely distributed and were present in most immature jack pine (*Pinus banksiana* Lamb.) plantations in the Kirkwood Management Unit and on scattered large jack pine in Township 1A, Blind River District.

Larch Casebearer, *Coleophora laricella* Hbn.

For the second consecutive year population levels increased at the Garden River Indian Reserve. Since 1968 when populations reached a high of 122 larvae per 18-in. (45.7-cm) branch tip a declining trend was recorded and in 1973 less than one larva per branch tip occurred. In 1975, 14.8 larvae were present compared with 3.5 in 1974.

Cone Beetles, *Conophthorus coniperda* (Sz.) and *C. resinosae* Hopk.

High populations of these beetles were again present in mature and overmature red pine (*Pinus resinosa* Ait.) and white pine (*P. strobus* L.) stands on islands and shoreline reserves at many locations in the Temagami District. Typical damage was noted along the northeast arm of Lake Temagami, where accumulated fallen twigs were particularly conspicuous.

Oak Leaf Shredder, *Croesia semipurpurana* (Kft.)

A marked increase in infestation intensity of this insect was evident in the Blind River, Sault Ste. Marie and Espanola districts. Severe defoliation to red oak (*Quercus rubra* L.) was mapped from Batchawana Bay in the Sault Ste. Marie District, east along the north shore to Spragge Township in the Blind River District and in scattered pockets on Manitoulin Island (see Appendix, Fig. A2). Defoliation in most areas exceeded 70%, but was most severe in areas of high red oak content, especially in the Blind River–Iron Bridge area. In 1974, infestations occurred throughout the same general area, but at a lesser intensity.

Greenstriped Mapleworm, *Dryocampa rubicunda rubicunda* (Fabr.)

Heavy defoliation of red maple (*Acer rubrum* L.) and sugar maple (*A. saccharum* Marsh.) recurred in the Sand Dam Road area and in McCallum and Cameron townships in North Bay District, and in Coleman Township

in Temagami District. New pockets of moderate-to-severe infestation were present in Dana and Boyd townships, North Bay District and in Carnarvon and Cockburn Island townships in Espanola District. For the second consecutive year light-to-medium infestations occurred in Bridgland and Rose townships in Blind River District. Populations declined to light in Humboldt and Dill townships in the Sudbury District.

Basswood Looper, *Erannis tiliaria* Harr.

There was a marked increase in damage levels and in the extent of infestation in the Wawa District. In 1974, the first year of heavy infestation, damage was present throughout approximately 50 sq. miles (130 km^2) in the central part of Lake Superior Park. In 1975, the infestation increased to encompass 800 sq. miles (2072 km^2) extending from Labonte Township (Twp 28, Rge 16) in the south to Nebonaionquet Township (Twp 28, Rge 22) in the north. Defoliation of mature trees was generally severe, particularly in areas with a high content of yellow birch and white birch. A wide variety of understory hosts also suffered heavy damage. A nuclear polyhedrosis virus collected in 1974 was more widespread and caused considerable larval mortality, especially in areas with high populations; an entomophthora fungus was also present. South of the heavy infestation, a band of light-to-moderate infestation extended through the Sault Ste. Marie District and east to Bright Township in Blind River District (see Appendix, Fig. A3).

Light-to-moderate defoliation of understory hosts occurred in Merrick Township, North Bay District and in Dawson, Carnarvon, Deagle and Victoria townships in Espanola District. In North Bay District, this insect, in association with the fall cankerworm, *Alsophila pometaria* (Harr.), caused heavy defoliation in a small area of Restoule Provincial Park (Fig. 1).

Birch Leafminer, *Fenusa pusilla* (Lep.)

Severe leaf mining persisted along the Veuve River in Hagar Township, Sudbury District and higher populations than in 1974 caused extensive mining throughout the Temagami District. Light-to-moderate populations occurred on small regeneration at numerous locations in North Bay, Sudbury and Espanola districts.

American Aspen Beetle, *Gonioctena americana* (Schaef.)

Medium-to-high populations of this leaf beetle were found on trembling aspen (*Populus tremuloides* Michx.) in La Salle and Sisk

Fig. 1. Typical defoliation of hardwood forest by the basswood looper.

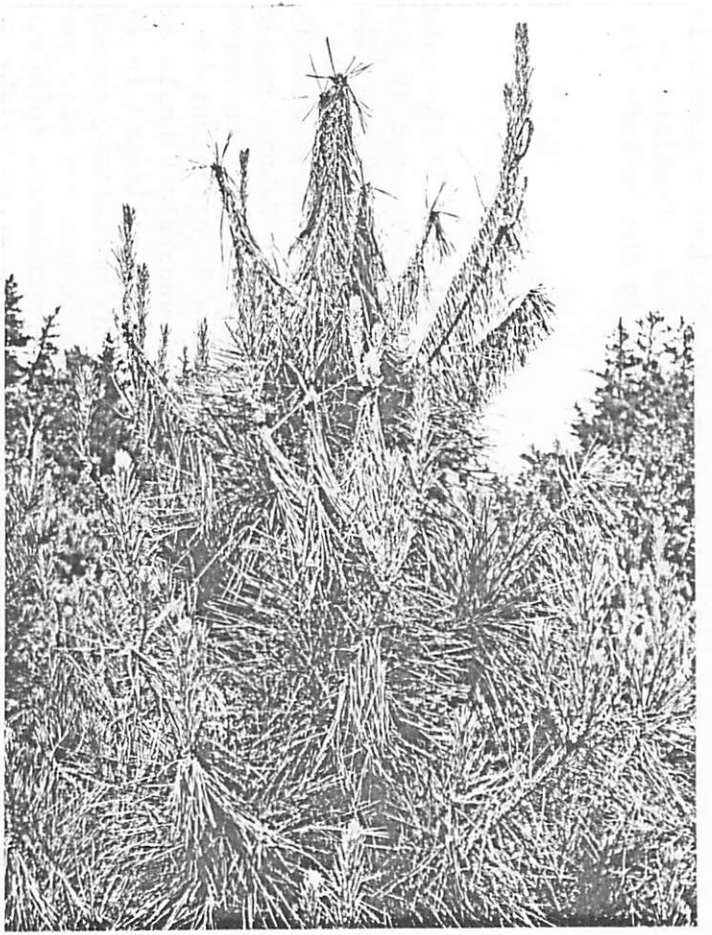

Fig. 2. Red pine tree showing typical damage caused by needle droop.

townships, North Bay District; in Antrim Township, Sudbury District; and on regeneration trees in Nairn Township, Espanola District. Light defoliation was common at numerous other locations throughout the Region.

Fall Webworm, *Hyphantria cunea* Dru.

Large amounts of webbing were again found in and around Beaucage Point on Indian Reserve No. 10, North Bay District. Although the infestation increased slightly in extent, the intensity remained about the same. Light populations were observed on Manitoulin Island, Espanola District. Scattered colonies were common elsewhere in the Region.

Aspen Blotchminer, *Lithocolletis ontario* Free.

The most significant changes in the status of this insect occurred in Temagami District, where high populations caused unusually severe damage to aspen reproduction (particularly in cut-over areas), and in Nairn Township, Espanola District. High populations in Rose, Kirkwood, Thessalon and Bridgland townships in Blind River District persisted for the fourth consecutive year. Small populations were found at numerous other locations, principally in the eastern part of the Region. As in other years, the highest incidence of mining was found on smaller host trees.

Forest Tent Caterpillar, *Malacosoma disstria* Hbn.

Infestations spread in the eastern half of the Region, except in the northeastern part of Temagami District (see Frontispiece). Moderate-to-severe defoliation was observed in an area of approximately 2,350 sq. miles (6,110 km^2) around Lake Nipissing in North Bay and Sudbury districts, and in the central and southwestern portions of the Sudbury District (see Appendix, Fig. A4). Small pockets were found in the northern and southern parts of the North Bay District and in the southern parts of the Sudbury and Espanola districts. Individual larvae were found elsewhere in the Region.

Forest tent caterpillar egg-band counts in 1975 indicate an increased amount of moderate-to-severe defoliation for 1976. The spread will be mainly in an easterly direction and it is predicted that the two largest areas will coalesce. Expansion northward and southward can be expected in North Bay District and westward from the Sudbury District into the eastern fringes of Espanola District (Table 1).

Table 1. Summary of forest tent caterpillar egg-band counts and infestation forecasts for 1976 in the Espanola, North Bay, Sudbury and Temagami districts (Counts were based on the examination of one or three trees per location.)

Location	Avg DBH (in.)[a]	No. of trees sampled	Avg no. of egg bands per tree	1976 infestation forecast[b]
Espanola District				
Nairn Twp (Hwy 17 at Spanish R.)	4	3	2.3	M
North Bay District				
Bastedo Twp (Hwy 64)	5	1	6.0	S
Calvin Twp (Samuel de Champlain Prov. Park)	4	3	4.0	M
East Ferris Twp (Hwy 17)	6	1	102.0	S
Gurd Twp (Hwy 522)	4	3	3.0	M
Indian Reserve No. 10 (Hwy 17)	5	1	90.0	S
Jocko Twp (junction hwy 63 and 533)	4	1	11.0	S
Mattawan Twp (Hwy 533)	4	3	2.0	L-M
Notman Twp (Hwy 11)	5	1	19.0	S
Patterson Twp (Restoule Prov. Park)	7	3	23.3	S
Sisk Twp (Marten R. Prov. Park)	5	3	2.7	M
Sudbury District				
Awrey Twp (Hwy 17)	4	3	4.0	M
Bigwood Twp (½ mile west of Rutter)	5	1	67.0	S

[a] 1 in. = 2.54 cm

[b] N = nil, L = light, M = moderate, S = severe

(continued)

Table 1. Summary of forest tent caterpillar egg-band counts and infestation forecasts for 1976 in the Espanola, North Bay, Sudbury and Temagami districts (Counts were based on the examination of one or three trees per location.) (concluded)

Location	Avg DBH (in.)[a]	No. of trees sampled	Avg no. of egg bands per tree	1976 infestation forecast[b]
Cascaden Twp (Windy L. Prov. Park)	4	3	0.3	L
Casmir Twp (Hwy 535)	6	1	85.0	S
Denison Twp (Fairbank Prov. Park)	4	3	16.7	S
Foy Twp	5	3	0.0	N
Graham Twp (Vermilion River)	4	1	30.0	S
Humboldt Twp (Hwy 637)	4	1	41.0	S
Killarney Twp (Killarney Prov. Park)	4	1	22.0	S
Laura Twp (Burwash Industrial Farm)	5	3	4.0	M
Temagami District				
Coleman Twp	5	3	8.0	S
Gillies Limit Twp	2	1	11.0	S
Lorrain Twp	3	1	33.0	S
South Lorrain Twp	8	3	1.0	L
Strathcona Twp (Finlayson Point Prov. Park)	5	3	3.0	M

[a] 1 in. = 2.54 cm

[b] N = nil, L = light, M = moderate, S = severe

Balsam Fir Sawfly, *Neodiprion abietis* complex

Damage caused by this insect increased in the North Bay District. The upper crowns of trees along the north shore of Lake Nipissing from Caldwell Township in the west, to Commanda Township in the east, were severely defoliated. Moderate-to-severe damage occurred in the southern parts of Field, Grant, Charlton and Blyth townships. Scattered pockets of balsam fir (*Abies balsamea* [L.] Mill.) suffered light-to-moderate defoliation in East Ferris, West Ferris, North Himsworth, South Himsworth, Patterson, Gurd and Nipissing townships.

Redheaded Pine Sawfly, *Neodiprion lecontei* (Fitch)

The light-to-moderate infestation in May Township in Espanola District increased in intensity, and quantitative sampling of 100 trees showed an average of 1.9 colonies per tree. In Patton Township, Blind River District, spraying was carried out to control the high populations in 2 acres (0.8 ha) of an 80-acre (32.4-ha) red pine plantation. Light populations near the city of North Bay and in Victoria Township in Espanola District persisted at a level comparable to that of 1974.

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

Population levels of this insect increased in the majority of sample locations on Manitoulin Island in Espanola District. Higher colony counts were recorded in two of three plantations in Dawson and Carnarvon townships, and at one location each in Sandfield and Billings townships. A new area of heavy damage occurred northeast of Providence Bay in Carnarvon Township (Table 2). The infestation in Gordon Township was greatly reduced as a result of a virus spray carried out in 1974. The plantation at Thessalon, where an infestation was discovered in 1974, was sprayed with virus in 1975.

This sawfly proved troublesome throughout the city of Sault Ste. Marie.

Swaine Jack Pine Sawfly, *Neodiprion swainei* Midd.

This sawfly again caused severe defoliation of jack pine trees on islands and along shorelines on numerous lakes throughout the northern part of Temagami District. Repeated defoliation has caused appreciable mortality of jack pine throughout the infested area.

Table 2. Summary of colony counts of European pine sawfly in Scots pine plantations on Manitoulin Island in 1974 and 1975

Location (Twp)	Tree height (ft)[a]	No. of trees examined		Total no. of colonies		Avg no. of colonies/tree	
		1974	1975	1974	1975	1974	1975
Billings	16	250	200	103	95	.41	.48
Carnarvon	12	100	100	43	97	.43	.97
Carnarvon	16	100	100	39	11	.39	.11
Carnarvon	6	100	50	0	8	.00	.16
Carnarvon	15	-	50	-	198	-	4.00
Dawson	12	100	100	66	85	.66	.85
Dawson	12	300	300	109	152	.36	.51
Dawson	12	100	100	50	39	.50	.39
Gordon	13	100	100	103	50	1.03	.50
Gordon	12	50	50	258	20	5.20	.40
Sandfield	8	100	100	25	61	.25	.61
West Bay Indian Reserve	16	33	-	66	-	2.00	cut
West Bay Indian Reserve	20	23	-	26	-	1.13	cut

[a] 1 ft = 30.48 cm

Redheaded Jack Pine Sawfly, *Neodiprion virginianus* complex

Increases in population levels of this sawfly were recorded at two locations in the Region. Heavy defoliation was observed in the southern part of Robinson Township in the Espanola District and at several points in Barr, Firstbrook and Hudson townships in the Temagami District. Light-to-moderate damage occurred in Hallam, Carnarvon and Burpee townships, Espanola District and low numbers were found at a few locations elsewhere in the Region.

Bruce Spanworm, *Operophtera bruceata* (Hlst.)

In the Sault Ste. Marie District, a new, small, heavy infestation of this geometrid occurred at Robertson Lake in Van Koughnet Township. Damage to overstory trees was light; however, understory hosts, primarily maple (*Acer* spp.), suffered heavy defoliation. Light damage to large-diameter maple was also noted along the Ranger Lake road in Hodgins Township.

White Pine Weevil, *Pissodes strobi* Peck.

This insect continued to be of major importance in a number of white pine plantations in the Region. In North Bay and Espanola districts, in three plots where damage was known to be heavy, the incidence of weeviled trees averaged 51% and 41%, respectively. In the Kirkwood Management Unit, Blind River District, the number of damaged leaders ranged from 5% to 24%. The incidence of weeviling in jack pine plantations did not exceed 3% in areas sampled (Table 3). In all white pine plantations where attack levels can be compared, values exceeded those of 1974.

Table 3. Summary of damage caused by the white pine weevil in five districts in 1974 and 1975

Location (Twp)	Host	No. of trees sampled	Trees weeviled (%)	
			1974	1975
Blind River District				
Kirkwood No. 3	wP	129	10.8	12.4
Kirkwood No. 4	wP	193	-	8.8
Kirkwood	jP	278	-	2.5
Rose No. 1	wP	182	16.7	24.1
Rose No. 8	wP	100	-	9.0
Rose	jP	200	-	1.5
Lefroy No. 2	wP	100	-	5.0
168	wP	300	17.0	21.0
Espanola District				
Foster	wP	100	26.0	38.0
Merritt	wP	100	29.0	48.0
Mills	wP	100	0.0	0.0
Victoria	wP	100	30.0	37.0
Hallam	ScP	100	16.0	7.0
Nairn	jP	100	3.0	2.0
North Bay District				
Badgerow	wP	100	-	64.0
Boulter	wP	100	-	40.0
North Himsworth	wP	100	-	49.0
Sudbury District				
Delamere	wP	100	-	22.0
Temagami District				
Firstbrook	jP	100	-	3.0

Larch Sawfly, *Pristiphora erichsonii* (Htg.)

An increase in population levels was observed in Espanola, Blind River and Sault Ste. Marie districts. Moderate-to-heavy damage occurred between the towns of Webbwood and Spanish, especially in May Township. Light-to-moderate defoliation was present in most stands in Temagami District; in the southern part of Robinson Township on Manitoulin Island and in Rose, Day and 1A townships in Blind River District; and on St. Joseph Island, Sault Ste. Marie District. Elsewhere populations were low.

Mountain Ash Sawfly, *Pristiphora geniculata* (Htg.)

Population increases resulted in heavy defoliation throughout Temagami District and moderate defoliation in the city of North Bay. Damage was severe along Highway 17 west in Wawa District and moderate in the town of Espanola. Light-to-moderate defoliation occurred throughout the Sault Ste. Marie and Blind River districts.

Aspen Leafroller, *Pseudexentera oregonana* Wlshm.

An increase in populations of this defoliator resulted in small pockets of heavy damage to trembling aspen stands in Grassett Township and Township 169 in Blind River District and in Deroche Township in Sault Ste. Marie District. Light infestations were common along the Searchmont and Ranger Lake roads in the Sault District; along highways 129 and 108 and along the White River road in Blind River District; and in the central part of Temagami District, particularly in the townships of Chambers, Best and South Lorrain.

Larch Needleworm, *Zeiraphera improbana* (Walker)

Two new small areas of heavy infestation were found in the Sault Ste. Marie District in 1975. In the Garden River Indian Reserve, east of Sault Ste. Marie, approximately 2 acres (0.8 ha) of large-diameter larch (*Larix* spp.) trees suffered heavy damage. West of Sault Ste. Marie a similar condition was present on scattered large hosts in the Pointe aux Pins area. Discoloration due to the heavy feeding was very pronounced in both areas. The moderate infestation in Beaucage Township, North Bay District persisted at a level comparable to that of 1974.

Table 4. Other forest insects

Insect	Host(s)	Remarks
Adelges lariciatus (Patch)	wS	moderate damage on open-grown trees in Carnarvon Twp, Espanola District
Archips negundanus Dyar	Mn	high populations of this unusual defoliator at several locations in the city of Sault Ste. Marie
Chrysomela mainensis mainensis Bech.	Al	high populations at one location in Thessalon Twp, Blind River District
Eupareophora parca MacG.	blA	heavy defoliation on scattered trees in Patton Twp, Blind River District
Lithocolletis nipigon Free.	bPo	high populations in Victoria Twp, Espanola District
Orgyia leucostigma J.E. Smith	Mm, W, sM	populations throughout the city of Sault Ste. Marie at all levels of infestation
Phyllobius oblongus Linn.	deciduous hosts	high populations in Carnarvon Twp, Espanola District; light populations in Pringle and Patterson twp, North Bay District and Hodgins Twp, Sault Ste. Marie District

TREE DISEASES

Dutch Elm Disease, *Ceratocystis ulmi* (Buism.) C. Moreau

Damage caused by this pathogen increased in 1975. The rate of mortality increased in all plots in the Region, averaging 42% in 1975 compared with 22.8% in 1974. The only exceptions were in Labonte Township, Wawa District and the town of Blind River where no mortality occurred (Table 5). The known range of this disease remained the same.

Table 5. Summary of mortality of elm caused by Dutch elm disease in 16 plots in the Northeastern Region

Plot location	No. of living trees 1973	Annual mortality rate 1974 (%)	Annual mortality rate 1975 (%)	2-year cumulative mortality (%)
Blind River District				
Bright Twp	40	67.5	25.0	92.5
Blind River (town)	40	0.0	0.0	0.0
Twp 188	40	22.5	45.0	67.5
Thessalon Twp	38	58.0	31.4	89.4
Espanola District				
Assiginack Twp	40	35.0	27.5	62.5
Dawson Twp	40	0.0	7.5	7.5
Salter Twp	40	22.5	52.5	75.0
North Bay District				
Caldwell Twp	40	17.5	57.5	75.0
French Twp	40	2.5	32.5	35.0
North Bay (city)	40	40.0	15.0	55.0
South Himsworth Twp	40	12.5	12.5	25.0
Sault Ste. Marie District				
MacDonald Twp	40	17.5	45.0	62.5
Johnson Twp	40	50.0	35.0	85.0
Sudbury District				
Rayside Twp	40	12.5	57.5	70.0
Scollard Twp	30	23.3	50.0	73.3
Wawa District				
Labonte Twp (Twp 28, Rge 16)	20	0.0	0.0	0.0

Needle Rust of Spruce, *Chrysomyxa ledicola* Lagh.

This rust occurred infrequently in the Region. Small pockets of small-diameter black spruce (*Picea mariana* [Mill.] B.S.P.) trees were affected in townships 7D and 2E in Blind River District where foliar damage was evaluated at trace and moderate levels, respectively. The heavy feeding on current foliage by the spruce budworm may have been a contributing factor to the limited occurrence of this rust.

Ink Spot of Poplar, *Ciborinia whetzelii* (Seaver) Seaver

This disease occurred most frequently in the western part of the Region. Infection centers were most numerous in Blind River and Sault Ste. Marie districts and ranged in size from ½ to 20 acres (0.2 to 8.1 ha). The defoliation level was low to trace on a high percentage of the trees in most affected stands. Exceptions occurred in 175, 2E and Herrick townships where moderate foliar damage was recorded. In Espanola, Sudbury and North Bay districts the disease was less prevalent but when present caused moderate damage to a high percentage of trees (Table 6).

Sweetfern Blister Rust, *Cronartium comptoniae* Arth.

A special survey was carried out to determine the impact of this rust. The region was subdivided into sampling units and 12 randomly selected jack pine stands were evaluated. The percentage of trees affected ranged from 2.5 to 10.7 in the six stands infected with the disease. Negative results were obtained in the other six plots (Table 7). Although the survey showed, in general, a low level of damage that is indicative of the status of the organism in the Region, past surveys have shown isolated pockets of moderate and high numbers of affected trees.

White Pine Blister Rust, *Cronartium ribicola* J. C. Fischer

The most noteworthy damage caused by this disease occurred in Espanola District. Severe damage occurred in 5% of the large-diameter white pine trees in one 30-acre (12-ha) stand in Robinson Township and 6% was recorded in a 20-acre (8-ha) plantation in Foster Township. In Blind River District, basal cankering was found most frequently in small plantations in Thessalon and Wells townships. Although the disease is widespread, damage levels were low elsewhere in the Region and damage was confined primarily to the branches of host trees.

Table 6. Defoliation damage caused by ink spot of poplar at a number of locations in the Northeastern Region

Location (Twp)	Tree height (ft)[a]	Area affected (acres)[b]	Trees affected (%)	Defoliation (%)
Blind River District				
2F	12	1.0	100	5
Grassett	40	2.0	50	1
Spragge	20	0.5	100	10
1B	25	10.0	90	1
157	50	10.0	25	1
150	30	10.0	10	1
175	30	0.5	100	50
2E	25	1.0	100	50
Espanola District				
Shakespeare	30	25.0	90	40
North Bay District				
Bastedo	30	100.0	100	45
Sault Ste. Marie District				
Shields	28	2.0	90	24
Curtis	20	20.0	75	15
Slater (Twp 29, Rge 14)	10	1.0	50	5
Herrick	12	1.0	50	50
Sudbury District				
Appleby	35	100.0	97	34
Temagami District				
Firstbrook	40	100.0	100	10
Olive	35	50.0	100	10
Law	45	50.0	100	10

[a] 1 ft = 30.48 cm

[b] 1 acre = 0.40 ha

Table 7. Summary of percentage of trees affected by sweetfern blister rust in the Northeastern Region in 1975

Location (Twp)	Tree height (ft)[a]	Area affected (acres)[b]	Trees affected (%)
Blind River District			
4F	63	50	2.5
Lefroy	32	40	0.0
Espanola District			
Nairn	7	5	3.0
Robinson	27	50	0.0
A	57	50	7.0
North Bay District			
LaSalle	58	75	0.0
Sault Ste. Marie District			
Parke	57	100	0.0
Sudbury District			
Haentschel	64	50	0.0
Hagar	32	50	10.0
Temagami District			
Firstbrook	41	500	10.7
Wawa District			
Maness (Twp 27, Rge 23)	32	10	0.0
Endrun (Twp 30, Rge 23)	58	100	2.9

[a] 1 ft = 30.48 cm

[b] 1 acre = 0.40 ha

Cylindrocladium Root Rot, *Cylindrocladium floridanum* Sob. and Seymour

The first occurrence of this disease in the Northeastern Region was observed in 3-0 black spruce in the Kirkwood Nursery, Blind River District. Small patches of seedlings with root rot occurred commonly throughout the beds; however, the overall damage level was considered light. This disease has been of particular importance in nurseries in the United States and careful attention is being given to the evaluation of its importance in Ontario.

Cherry Leaf Spot, *Cylindrosporium padi* (Lib.) Karst.

This disease persisted along Highway 17 north in the Sault Ste. Marie and Wawa districts, but at a damage level lower than that of 1974. Defoliation in Fisher Township was 40%, the highest ever recorded. On the Montreal mining property the percentage of affected trees declined from 68 to 40. The disease occurred at many other locations and defoliation ranged from 1% to 25%.

Leaf and Twig Blight, *Pollaccia radiosa* (Lib.) Bald. & Cif.

This disease was most prevalent in the Blind River, Sault Ste. Marie and Wawa districts. Infection centers ranged in size from 2 to 10 acres (0.8 to 4 ha) and included trees in the small-diameter classes. At most sample points a high percentage of trees were infected, but damage was light.

Needle Droop of Red Pine

A needle droop condition caused serious damage to a number of red pine plantations in the Region. The symptoms were the same at all locations examined. Most of the dead needles were bent over at the needle fascicle. The damage was confined to the buds, needles and shoots which developed in 1974; however, many of the 1975 terminal shoots did not grow (Fig. 2). It was eventually concluded that the damage was the result of physiological drought which occurred late in the summer of 1974.

Up to 11% of the trees were affected in infected plantations in Gibbons Township, North Bay District and up to 90% in Patton Township, Blind River District (Table 8). Small pockets of moderate-to-severe defoliation were also found in Lorne Township, Espanola District and in Firstbrook Township, Temagami District. This condition was not observed elsewhere in the Region.

Table 8. Needle droop conditions in six red pine plantations in the Northeastern Region in 1975

Location (Twp)	Tree height (ft)[a]	Area affected (acres)[b]	Trees affected (%)
Blind River District			
Patton	3	80	90.7
Patton	3	5	74.0
Rose	3	100	81.0
2A	13	50	51.3
North Bay District			
Gibbons	6	5	11.0
Sudbury District			
Hanmer	4	100	88.0

[a] 1 ft = 30.48 cm

[b] 1 acre = 0.40 ha

APPENDIX

NORTHEASTERN REGION

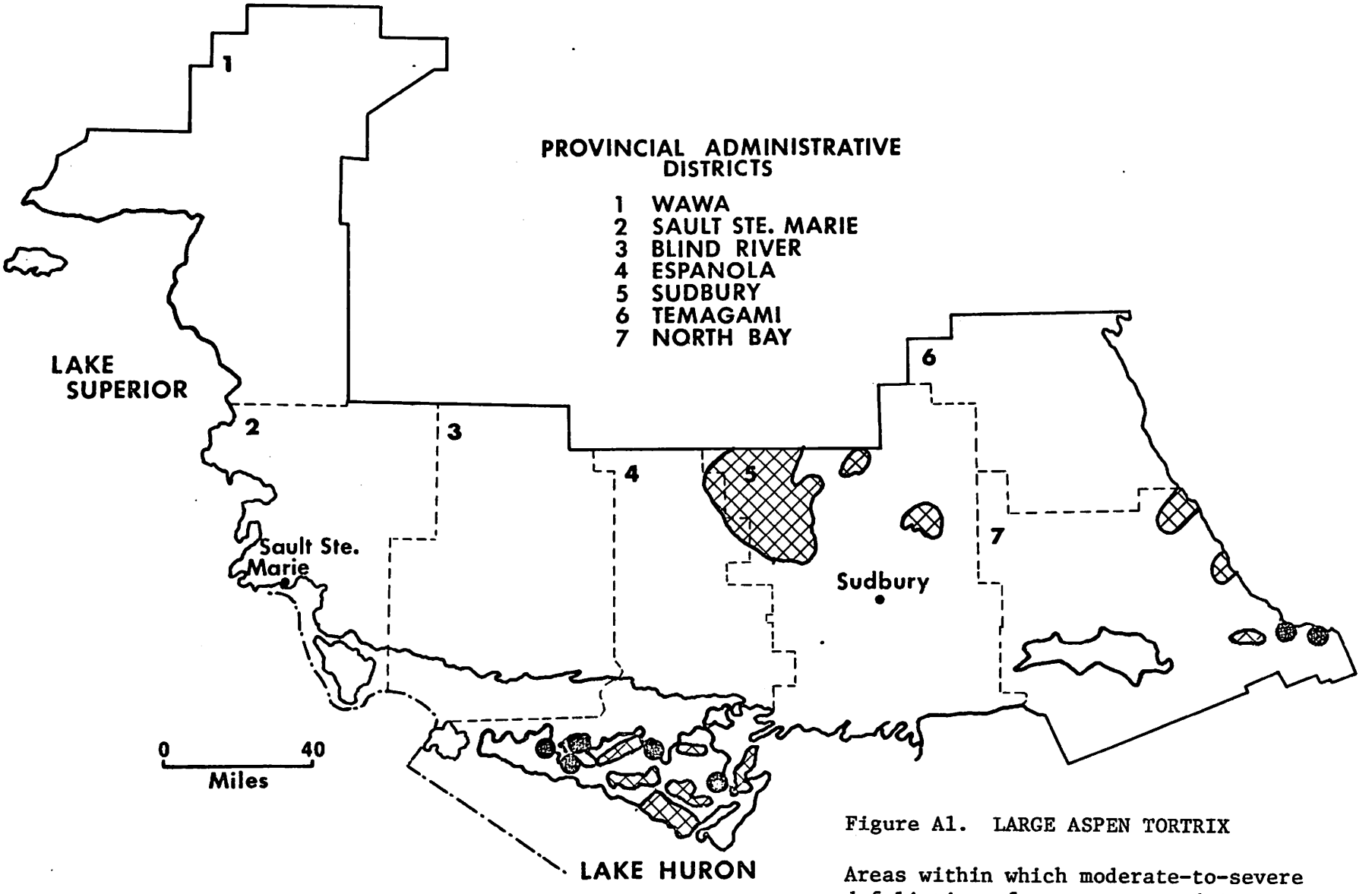

Figure A1. LARGE ASPEN TORTRIX

Areas within which moderate-to-severe defoliation of aspen occurred in 1975 . . . . . or ●

NORTHEASTERN REGION

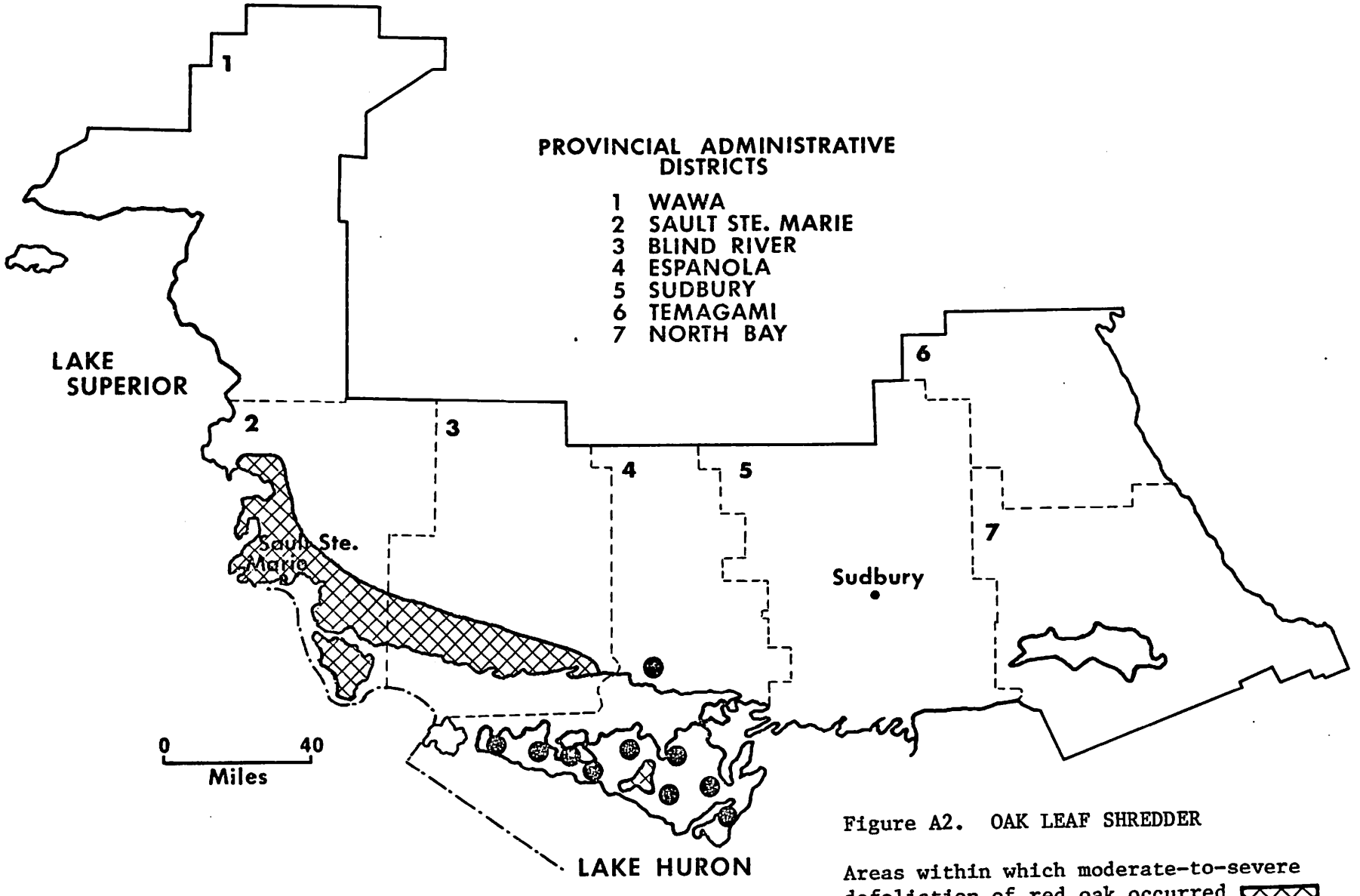

Figure A2. OAK LEAF SHREDDER

Areas within which moderate-to-severe defoliation of red oak occurred in 1975 . . . . . or ●

NORTHEASTERN REGION

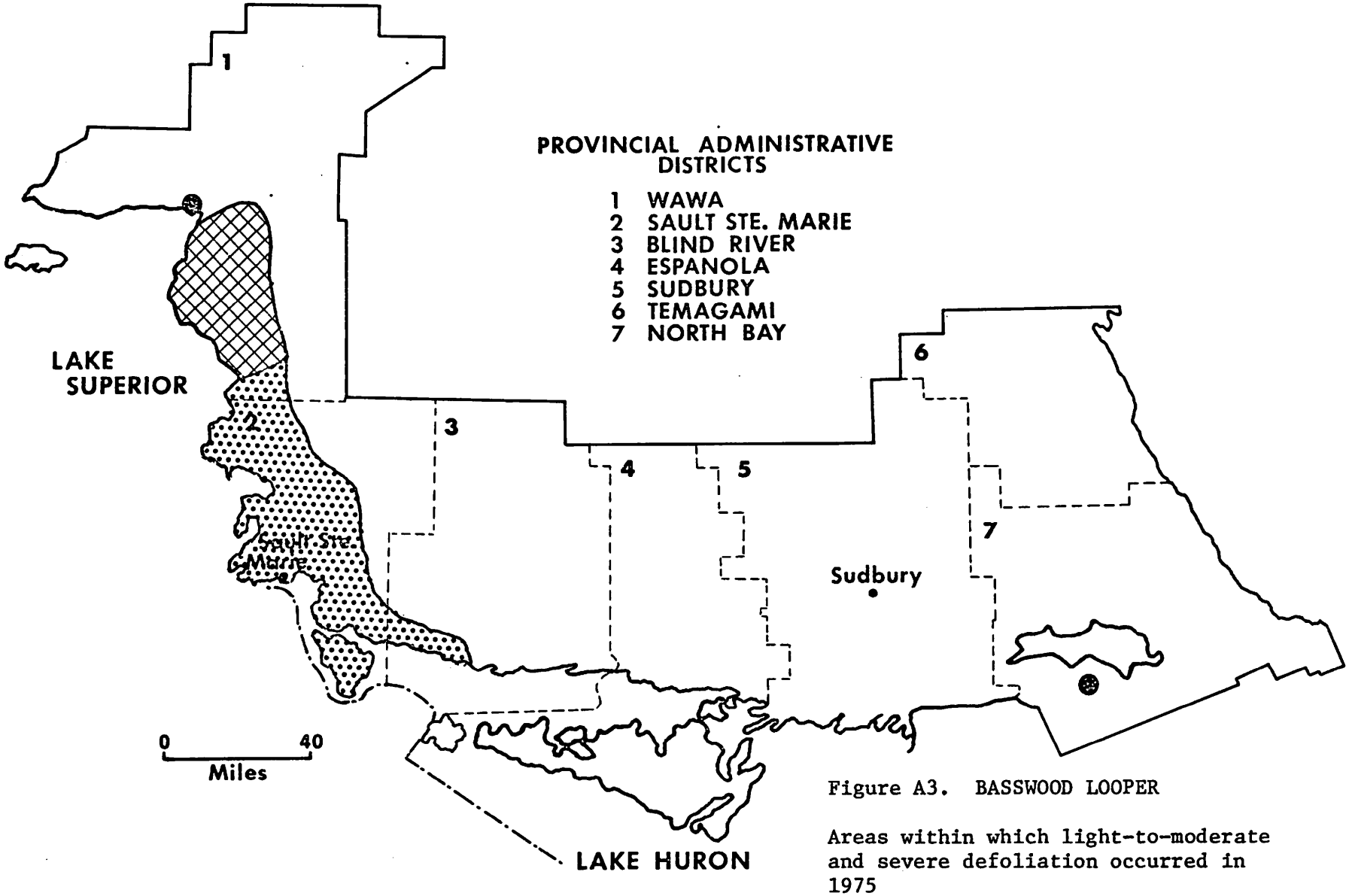

Figure A3. BASSWOOD LOOPER

Areas within which light-to-moderate and severe defoliation occurred in 1975

Light-to-moderate defoliation . .

Severe defoliation . . . . . or

NORTHEASTERN REGION

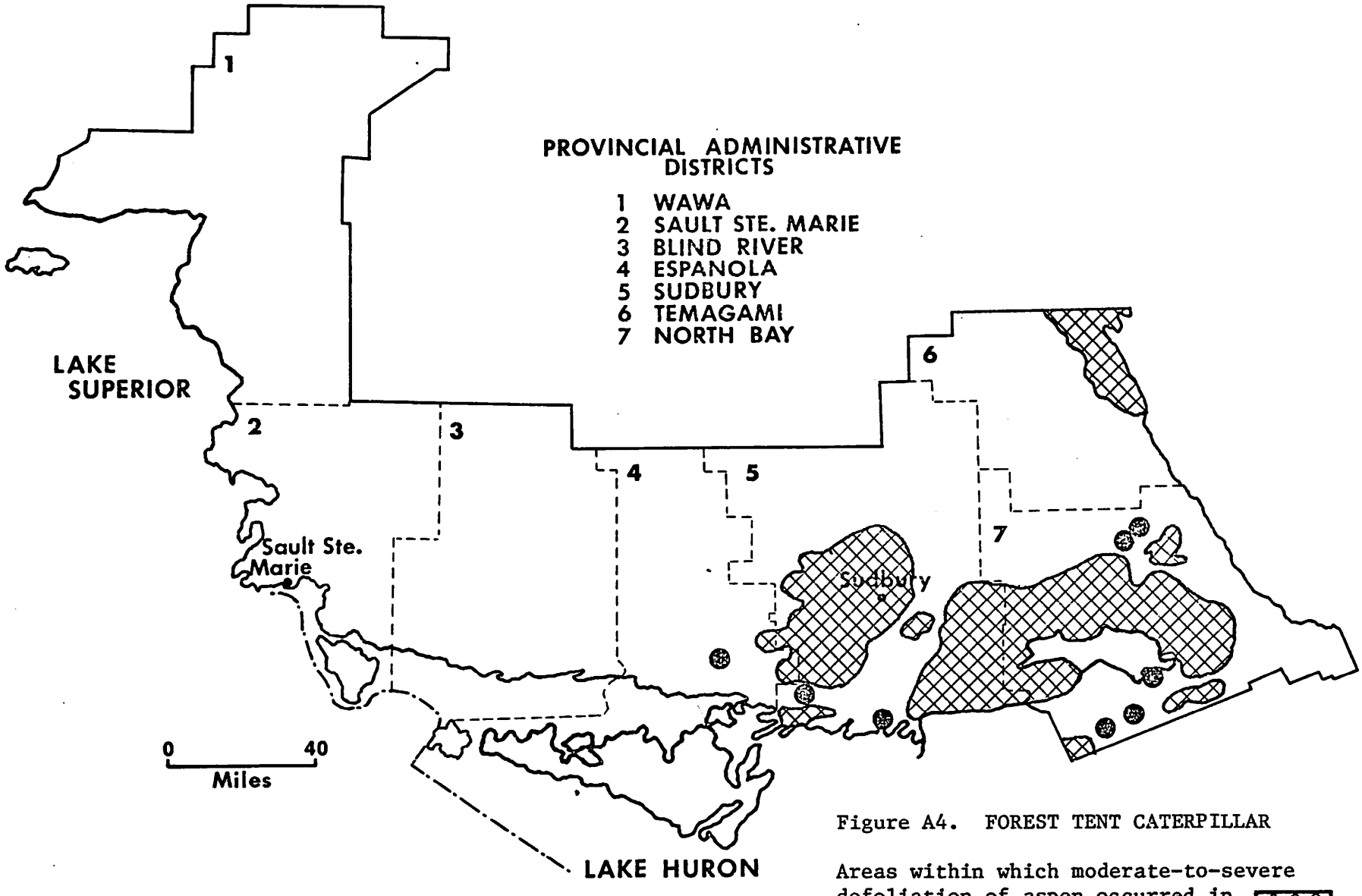

Figure A4. FOREST TENT CATERPILLAR

Areas within which moderate-to-severe defoliation of aspen occurred in 1975 . . . . . or ●