

INDEX OF HOSTS AND ASSOCIATED FUNGI IDENTIFIED BY THE FOREST INSECT
AND DISEASE SURVEY IN ONTARIO FROM 1967 TO 1987. I. THE PINES

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GREAT LAKES FORESTRY CENTRE

FORESTRY CANADA

ONTARIO REGION

1989

INFORMATION REPORT O-X-395

©Minister of Supply and Services Canada 1989
Catalogue No. FO 46-14/395E
ISBN 0-662-16247-1
ISSN 0822-210X

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are available at no charge from:*

*Communications Services
Great Lakes Forestry Centre
Forestry Canada
Ontario Region
P.O. Box 490
Sault Ste. Marie, Ontario
P6A 5M7*

Microfiches of this publication may be purchased from:

*Micro Media Inc.
Place du Portage
165, Hotel-de-Ville
Hull, Quebec
J8X 3X2*

Myren, D.T. and Davis, C.N. 1988. Index of hosts and associated fungi identified by the Forest Insect and Disease Survey in Ontario from 1967 to 1987. I. The pines. For. Can., Ontario Region, Sault Ste. Marie, Ont. Inf. Rep. 0-X-395. 83 p.

ABSTRACT

This publication lists all fungi found on pine hosts from 1967 to 1987 by personnel of the Forest Insect and Disease Survey (FIDS) Unit at the Great Lakes Forestry Centre. The list is arranged first by host and then by organism. An index of common names of hosts and of diseases gives access to the appropriate pages in the lists to the reader not familiar with all Latin binomials. A comprehensive index of all Latin binomials, including frequently used synonyms, is included.

RÉSUMÉ

Les auteurs ont dressé la liste de tous les champignons observés sur des pins par le personnel de la section du Relevé des insectes et des maladies des arbres (RIMA) du Centre de foresterie des Grands Lacs de 1967 à 1987. La liste est divisée par hôte et par agent. La publication renferme un index des noms communs des hôtes et des maladies, qui permet au lecteur non familier avec tous les noms latins de trouver les pages voulues, ainsi qu'un index compréhensif de tous les noms latins, y compris les synonymes fréquemment employés.

ACKNOWLEDGMENTS

The authors wish to acknowledge the assistance provided by the Forest Insect and Disease Survey (FIDS) field staff in the preparation of this report. It is only through their detection of tree diseases and submission of well documented samples that the information presented here is made possible. Special thanks go to FIDS rangers Mr. R. Sajan and Mr. B. Smith for assistance in assembling and organizing this information. The cooperation of staff of the Ontario Ministry of Natural Resources (OMNR) in submitting samples and alerting our field staff to problem locations is appreciated.

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INTRODUCTION

The information presented in this index of fungi on pines was obtained from the Forest Insect and Disease Survey (FIDS) data bank maintained at the Petawawa National Forestry Institute. This data bank contains detailed records of each tree disease collection made by FIDS staff since 1967. Information from GLFC extension sample records not contained in the data bank is included. Most of the samples in our extension records were collected by staff of the Ontario Ministry of Natural Resources (OMNR).

This index has been prepared so as to ensure that some, at least, of the information in our data bank is available to the forestry community at large. Additional indices will be prepared over the next several years to cover all tree species native to Ontario; some of the more widely planted exotics will also be included.

The text consists of two major divisions. In the first the hosts are arranged in alphabetical order by their Latin binomials. In the second, the organisms are arranged in a similar fashion. These divisions are followed by an alphabetical list of the common names of both the hosts and the diseases, with the corresponding Latin binomials. By consulting this list for names that may be more familiar, the reader will gain access to the binomials in the main body of the text. An index of all Latin binomials, including anomorphs and synonyms, has also been included.

Many of the fungi presented are not true pathogens but have been found on the hosts as saprophytes. Others are known to be either weakly or vigorously pathogenic. To simplify attempts to recognize the category to which a fungus belongs, we have assigned a number according to the following system, which is used in the annual FIDS reports:

DISEASE RATING

1. Capable of causing serious injury to or death of living trees.
 2. Capable of causing sporadic or local injury but not usually a threat to living trees.
 3. Of minor importance and not known to have caused serious damage to trees.
 4. Known as a saprophytic fungus.
- M. Mycorrhizal.

Our assignment of an organism to a specific category is based on our field observations and laboratory experience.

Geographic locations refer to the provincial administrative regions as presented in Figure 1. We have elected to use a suitable abbreviation in designating the regions, such as NE for the Northeastern Region. In the text, the number of collections from a region follows the abbreviation and is enclosed within parentheses. It should be noted that these are the regions from which the fungus was reported; the fungus was not necessarily more abundant there, nor was it necessarily absent from other regions.

Many of the fungi and the diseases they cause do not have common names. For these we have constructed a name using the fungal genus, the type of disease, or the host, whichever we deemed most appropriate and least confusing. We do not necessarily nominate these as official common names but use them only to facilitate the use of this host index.

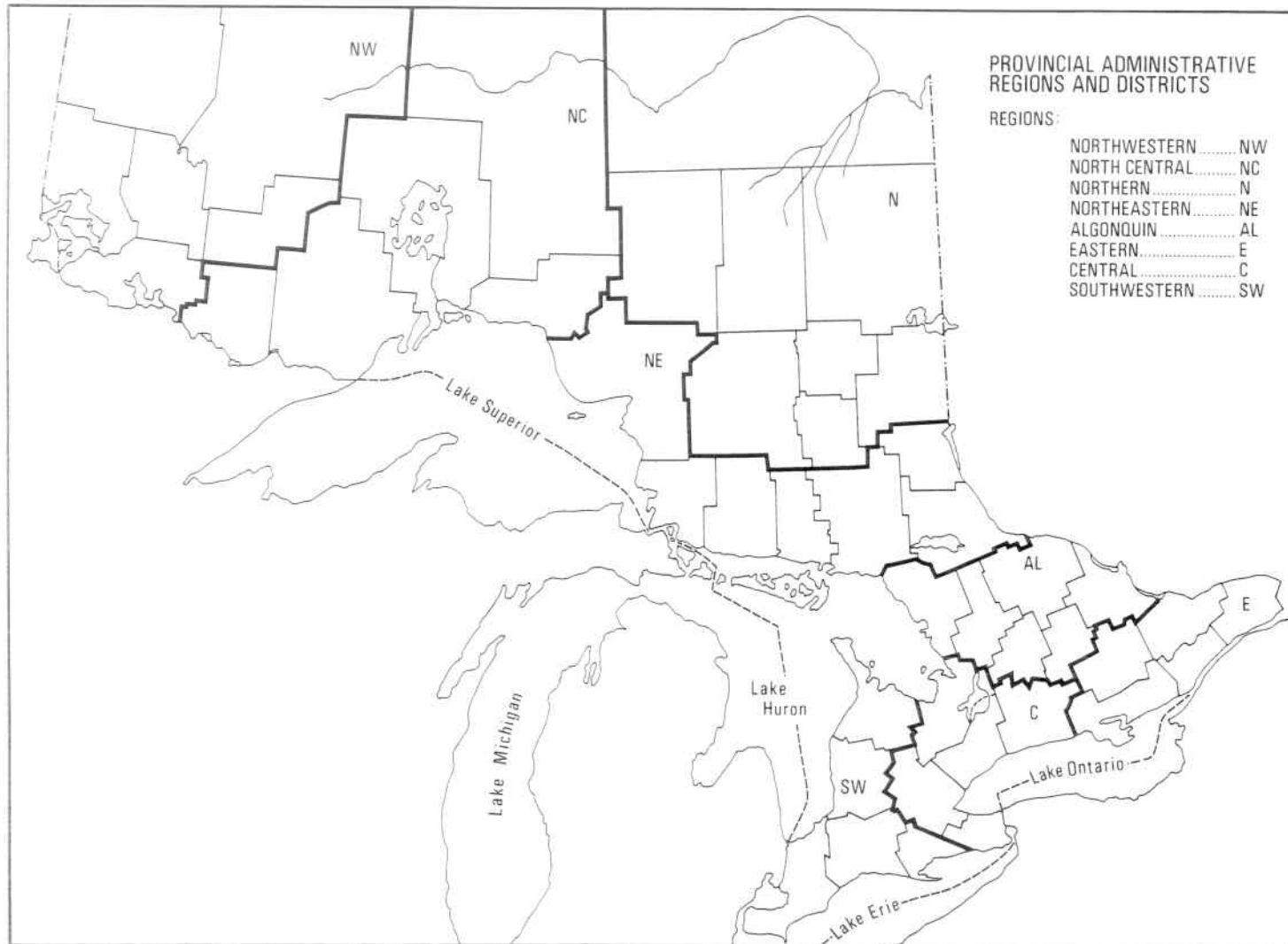


Figure 1. A map of the province of Ontario with the Ontario Ministry of Natural Resources provincial administrative regions bordered by darker lines and identified by the selected abbreviation.

HOST/FUNGUS LISTING

Pinus banksiana Lamb., jack pine

Arceuthobium americanum Nutt. ex Engel.¹: dwarf mistletoe

Disease Rating: 1

Loc.: NW (3)

Arceuthobium pusillum Peck²: eastern dwarf mistletoe

Disease Rating: 1

Loc.: NW (1), NC (2)

Armillaria mellea (Vahl:Fr.) Kummer³: armillaria root rot

Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten

Disease Rating: 1

Loc.: NW (54), NC (109), N (146), NE (54), AL (10), E (6), C (3)

Ascochyta abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Loc.: NW (49), NC (176), N (124), NE (70), AL (6)

Ascocoryne sarcoides (Jacq.:Fr.) J.W. Groves & D. Wilson: pink stain

Syn.: *Coryne sarcoides* (Jacq.:Fr.) Tul.

Disease Rating: 3

Loc.: NC (2), N (1), NE (2)

Ascochyta sp.: needle spot

Disease Rating: 5

Loc.: NC (1)

Biatorella resinae (Ehrenb.:Fr.) Mudd: resin cup fungus

Anamorph: *Zythia resinae* (Ehrenb.:Fr.) P. Karsten

Disease Rating: 4

Loc.: N (1), NE (1)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold

Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel

Anamorph: *Botrytis cinerea* Pers.:Fr.

Disease Rating: 1

Loc.: SW (1)

Camarosporium sp.: camarosporium canker

Disease Rating: 3

Loc.: N (1), NE (1)

1. *Arceuthobium americanum* and *A. pusillum* are parasitic phanerogams, not fungi.

2. *ibid.*

3. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

Pinus banksiana Lamb., jack pine

Capnodium sp.: sooty mold

Disease Rating: 3

Loc.: N (4), NE (2)

Cenangium acuum Cooke & Peck: twig blight

Disease Rating: 4

Loc.: NW (1), SW (1)

Cenangium atropurpureum Cash & Davidson: twig blight

Disease Rating: 3

Loc.: N (1), NE (1)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Loc.: NW (5), NC (6), N (6), NE (9), AL (6), C (1)

Cephalosporium sp.: cephalosporium wilt

Disease Rating: 4

Loc.: NW (1), NC (2), N (3), AL (1)

Ceratocystis sp.: blue stain

Disease Rating: 2

Loc.: NW (1), N (2), NE (1), AL (1)

Chaetomium sp.: chaetomium

Disease Rating: 4

Loc.: NW (1), NC (4), N (3), NE (2)

Chaetomium globosum Kunze:Fr.: olive-green mold

Disease Rating: 4

Loc.: NC (1)

Cladosporium sp.: needle spot

Disease Rating: 3

Loc.: NW (1), NC (1), SW (1)

Cladosporium variabile (Cooke) de Vries: needle blight

Disease Rating: 3

Loc.: SW (1)

Coleosporium sp.: pine needle rust

Disease Rating: 2

Loc.: NC (1)

Coleosporium asterum (Dietel) Sydow: pine needle rust

Syn.: *Coleosporium solidaginis* Thüm.

Disease Rating: 2

Loc.: NW (50), NC (51), N (88), NE (27), AL (2), E (12), C (6), SW (2)

***Pinus banksiana* Lamb., jack pine**

Coleosporium viburni Arthur: pine needle rust

Disease Rating: 2

Loc.: N (2)

Coniophora puteana (Schumacher:Fr.) P. Karsten: brown cubical rot

Disease Rating: 1

Loc.: N (1), NE (1)

Cronartium sp.: stem rust

Disease Rating: 1

Loc.: NW (10), NC (8), N (20), NE (4), AL (1)

Cronartium coleosporioides Arthur f. sp. *coleosporioides*: orange stalactiform blister rust

Disease Rating: 1

Loc.: NW (1), NC (12), N (5), NE (5)

Cronartium comandrae Peck: comandra blister rust

Disease Rating: 1

Loc.: NW (12), NC (8), N (3), E (1)

Cronartium comptoniae Arthur: sweet fern blister rust

Disease Rating: 1

Loc.: NW (25), NC (35), N (95), NE (46), AL (11), E (2), SW (1)

Cronartium quercuum (Berk.) Miyabe ex Shirai f. sp. *banksianae*: eastern gall rust

Disease Rating: 2

Loc.: NW (3), NC (2), N (4), NE (12), AL (1), SW (1)

Cryptoporus volvatus (Peck) Shear: trunk rot

Syn. *Polyporus volvatus* Peck

Disease Rating: 4

Loc.: E (2)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot

Disease Rating: 1

Loc.: NC (1)

Cytospora sp.: cytospora canker

Disease Rating: 3

Loc.: NC (1), N (3), NE (2)

Cytospora pini Desm.: cytospora canker

Disease Rating: 3

Loc.: NW (1), NC (2), N (2), NE (1)

Cytosporella sp.: shoot blight

Disease Rating: 3

Loc.: NC (1), NE (1)

Pinus banksiana Lamb., jack pine

Cytosporina sp.: twig canker

Disease Rating: 3

Loc.: NC (2), N (1)

Dasyscyphus sp.: dasyscyphus canker

Disease Rating: 3

Loc.: NC (2)

Dasyscyphus acuum (Alb. & Schwein.) Sacc.: needle dasyscyphus

Disease Rating: 4

Loc.: NC (1)

Davisomycella sp.: tar spot needle cast

Syn.: *Hypodermella* sp.

Disease Rating: 2

Loc.: NC (2), NE (1)

Davisomycella ampla (J. Davis) Darker: tar spot needle cast

Syn.: *Hypodermella ampla* (J. Davis) Dearn.

Disease Rating: 2

Loc.: NW (32), NC (58), N (97), NE (64), AL (37), E (4)

Dendrophoma sp.: dendrophoma

Disease Rating: 4

Loc.: NC (2)

Dichomitus squalens (P. Karsten) Reid: red ray rot

Syn.: *Polyporus anceps* Peck

Disease Rating: 2

Loc.: NC (1)

Elytroderma deformans (Weir) Darker: needle cast

Disease Rating: 2

Loc.: NW (1), N (1)

Endocronartium sp.: western gall rust

Disease Rating: 2

Loc.: NC (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust

Syn.: *Peridermium harknessii* J.P. Moore

Disease Rating: 2

Loc.: NW (184), NC (107), N (113), NE (54), AL (14), E (4), C (1), SW (1)

Fomitopsis pinicola (Swartz:Fr.) P. Karsten: brown crumbly rot

Syn.: *Fomes pinicola* (Swartz:Fr.) Cooke

Disease Rating: 3

Loc.: NW (1), NC (1), N (2), NE (1)

Pinus banksiana Lamb., jack pine

Gliocladium roseum (Link) Bainier: gliocladium stain

Disease Rating: 4

Loc.: NW (1), N (1)

Gloeophyllum odoratum (Fr.) Imaz.: brown cubical rot

Syn.: *Polyporus odoratus* Wolfen:Fr.

Syn.: *Trametes americana* Overh.

Disease Rating: 4

Loc.: AL (1)

Gloeophyllum sepiarium (Wulfen:Fr.) P. Karsten: brown cubical rot

Syn.: *Lenzites saepiaria* (Wulfen:Fr.) Fr.

Disease Rating: 2

Loc.: NE (1)

Hendersonia sp.: needle blight

Disease Rating: 3

Loc.: NW (1), N (4), NE (1), AL (3)

Hendersonia pinicola Wehm.: needle cast

Disease Rating: 3

Loc.: N (2), AL (1)

Heterobasidium annosum (Fr.) Bref.: fomes root rot

Syn.: *Fomes annosus* (Fr.) P. Karsten

Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers

Disease Rating: 1

Loc.: C (12), SW (2)

Hypodermella sp.: needle cast

Disease Rating: 3

Loc.: N (1)

Inonotus circinatus (Fr.) Gilbertson: circinatus root rot

Syn.: *Polyporus circinatus* Fr.

Disease Rating: 1

Loc.: N (1)

Junghuhnia collabens (Fr.) Ryv.: white pitted rot

Syn.: *Polyporus collabens* Fr.

Syn.: *Poria rixosa* (P. Karsten) P. Karsten

Disease Rating: 4

Loc.: NW (1)

Lachnellula sp.: lachnellula dieback

Disease Rating: 2

Loc.: NE (1)

***Pinus banksiana* Lamb., jack pine**

Lachnellula agassizii (Berk. & M.A. Curtis) Dennis: lachnellula dieback

Syn.: *Dasyscyphus agassizii* (Berk. & M.A. Curtis) Sacc.

Disease Rating: 3

Loc.: NC (2), N (1)

Lachnellula chrysophthalma (Pers.) P. Karsten: lachnellula dieback

Disease Rating: 3

Loc.: NC (1)

Leucostoma sp.: canker

Disease Rating: 3

Loc.: NW (1), NC (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Loc.: NW (8), NC (2), N (5), NE (1)

Lophodermella sp.: needle cast

Disease Rating: 3

Loc.: NE (2)

Lophodermella concolor (Dearn.) Darker: needle cast

Syn.: *Hypodermella concolor* (Dearn.) Darker

Disease Rating: 2

Loc.: NW (1), NC (1), N (1), NE (1), AL (2)

Lophodermium sp.: needle cast

Anamorph: *Leptostroma* sp.

Disease Rating: 2

Loc.: NW (5), NC (23), N (38), NE (15), AL (3), C (2), SW (2)

Lophodermium nitens Darker: needle cast

Disease Rating: 2

Loc.: NC (1), N (5), NE (1), E (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast

Disease Rating: 3

Loc.: NW (5), NC (8), N (23), NE (6), AL (2), E (1)

Oligoporus sericeomollis (Romell) Pouzar: brown cubical rot

Syn.: *Polyporus sericeomollis* Romell

Syn.: *Poria sericeomollis* (Romell) Egel.

Disease Rating: 4

Loc.: NW (1)

Pestalotia sp.: needle and shoot blight

Disease Rating: 4

Loc.: E (1)

Pinus banksiana Lamb., jack pine

Pezicula livida (Berk. & Broome) Rehm: pezicula dieback

Anamorph: *Cryptosporiopsis abietina* Petrak

Disease Rating: 4

Loc.: NW (1)

Phaeolus schweinitzii (Fr.) Pat.: brown cubical rot

Syn.: *Polyporus schweinitzii* Fr.

Disease Rating: 1

Loc.: NW (1)

Phellinus ferruginosus (Schrader:Fr.) Pat.: white spongy rot

Syn.: *Poria ferruginosa* (Schrader:Fr.) P. Karsten

Disease Rating: 4

Loc.: NW (1)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot

Syn.: *Fomes pini* (Thore:Fr.) P. Karsten

Disease Rating: 1

Loc.: NW (2), NC (2), NE (1)

Phellinus viticola (Schwein.) Donk: grape white rot

Syn.: *Fomes viticola* (Schwein.) Lowe

Disease Rating: 4

Loc.: NW (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight

Disease Rating: 3

Loc.: NW (1), NC (5), N (1), E (1)

Poria subacida (Peck) Sacc.: white stringy rot

Disease Rating: 1

Loc.: NW (1)

Retinocyclus sp.: retinocyclus dieback

Disease Rating: 3

Loc.: N (1)

Rhizina undulata Fr.: tea pot fungus

Syn.: *Rhizina inflata* P. Karsten

Disease Rating: 3

Loc.: NC (3)

Rosellinia sp.: felt blight

Disease Rating: 2

Loc.: NC (1)

Rosellinia thelena (Fr.) Rabenh.: pine bark rosellinia

Disease Rating: 4

Loc.: NC (1), N (1), NE (1)

***Pinus banksiana* Lamb., jack pine**

- Scolecconectria cucurbitula* (Tode:Fr.) C. Booth: canker & dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnelt
Disease Rating: 3
Loc.: NW (7), NC (26), N (20), NE (3), AL (2), E (1), C (1)
- Scytinostroma galactinum* (Fr.) Donk: yellow stringy rot
Syn.: *Corticium galactinum* (Fr.) Burt
Disease Rating: 2
Loc.: NW (1), NE (1)
- Sistotrema brinkmannii* (Bresad.) John Eriksson: white stringy rot
Syn.: *Trechispora brinkmannii* (Bresad.) Rogers and Jacks.
Disease Rating: 4
Loc.: NE (1)
- Sphaeropsis sapinea* (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: NC (1), AL (1), C (1)
- Sydowia polyspora* (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnelt
Disease Rating: 2
Loc.: N (1), NE (1), AL (1), E (1)
- Thelephora terrestris* Ehrh.:Fr.: smothering disease
Disease Rating: 4M
Loc.: N (1), SW (1)
- Therrya fuckelii* (Rehm) Kujala: therrya canker
Disease Rating: 3
Loc.: NW (1)
- Trichaptum abietinus* (Pers.:Fr.) Ryv.: pitted sap rot
Syn.: *Polyporus abietinus* Pers.:Fr.
Disease Rating: 4
Loc.: NW (2), NE (1)
- Tympanis* sp.: tympanis canker
Disease Rating: 3
Loc.: NW (2), NC (1), N (4), NE (2)
- Tympanis hypopodia* Nyl.: tympanis canker
Syn.: *Tympanis piceina* Groves
Disease Rating: 3
Loc.: N (4), NE (1)

Pinus banksiana Lamb., jack pine

Tympanis truncatula (Pers.:Fr.) Rehm: tympanis dieback

Syn.: *Tympanis pinastri* Tul.

Disease Rating: 3

Loc.: N (1)

Valsa sp.: cytospora canker

Disease Rating: 3

Loc.: NC (1), NE (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker

Disease Rating: 3

Loc.: NW (3), NC (2), N (9)

Wallrothiella arceuthobii (Peck) Sacc.: flower blight

Disease Rating: 2

Loc.: NW (2) (on *Arceuthobium americanum* Nutt. ex Engel.)

***Pinus contorta* Dougl., lodgepole pine**

Armillaria mellea (Vahl:Fr.) Kummer⁴: armillaria root rot

Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten

Disease Rating: 1

Loc.: NC (2)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Loc.: NC (5)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Loc.: NC (5)

Coleosporium asterum (Dietel) Sydow: pine needle rust

Syn.: *Coleosporium solidaginis* Thüm.

Disease Rating: 2

Loc.: NC (7)

Cronartium sp.: stem rust

Disease Rating: 1

Loc.: NC (5), N (1)

Cronartium comptoniae Arthur: sweet fern blister rust

Disease Rating: 1

Loc.: NC (4), N (2)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust

Syn.: *Peridermium harknessii* J.P. Moore

Disease Rating: 2

Loc.: NC (2), N (1)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum

Disease Rating: 3

Loc.: C (1)

Hormodendrum sp.: wood stain

Disease Rating: 4

Loc.: C (1)

Lachnellula chrysophthalma (Pers.) P. Karsten: lachnellula dieback

Disease Rating: 3

Loc.: NC (1)

4. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus contorta* Dougl., lodgepole pine**

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast

Disease Rating: 3

Loc.: SW (1)

Mycosphaerella pini Rostrup: red band disease

Syn.: *Scirrhia pini* Funk and Parker

Anamorph: *Dothistroma septospora* (Dorog.) Morelet var. *septospora*

Disease Rating: 2

Loc.: SW (1)

Pestalotia sp.: needle and shoot blight

Disease Rating: 4

Loc.: C (1)

Scolecnectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback

Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.

Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnelt

Disease Rating: 3

Loc.: NC (1)

***Pinus mugo* Turra var. *mughus* Zenari, mugho pine**

Armillaria mellea (Vahl:Fr.) Kummer⁵: armillaria root rot

Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten

Disease Rating: 1

Loc.: NC (1)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Loc.: E (1)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Loc.: C (1)

Cronartium comandrae Peck: comandra blister rust

Disease Rating: 1

Loc.: AL (1)

Cyclaneusma sp.: needle cast

Syn.: *Naemacyclus* sp.

Disease Rating: 2

Loc.: SW (2)

Cyclaneusma minus (Butin) DiCosmo, Peredo & Minter: needle cast

Syn.: *Naemacyclus minor* Butin

Disease Rating: 2

Loc.: SW (1)

Cyclaneusma niveum (Pers.:Fr.) DiCosmo, Peredo & Minter: needle cast

Syn.: *Naemacyclus niveus* (Pers.:Fr.) Fuckel ex Sacc.

Disease Rating: 3

Loc.: E (1), SW (1)

Cytospora pini Desm.: cytospora canker

Disease Rating: 3

Loc.: NE (1)

Cytospora sp.: shoot blight

Disease Rating: 3

Loc.: NW (1)

5. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus mugo* Turra var. *mughus* Zenari, mugho pine**

Mycosphaerella dearnessii Barr: brown spot needle blight

Syn.: *Scirrhia acicola* (Dearn.) Siggers

Anamorph: *Lecanosticta acicola* (Thüm.) H. Sydow

Disease Rating: 2

Loc.: AL (1), E (1), SW (5)

Pestalotia sp.

Disease Rating: 4

Loc.: C (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight

Disease Rating: 3

Loc.: C (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight

Anamorph: *Sclerophoma pythiophila* (Corda) Höhnelt

Disease Rating: 2

Loc.: NW (1), SW (2)

***Pinus nigra* Arnold, Austrian pine**

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Loc.: NE (2), AL (4), E (1)

Cenangium acuum Cooke & Peck: twig blight

Disease Rating: 4

Loc.: C (1)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Loc.: E (1), C (3)

Coniochaeta sp.: coniochaeta

Disease Rating: 4

Loc.: C (1)

Cytospora sp.: cytospora canker

Disease Rating: 3

Loc.: NE (1)

Cytospora pini Desm.: cytospora canker

Disease Rating: 3

Loc.: C (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust

Syn.: *Peridermium harknessii* J.P. Moore

Disease Rating: 2

Loc.: NW (1), SW (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Loc.: AL (1)

Lophodermium sp.: needle cast

Anamorph: *Leptostroma* sp.

Disease Rating: 2

Loc.: AL (1), E (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast

Disease Rating: 3

Loc.: AL (1), E (1), C (1)

***Pinus nigra* Arnold, Austrian pine**

Mycosphaerella dearnessii Barr: brown spot needle cast

Syn.: *Scirrhia acicola* (Dearn.) Siggers

Anamorph: *Lecanosticta acicola* (Thüm.) H. Sydow

Disease Rating: 2

Loc.: C (1), SW (2)

Mycosphaerella pini Rostrup: red band disease

Syn.: *Scirrhia pini* Funk & Parker

Anamorph: *Dothiostroma septospora* (Dorog.) Morelet var. *septospora*

Disease Rating: 2

Loc.: E (3), C (10), SW (5)

Pestalotia sp.: needle and shoot blight

Disease Rating: 4

Loc.: C (1), SW (1)

Septoria sp.: needle spot

Disease Rating: 3

Loc.: N (1), AL (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight

Syn.: *Diplodia pinea* (Desm.) Kickx

Disease Rating: 1

Loc.: AL (1), E (9), C (14), SW (11)

Tympanis confusa Nyl.: tympanis canker

Disease Rating: 3

Loc.: C (1)

Pinus ponderosa Laws., ponderosa pine

Cronartium sp.: stem rust

Disease Rating: 1

Loc.: NE (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Loc.: NE (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight

Syn.: *Diplodia pinea* (Desm.) Kickx

Disease Rating: 1

Loc.: C (1)

Pinus resinosa Ait., red pine

- Armillaria mellea* (Vahl:Fr.) Kummer⁶: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NW (16), NC (8), N (8), NE (40), AL (32), E (12), C (47),
SW (4)
- Ascocalyx abietina* (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt
Disease Rating: 1
Loc.: NW (14), NC (31), N (75), NE (105), AL (77), C (1)
- Ascocoryne sarcoides* (Jacq.:Fr.) J.W. Groves & D. Wilson: pink stain
Syn.: *Coryne sarcoides* (Jacq.:Fr.) Tul.
Disease Rating: 3
Loc.: AL (2), E (1)
- Botryotinia fuckeliana* (de Bary) Whetzel: gray mold
Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel
Anamorph: *Botrytis cinerea* Pers.:Fr.
Disease Rating: 1
Loc.: N (1), NE (3), C (1)
- Caliciopsis pinea* Peck: caliciopsis canker
Disease Rating: 3
Loc.: SW (1)
- Cenangium acuum* Cooke & Peck: twig blight
Disease Rating: 4
Loc.: NC (1), NE (1), C (1)
- Cenangium ferruginosum* Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: NW (4), NC (4), NE (1), AL (8), E (15), C (7), SW (2)
- Cephalosporium* sp.: cephalosporium wilt
Disease Rating: 4
Loc.: NW (1), AL (2), E (1), C (4)
- Ceratocystis* sp.: blue stain
Disease Rating: 2
Loc.: NE (1), C (1), SW (1)

6. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

Pinus resinosa Ait., red pine

Coccomyces strobilifer J. Reid & Cain: coccomyces canker

Disease Rating: 2

Loc.: NE (1), E (2)

Coleosporium asterum (Dietel) Sydow: pine needle rust

Syn.: *Coleosporium solidaginis* Thüm.

Disease Rating: 2

Loc.: NW (9), NC (1), NE (5), AL (33), E (43), C (38), SW (24)

Coltricia cinnamomea (Pers.) Murrill: shiny cinnamon polypore

Syn.: *Polyporus cinnamomeus* Pers.

Disease Rating: 4

Loc.: NE (1)

Coltricia perennis (Fr.) Murrill: perennis polypore

Syn.: *Polyporus perennis* L.:Fr.

Disease Rating: 4

Loc.: SW (1)

Coniochaeta sp.: coniochaeta

Disease Rating: 4

Loc.: NE (1)

Coriolus versicolor (L.:Fr.) Quélet: turkeytail

Syn.: *Polyporus versicolor* L.:Fr.

Disease Rating: 4

Loc.: SW (1)

Corticium sp.: white spongy rot

Disease Rating: 2

Loc.: AL (1)

Cryptoporus volvatus (Peck) Shear: trunk rot

Syn.: *Polyporus volvatus* Peck

Disease Rating: 4

Loc.: AL (2), E (4), C (1)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot

Disease Rating: 1

Loc.: E (1)

Cytospora sp.: cytospora canker

Disease Rating: 3

Loc.: NW (2), NC (1), N (3), NE (2), AL (3), E (5), C (1)

Cytospora pini Desm.: cytospora canker

Disease Rating: 3

Loc.: NE (1), AL (2)

***Pinus resinosa* Ait., red pine**

Cytospora sp.: shoot blight

Disease Rating: 3

Loc.: NC (1), N (1), E (1)

Cytosporina sp.: twig canker

Disease Rating: 3

Loc.: AL (4), SW (1)

Dermea sp.: dermea canker

Disease Rating: 3

Loc.: AL (1)

Dothiorella sp.: dothiorella canker and dieback

Disease Rating: 3

Loc.: NW (1)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum

Disease Rating: 3

Loc.: C (1)

Ganoderma tsugae Murrill: white spongy rot

Disease Rating: 2

Loc.: C (1)

Gelatinosporium sp.: stem canker

Disease Rating: 3

Loc.: NE (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot

Syn.: *Fomes annosus* (Fr.) P. Karsten

Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers

Disease Rating: 1

Loc.: E (17), C (27), SW (13)

Hormiscium sp.: hormiscium

Disease Rating: 4

Loc.: NW (2), NC (2), N (2), NE (7)

Hydnellum aurantiacum (Batsch:Fr.) P. Karsten: hydnellum

Syn.: *Hydnum aurantiacum* Alb. & Schwein.

Disease Rating: 4

Loc.: AL (1)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot

Syn.: *Polyporus tomentosus* Fr.

Disease Rating: 1

Loc.: SW (2)

***Pinus resinosa* Ait., red pine**

Leucostoma sp.: canker

Disease Rating: 3

Loc.: N (1), E (2)

Leucostoma kunzei (Fr.) Munk: cytospora canker

Anamorph: *Cytospora kunzei* Sacc.

Disease Rating: 2

Loc.: AL (1)

Lophium sp.: mussel shell fungus

Disease Rating: 4

Loc.: N (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Loc.: NW (3), NC (1), N (1), NE (3), AL (3)

Lophodermium sp.: needle cast

Anamorph: *Leptostroma* sp.

Disease Rating: 2

Loc.: NW (7), NC (4), N (6), NE (56), AL (26), E (20), C (10),
SW (2)

Lophodermium nitens Darker: needle cast

Disease Rating: 2

Loc.: NC (2), N (1), E (1), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast

Disease Rating: 3

Loc.: NW (9), NC (8), N (7), NE (16), AL (28), E (1), C (6),
SW (2)

Lophodermium seditiosum Minter, Staley & Millar: needle cast

Anamorph: *Leptostroma austriacum* Oud.

Anamorph: *Leptostroma rostrupii* Minter

Disease Rating: 1

Loc.: N (1), NE (2), E (5)

Nectria sp.: nectria canker

Disease Rating: 3

Loc.: NC (1)

Oligoporus guttulatus (Peck) Gilbertson & Ryv.: brown cubical rot

Syn.: *Polyporus guttulatus* (Peck)

Syn.: *Tyromyces guttulatus* (Peck) Murrill

Disease Rating: 4

Loc.: SW (1)

***Pinus resinosa* Ait., red pine**

Peniophora sp.: sap rot

Disease Rating: 4

Loc.: AL (1)

Pestalotia sp.: needle & shoot blight

Disease Rating: 4

Loc.: NW (2), N (1), C (3)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot

Syn.: *Fomes pini* (Thore:Fr.) P. Karsten

Disease Rating: 1

Loc.: NC (1), NE (2), C (1)

Phoma sp.: needle blight

Disease Rating: 3

Loc.: NW (6), NC (1), NE (2), E (1), C (1)

Phomopsis sp.: phomopsis canker

Disease Rating: 3

Loc.: NW (1), N (1), NE (2)

Rhizina undulata Fr.: tea pot fungus

Syn.: *Rhizina inflata* P. Karsten

Disease Rating: 3

Loc.: C (2)

Scolecnectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback

Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.

Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnelt

Disease Rating: 3

Loc.: NW (1), NC (6), N (4), NE (6), AL (9), E (9), C (2), SW (1)

Scytinostroma galactinum (Fr.) Donk: yellow stringy rot

Syn.: *Corticium galactinum* (Fr.) Burt

Disease Rating: 2

Loc.: AL (1)

Sirococcus conigenus (DC.) P. Cannon & Minter: shoot blight

Syn.: *Sirococcus strobilinus* Preuss

Disease Rating: 2

Loc.: NW (40), NC (20), N (5), NE (23), AL (2)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight

Syn.: *Diplodia pinea* (Desm.) Kickx

Disease Rating: 1

Loc.: NW (3), NC (2), NE (2), AL (4), E (7), C (8), SW (7)

Pinus resinosa Ait., red pine

Sporonema sp.: needle spot

Disease Rating: 4

Loc.: E (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight

Anamorph: *Sclerophoma pythiophila* (Corda) Höhnelt

Disease Rating: 2

Loc.: NW (1), N (3), NE (12), AL (4), E (5)

Thelephora terrestris Ehrh.:Fr.: smothering disease

Disease Rating: 4M

Loc.: AL (1), E (2)

Therrya fuckelii (Rehm) Kujala: therrya canker

Disease Rating: 3

Loc.: AL (1), E (4), C (4)

Trichaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot

Syn.: *Polyporus abietinus* Pers.:Fr.

Disease Rating: 4

Loc.: E (1), C (1)

Tympanis sp.: tympanis canker

Disease Rating: 3

Loc.: NW (1), NC (2), N (1), NE (2), AL (12), E (6), C (2)

Valsa sp.: cytospora canker

Disease Rating: 3

Loc.: NW (2), NE (2), AL (2), E (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker

Disease Rating: 3

Loc.: NW (3), NC (6), N (1), NE (6), AL (1), E (2)

Verticicladiella sp.: black root stain

Disease Rating: 1

Loc.: E (2)

Verticillium sp.: seedling root rot

Disease Rating: 3

Loc.: NE (1), C (1)

***Pinus strobus* L., eastern white pine**

Armillaria mellea (Vahl:Fr.) Kummer⁷: armillaria root rot

Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten

Disease Rating: 1

Loc.: NC (1), N (5), NE (9), AL (19), E (2), C (3), SW (4)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Loc.: NC (4), N (2), NE (7)

Biatorella resinae (Ehrenb.:Fr.) Mudd: resin cup fungus

Anamorph: *Zythia resinae* (Ehrenb.:Fr.) P. Karsten

Disease Rating: 4

Loc.: NE (1)

Bifusella sp.: needle cast

Disease Rating: 3

Loc.: AL (1)

Bifusella linearis (Peck) Höhnelt: needle cast

Syn.: *Hypoderma lineare* (Peck) Thüm.

Disease Rating: 3

Loc.: NE (2)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold

Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel

Anamorph: *Botrytis cinerea* Pers.:Fr.

Disease Rating: 1

Loc.: E (1)

Caliciopsis pinea Peck: caliciopsis canker

Disease Rating: 3

Loc.: C (1)

Camarosporium sp.: camarosporium canker

Disease Rating: 3

Loc.: NE (1)

Capnodium sp.: sooty mold

Disease Rating: 3

Loc.: AL (1), E (1), C (1)

7. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus strobus* L., eastern white pine**

Capnodium pini Berk. & M.A. Curtis: sooty mold

Disease Rating: 3

Loc.: E (1)

Cenangium acuum Cooke & Peck: twig blight

Disease Rating: 4

Loc.: NE (3), C (3), SW (1)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Loc.: NC (1), NE (1), E (1), C (2), SW (1)

Cephalosporium sp.: cephalosporium wilt

Disease Rating: 4

Loc.: E (2), SW (1)

Coccomyces strobi J. Reid & Cain: coccomyces canker

Disease Rating: 2

Loc.: NE (2), E (1), C (1), SW (3)

Cronartium ribicola J.C. Fischer: white pine blister rust

Disease Rating: 1

Loc.: NW (25), NC (22), N (29), NE (117), AL (53), E (36),
C (32), SW (25)

Cytospora sp.: cytospora canker

Disease Rating: 3

Loc.: NE (4), AL (1), E (2), C (2), SW (4)

Cytospora pini Desm.: cytospora canker

Disease Rating: 3

Loc.: NC (1), NE (4), AL (2), E (1), SW (3)

Cytosporina sp.: twig canker

Disease Rating: 3

Loc.: NE (1)

Dermea balsamea (Peck) Seaver: dermea twig canker

Syn.: *Gelatinosporium abietinum* Peck

Anamorph: *Foveostroma abietinum* (Peck) DiCosmo

Disease Rating: 3

Loc.: NE (4), AL (1)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum

Disease Rating: 3

Loc.: NE (4), AL (1), SW (1)

Pinus strobus L., eastern white pine

Fusicoccum sp.: needle blight

Disease Rating: 3

Loc.: SW (2)

Gelatinosporium sp.: stem canker

Disease Rating: 3

Loc.: NW (1), NE (1)

Gloeophyllum sepiarium (Wulfen:Fr.) P. Karsten: brown cubical rot

Syn.: *Lenzites saepiaria* (Wulfen:Fr.) Fr.

Disease Rating: 2

Loc.: E (1)

Hendersonia sp.: needle blight

Disease Rating: 3

Loc.: NE (1)

Hendersonia pinicola Wehm.: needle cast

Disease Rating: 3

Loc.: NE (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot

Syn.: *Fomes annosus* (Fr.) P. Karsten

Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers

Disease Rating: 1

Loc.: C (1), SW (7)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot

Syn.: *Polyporus tomentosus* Fr.

Disease Rating: 1

Loc.: AL (1)

Lachnellula agassizii (Berk. & M.A. Curtis) Dennis: lachnellula dieback

Syn.: *Dasyscyphus agassizii* (Berk. & M.A. Curtis) Sacc.

Disease Rating: 3

Loc.: NE (2)

Leucostoma kunzei (Fr.) Munk: cytospora canker

Anamorph: *Cytospora kunzei* Sacc.

Disease Rating: 2

Loc.: NC (1), NE (1), E (1), C (3), SW (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Loc.: NE (2), SW (1)

Pinus strobus L., eastern white pine

- Lophodermium* sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Loc.: NW (1), N (4), NE (5), AL (2), E (2), SW (1)
- Lophodermium nitens* Darker: needle cast
Disease Rating: 2
Loc.: NC (1), N (2), NE (1), SW (1)
- Lophodermium pinastri* (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: NC (1), NE (1), AL (1), E (1)
- Lophophacidium dooksii* Corlett & R. Shoem.: needle blight
Disease Rating: 2
Loc.: NW (1), NE (12), AL (1), C (1)
- Meloderma desmazierii* (Duby) Darker: needle cast
Syn.: *Hypoderma desmazierii* Duby
Anamorph: *Leptostroma strobicola* Hilitz.
Disease Rating: 3
Loc.: NC (1), N (1), AL (2)
- Nectria* sp.: nectria canker
Disease Rating: 3
Loc.: E (1)
- Phaeolus schweinitzii* (Fr.) Pat.: brown cubical rot
Syn.: *Polyporus schweinitzii* Fr.
Disease Rating: 1
Loc.: AL (1), C (2), SW (2)
- Potebniamyces coniferarum* (Hahn) Smerlis: needle blight
Anamorph: *Phacidiopycnis pseudotsugae* (M. Wilson) Hahn
Disease Rating: 3
Loc.: NE (1), E (1), SW (2)
- Retinocyclus abietis* (Crouan) Groves & Wells: leader dieback
Disease Rating: 3
Loc.: AL (1)
- Rhizina undulata* Fr.: tea pot fungus
Syn.: *Rhizina inflata* P. Karsten
Disease Rating: 3
Loc.: C (3)

Pinus strobus L., eastern white pine

Scolecconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback

Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.

Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel

Disease Rating: 3

Loc.: NW (6), NC (6), N (14), NE (5), AL (11), E (2), C (11),
SW (2)

Scytinostroma galactinum (Fr.) Donk: white stringy rot

Syn.: *Corticium galactinum* (Fr.) Burt

Disease Rating: 2

Loc.: NE (1)

Sirococcus conigenus (DC.) P. Cannon & Minter: shoot blight

Syn.: *Sirococcus strobilinus* Preuss

Disease Rating: 2

Loc.: NW (2)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight

Syn.: *Diplodia pinea* (Desm.) Kickx

Disease Rating: 1

Loc.: E (1), SW (1)

Stagonospora sp.: needle spot

Disease Rating: 3

Loc.: NE (2)

Stereum sp.: stem decay

Disease Rating: 2

Loc.: NE (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight

Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel

Disease Rating: 2

Loc.: NE (1), AL (1), E (3), C (3), SW (1)

Tympanis sp.: tympanis canker

Disease Rating: 3

Loc.: NE (3), C (1), SW (2)

Tympanis hypopodia Nyl.: tympanis canker

Syn.: *Tympanis piceina* Groves

Disease Rating: 3

Loc.: N (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker

Disease Rating: 3

Loc.: NC (1), N (2), AL (1), C (1)

Pinus strobus L., eastern white pine

Verticicladiella sp.: black root stain

Disease Rating: 1

Loc.: AL (1)

Verticicladiella procera Kendr.: black root stain

Disease Rating: 1

Loc.: NE (1), E (1)

Pinus sylvestris L., Scots pine

Armillaria mellea (Vahl.:Fr.) Kummer⁸: armillaria root rot

Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten

Disease Rating: 1

Loc.: NW (1), NE (5), E (3), C (4)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Loc.: N (5), NE (6), AL (4), E (1)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold

Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel

Anamorph: *Botrytis cinerea* Pers.:Fr.

Disease Rating: 1

Loc.: C (4), SW (2)

Capnodium sp.: sooty mold

Disease Rating: 3

Loc.: AL (1), E (3)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Loc.: NC (1), N (1), NE (2), AL (7), E (3), C (30), SW (3)

Ceratocystis sp.: blue stain

Disease Rating: 2

Loc.: NE (1)

Climacocystis borealis (Fr.) Kotl. & Pouzar: white mottled rot

Syn.: *Polyporus borealis* Fr.

Syn.: *Tyromyces borealis* (Fr.) Imaz.

Disease Rating: 2

Loc.: C (1)

Coleosporium asterum (Dietel) Sydow: pine needle rust

Syn.: *Coleosporium solidaginis* Thüm.

Disease Rating: 2

Loc.: E (1)

Cronartium sp.: stem rust

Disease Rating: 1

Loc.: E (1), C (2)

8. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

Pinus sylvestris L., Scots pine

- Cronartium coleosporioides* Arthur f. sp. *coleosporioides*: orange stalactiform blister rust
Disease Rating: 1
Loc.: NE (1)
- Cronartium comandrae* Peck: comandra blister rust
Disease Rating: 1
Loc.: NC (1)
- Cronartium comptoniae* Arthur: sweet fern blister rust
Disease Rating: 1
Loc.: NE (1)
- Cronartium quercuum* (Berk.) Miyabe ex Shirai f. sp. *banksianae*: eastern gall rust
Disease Rating: 2
Loc.: NW (2), NE (3), AL (1), E (2), SW (7)
- Cyclaneusma* sp.: needle cast
Syn.: *Naemacyclus* sp.
Disease Rating: 2
Loc.: NE (4), AL (1), E (1), C (4)
- Cyclaneusma minus* (Butin) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus minor* Butin
Disease Rating: 2
Loc.: NE (1), AL (1), E (1), C (2)
- Cyclaneusma niveum* (Pers.:Fr.) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus niveus* (Pers.:Fr.) Fuckel ex Sacc.
Disease Rating: 3
Loc.: NE (1), AL (2), C (3)
- Cylindrocladium floridanum* Sob. & C.P. Seym.: cylindrocladium root rot
Disease Rating: 1
Loc.: E (1)
- Cytospora* sp.: cytospora canker
Disease Rating: 3
Loc.: NE (1)
- Dermea balsamea* (Peck) Seaver: dermea twig canker
Syn.: *Gelatinosporium abietinum* Peck
Anamorph: *Foveostroma abietinum* (Peck) DiCosmo
Disease Rating: 3
Loc.: NE (1)
- Endocronartium harknessii* (J.P. Moore) Y. Hirats.: western gall rust
Syn.: *Peridermium harknessii* J.P. Moore
Disease Rating: 2
Loc.: NW (1), N (1), NE (17), AL (10), E (8), C (10), SW (6)

Pinus sylvestris L., Scots pine

Haematostereum sanguinolentum (Alb. & Schwein.:Fr.) Pouzar: red heart rot

Syn.: *Stereum sanguinolentum* (Alb. & Schwein.:Fr.) Fr.

Disease Rating: 2

Loc.: E (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot

Syn.: *Fomes annosus* (Fr.) P. Karsten

Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers

Disease Rating: 1

Loc.: C (1), SW (4)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot

Syn.: *Polyporus tomentosus* Fr.

Disease Rating: 1

Loc.: SW (1)

Leucostoma sp.: canker

Disease Rating: 3

Loc.: NW (1)

Leucostoma kunzei (Fr.) Munk: cytospora canker

Anamorph: *Cytospora kunzei* Sacc.

Disease Rating: 2

Loc.: NW (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Loc.: NE (1), C (1)

Lophodermium sp.: needle cast

Anamorph: *Leptostroma* sp.

Disease Rating: 2

Loc.: AL (2), E (2), C (3), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast

Disease Rating: 3

Loc.: NC (1), NE (1), C (3)

Paxillus atrotomentosus (Batsch:Fr.) Fr.: velvet-footed paxillus

Disease Rating: 4

Loc.: AL (1)

Pestalotia sp.: needle and shoot blight

Disease Rating: 4

Loc.: E (1), C (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight

Disease Rating: 3

Loc.: SW (1)

Pinus sylvestris L., Scots pine

Sclerophoma sp.: sclerophoma dieback

Disease Rating: 3

Loc.: E (1)

Scoleconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback

Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.

Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel

Disease Rating: 3

Loc.: NW (2), NC (1), N (4), NE (1), E (1), C (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight

Syn.: *Diplodia pinea* (Desm.) Kickx

Disease Rating: 1

Loc.: NE (1), AL (3), E (7), C (46), SW (8)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight

Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel

Disease Rating: 2

Loc.: NW (1), AL (2), E (3), C (2)

Telephora terrestris Ehrh.:Fr.: smothering disease

Disease Rating: 4M

Loc.: AL (1)

Therrya fuckelii (Rehm) Kujala: therrya canker

Disease Rating: 3

Loc.: AL (1)

Tricaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot

Syn.: *Polyporus abietinus* Pers.:Fr.

Disease Rating: 4

Loc.: C (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker

Disease Rating: 3

Loc.: NW (1), NC (2), NE (1), AL (1)

FUNGUS/HOST LISTING

Arceuthobium americanum Nutt. ex Engel.⁹: dwarf mistletoe

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc: NW (3)

Arceuthobium pusillum Peck⁹: eastern dwarf mistletoe

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (2)

Armillaria mellea (Vahl:Fr.) Kummer¹⁰: armillaria root rot

Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW(54), NC (109), N (146), NE (54), AL (10), E (6), C (3)

Host: *Pinus contorta* Dougl.

Loc.: NC (2)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: NC (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (16), NC (8), N (8), NE (40), AL (32), E (12), C (47)
SW (4)

Host: *Pinus strobus* L.

Loc.: NC (1), N (5), NE (9), AL (19), E (2), C (3), SW (4)

Host: *Pinus sylvestris* L.

Loc.: NW (1), NE (5), E (3), C (4)

Armillaria ponderosa (Peck) Sacc.: white matsutake root rot

Disease Rating: 3M

Host: *Pinus banksiana* Lamb.

Loc.: NE (1)

Ascochyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker

Syn.: *Gremmeniella abietina* (Lagerb.) Morelet

Syn.: *Scleroderris lagerbergii* Gremmen

Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnelt

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (49), NC (176), N (124), NE (70), AL (6)

Host: *Pinus contorta* Dougl.

Loc.: NC (5)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: E (1)

Host: *Pinus nigra* Arnold

Loc.: NE (2), AL (4), E (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (14), NC (31), N (75), NE (105), AL (77), C (1)

Host: *Pinus strobus* L.

Loc.: NC (4), N (2), NE (7)

Host: *Pinus sylvestris* L.

Loc.: N (5), NE (6), AL (4), E (1)

9. *Arceuthobium americanum* and *A. pusillum* are parasitic phanerogams, not fungi.

10. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.).

Ascocoryne sarcoides (Jacq.:Fr.) J.W. Groves & D. Wilson: pink stain

Syn.: *Coryne sarcoides* (Jacq.:Fr.) Tul.

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (2), N (1), NE (2)

Host: *Pinus resinosa* Ait.

Loc.: AL (2), E (1)

Ascochyta sp.: needle spot

Disease Rating: 5

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Biatorella resinae (Ehrenb.:Fr.) Mudd: resin cup fungus

Anamorph: *Zythia resinae* (Ehrenb.:Fr.) P. Karsten

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: N (1), NE (1)

Host: *Pinus strobus* L.

Loc.: NE (1)

Bifusella sp.: needle cast

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: AL (1)

Bifusella linearis (Peck) Höhnelt: needle cast

Syn.: *Hypoderma lineare* (Peck) Thüm.

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: NE (2)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold

Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel

Anamorph: *Botrytis cinerea* Pers.:Fr.

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: SW (1)

Host: *Pinus resinosa* Ait.

Loc.: N (1), NE (3), C (1)

Host: *Pinus strobus* L.

Loc.: E (1)

Host: *Pinus sylvestris* L.

Loc.: C (4), SW (2)

Caliciopsis pinea Peck: caliciopsis canker

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: SW (1)

Host: *Pinus strobus* L.

Loc.: C (1)

Camarosporium sp.: camarosporium canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (1), NE (1)

Host: *Pinus strobus* L.

Loc.: NE (1)

Capnodium sp.: sooty mold

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (4), NE (2)

Host: *Pinus strobus* L.

Loc.: AL (1), E (1), C (1)

Host: *Pinus sylvestris* L.

Loc.: AL (1), E (3)

Capnodium pini Berk. & M.A. Curtis: sooty mold

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: E (1)

Cenangium acuum Cooke & Peck: twig blight

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), SW (1)

Host: *Pinus nigra* Arnold

Loc.: C (1)

Host: *Pinus resinosa* Ait.

Loc.: NC (1), NE (1), C (1)

Host: *Pinus strobus* L.

Loc.: NE (3), C (3), SW (1)

Cenangium atropurpureum Cash & Davidson: twig blight

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (1), NE (1)

Cenangium ferruginosum Fr.:Fr.: twig blight

Syn.: *Cenangium abietis* (Pers.) Rehm

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (5), NC (6), N (6), NE (9), AL (6), C (1)

Host: *Pinus contorta* Dougl.

Loc.: NC (5)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: C (1)

Host: *Pinus nigra* Arnold

Loc.: E (1), C (3)

Host: *Pinus resinosa* Ait.

Loc.: NW (4), NC (4), NE (1), AL (8), E (15), C (7), SW (2)

Host: *Pinus strobus* L.

Loc.: NC (1), NE (1), E (1), C (2), SW (1)

(cont'd)

Cenangium ferruginosum Fr.:Fr.: twig blight (concl.)

Host: *Pinus sylvestris* L.

Loc.: NC (1), N (1), NE (2), AL (7), E (3), C (30), SW (3)

Cephalosporium sp.: cephalosporium wilt

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (2), N (3), AL (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (1), AL (2), E (1), C (4)

Host: *Pinus strobus* L.

Loc.: E (2), SW (1)

Ceratocystis sp.: blue stain

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), N (2), NE (1), AL (1)

Host: *Pinus resinosa* Ait.

Loc.: NE (1), C (1), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NE (1)

Chaetomium sp.: chaetomium

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (4), N (3), NE (2)

Chaetomium globosum Kunze:Fr.: olive-green mold

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Cladosporium sp.: needle spot

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (1), SW (1)

Cladosporium variabile (Cooke) de Vries: needle blight

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: SW (1)

Climacocystis borealis (Fr.) Kotl. & Pouzar: white mottled rot

Syn.: *Polyporus borealis* Fr.

Syn.: *Tyromyces borealis* (Fr.) Imaz.

Disease Rating: 2

Host: *Pinus sylvestris* L.

Loc.: C (1)

- Coccomyces strobil* J. Reid & Cain: coccomyces canker
Disease Rating: 2
Host: *Pinus resinosa* Ait.
Loc.: NE (1), E (2)
Host: *Pinus strobus* L.
Loc.: NE (2), E (1), C (1), SW (3)
- Coleosporium* sp.: pine needle rust
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)
- Coleosporium asterum* (Dietel) Sydow: pine needle rust
Syn.: *Coleosporium solidaginis* Thüm.
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (50), NC (51), N (88), NE (27), AL (2), E (12), C (6),
SW (2)
Host: *Pinus contorta* Dougl.
Loc.: NC (7)
Host: *Pinus resinosa* Ait.
Loc.: NW (9), NC (1), NE (5), AL (33), E (43), C (38), SW (24)
Host: *Pinus sylvestris* L.
Loc.: E (1)
- Coleosporium viburni* Arthur: pine needle rust
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: N (2)
- Coltricia cinnamomea* (Pers.) Murrill: shiny cinnamon polypore
Syn.: *Polyporus cinnamomeus* Pers.
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: NE (1)
- Coltricia perennis* (Fr.) Murrill: perennis polypore
Syn.: *Polyporus perennis* L.:Fr.
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: SW (1)
- Coniochaeta* sp.: coniochaeta
Disease Rating: 4
Host: *Pinus nigra* Arnold
Loc.: C (1)
Pinus resinosa Ait.
Loc.: NE (1)
- Coniophora puteana* (Schumacher:Fr.) P. Karsten: brown cubical rot
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: N (1), NE (1)

Coriolum versicolor (L.:Fr.) Quélet: turkeytail

Syn.: *Polyporus versicolor* L.:Fr.

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: SW (1)

Corticium sp.: white spongy rot

Disease Rating: 2

Host: *Pinus resinosa* Ait.

Loc.: AL (1)

Cronartium sp.: stem rust

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (10), NC (8), N (20), NE (4), AL (1)

Host: *Pinus contorta* Dougl.

Loc.: NC (5), N (1)

Host: *Pinus ponderosa* Laws.

Loc.: NE (1)

Host: *Pinus sylvestris* L.

Loc.: E (1), C (2)

Cronartium coleosporioides Arthur f. sp. *coleosporioides*: orange stalactiform blister rust

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (12), N (5), NE (5)

Host: *Pinus sylvestris* L.

Loc.: NE (1)

Cronartium comandrae Peck: comandra blister rust

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (12), NC (8), N (3), E (1)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: AL (1)

Host: *Pinus sylvestris* L.

Loc.: NC (1)

Cronartium comptoniae Arthur: sweet fern blister rust

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (25), NC (35), N (95), NE (46), AL (11), E (2), SW (1)

Host: *Pinus contorta* Dougl.

Loc.: NC (4), N (2)

Host: *Pinus sylvestris* L.

Loc.: NE (1)

Cronartium quercuum (Berk.) Miyabe ex Shirai f. sp. *banksianae*: eastern gall rust

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (3), NC (2), N (4), NE (12), AL (1), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NW (2), NE (3), AL (1), E (2), SW (7)

Cronartium ribicola J.C. Fischer: white pine blister rust

Disease Rating: 1

Host: *Pinus strobus* L.

Loc.: NW (25), NC (22), N (29), NE (117), AL (53), E (36),
C (32), SW (25)

Cryptoporus volvatus (Peck) Hubbard: trunk rot

Syn.: *Polyporus volvatus* Peck

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: E (2)

Host: *Pinus resinosa* Ait.

Loc.: AL (2), E (4), C (1)

Cyclaneusma sp.: needle cast

Syn.: *Naemacyclus* sp.

Disease Rating: 2

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: SW (2)

Host: *Pinus sylvestris* L.

Loc.: NE (4), AL (1), E (1), C (4)

Cyclaneusma minus (Butin) DiCosmo, Peredo & Minter: needle cast

Syn.: *Naemacyclus minor* Butin

Disease Rating: 2

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: SW (1)

Host: *Pinus sylvestris* L.

Loc.: NE (1), AL (1), E (1), C (2)

Cyclaneusma niveum (Pers.:Fr.) DiCosmo, Peredo & Minter: needle cast

Syn.: *Naemacyclus niveus* (Pers.:Fr.) Fuckel ex Sacc.

Disease Rating: 3

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: E (1), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NE (1), AL (2), C (3)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Host: *Pinus resinosa* Ait.

Loc.: E (1)

Host: *Pinus sylvestris* L.

Loc.: E (1)

Cytospora sp.: cytospora canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (1), N (3), NE (2)

(cont'd)

Cytospora sp.: cytospora canker (concl.)

Host: *Pinus nigra* Arnold

Loc.: NE (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (2), NC (1), N (3), NE (2), AL (3), E (5), C (1)

Host: *Pinus strobus* L.

Loc.: NE (4), AL (1), E (2), C (2), SW (4)

Host: *Pinus sylvestris* L.

Loc.: NE (1)

Cytospora pini Desm.: cytospora canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (2), N (2), NE (1)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: NE (1)

Host: *Pinus nigra* Arnold

Loc.: C (1)

Host: *Pinus resinosa* Ait.

Loc.: NE (1), AL (2)

Host: *Pinus strobus* L.

Loc.: NC (1), NE (4), AL (2), E (1), SW (3)

Cytospora sp.: shoot blight

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (1), NE (1)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: NW (1)

Host: *Pinus resinosa* Ait.

Loc.: NC (1), N (1), E (1)

Cytosporina sp.: twig canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (2), N (1)

Pinus resinosa Ait.

Loc.: AL (4), SW (1)

Pinus strobus L.

Loc.: NE (1)

Dasyscyphus sp.: dasyscyphus canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (2)

Dasyscyphus acuum (Alb. & Schwein.) Sacc.: needle dasyscyphus

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Davisomycella sp.: tar spot needle cast

Syn.: *Hypodermella* sp.

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NC (2), NE (1)

Davisomycella ampla (J. Davis) Darker: tar spot needle cast

Syn.: *Hypodermella ampla* (J. Davis) Dearn.

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (32), NC (58), N (97), NE (64), AL (37), E (4)

Dendrophoma sp.: dendrophoma

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NC (2)

Dermea sp.: dermea canker

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: AL (1)

Dermea balsamea (Peck) Seaver: dermea twig canker

Syn.: *Gelatinosporium abietinum* Peck

Anamorph: *Foveostroma abietinum* (Peck) DiCosmo

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: NE (4), AL (1)

Host: *Pinus sylvestris* L.

Loc.: NE (1)

Dichomitus squalens (P. Karsten) Reid: red ray rot

Syn.: *Polyporus anceps* Peck

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Dothiorella sp.: dothiorella canker and dieback

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: NW (1)

Elytroderma deformans (Weir) Darker: needle cast

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), N (1)

Endocronartium sp.: western gall rust

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust

Syn.: *Peridermium harknessii* J.P. Moore

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (184), NC (107), N (113), NE (54), AL (14), E (4),
C (1), SW (1)

Host: *Pinus contorta* Dougl.

Loc.: NC (2), N (1)

Host: *Pinus nigra* Arnold

Loc.: NW (1), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NW (1), N (1), NE (17), AL (10), E (8), C (10), SW (6)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum

Disease Rating: 3

Host: *Pinus contorta* Dougl.

Loc.: C (1)

Host: *Pinus resinosa* Ait.

Loc.: C (1)

Host: *Pinus strobus* L.

Loc.: NE (4), AL (1), SW (1)

Fomitopsis pinicola (Swartz:Fr.) P. Karsten: brown crumbly rot

Syn.: *Fomes pinicola* (Swartz:Fr.) Cooke

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (1), N (2), NE (1)

Fusicoccum sp.: needle blight

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: SW (2)

Ganoderma tsugae Murrill: white spongy rot

Disease Rating: 2

Host: *Pinus resinosa* Ait.

Loc.: C (1)

Gelatinosporium sp.: stem canker

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: NE (1)

Host: *Pinus strobus* L.

Loc.: NW (1), NE (1)

Gliocladium roseum (Link) Bainier: gliocladium stain

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), N (1)

Gloeophyllum odoratum (Fr.) Imaz.: brown cubical rot

Syn.: *Polyporus odoratus* Wolfen:Fr.

Syn.: *Trametes americana* Overh.

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: AL (1)

Gloeophyllum sepiarium (Wulfen:Fr.) P. Karsten: brown cubical rot

Syn.: *Lenzites saepiaria* (Wulfen:Fr.) Fr.

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NE (1)

Host: *Pinus strobus* L.

Loc.: E (1)

Haematostereum sanguinolentum (Alb. & Schwein.:Fr.) Pouzar: red heart rot

Syn.: *Stereum sanguinolentum* (Alb. & Schwein.:Fr.) Fr.

Disease Rating: 2

Host: *Pinus sylvestris* L.

Loc.: E (1)

Hendersonia sp.: needle blight

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), N (4), NE (1), AL (3)

Host: *Pinus strobus* L.

Loc.: NE (1)

Hendersonia pinicola Wehm.: needle cast

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (2), AL (1)

Host: *Pinus strobus* L.

Loc.: NE (1)

Heterobasidium annosum (Fr.) Bref.: fomes root rot

Syn.: *Fomes annosus* (Fr.) P. Karsten

Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: C (12), SW (2)

Host: *Pinus resinosa* Ait.

Loc.: E (17), C (27), SW (13)

Host: *Pinus strobus* L.

Loc.: C (1), SW (7)

Host: *Pinus sylvestris* L.

Loc.: C (1), SW (4)

Hormiscium sp.: hormiscium

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: NW (2), NC (2), N (2), NE (7)

Hormodendrum sp.: wood stain

Disease Rating: 4

Host: *Pinus contorta* Dougl.

Loc.: C (1)

Hydnellum aurantiacum (Batsch:Fr.) P. Karsten: hydnellum

Syn.: *Hydnum aurantiacum* Alb. & Schwein.

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: AL (1)

Hypodermella sp.: needle cast

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (1)

Inonotus circinatus (Fr.) Gilbertson: circinatus root rot

Syn.: *Polyporus circinatus* Fr.

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: N (1)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot

Syn.: *Polyporus tomentosus* Fr.

Disease Rating: 1

Host: *Pinus resinosa* Ait.

Loc.: SW (2)

Host: *Pinus strobus* L.

Loc.: AL (1)

Host: *Pinus sylvestris* L.

Loc.: SW (1)

Junghuhnia collabens (Fr.) Ryv.: white pitted rot

Syn.: *Polyporus collabens* Fr.

Syn.: *Poria rixosa* (P. Karsten) P. Karsten

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Lachnellula sp.: lachnellula dieback

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NE (1)

Lachnellula agassizii (Berk. & M.A. Curtis) Dennis: lachnellula dieback

Syn.: *Dasyscyphus agassizii* (Berk. & M.A. Curtis) Sacc.

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (2), N (1)

Host: *Pinus strobus* L.

Loc.: NE (2)

Lachnellula chrysophthalma (Pers.) P. Karsten: lachnellula dieback

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Host: *Pinus contorta* Dougl.

Loc.: NC (1)

Leucostoma sp.: canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (1)

Host: *Pinus resinosa* Ait.

Loc.: N (1), E (2)

Host: *Pinus sylvestris* L.

Loc.: NW (1)

Leucostoma kunzei (Fr.) Munk: cytospora canker

Anamorph: *Cytospora kunzei* Sacc.

Disease Rating: 2

Host: *Pinus resinosa* Ait.

Loc.: AL (1)

Host: *Pinus strobus* L.

Loc.: NC (1), NE (1), E (1), C (3), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NW (1)

Lophium sp.: mussel shell fungus

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: N (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (8), NC (2), N (5), NE (1)

Host: *Pinus nigra* Arnold

Loc.: AL (1)

Host: *Pinus ponderosa* Laws.

Loc.: NE (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (3), NC (1), N (1), NE (3), AL (3)

Host: *Pinus strobus* L.

Loc.: NE (2), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NE (1), C (1)

Lophodermella sp.: needle cast

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NE (2)

Lophodermella concolor (Dearn.) Darker: needle cast

Syn.: *Hypodermella concolor* (Dearn.) Darker

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (1), N (1), NE (1), AL (2)

Lophodermium sp.: needle cast

Anamorph: *Leptostroma* sp.

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (5), NC (23), N (38), NE (15), AL (3), C (2), SW (2)

Host: *Pinus nigra* Arnold

Loc.: AL (1), E (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (7), NC (4), N (6), NE (56), AL (26), E (20), C (10), SW (2)

Host: *Pinus strobus* L.

Loc.: NW (1), N (4), NE (5), AL (2), E (2), SW (1)

Host: *Pinus sylvestris* L.

Loc.: AL (2), E (2), C (3), SW (1)

Lophodermium nitens Darker: needle cast

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NC (1), N (5), NE (1), E (1)

Host: *Pinus resinosa* Ait.

Loc.: NC (2), N (1), E (1), SW (1)

Host: *Pinus strobus* L.

Loc.: NC (1), N (2), NE (1), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (5), NC (8), N (23), NE (6), AL (2), E (1)

Host: *Pinus contorta* Dougl.

Loc.: SW (1)

Host: *Pinus nigra* Arnold

Loc.: AL (1), E (1), C (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (9), NC (8), N (7), NE (16), AL (28), E (1), C (6), SW (2)

Host: *Pinus strobus* L.

Loc.: NC (1), NE (1), AL (1), E (1)

Host: *Pinus sylvestris* L.

Loc.: NC (1), NE (1), C (3)

Lophodermium seditiosum Minter, Staley & Millar: needle cast

Anamorph: *Leptostroma austriacum* Oud.

Anamorph: *Leptostroma rostrupii* Minter

Disease Rating: 1

Host: *Pinus resinosa* Ait.

Loc.: N (1), NE (2), E (5)

Lophophacidium dooksii Corlett & R. Shoem.: needle blight

Disease Rating: 2

Host: *Pinus strobus* L.

Loc.: NW (1), NE (12), AL (1), C (1)

Meloderma desmazierii (Duby) Darker: needle cast

Syn.: *Hypoderma desmazierii* Duby

Anamorph: *Leptostroma strobicola* Hilitz.

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: NC (1), N (1), AL (2)

Mycosphaerella dearnessii Barr: brown spot needle blight

Syn.: *Scirrhia acicola* (Dearn.) Siggers

Anamorph: *Lecanosticta acicola* (Thüm.) H. Sydow

Disease Rating: 2

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: AL (1), E (1), SW (5)

Host: *Pinus nigra* Arnold

Loc.: C (1), SW (2)

Mycosphaerella pini Rostrup: red band disease

Syn.: *Scirrhia pini* Funk & Parker

Anamorph: *Dothiostroma septospora* (Dorog.) Morelet var. *septospora*

Disease Rating: 2

Host: *Pinus contorta* Dougl.

Loc.: SW (1)

Host: *Pinus nigra* Arnold

Loc.: E (3), C (10), SW (5)

Nectria sp.: nectria canker

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: NC (1)

Host: *Pinus strobus* L.

Loc.: E (1)

Oligoporus guttulatus (Peck) Gilbertson & Ryv.: brown cubical rot

Syn.: *Polyporus guttulatus* (Peck) Gilbertson & Ryv.

Syn.: *Tyromyces guttulatus* (Peck) Murrill

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: SW (1)

Oligoporus sericeomollis (Romell) Pouzar: brown cubical rot

Syn.: *Polyporus sericeomollis* Romell

Syn.: *Poria sericeomollis* (Romell) Egel.

Syn.: *Tyromyces sericeomollis* (Romell) Bondartsev & Singer.

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Paxillus atrotomentosus (Batsch:Fr.) Fr.: velvet-footed paxillus

Disease Rating: 4

Host: *Pinus sylvestris* L.

Loc.: AL (1)

Peniophora sp.: sap rot

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: AL (1)

Pestalotia sp.: needle and shoot blight

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: E (1)

Host: *Pinus contorta* Dougl.

Loc.: C (1)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: C (1)

Host: *Pinus nigra* Arnold

Loc.: C (1), SW (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (2), N (1), C (3)

Host: *Pinus sylvestris* L.

Loc.: E (1), C (1)

Pezicula livida (Berk. & Broome) Rehm: pezicula dieback

Anamorph: *Cryptosporiopsis abietina* Petrak

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Phaeolus schweinitzii (Fr.) Pat.: brown cubical rot

Syn.: *Polyporus schweinitzii* Fr.

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Host: *Pinus strobus* L.

Loc.: AL (1), C (2), SW (2)

Phellinus ferruginosus (Schrader:Fr.) Pat.: white spongy rot

Syn.: *Poria ferruginosa* (Schrader:Fr.) P. Karsten

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot

Syn.: *Fomes pini* (Thore:Fr.) P. Karsten

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (2), NC (2), NE (1)

(cont'd)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot (concl.)

Host: *Pinus resinosa* Ait.

Loc.: NC (1), NE (2), C (1)

Phellinus viticola (Schwein.) Donk: grape white rot

Syn.: *Fomes viticola* (Schwein.) Lowe

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Phoma sp.: needle blight

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: NW (6), NC (1), NE (2), E (1), C (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NC (5), N (1), E (1)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: C (1)

Host: *Pinus sylvestris* L.

Loc.: SW (1)

Phomopsis sp.: phomopsis canker

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: NW (1), N (1), NE (2)

Poria subacida (Peck) Sacc.: white stringy rot

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Potebniamyces coniferarum (Hahn) Smerlis: needle blight

Anamorph: *Phacidiopycnis pseudotsugae* (M. Wilson) Hahn

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: NE (1), E (1), SW (2)

Retinocyclus sp.: retinocyclus dieback

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (1)

Retinocyclus abietis (Crouan) Groves & Wells: leader dieback

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: AL (1)

Rhizina undulata Fr.: tea pot fungus

Syn.: *Rhizina inflata* P. Karsten

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (3)

Host: *Pinus resinosa* Ait.

Loc.: C (2)

Host: *Pinus strobus* L.

Loc.: C (3)

Rosellinia sp.: felt blight

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NC (1)

Rosellinia thelena (Fr.) Rabenh.: pine bark rosellinia

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NC (1), N (1), NE (1)

Sclerophoma sp.: sclerophoma dieback

Disease Rating: 3

Host: *Pinus sylvestris* L.

Loc.: E (1)

Scolecocetria cucurbitula (Tode:Fr.) C. Booth: canker and dieback

Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.

Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnelt

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (7), NC (26), N (20), NE (93), AL (2), E (1), C (1)

Host: *Pinus contorta* Dougl.

Loc.: NC (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (1), NC (6), N (4), NE (6), AL (9), E (9), C (2), SW (1)

Host: *Pinus strobus* L.

Loc.: NW (6) NC (6), N (14), NE (5), AL (11), E (2), C (11), SW (2)

Host: *Pinus sylvestris* L.

Loc.: NW (2), NC (1), N (4), NE (1), E (1), C (1)

Scytinostroma galactinum (Fr.) Donk: yellow stringy rot

Syn.: *Corticium galactinum* (Fr.) Burt

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (1), NE (1)

Host: *Pinus resinosa* Ait.

Loc.: AL (1)

Host: *Pinus strobus* L.

Loc.: NE (1)

Septoria sp.: needle spot

Disease Rating: 3

Host: *Pinus nigra* Arnold

Loc.: N (1), AL (1)

Sirococcus conigenus (DC.) P. Cannon & Minter: shoot blight

Syn.: *Sirococcus strobilinus* Preuss

Disease Rating: 2

Host: *Pinus resinosa* Ait.

Loc.: NW (40), NC (20), N (5), NE (23), AL (2)

Host: *Pinus strobus* L.

Loc.: NW (2)

Sistotrema brinkmannii (Bresad.) John Eriksson: white stringy rot

Syn.: *Trechispora brinkmannii* (Bresad.) Rogers and Jacks.

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NE (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight

Syn.: *Diplodia pinea* (Desm.) Kickx

Disease Rating: 1

Host: *Pinus banksiana* Lamb.

Loc.: NC (1), AL (1), C (1)

Host: *Pinus nigra* Arnold

Loc.: AL (1), E (9), C (14), SW (11)

Host: *Pinus ponderosa* Laws.

Loc.: C (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (3), NC (2), NE (2), AL (4), E (7), C (8), SW (7)

Host: *Pinus strobus* L.

Loc.: E (1), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NE (1), AL (3), E (7), C (46), SW (8)

Sporonema sp.: needle spot

Disease Rating: 4

Host: *Pinus resinosa* Ait.

Loc.: E (1)

Stagonospora sp.: needle spot

Disease Rating: 3

Host: *Pinus strobus* L.

Loc.: NE (2)

Stereum sp.: stem decay

Disease Rating: 2

Host: *Pinus strobus* L.

Loc.: NE (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight

Anamorph: *Sclerophoma pythiophila* (Corda) Höhnelt

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: N (1), NE (1), AL (1), E (1)

Host: *Pinus mugo* Turra var. *mughus* Zenari

Loc.: NW (1), SW (2)

Host: *Pinus resinosa* Ait.

Loc.: NW (1), N (3), NE (12), AL (4), E (5)

Host: *Pinus strobus* L.

Loc.: NE (1), AL (1), E (3), C (3), SW (1)

Host: *Pinus sylvestris* L.

Loc.: NW (1), AL (2), E (3), C (2)

Thelephora terrestris Ehrh.:Fr.: smothering disease

Disease Rating: 4M

Host: *Pinus banksiana* Lamb.

Loc.: N (1), SW (1)

Host: *Pinus resinosa* Ait.

Loc.: AL (1), E (2)

Host: *Pinus sylvestris* L.

Loc.: AL (1)

Therrya fuckelii (Rehm) Kujala: therrya canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (1)

Host: *Pinus resinosa* Ait.

Loc.: AL (1), E (4), C (4)

Host: *Pinus sylvestris* L.

Loc.: AL (1)

Trichaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot

Syn.: *Polyporus abietinus* Pers.:Fr.

Disease Rating: 4

Host: *Pinus banksiana* Lamb.

Loc.: NW (2), NE (1)

Host: *Pinus resinosa* Ait.

Loc.: E (1), C (1)

Host: *Pinus sylvestris* L.

Loc.: C (1)

Tympanis sp.: tympanis canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (2), NC (1), N (4), NE (2)

Host: *Pinus resinosa* Ait.

Loc.: NW (1), NC (2), N (1), NE (2), AL (12), E (6), C (2)

Host: *Pinus strobus* L.

Loc.: NE (3), C (1), SW (2)

Tympanis confusa Nyl.: tympanis canker

Disease Rating: 3

Host: *Pinus nigra* Arnold

Loc.: C (1)

Tympanis hypopodia Nyl.: tympanis canker

Syn.: *Tympanis piceina* Groves

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (4), NE (1)

Host: *Pinus strobus* L.

Loc.: N (1)

Tympanis truncatula (Pers.:Fr.) Rehm: tympanis dieback

Syn.: *Tympanis pinastri* Tul.

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: N (1)

Valsa sp.: cytospora canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NC (1), NE (1)

Host: *Pinus resinosa* Ait.

Loc.: NW (2), NE (2), AL (2), E (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker

Disease Rating: 3

Host: *Pinus banksiana* Lamb.

Loc.: NW (3), NC (2), N (9)

Host: *Pinus resinosa*

Loc.: NW (3), NC (6), N (1), NE (6), AL (1), E (2)

Host: *Pinus strobus* L.

Loc.: NC (1), N (2), AL (1), C (1)

Host: *Pinus sylvestris* L.

Loc.: NW (1), NC (2), NE (1), AL (1)

Verticicladiella sp.: black root stain

Disease Rating: 1

Host: *Pinus resinosa* Ait.

Loc.: E (2)

Host: *Pinus strobus* L.

Loc.: AL (1)

Verticicladiella procera Kendr.: black root stain

Disease Rating: 1

Host: *Pinus strobus* L.

Loc.: NE (1), E (1)

Verticillium sp.: seedling root rot

Disease Rating: 3

Host: *Pinus resinosa* Ait.

Loc.: NE (1), C (1)

Wallrothiella arceuthobii (Peck) Sacc.: flower blight

Disease Rating: 2

Host: *Pinus banksiana* Lamb.

Loc.: NW (2) (on *Arceuthobium americanum* Nutt. ex Engel.)

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11. *Arceuthobium americana* and *A. pusillum* are parasitic phanerogams, not fungi.

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12. *Arceuthobium americanum* and *A. pusillum* are parasitic phanerogams, not fungi.

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