

FOREST FUNGI COLLECTED IN WATERTON LAKES NATIONAL PARK, ALBERTA

by

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J. J. Lawrence and Y. Hiratsuka\*

ABSTRACT

Seventy-five species of forest fungi collected on 33 different hosts in the Waterton Lakes National Park, Alberta, Canada, are listed alphabetically under each host and common names of the disease or types of fungi are shown in connection with each fungus.

INTRODUCTION

Following is a list of fungi collected during the forest disease surveys from 1952 to 1970 in Waterton Lakes National Park. They are arranged alphabetically under each host and common names of the diseases or types of fungi are also shown after each fungus name. Most of the specimens were collected by the field personnel of the Insect and Disease Survey Section of the Northern Forest Research Centre, Canadian Forestry Service. All specimens and records are kept at the Mycological Herbarium, Northern Forest Research Centre, Canadian Forestry Service, Edmonton, Alberta (International herbarium code letters: C F B).

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LIST OF FOREST FUNGI AND HOSTS

Abies balsamea (L.) Mill., balsam fir.

Armillaria mellea (Vahl ex Fr.) Quel., "Armillaria root rot",  
"shoe string fungus rot", spongy root, and butt rot.

Lirula nervata (Darker) Darker, needle cast.

Abies lasiocarpa (Hook.) Nutt., alpine fir.

Aleurodiscus amorphus (Pres.) Rab., occasionally causes cankers,  
mainly a saprophyte.

Auricularia auricula (Hook.) Underw., slash fungus.

Isthmiella abietis (Dearn.) Darker, needle cast.

Echinodontium tinctorium Ell. & Ev., "Indian paint fungus", brown  
stringy trunk rot.

Fomes pini (Thore ex Pers.) Lloyd, "red ring rot", red scale, conk  
rot or pecky rot.

Hypodermella abietis-concoloris (Mayr) Dearn., needle cast.

Isthmiella quadrispora Ziller, needle cast.

Lirula nervata (Darker) Darker, needle cast.

Lophodermium picea (Fckl.) Hoehn., needle cast.

Peniophora byssoides (Pers. ex Fr.) Bres., slash fungus.

Peniophora cremea (Bres.) Sacc. & Syd., slash fungus.

Polyporus alboluteus Ell. & Ev., reported to cause a white rot.

Poria oleagina Overh., associated with a brown check rot.

Pucciniastrum epilobii Otth, (O, I)<sup>\*</sup> needle rust, II, III states on

Epilobium spp.

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\* O, I, II, and III denote spermogonia, aecia, uredinia, and telia respectively of rust fungi.

Pucciniastrum geoppertianum (Kuehn) Kleb., (O, I), needle rust,  
II, III states on Vaccinium spp.

Alnus tenuifolia Nutt., mountain alder.

Melinconis alni Tul. var. marginalis (Pk) Wehm., causes branch die-  
back.

Alnus sp., alder.

Peniophora aurantiaca (Bres.) Hoehn. & Litsch, slash fungus, white rot.

Amelanchier alnifolia Nutt., saskatoon.

Gymnosporangium clavipes (Cke. & Pk) Cke. & Pk, (O, I), rust on  
fruits, petioles and leaves, III state on Junipers communis.

Aster conspicuus Lindl., showy aster.

Coleosporium asterum (Diet.) Syd. (II, III), leaf rust, alternate  
state of a pine needle rust.

Betula occidentalis Hook., water birch.

Fomes iginiarius (L. & Fr.) Kickx, "tinder conk", heart rot.

Stereum hirsutum (Willd. ex Fr.) S. F. Gray, slash fungus, white sap-  
wood rot.

Tympanis alnea (Pres.) Fr., stem fungus.

Castilleja miniata Dougl., common red paint-brush.

Cronartium coleosporiodes Arth., (II, III), leaf rust, alternate  
states of the "stalactiform blister rust" of hard pines.

Cerastium arvense L., field chickweed.

Melampsorella caryophyllacearum Schroet., (II, III) leaf rust,  
alternate states of the "fir witch's broom rust".

Conifers.

Poria mappa Overh. & Lowe, slash fungus, white rot.

Trametes serialis Fr., brown cubical rot, occasionally causes  
heart rot.

Epilobium glandulosum Lehm.

Pucciniastrum epilobii Otth, (II, III), leaf rust, alternate states  
of a fir needle rust.

Ground.

Peziza sylvestris (Boud.) Sacc. & Trott., cup fungus.

Juniperus communis L., ground juniper.

Gymnosporangium tremelloides Hartig, (III), globose gall rust, 0, I  
states on Sorbus spp.

Herpotrichia nigra Hartig, snow mold.

Lophodermium juniperi (Grev.) Darker, needle cast.

Juniperus scopulorum Sarg., rocky mountain juniper

Herpotrichia nigra Hartig, snow mold

Ledum glandulosum Nutt., glandular Labrador tea.

Chrysomyxa ledi d By. (II, III), leaf rust, O, I states on spruce needles.

Menziesia glabella A. Gray.

Cladosporium sp., saprophyte.

Picea engelmannii Pary, Engelmann spruce.

Chrysomyxa pitolata Wint., (O, I), cone rust, II, III states on Pyrola spp.

Fomes pini (Thore ex Pers.) Lloyd, "red ring rot", red scale, conk rot or pecky rot.

Hymenochaete tabacina (Sow. ex Fr.) Lev., slash fungus, white rot.

Peniophora byssoides (Pers. ex Fr.) Bres., slash fungus.

Polyporus alboluteus Ell. & Ev., causes white rot.

Retinicyclus abietis (Crouan) Groves and Wells, associated with die-back and cankers.

Stemonitis axifera (Bull.) Macbr., on decayed wood.

Trametes heteromorpha (Fr.) Bres., brown cubical rot.

Trichothecium roseum Ik. ex Fr., saprophytic or weakly parasitic.

Picea glauca (Moench) Voss, white spruce.

Armillaria mellea (Vahl ex Fr.) Quel., "Armillaria root rot", "shoe string fungus rot", spongy root and butt rot.

Chrysomyxa arctostaphyli Diet., (O, I), "yellow witches' broom", twig and needle rust, III state on Arctostaphylos uva-ursi.

Chrysomyxa pirolata Wint., (O, I), cone rust, II, III states on  
Pyrola spp.

Pinus albicaulis Engelm., whitebark pine.

Cronartium ribicola J. C. Fisch., (O, I), "white pine blister rust",  
II, III states on Ribes spp. (gooseberries and currants).

Pinus contorta Dougl., lodgepole pine.

Armillaria mellea (Vahl ex Fr.) Quel., "Armillaria root rot", "shoe  
string fungus rot", spongy root and butt rot.

Atropellis piniphila (Weir) Lohman & Cash, "Atropellis canker" on  
stem.

Coleosporium asterum (Diet.) Syd., (O, I), needle rust, II, III  
states on Aster spp.

Corticium centrifugum complex, slash fungus.

Cronartium coleosporioides Arth., (Peridermium stalactiforme Arth  
& Kern), (O, I), "stalactiform blister rust" on stems II,  
III states on Castilleja spp. and Pedicularis spp.

Cronartium comandrae Pk., (O, I), "Comandra blister rust" on stem, II,  
III states on Comandra and Geocaulon.

Davisomycella ampla (J. J. Davis) Darker, needle cast.

Elytroderma deformans (Weir) Darker, needle cast.

Endocronartium harknessii (J. P. Moore) Y. Hiratsuka, (Peridermium  
harknessii J. P. Moore), (O, I), "western gall rust" on  
stem, autoecious species.

Fomes pini (Thore ex Fr.) Lloyd, "red ring rot", red scale or  
pecky rot.

Lophodermella concolor (Dearn.) Darker, needle cast.

Phaeoseptoria contortae J. A. Parmelee & Y. Hiratsuka, needle fungus,  
may be the cause of the "black band disease".

Sebacina eyrei Wakef., jelly fungus.

Pinus flexilis James, limber pine.

Bifusella linearis (Pk) Hoehn., needle cast.

Cronartium ribicola J. C. Fisch., (O, I), "white pine blister rust",  
II, III states on Ribes spp. (gooseberries and currants).

Lachnella fuscoviridis (Rehm.) Karst., stem fungus.

Lecanosticta sp., needle fungus.

Populus balsamifera L., balsam poplar.

Drepanopeziza populorum (Desm.) Hohen., (Marssonina populi (Lib.)  
Mann., leaf spot.

Melampsora occidentalis Jacks., (II, III) leaf rust, O, I states on  
conifers.

Pleurotus ostreatus (Jacq. ex Fr.) Kumm., white spongy rot.

Uncinula salicis (DC.) Wint., powdery mildew.

Venturia populina (Vuill.) Fabric., (Pollaccia elegans Servazzi), leaf  
and twig blight.

Populus tremuloides Michx., trembling aspen

Ciborinia whetzelii (Seaver) Seaver, leaf spots.



Cryptochaete rufa (Fr.) Karst., slash fungus.

Drepanopeziza sp. (has been reported as Marssonina tremuloides),  
leaf spot.

Fomes igniarius (L. ex Fr.) Kickx, "tinder conk", "heart wood rot".

Fomes pinicola (Sw. ex Fr.) Cke., "red belt fungus", brown cubical  
rot.

Hypoxyton mammatum (Wahl) Miller, "Hypoxyton canker", canker and  
die-back.

Melampsora medusae Thuem., (M. albertensis Arth.) (II, III), leaf  
rust, O, I states on conifers.

Peniophora polygonia (Pers., ex Fr.) Bourd. & Galz., white spongy rot.

Pleurotus ostreatus (Jacq. ex Fr.) Kumm., white spongy rot.

Trametes hispida Bagl., mostly slash fungus, has been reported as a  
heart rot of living trees.

Venturia tremulae Aderh., (Pollaccia radiosa (Lib.) Bald. & Cif.),  
leaf and twig blight.

Prunus virginiana L., choke cherry.

Dibotryon morbosum (Schw.) Th. & Syd., stem fungus.

Pseudotsuga menziesii (Mirb.) Franco, Douglas-fir.

Aleurodiscus amorphus (Pers.) Rab., mainly saprophyte, occasionally  
causes cankers.

Fomes pini (Thore ex Fr.) Lloyd, "red ring rot", red scale, conk  
rot or pecky rot.

Fomes pinicola (Sw. ex Fr.) Cke, "red belt fungus", brown  
cubical rot.

Melampsora medusae Thuem., (M. albertensis Arth.) (0, I), leaf  
rust, II, III states on Populus spp.

Ribes triste Pall.

Cronartium ribicola J. C. Fisch., (II, III), leaf rust, alternate  
states of "white pine blister rust".

Ribes viscosissimum Pursh, sticky current.

Cronartium ribicola J. C. Fisch., (II, III), leaf rust, alternate  
states of "white pine blister rust".

Rubus parviflorus Nutt., thimbleberry.

Phragmidium rubi-idaei (DC.) Karst., (0, I, II, III), leaf rust,  
autoecious species.

Salix maccaliana Rowlee, rock willow.

Melampsora epitea Thuem., (II, III), leaf rust; 0, I states on  
conifers.

Salix sp. Willow.

Cytospora salicis Rab., associated with canker and die-back.

Senecio triangularis Hook.

Ramularia senecionis (Berk. & Br.) Sacc., leaf spot.

Sorbus scopulina Greene.

Gymnosporangium tremelloides Hartig, (0, I), leaf rust, III state  
on Juniperus comunis.

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