

FOREST FUNGI COLLECTED IN JASPER NATIONAL PARK, ALBERTA

by

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J. J. Lawrence and Y. Hiratsuka\*

ABSTRACT

Sixty-eight species of forest fungi collected on 34 different hosts in the Jasper 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 Jasper 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 lasiocarpa (Hook.) Nutt., alpine fir

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

Guepiniopsis torta (Fr.) Pat., slash fungus.

Herpotrichia nigra Hartig, snow mould.

Isthmiella abietis (Dearn.) Darker, needle cast.

Lachnellula arida (Phill.) Dennis, stem fungus.

Merulius ravenelii Berk., slash fungus.

Pucciniustrum goeppertianum (Kuehn.) Kleb., (O,I)\*, needle rust,  
II, III states on Vaccinium spp.

Abies sp., fir

Stereum sanguinolentum (Alb. & Schw. ex Fr.) Fr., red heart rot,  
top or trunk rot.

Arceuthobium americanum Nutt. ex Engelm., lodgepole pine mistletoe

Collectotrichum gloeosporioides Penz. senu Arx, on stem and seed.

Wallrothiella arceuthobii (Pk.) Sacc., on seed.

Arctostaphylos rubra (Rehd. & Wils.) Fern., alpine bearberry

Pucciniastrum sparsum (Wint.) E. Fisch., (II,III), leaf rust,  
alternate states of a spruce needle rust.

Arctostaphylos uva-uris (L.) Spreng., common bearberry, kinnikinnick.

Spaceloma sp, leaf spot.

Aster sp.

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

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O,I,III and III denote spermogonia, aecia, uredinia, and telia respectively.

Betula sp.

Eutypella sp. branch fungus.

Comandra pallida DC., bastard toad-flax.

Cronartium comandrae Pk., (II,III), leaf rust, alternate states  
of "Comandra blister rust" of hard pines.

Empetrum nigrum L., crowberry

Chrysomyxa empetri Schroet. ex Cumm., (II,III), leaf rust, alternate  
states of a spruce needle rust.

Galium boreale L.

Placosphaeria punctiformis (Fckl.) Sacc., leaf spot

Hedysarum alpinum L.

Uromyces hedysari-obscuri (DC.) Car & Picc., (0,I,II,III), leaf rust.

Juniperus communis L., ground juniper

Gymnosporangium clavariiforme (Pers.) DC., (III), rust, (0,I) state  
on Amelanchier spp.

Gymnosporangium cornutum Arth. ex Fr., (III), rust, (0,I) state on  
Amelanchier spp.

Gymnosporangium gaeumannii Zogg. ssp. albertensis Parmelee, (II,III),  
needle rust, alternate host not known.

Lophodermium juniperi (Grev.) Darker, needle cast.

Ledum groenlandicum Oeder, common Labrador tea.

Chrysomyxa ledi d By., (II,III) needle rust, alternate states of a  
spruce needle rust.

Chrysomyxa ledicola Lagh., (II,III) needle rust, alternate states of  
a spruce needle rust.

Melampsora epitea Thuem.

Eudarluca caricis (Fr.) O. Eriks. (= Darluca filum (Fr.) Cast.),  
hyperparasite.

Picea engelmannii Parry, Engelmann spruce.

Chrysomyxa ledi d By., (0,I), needle rust, II,III states on Ledum spp.

Chrysomyxa ledicola Lagh., (0,I), needle rust, II,III states on  
Ledum spp.

Chrysomyxa pirolata Wint., (0,I), cone rust, II,III states on  
Pyrola spp.

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

Herpotrichia nigra Hartig, snow mold.

Lirula macrospora (Hartig) Darker, needle cast.

Peniophora serparans Burt, slash fungi.

Picea glauca (Moench) Voss, White spruce

Arceuthobium americanum Nutt. ex Engelm., "lodgepole pine mistletoe",  
witches broom.

Chrysomyxa arctostaphyli Diet., (0,I) "Yellow witches' broom", twig  
and needle rust, III state on Arctostaphylons ura-ursi.

Chrysomyxa empetri Schroet. ex Cumm., (0,I) needle rust, II,III states  
on Empetrum nigrum.

Chrysomyxa ledicola Lagh., (0,I) needle rust, II,III states on Ledum spp.

Chrysomyxa pirolata Wint., (0,I) cone rust, II,III states on pyrola sp.

Chrysomyxa weirii Jacks., (III), leaf rust, autoecious microcyclic species.

Isthmiella crepidiformis (Darker) Darker, needle cast.

Lirula macrospora (Hartig) Darker, needle cast.

Picea mariana (Mill.) BSP., black spruce

Chrysomyxa arctostaphyli Diet., (0,I) "yellow witches' broom",

twig and needle rust, III state on Arctostaphyli ura-ursi.

Chrysomyxa pirolata Wint., (0,I) cone rust, II, III states on Pyrola spp.

Isthmiella crepidiformis (Darker) Darker, needle cast.

Picea sp.

Chrysomyxa lidicola Iagh., (0,I) needle rust, II, III state on Ledum spp.

Chrysomyxa weirii Jacks., (III) needle rust, autoecious, microcyclic species.

Corticium radiosum Fr., slash fungi.

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

Isthmiella crepidiformis (Darker) Darker, needle cast.

Lachnellula agassizii (Berk. & Curt.) Dennis, stem fungus.

Stereum sanguinolentum (Alb. & Schw. ex Fr.) Fr., red heart rot.

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

Pinus albicaulis Engelm., whitebark pine

Cronartium ribicola J. C. Fisch., (0,I), "white pine blister rust"

on stem, II, III states on Ribes spp.

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

Lophodermium nitens Darker, needle cast.

Pinus contorta Dougl., lodgepole pine

Atropellis piniphila (Weir) Lohman & Cash, "Atropellis canker",

on stem.

Biatorella resinae (Ehr. ex Fr.) Mudd (=Zythia resinae (Ehr. ex Fr.)

bark fungus.

Ceratocystis minor (Hedgc.) Hunt, stem and branch canker.

Corticium centrifugum complex, slash fungus.

Cronartium coleosporioides Arth. (Peridermium stalactiforme Arth. & Kern) (O,I) "stalactiform blister rust", on stems, II, III on Castillia 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, systemic needle cast.

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

Hendersonia pinicola Wehm., needle fungus, associated with Lophodermella concolor.

Hirschioporus abietinus (Dicks. ex Fr.) Donk, slash fungi.

Lophodermella concolor (Dearn.) Darker, needle cast.

Lophodermium pinastri (Shrad. ex Hook.) Chev., needle cast.

Polyporus volvatus Pk., slash fungi.

Propolis rhodoleuca Fr. var. strobilina (Desm.) Phill., stem and branch fungus.

Pinus flexilis James, limber pine.

Lophodermium nitens Darker, needle cast.

Populus balsamifera L., balsam poplar

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

Polyporus zonatus Fr., slash fungus.

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

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

Populus tremuloides Michx., trembling aspen

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

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

Fomes igniarius (L. ex Fr.) Kickx, "tinder conk", brown cubical rot.

Marssonina tremuloidis (Ell. & Ev.) Kelb., leaf spot.

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.

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

Potentilla fruticosa L., shrubby cinquefoil.

Phragmidium andersonii Shear, (O,I,II,III), leaf rust.

Potentilla sp., cinquefoil.

Phragmidium potentillae (Pers.) Karst., (O,I,II,III), leaf rust.

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

Fomes officinalis (Vill. ex Fr.) Faull, "felted heart rot".

Hirschioporus abietinus (Dicks, ex Fr.) Donk, slash fungus.

Phomopsis lokoyoe Hahn, stem and branch canker.

Rhabdocline pseudotsugae Syd., needle cast.

Pyrola asarifolia Michx., common pink wintergreen.

Chrysomyxa pirolata Wint., (II,III), leaf rust, alternate states of  
a spruce cone rust.

Pucciniastrum pyrolae Diet. ex Arth., (II,III), leaf rust, O,I states  
unknown.



Pyrola virens Schweigg., greenish-flowered wintergreen.

Chrysomyxa pirolata Wint., (II,III) leaf rust, alternate states of  
a spruce cone rust.

Rubus sp.,

Pucciniastrum arcticum Tranz., (II,III) leaf rust, alternate states  
of a spruce needle rust.

Salix sp., willow

Ciborinia foliicola (Cash & Davidson) Whet., leaf blight.

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

Rhytisma salicinum (Pers.) Fr., tar spot on leaf.

Sheperdia canadensis (L.) Nutt., Canadian buffalo-berry.

Puccinia caricis-sheperdiae J.J. Davis, (0,I) leaf rust, (II,III)  
states on Carex spp.

Solidago sp., goldenrod.

Coleosporium asterum (Diet.) Syd., (II,III) leaf rust, 0,I states  
on Pinus spp.

Sorbus sp., mountain-ash

Gymnosporangium cornutum Arth. ex Kern, (0,I) leaf rust, III state  
on Juniperus.

Gymnosporangium sp.

Vaccinium myrtillus L., low bilberry.

Pucciniastrum goeppertianum (Kuehn.) Kelb., (II,III) leaf rust,  
alternate states of fir needle rust.

Vaccinium scoparium Leiberg., grouse-berry.

Pucciniastrum goeppertianum (Kuehn.) Kelb., (II,III) leaf rust,  
alternate states of fir needle rust.

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