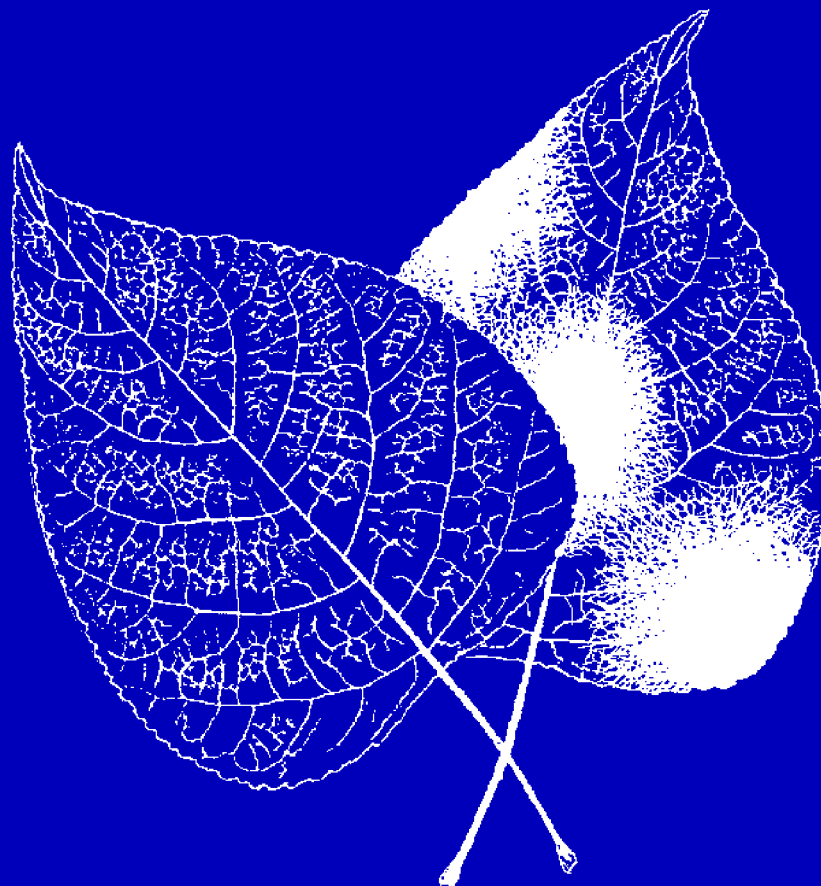


# An Annotated Host Fungus Index for *Populus* in British Columbia

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CANADA-BRITISH COLUMBIA PARTNERSHIP AGREEMENT ON FOREST RESOURCE DEVELOPMENT: FRDA II



# **An Annotated Host Fungus Index for *Populus* in British Columbia**

by

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**August 1994**

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**Canada** 



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## INTRODUCTION

This index provides an updated reference for all documented fungal associations with either living or dead native *Populus* in British Columbia. Fungi occurring on hybrid poplar are also listed, with emphasis on two crosses. Both of these crosses have as one parent our native *P. balsamifera* L. ssp. *trichocarpa* (Torr. & Gray) Brayshaw (T); the other parent is either eastern cottonwood, *P. deltoides* J. Bartram ex Marsh. (D) or a Japanese species, *P. maximowiczii* A. Henry (M). These two hybrids (TXD and TXM) are currently being grown in British Columbia in commercial plantations as a source of pulpwood.

With increased interest in the use of native aspen, balsam poplar, and cottonwood for wood products, plus intensive cultivation of fast-growing hybrids for pulp, there has been a greater need for region- and host-specific pathology and biodiversity data. This host-fungus index documents the known fungal diversity on *Populus* at the onset of intensified harvesting and large-scale domestication of native and hybrid species in British Columbia. It contains data accrued during the last 50 years of general Forest Insect and Disease Survey forest health monitoring (Lowe 1977), plus three field seasons (1991–1993) of specific poplar disease collections made by the authors. It is hoped that the index will facilitate identification of fungi associated with *Populus*, and act as a checklist to be used in detecting unusual or newly introduced disease outbreaks. The list of fungi is probably incomplete; many new host and distribution records have been made each year since this project began.

If they have been annotated, the species listed in the index are linked to voucher collections curated at the Pacific Forestry Centre Forest Pathology Herbarium (DAVFP). Species flagged with the letter [R] are records only, compiled from literature citations or field survey observations on file at DAVFP (pertinent information is available on request but not

cited herein). A number of the host-fungus records were confirmed by culturing from host tissues, in which case fruiting bodies may or may not have been present on the original substrate collection. These species (substrate and/or dried culture deposited in DAVFP) are flagged with the letter [C]. Type specimens for a few fungal taxa on *Populus* are deposited in DAVFP; these are indicated by the word (TYPE).

Those familiar with the recent USDA index of "Fungi on Plants and Plant Products in the United States" will notice that the format for our index is somewhat similar, with abbreviations for authorities consistent with the list at the end of this volume (Farr *et al.* pp. 1241–52). In our host-fungus index, two main sections were created, both with four host categories: trembling aspen, black cottonwood, balsam poplar, and *Populus* sp., the latter including records on hybrids and unidentified host species. In the first section, all fungi known to occur on these hosts in B.C. are listed alphabetically by genus. In the second section, following the alphabetical lists, the fungi listed for each host have been cross-referenced by taxonomic group (i.e., fungal class and order). Occasionally, names listed in this second section do not have individual headings in the alphabetical section. When this occurs, the name under which it is described (usually the teleomorph) follows in parentheses.

Not every synonym for each fungus species is listed in this index. Only those frequently encountered in literature pertaining to: a) historical host-fungus records, and b) the occurrence of these taxa on *Populus*, are included.

The following reference section contains literature that provided key information used in making annotations and taxonomic decisions.

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## ABBREVIATIONS USED IN THE INDEX

- DAVFP – Name designated in the Index Herbariorum (Holmgren *et al.* 1990) for Pacific Forestry Centre's Forest Pathology Herbarium, established in 1940. Acronym stands for Department of Agriculture, Victoria, Forest Pathology.
- [R] – Record only; no specimen at DAVFP. Records are based on literature citations on file at DAVFP (voucher specimens may be deposited at other herbaria) or from field observations made by Forest Insect and Disease Survey staff and entered into the FIDS national database, Infobase.
- [C] – One or more specimen has been cultured, and dried cultures are deposited at DAVFP.
- [C,R] – Record of a culture identification; no specimen at DAVFP. Literature citation on file at DAVFP.

# 1 FUNGI LISTED ALPHABETICALLY, BY HOST

## 1.1 Balsam Poplar – *Populus balsamifera* L.

### *Armillaria sinapina* Bérubé & Dessureault

Syn. *Armillaria mellea* (Vahl:Fr.) P. Kumm. (pro parte)

Basidiomycetes, Agaricales

Brown mushroom associated with stringy yellow root and butt rot in suppressed or overmature stands, producing conspicuous white mycelial fans under the bark. Also frequently encountered as a conifer stump/root saprophyte.

### *Bjerkandera adusta* (Willd.:Fr.) P. Karst. [C]

Syn. *Polyporus adustus* (Willd.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual polypore with a grey to black pore surface and cream-coloured cap. Common in older stands, associated with white rot of logs and slash.

### *Caliciopsis calicioides* (Ellis & Everh.) Fitzp.

Ascomycetes, Coryneliales

Black, bristle-like microfungus found in bark fissures of living trees.

### *Cytospora* Ehrenb.:Fr.

Coelomycetes

Anamorph of a *Valsa* Fr., nom. cons. prop. (Ascomycetes, Diaporthales) usually associated with orange discoloration and cankers around stressed or wounded bark.

### *Fomes fomentarius* (L.:Fr.) J. Kickx fil.

Basidiomycetes, Aphyllophorales

Perennial polypore associated with white, mottled heart rot of living hardwoods.

### *Ganoderma applanatum* (Pers.) Pat.

Syn. *Fomes applanatus* (Pers.) Gill.

Basidiomycetes, Aphyllophorales

Perennial, shelf-like polypore commonly known as "artist's conk." Pore surface darkens permanently when damaged. Associated with white root and butt rot of living and dead hardwoods and conifers.

### *Gymnopilus spectabilis* (Fr.:Fr.) A.H. Sm. [C]

Syn. *Pholiota spectabilis* (Fr.:Fr.) Gill.

Basidiomycetes, Agaricales

Large brown mushroom associated with white rot of hardwood and conifer logs and slash.

### *Hericium coralloides* (Scop.:Fr.) S.F. Gray [C]

Syn. *Hericium ramosum* (Bull.) Letell.

Basidiomycetes, Aphyllophorales

Annual, white, coral-like hydroid fruiting bodies associated with white, spongy heart rot. Cultural and morphological studies by Ginns 1984 (Mycotaxon 20:39–43) have separated two distinct North American taxa previously labelled as *H. coralloides*. Collections from eastern

North American hardwoods (rarely conifers) are now considered to be a separate species, *H. americanum* Ginns. *Hericium coralloides* is widespread throughout North America, and commonly collected in British Columbia.

*Hypoxylon fuscum* (Pers.:Fr.) Fr.

Ascomycetes, Sphaeriales

Anamorph: *Virgariella* S.J. Hughes (Hyphomycetes)

Cushion-shaped, purplish brown fruiting bodies on dead branches and trunks, associated with white rot.

*Inonotus cuticularis* (Bull.:Fr.) P. Karst. [C]

Syn. *Polyporus cuticularis* (Bull.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white heart rot of hardwoods. Decay usually develops around wounds or on dead trees.

*I. glomeratus* (Peck) Murrill [C]

Syn. *Polyporus glomeratus* Peck

Annual, resupinate fruiting bodies with pores when fertile but often collected without a pore layer present. Associated with white heart rot of living and dead hardwoods.

*Lahmia kunzei* Koerb.

Syn. *Parkerella populi* Funk

Ascomycetes, Lahmiales

Microfungus associated with rough bark, fruiting in and around the bark fissures.

*Linospora tetraspora* G.E. Thompson [R]

Ascomycetes, Diaporthales

*Melampsora occidentalis* H. Jacks.

Basidiomycetes, Uredinales

Foliar rust of cottonwood, balsam poplar, and some hybrid poplars. Uredinial and telial states occur on *Populus* causing orange discolouration and premature leaf browning and loss. Alternate (aecial) hosts in the Pinaceae include *Abies*, *Larix*, *Picea*, *Pinus*, *Pseudotsuga*, and *Tsuga*.

*Mycosphaerella populicola* G.E. Thompson

Ascomycetes, Dothideales

Anamorph: *Septoria populicola* Peck (Coelomycetes)

*Septoria* state associated with leaf spotting, blotching, and premature chlorosis and defoliation. The *Mycosphaerella* state has rarely been collected, and cankers are not associated with this fungus in British Columbia to date.

*M. populorum* G.E. Thompson

Anamorph: *Septoria musiva* Peck (Coelomycetes)

This species is reported as occurring in the Pacific Northwest in most North American host-fungus lists, but critical examination of herbarium collections has shown that they have been based on either young anamorphic fruiting bodies of *M. populicola* (in which conidia are somewhat shorter), or have been misidentified and are in fact good collections of *M. populicola*. It is extremely doubtful that this species actually occurs in the Pacific Northwest, and lack of *Septoria*-induced cankers in our region substantiates this observation.

## Balsam Poplar

***Peniophora rufa*** (Fr.:Fr.) Boidin

Syn. ***Cryptochaete rufa*** (Fr.:Fr.) P. Karst.

Basidiomycetes, Aphyllophorales

Annual, resupinate, reddish pink, nonporoid fruiting bodies occurring on wounds and dead wood. Associated with stained wood column with scattered pink to brownish pink pockets of decay.

***Phaeocalicium populneum*** (Brond.:Duby) A. Schmidt

Ascomycetes, Caliciales

Black, bristle-like microfungus fruiting on bark of dead *Populus* branchlets. Common in British Columbia.

***Pleurotus subareolatus*** Peck [R]

Basidiomycetes, Agaricales

***Scutellinia scutellata*** (L.:Fr.) Lambotte [R]

Ascomycetes, Pezizales

***Valsa sordida*** Nitschke

Ascomycetes, Diaporthales

Anamorph: ***Cytospora chrysosperma*** (Pers.:Fr.) Fr. (Coelomycetes)

Microfungus associated with orange discolouration and cankering of wounded or stressed bark, and occurring on recently dead trees. Common and widespread on *Populus* and *Salix*; also collected on other hardwoods.

***Venturia populina*** (Vuill.) L. Fabricius

Ascomycetes, Dothideales

Anamorph: ***Pollaccia elegans*** Servazzi (Hyphomycetes)

Microfungus attacking black and balsam poplars and TXD hybrids in British Columbia. ***Pollaccia*** state most commonly found during growing season, occurring in olive-coloured areas on blighted tissues. ***Venturia*** state matures on overwintered dead tissues. Associated with black leaf blotch and shoot dieback, the latter often forming a characteristic "shepherd's crook."

## 1.2 Trembling Aspen – *Populus tremuloides* Michx.

***Amphisphaerella amphisphaerioides*** (Sacc. & Speg.) Kirschstein  
Ascomycetes, Amphisphaeriales

Saprophytic microfungus, immersed in wood of decorticated branches.

***Antrodia malicola*** (Berk. & M.A. Curtis) Donk [R]  
Syn. ***Trametes malicola*** Berk. & M.A. Curtis  
Basidiomycetes, Aphyllophorales

***A. xantha*** (Fr.:Fr.) Ryvar den  
Syn. ***Poria xantha*** (Fr.:Fr.) Cooke

Annual, resupinate, yellow polypore associated with brown cubical rot. Usually found on conifers, but occasionally on hardwoods.

***Aporpium caryae*** (Schwein.) Teix. & D.P. Rogers  
Syn. ***Polyporus caryae*** Schwein.  
Basidiomycetes, Tremellales

Annual, resupinate, poroid fruiting bodies with pinkish brown surface reddening when bruised. Associated with white rot of hardwood logs and slash; more commonly encountered in eastern North American hardwood forests.

***Armillaria sinapina*** Bérubé & Dessureault  
Syn. ***Armillaria mellea*** (Vahl:Fr.) P. Kumm. (pro parte)  
Basidiomycetes, Agaricales

Brown mushroom associated with stringy yellow root and butt rot in suppressed or overmature stands, producing conspicuous, white mycelial fans under the bark. Also frequently encountered as a conifer stump/root saprophyte.

***Bjerkandera adusta*** (Willd.:Fr.) P. Karst.  
Syn. ***Polyporus adustus*** (Willd.:Fr.) Fr.  
Basidiomycetes, Aphyllophorales

Annual polypore with a grey to black pore surface and cream-coloured cap. Common in older aspen stands, associated with white rot of logs and slash.

***Caliciopsis calicioides*** (Ellis & Everh.) Fitzp.  
Ascomycetes, Coryneliales

Black, bristle-like microfungus found in bark fissures of living trees, especially those with rough bark.

***Calocera cornea*** (Batsch:Fr.) Fr.  
Basidiomycetes, Dacrymycetales

Jelly fungus—saprophytic on wood.

## Trembling Aspen

*Ceraceomyces serpens* (Fr.:Fr.) Ginns

Syn. *Merulius serpens* Fr.:Fr.

*Byssomerulius serpens* (Fr.:Fr.) Parmasto

Basidiomycetes, Aphyllophorales

Annual, resupinate, shallowly poroid to meruloid fruiting bodies, associated with white rot of hardwoods and conifers.

*Ceratocystis fimbriata* Ellis & Halst.

Ascomycetes, Ophiostomatales

Anamorph: *Chalara* (Corda) Rabenh. (Hyphomycetes)

Microfungus associated with a perennial target canker that may girdle and kill young trees. Infrequently collected in British Columbia to date.

*Ceratocystis* Ellis & Halst. [C]

Culture record only.

*Ceriporia purpurea* (Fr.:Fr.) Donk

Syn. *Poria purpurea* (Fr.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white rot of dead hardwoods and conifers.

*Ceriporiopsis aneirina* (Sommerf.:Fr.) Domanski

Syn. *Poria aneirina* (Sommerf.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate, cream-coloured polypore associated with soft, laminated white rot of *Populus* and *Betula*.

*Cerrena unicolor* (Bull.:Fr.) Murrill [R]

Syn. *Daedalea unicolor* (Bull.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

*Chlorociboria aeruginosa* (Pers.:Fr.) Seaver ex Ramamurthi, Korf, & Batra

Syn. *Chlorosplenium aeruginascens* (Nyl.) P. Karst.

Ascomycetes, Helotiales

Blue-green, cup-shaped microfungus associated with a deep blue-green stain of dead, usually decorticated wood.

*Chondrostereum purpureum* (Pers.:Fr.) Pouzar

Syn. *Stereum purpureum* Pers.:Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate, reddish purple, nonporoid fruiting bodies in wounds or on slash. Associated with white rot of hardwoods, rarely conifers.

*Ciborinia whetzeli* (Seaver) Seaver

Syn. *Sclerotinia whetzeli* Seaver

*Ciborinia bifrons* Whetzel

Ascomycetes, Helotiales

Anamorph: *Sclerotium bifrons* Ellis & Everh. ex Sacc. & Syd. (Agonomycetes)

Causing ink spot disease of aspen foliage, with round black sclerotia evident in dead leaves.

***Coniochaeta ligniaria*** (Grev.) Cooke

Ascomycetes, Sordariales

Anamorph: ***Phialophora*** Medlar (Hyphomycetes)

Saprophytic microfungus on decorticated wood.

***C. pulveracea*** (Ehrenb.:Fr.) Munk

Saprophytic microfungus on decorticated wood.

***Coniophora olivacea*** (Pers.:Fr.) P. Karst.

Basidiomycetes, Aphyllophorales

Resupinate, nonporoid fruiting bodies, but surface often bumpy or wrinkled. Associated with brown cubical rot of hardwood and conifer logs and slash.

***Corioloopsis gallica*** (Bull.:Fr.) Ryvarden

Syn. ***Trametes hispida*** Bagl.

Basidiomycetes, Aphyllophorales

Annual, shelf-like polypore associated with white rot, predominately of *Populus* and *Salix*, less commonly on other hardwoods, and rarely on conifers.

***Corticium roseum*** Pers.:Fr.

Syn. ***Aleurodiscus roseus*** (Pers.:Fr.) Höhn. & Litsch.

***Laeticorticium roseum*** (Pers.:Fr.) Donk

Basidiomycetes, Aphyllophorales

Resupinate, nonporoid fruiting bodies associated with white rot of hardwoods, rarely conifers.

***Crepidotus fulvotomentosus*** Peck

Basidiomycetes, Agaricales

Small saprophytic mushroom on wood, associated with white rot.

***C. mollis*** (Schaeff.:Fr.) Staude

Small saprophytic mushroom, associated with white rot of hardwood and conifer logs and slash.

***Crustoderma dryinum*** (Berk. & M.A. Curtis) Parmasto

Syn. ***Corticium dryinum*** Berk. & M.A. Curtis in Berk.

***Peniophora dryina*** (Berk. & M.A. Curtis) D.P. Rogers & H. Jacks.

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with brown rot of hardwoods and conifers.

***Cryptodiaporthe salicella*** (Fr.:Fr.) Petr. [C,R]

Ascomycetes, Diaporthales

Anamorph: ***Discella microsperma*** (G. Johnst.) Sutton (Coelomycetes)

***Cryptodiaporthe*** Petr.

Unidentified species associated with dead branches.

## Trembling Aspen

*Cryptosphaeria lignyota* (Fr.:Fr.) Auersw.

Syn. *Diatrype lignyota* (Fr.:Fr.) Fr.

*Cryptosphaeria populina* (Pers.:Fr.) Sacc.

Ascomycetes, Diatrypales

Anamorph: *Cytosporina* (Sacc.) Sacc. (= *Libertella* Desmaz.) (Coelomycetes)

Microfungus associated with cankers and dieback, frequently following wounds. Discolouration and decay of the heartwood and sapwood precedes canker development, extending up to a metre beyond the canker. The *Cytosporina* state is easily isolated from infected wood.

*Cucurbitaria staphula* Dearn. ex R.H. Arnold & Russell

Ascomycetes, Dothideales

Anamorph: *Dichomera* Cooke (Coelomycetes)

Saprophytic microfungus on wood.

*Cucurbitaria* S.F. Gray

Unidentified species on bark. Spores smaller than average measurements for *C. staphula*.

*Cystostereum murrayi* (Berk. & M.A. Curtis) Pouzar [R]

Syn. *Stereum murrayi* (Berk. & M.A. Curtis) Burt

*Corticium effusum* Overh.

Basidiomycetes, Aphyllophorales

*Cytospora* Ehrenb.:Fr.

Coelomycetes

Anamorph of a *Valsa* Fr., nom. cons. prop. (Ascomycetes, Diaporthales) often associated with orange discolouration and cankers around wounded or otherwise stressed bark.

*Daedaleopsis confragosa* (Bolton:Fr.) J. Schröt.

Syn. *Daedalea confragosa* (Bolton:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual, shelf-like fruiting bodies with maze-like pores, associated with white rot of dead hardwoods, rarely conifers.

*Dasyscyphus* S.F. Gray

Ascomycetes, Helotiales

Minute, hairy saprophytic cup fungus on wood.

*Diplodia tumefaciens* (Shear) Zalasky

Syn. *Macrophoma tumefaciens* Shear

Coelomycetes

Microfungus associated with branch and stem swellings on *Populus*. The teleomorph, *Keissleriella emergens* (P. Karst.) Bose (Ascomycetes, Dothideales), has not been reported from British Columbia; elsewhere in Canada it has been isolated in culture from diseased roots.



***Drepanopeziza populi-albae*** (Kleb.) Nannf. [R]

Ascomycetes, Helotiales

Anamorph: ***Marssonina castagnei*** (Desmaz. & Mont.) Magnus (Coelomycetes)

Usually associated with leaf spot of *Populus alba* L. (white poplar). No specimen available for verification.

***D. populorum*** (Desmaz.) Höhn.

Anamorph: ***Marssonina populi*** (Lib.) Magnus (Coelomycetes)

The ***Drepanopeziza*** state is rare in Canada. The ***Marssonina*** state is common, associated with orange-brown leaf spotting and blotching of aspen.

***Encoelia fascicularis*** (Albertini & Schwein.:Fr.) P. Karst.

Syn. ***Phibalis fascicularis*** (Albertini & Schwein.:Fr.) Wallr.

***Cenangium populneum*** (Pers.) Rehm

Ascomycetes, Helotiales

Discomycete fruiting on dead twigs and branches.

***E. pruinosa*** (Ellis & Everh.) Torkelson & Eckblad

Syn. ***Phibalis pruinosa*** (Ellis & Everh.) L.M. Kohn & Korf

***Cenangium singulare*** (Rehm) R.W. Davidson & Cash

Discomycete associated with "sooty bark canker" of aspen: large, diffuse cankers up to several metres in length, often resulting in tree mortality.

***Epicoccum*** Link:Fr. [R]

Hyphomycetes

***Fibulomyces mutabilis*** (Bres.) Jülich

Syn. ***Corticium mutabile*** Bres.

***Athelia pellicularis*** (P. Karst.) Donk

***Corticium pelliculare*** (P. Karst.) P. Karst.

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies on hardwoods and conifers.

***Flammulina velutipes*** (Curtis:Fr.) Singer

Syn. ***Collybia velutipes*** (Curtis:Fr.) P. Kumm.

Basidiomycetes, Agaricales

Brown mushrooms fruiting in clumps on or around stumps, logs, and roots. Associated with spongy, white sapwood rot of living and dead hardwoods.

***Fomitopsis cajanderi*** (P. Karst.) Kotlaba & Pouzar

Syn. ***Fomes cajanderi*** Weir

***F. subroseus*** (Weir) Overh.

Basidiomycetes, Aphyllophorales

Perennial conk with pore layer often rose-coloured, associated with brown cubical rot. Commonly on conifers, rarely hardwoods.

## Trembling Aspen

***F. pinicola*** (Sw.:Fr.) P. Karst.

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

Perennial, shelf-like conk with white pore surface and red band around margin, associated with brown cubical rot. More commonly found on conifers and *Prunus*; occasionally on *Populus* and *Betula*.

***Fusarium lateritium*** Nees:Fr. [C,R]

Hyphomycetes

***Ganoderma applanatum*** (Pers.) Pat.

Syn. ***Fomes applanatus*** (Pers.) Gill.

Basidiomycetes, Aphyllophorales

Perennial, shelf-like polypore commonly known as "artist's conk." Pore surface darkens permanently when damaged. Associated with white root and butt rot of living aspen, also fruiting on dead hardwoods and conifers.

***Gloeophyllum sepiarium*** (Wulfen:Fr.) P. Karst.

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

Basidiomycetes, Aphyllophorales

Annual to perennial, brownish, shelf-like fruiting bodies with pore surface that intergrades to gill-like in places. Associated with brown rot of conifers, less common on hardwoods.

***Gloeoporus dichrous*** (Fr.:Fr.) Bres.

Syn. ***Polyporus dichrous*** Fr.:Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate to shelf-like polypore associated with white rot of dead hardwoods, rarely conifers.

***Glyphium corrugatum*** (Ellis) H. Goree [R]

Ascomycetes, Dothideales

***Grandinia spathulata*** (Schrad.:Fr.) Jülich

Syn. ***Hyphodontia spathulata*** (Schrad.:Fr.) Parmasto

***Odontia spathulata*** (Schrad.:Fr.) Litsch.

Basidiomycetes, Aphyllophorales

Annual, resupinate fruiting bodies with flattened teeth, associated with white rot of hardwood and conifer logs and slash.

***Graphium*** Corda [C]

Hyphomycetes

Unidentified species cultured from wood.

***Gymnopilus spectabilis*** (Fr.:Fr.) A.H. Sm.

Syn. ***Pholiota spectabilis*** (Fr.:Fr.) Gill.

Basidiomycetes, Agaricales

Large brown mushroom associated with white rot of hardwood and conifer logs and slash.

***Hapalopilus nidulans*** (Fr.) P. Karst.

Syn. ***Polyporus rutilans*** Pers.:Fr.

***Hapalopilus rutilans*** (Pers.:Fr.) Murrill

***Polyporus nidulans*** Fr.:Fr.

Basidiomycetes, Aphyllophorales

Annual, shelf-like, cinnamon-coloured polypore associated with white rot of hardwoods, rarely conifers.

***Hericium coralloides*** (Scop.:Fr.) S.F. Gray

Syn. ***Hericium ramosum*** (Bull.) Letell.

Basidiomycetes, Aphyllophorales

Annual, white, coral-like hydroid fruiting bodies associated with a white spongy heart rot. Cultural and morphological studies by Ginns, 1984 (*Mycotaxon* 20:39–43) have separated two distinct North American taxa previously labelled as ***H. coralloides***. Collections from eastern North American hardwoods (rarely conifers) are now considered to be a separate species, ***H. americanum*** Ginns. ***Hericium coralloides*** is widespread throughout North America, and commonly collected in British Columbia.

***Hohenbuehelia unguicularis*** (Fr.:Fr.) O.K. Miller

Syn. ***Pleurotus unguicularis*** (Fr.:Fr.) Singer

Basidiomycetes, Agaricales

Small mushroom associated with white rot of wood. Most commonly reported from *Pinus*.

***Hyphoderma karstenii*** Jülich

Syn. ***Metulodontia nivea*** (P. Karst.) Parmasto

***Peniophora nivea*** (P. Karst.) Bourd. & Galzin

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods and conifers.

***H. mutatum*** (Peck) Donk

Syn. ***Corticium mutatum*** Peck

***Peniophora mutata*** (Peck) Höhn. & Litsch.

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods.

***Hyponectria populi*** (G.E. Thompson) Barr

Syn. ***Guignardia populi*** G.E. Thompson

Ascomycetes, Amphisphaeriales

Microfungus associated with leaf spots. Rarely collected in British Columbia, but common in eastern North America. Early collections confused with ***Septogloeum rhopaloideum*** Dearn. & Bisby.

***Hypoxylon fuscum*** (Pers.:Fr.) Fr. [R]

Ascomycetes, Sphaeriales

Anamorph: ***Virgariella*** S.J. Hughes (Hyphomycetes)

## Trembling Aspen

*H. mammatum* (Wahlenberg) J.H. Miller

Syn. *Hypoxyloa pruina* Cooke

Anamorph: *Geniculosporium* Chesters & Greenhalgh (Hyphomycetes)

Pathogenic pyrenomycete associated with damaging cankers and mortality, but infrequently encountered in British Columbia.

*H. multiforme* (Fr.:Fr.) Fr.

Anamorph: *Nodulisporium* G. Preuss (Hyphomycetes)

Saprophytic pyrenomycete on fallen decorticated aspen.

*H. novemexicanum* J.H. Miller

Anamorph: *Nodulisporium* G. Preuss (Hyphomycetes)

Rare saprophyte on fallen decorticated aspen. Previously known only from New Mexico and South Africa.

*H. serpens* (Pers.:Fr.) J. Kickx fil.

Anamorph: *Geniculosporium serpens* Chesters & Greenhalgh (Hyphomycetes)

Small, black individual fruiting bodies or crusts saprophytic on dead stems and branches. Associated with white rot of wood.

*Hysterographium fraxini* (Pers.:Fr.) de Not.

Ascomycetes, Dothideales

Saprophytic microfungus on wood.

*Inonotus cuticularis* (Bull.:Fr.) P. Karst. [C]

Syn. *Polyporus cuticularis* (Bull.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white heart rot of hardwoods. Decay usually developing around wounds or on dead trees.

*I. glomeratus* (Peck) Murrill [C]

Syn. *Polyporus glomeratus* Peck

Annual, resupinate fruiting bodies with pores when fertile but often collected without a pore layer present. Associated with white heart rot of living and dead hardwoods.

*I. radiatus* (Sowerby:Fr.) P. Karst. [R]

Syn. *Polyporus radiatus* (Sowerby:Fr.) Fr.

*I. rheades* (Pers.) Bondartsev & Singer

Syn. *Polyporus rheades* Pers.

*P. vulpinus* Fr.

Annual, resupinate polypore associated with white heart rot of living aspen; also decays dead and fallen trees.

*Irpex lacteus* (Fr.:Fr.) Fr. [R]

Syn. *Sistotrema lacteum* Fr.

*Hydnum lacteum* Fr.:Fr.

*Polyporus tulipiferae* (Schwein.) Overh.

Basidiomycetes, Aphyllophorales

***Junghuhnia nitida*** (Pers.:Fr.) Ryvarden  
Syn. ***Poria nitida*** (Pers.:Fr.) Cooke  
***P. attenuata*** (Peck) Peck  
***P. eupora*** (P. Karst.) Cooke  
Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white heart rot of dead hardwoods, rarely conifers. Infrequently collected in the Pacific Northwest.

***Karschia*** Koerb.  
Ascomycetes, Dothideales

Black, cupulate lichenized microfungus. Saprophytic on wood and bark.

***Kavinia alboviridis*** (Morg.) R.L. Gilbertson & Budington [R]  
Syn. ***Mycoacia alboviride*** (Morg.) L.W. Miller & Boyle  
Basidiomycetes, Aphyllophorales

***Kuehneromyces mutabilis*** (Schaeff.:Fr.) Singer & A.H. Sm.  
Syn. ***Pholiota mutabilis*** (Schaeff.:Fr.) P. Kumm.  
Basidiomycetes, Agaricales

Mushroom associated with white rot of hardwoods and conifers. Often seen fruiting on the cut end of logs.

***Lahmia kunzei*** Koerb.  
Syn. ***Parkerella populi*** Funk (TYPE)  
Ascomycetes, Lahmiales

Microfungus associated with cork-bark of aspen caused by ***Rhytidiella baranyayi*** Funk & Zalasky; fruiting in and around the bark fissures.

***Lasiosphaeria*** Ces. & de Not.  
Ascomycetes, Sordariales

Saprophytic microfungus. Record based on a single overmature collection from decorticated wood.

***Leciographa gallicola*** Funk  
Ascomycetes, Opegraphales  
Anamorph: ***Seimatosporium etheridgei*** Funk (TYPE) (Coelomycetes)

Small, black apothecia associated with bark swellings of aspen.

***Lentinellus cochleatus*** (Fr.:Fr.) P. Karst.  
Syn. ***Lentinellus umbilicatus*** (Peck) Singer  
Basidiomycetes, Agaricales

Annual, gilled fruiting bodies associated with white rot of hardwood and conifer logs and slash.

***Leptographium*** Lagerberg & Melin. [C]  
Hyphomycetes

Unidentified species cultured from wood; an anamorphic state of a species of ***Ceratocystis*** Ellis & Halst. (Ascomycetes, Ophiostomatales).

## Trembling Aspen

***Leucostoma nivea*** (Hoffm.:Fr.) Höhn.

Syn. ***Valsa nivea*** (Hoffm.:Fr.) Fr.

Ascomycetes, Diaporthales

Anamorph: ***Cytospora nivea*** Sacc. (Coelomycetes)

Microfungus associated with cankers and dieback of *Populus* and *Salix*.

***Libertella*** Desmaz. [R]

Coelomycetes

Unidentified anamorph of Diatrypaceae (Ascomycetes). Possibly an anamorph of a species of ***Cryptosphaeria*** Grev.

***Marasmius epiphyllus*** (Pers.:Fr.) Fr. [R]

Basidiomycetes, Agaricales

Small mushroom fruiting on fallen leaves of aspen.

***Marssonina tremulae*** (Lib.) Kleb.

Syn. ***Marssonina brunnea*** (Ellis & Everh.) Magnus

Coelomycetes

Anamorph of ***Drepanopeziza tremulae*** Rimpau (Ascomycetes, Helotiales), but the teleomorph has not been reported from British Columbia. Microfungus associated with leaf spotting, browning, and premature defoliation.

***Melampsora albertensis*** Arth.

Basidiomycetes, Uredinales

Most records of aspen leaf rust in British Columbia are currently under ***M. medusae*** (see comments below). It causes yellow leaf spot and premature defoliation. Further microscopic study of all spore states and aecial host testing to clarify the distribution of these two species is required.

***Melampsora medusae*** Thuem.

Most records of aspen leaf rust in British Columbia are currently listed under this binomial. Uredinia and telia associated with yellow leaf spots and premature defoliation. Aecial hosts in the Pinaceae include *Larix*, *Pinus*, *Picea*, and *Tsuga*. One variety attacks *Populus deltoides* and eastern cottonwood. It is possible that some or all records should be transferred to ***M. albertensis***, but further study is required to determine the differences, if any, between these two species.

***Melanomma pulvis-pyrius*** (Pers.:Fr.) Fuckel

Ascomycetes, Dothideales

Common sporophytic microfungus on wood.

***Mycosphaerella populicola*** G.E. Thompson

Ascomycetes, Dothideales

Anamorph: ***Septoria populicola*** Peck (Coelomycetes)

***Septoria*** state associated with leaf spots. The ***Mycosphaerella*** state has rarely been collected, and cankers are not associated with this fungus in British Columbia to date. More commonly encountered on black cottonwood and hybrids.

***M. tassiana*** (de Not.) Johans.

Anamorph: ***Cladosporium herbarum*** (Pers.:Fr.) Link (Hyphomycetes)

Frequently encountered saprophytic microfungus on many woody and herbaceous plant species. One collection on trembling aspen, from overwintered leaves, in spots caused by the anamorph of ***Venturia borealis*** Funk the previous year.

***Neofabraea populi*** G.E. Thompson

Ascomycetes, Helotiales

Anamorph: ***Cryptosporiopsis*** Bubák & Kab. (Coelomycetes)

Small brown apothecia erumpent in clusters from bark, associated with branch and stem cankers of *Populus*. Other members of this genus have been considered synonyms of ***Pezicula*** Tul. & C. Tul.

***Oxyporus corticola*** (Fr.:Fr.) Ryvarden

Syn. ***Polyporus corticola*** Fr.:Fr.

***Poria corticola*** (Fr.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white rot of hardwoods and conifers. Circumglobal—present in all forest regions of North America.

***Panus rudis*** Fr.

Syn. ***Lentinus strigosus*** (Schwein.:Fr.) Fr.

***Panus fragilis*** O.K. Miller

Basidiomycetes, Agaricales

Mushroom associated with white rot of hardwood and conifer logs and slash.

***Peniophora polygonia*** (Pers.:Fr.) Bourd. & Galzin

Syn. ***Corticium polygonium*** Pers.:Fr.

***Cryptochaete polygonia*** (Pers.:Fr.) P. Karst.

Basidiomycetes, Aphyllophorales

Annual, resupinate, pinkish, nonporoid fruiting bodies associated with white rot of *Populus* logs and slash.

***P. rufa*** (Fr.:Fr.) Boidin

Syn. ***Cryptochaete rufa*** (Fr.:Fr.) P. Karst.

Annual, resupinate, reddish pink, nonporoid fruiting bodies occurring on wounds and dead wood. Associated with stained wood column with scattered pink to brownish pink pockets of decay.

***Perrotia flammea*** (Albertini & Schwein.:Fr.) Boud.

Ascomycetes, Helotiales

Saprophytic discomycete with small, reddish, hairy apothecia fruiting on decorticated wood.

***Phaeocalicium populneum*** (Brond.:Duby) A. Schmidt

Ascomycetes, Caliciales

Black, bristle-like microfungus fruiting on bark of dead *Populus* branchlets.

***Phaeocalicium*** A. Schmidt

Unidentified species saprophytic on bark.

## Trembling Aspen

*Phaeoramularia maculicola* (Rom. & Sacc.) Sutton [R]

Hyphomycetes

*Phanerochaete sanguinea* (Fr.:Fr.) Pouzar

Syn. *Peniophora sanguinea* (Fr.:Fr.) Bres.

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with red stain and white rot of hardwoods and conifers.

*P. sordida* (P. Karst.) J. Eriksson & Ryvarden

Syn. *Corticium sordidum* P. Karst.

*Peniophora sordida* (P. Karst.) Burt

*P. cremea* (Bres.) Sacc. & Syd.

*Phanerochaete cremea* (Bres.) J. Eriksson

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods and occasionally conifers.

*Phellinus ferruginosus* Bourd. & Galzin

Syn. *Polyporus ferruginosus* (Schrad.:Fr.) Bourd. & Galzin

*Poria ferruginosa* (Schrad.:Fr.) P. Karst.

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with laminated white rot of dead hardwoods and conifers.

*P. tremulae* (Bondartsev) Bondartsev & Borisov [C]

Syn. *Fomes igniarius* f. *tremulae* Bondartsev

Perennial, hoof-shaped polypore on mature and overmature living aspen. Associated with red stain in incipient stages of decay and white rot with black zone lines in advanced decay. Most common and damaging cause of stain and decay of trembling aspen in British Columbia.

*Phlebia radiata* Fr.

Syn. *Merulius merismoides* Fr.:Fr.

*Phlebia merismoides* (Fr.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with white rot of dead hardwoods, rarely conifers. Also associated with decay of wood products.

*P. tremellosus* (Schrad.:Fr.) Nakasone & Burdsall [R]

Syn. *Merulius tremellosus* Schrad.:Fr.

*Pholiota alnicola* (Fr.:Fr.) Singer [C]

Syn. *Flammula alnicola* (Fr.:Fr.) P. Kumm.

Basidiomycetes, Agaricales

Mushroom associated with brown rot of hardwoods. Cultured from wood.

*P. aurivella* (Batsch:Fr.) P. Kumm. [C]

Mushroom associated with white rot of hardwoods.



*Phoma* Sacc., nom. cons.  
Coelomycetes

One collection, from winter-damaged leaf petiole.

*Piloderma byssinum* (P. Karst.) Jülich  
Syn. *Athelia byssina* (P. Karst.) Parmasto  
*Corticium byssinum* (P. Karst.) Massee  
Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies on wood and litter. Mycorrhizal association confirmed on other hardwood and conifer hosts.

*Pleospora* Rabenh. ex Ces. & de Not., nom. cons.  
Ascomycetes, Dothideales

Unidentified species saprophytic on bark and plant debris.

*Pleurotus ostreatus* (Jacq.:Fr.) P. Kumm.  
Basidiomycetes, Agaricales

Laterally stalked, gilled mushroom associated with white rot of living and dead hardwoods.

*P. subareolatus* Peck

Laterally stalked, gilled mushroom associated with spongy white rot of living and dead hardwoods.

*Polyporus badius* (Pers.:S.F. Gray) Schwein.  
Syn. *Grifola badia* Pers.: S.F. Gray  
*Polyporus picipes* Fr.  
Basidiomycetes, Aphyllophorales

Annual, stipitate polypore associated with white rot of dead hardwoods and conifers.

*P. elegans* Bull.:Fr.

Annual, stipitate polypore associated with white rot of dead hardwoods.

*Postia caesia* (Schrad.:Fr.) P. Karst.  
Syn. *Polyporus caesius* (Schrad.:Fr.) Fr.  
*Oligoporus caesius* (Schrad.:Fr.) R.L. Gilbertson & Ryvarden  
*Tyromyces caesius* (Schrad.:Fr.) Murrill  
Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with brown rot of hardwood and conifer slash.

*Punctularia strigoso-zonata* (Schwein.) Talbot  
Syn. *Merulius strigoso-zonata* Schwein.  
*Phlebia strigoso-zonata* (Schwein.) C.G. Lloyd  
Basidiomycetes, Aphyllophorales

Annual, resupinate, wrinkled fruiting bodies associated with spongy white rot of hardwoods.

## Trembling Aspen

### *Radulodon americanus* Ryvarden (TYPE)

Basidiomycetes, Aphyllophorales

Annual, resupinate, hydroid fruiting bodies associated with stringy white rot of hardwoods. Frequently associated with heart rot in living aspen. Early records of this fungus are attributed to *R. casearium*, but in fact the latter species is a different, rare taxon.

### *Resinicium bicolor* (Albertini & Schwein.:Fr.) Parmasto [R]

Syn. *Odontia bicolor* (Albertini & Schwein.:Fr.) Quél.

Basidiomycetes, Aphyllophorales

### *Rhytidiella baranyayi* Funk & Zalasky (TYPE)

Ascomycetes, Dothideales

Microfungus associated with cork-bark disease of aspen.

### *Schizophyllum commune* Fr.:Fr.

Basidiomycetes, Aphyllophorales

Annual, white, mushroom-like fruiting bodies associated with spongy white rot of hardwoods and conifers. Common on *Populus* slash.

### *Sistotrema raduloides* (P. Karst.) Donk

Syn. *Trechispora raduloides* (P. Karst.) D.P. Rogers

Basidiomycetes, Aphyllophorales

Annual, resupinate, poroid to hydroid fruiting bodies associated with white rot of aspen and cottonwood, rarely conifers.

### *Skeletocutis nivea* (Jungh.) J. Keller

Syn. *Polyporus niveus* Jungh.

*P. semipileatus* Peck

*Tyromyces semipileatus* (Peck) Murrill

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white rot of dead hardwoods.

### *Sporidesmium* Link:Fr.

Hyphomycetes

Unidentified species saprophytic on bark. One collection only.

### *Steccherinum ciliolatum* (Berk. & M.A. Curtis) R.L. Gilbertson & Budington

Syn. *Hydnum ciliolatum* Berk. & M.A. Curtis

*Odontia ciliolata* (Berk. & M.A. Curtis) L.W. Miller

Basidiomycetes, Aphyllophorales

Annual, resupinate, hydroid fruiting bodies associated with white rot of hardwood logs and slash.

### *Stictis radiata* Pers.:Fr.

Ascomycetes, Ostropales

Common saprophytic microfungus immersed in stem tissues of a wide variety of woody and herbaceous hosts.

### *Taphrina populina* (Fr.:Fr.) Fr. [R]

Ascomycetes, Taphrinales

***Teichospora*** Fuckel

Ascomycetes, Dothideales

Unidentified species saprophytic on wood.

***Trametes ochracea*** (Pers.) R.L. Gilbertson & Ryvarden

Syn. ***Polyporus zonatus*** Nees:Fr.

Basidiomycetes, Aphyllophorales

Annual, usually resupinate polypore associated with white rot of dead hardwoods.

***T. pubescens*** (Schumach.:Fr.) Pilát

Syn. ***Polyporus pubescens*** Schumach.: Fr.

Annual, resupinate polypore associated with white rot of dead hardwoods.

***T. versicolor*** (L.:Fr.) Pilát

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

***Coriolus versicolor*** (L.:Fr.) Quéf.

Annual, shelf-like polypore associated with white heart rot of dead hardwoods, occasionally conifers.

***Trechispora vaga*** (Fr.) Liberta

Basidiomycetes, Aphyllophorales

Annual, smooth to poroid or hydroid fruiting bodies associated with white rot of hardwoods and conifers.

***Tremella mesenterica*** Retz.:Fr.

Basidiomycetes, Tremellales

Yellow jelly fungus associated with white rot of dead branches and slash of hardwoods and conifers.

***Trichaptum biforme*** (Fr.) Ryvarden

Syn. ***Polyporus biformis*** Fr.

***P. pergamenus*** Fr.

***Hirschioporus pargamenus*** (Fr.) Bondartsev & Singer

Basidiomycetes, Aphyllophorales

Annual, shelf-like, frequently imbricate polypore with violet pores often splitting to form spines. Associated with white pocket rot of aspen and cottonwood logs and slash.

***T. subchartaceum*** (Murrill) Ryvarden

Syn. ***Coriolus subchartaceus*** Murrill

***Polyporus subchartaceus*** (Murrill) Overh.

Annual, shelf-like polypore with a violaceous pore layer, associated with white pocket rot of aspen and cottonwood logs and slash.

***Trichia decipiens*** (Pers.) Macbr.

Myxomycetes

Slime mould, causing a bright red colouration at the base of trees.

## Trembling Aspen

*Trichoderma* Pers.:Fr. [R]

Hyphomycetes

*Tympanis alnea* (Pers.:Fr.) Fr.

Ascomycetes, Helotiales

Anamorph: *Sirodothis inversa* (Fr.:Fr.) Sutton & Funk (Coelomycetes)

Clusters of black apothecia erumpent from bark of dead branches. Common on Betulaceae and *Populus*, occasionally on other hardwoods.

*T. conspersa* Fr. [R]

Usually collected on *Malus*—this is an unusual record.

*T. spermatispora* (Nyl.) Nyl.

Anamorph: *Sirodothis populnea* (Thuem.) Sutton & Funk (Coelomycetes)

Clusters of black apothecia erumpent from bark of dead *Populus* branches.

*Uncinula adunca* (Wallr.:Fr.) Lév. [R]

Syn. *Uncinula salicis* (DC.) G. Wint. in Rabenh.

Ascomycetes, Erysiphales

*Uredo* Pers.:Pers.

Basidiomycetes, Uredinales

Unidentified rust species obtained through inoculation of urediniospores produced on *Populus alba* L.

*Valsa sordida* Nitschke

Ascomycetes, Diaporthales

Anamorph: *Cytospora chryosperma* (Pers.:Fr.) Fr. (Coelomycetes)

Microfungus associated with orange discoloration and cankering of wounded or stressed bark, and on recently dead trees. Common and widespread on *Populus* and *Salix*; also occurs on other hardwoods.

*Venturia borealis* Funk (TYPE)

Ascomycetes, Dothideales

Anamorph: *Pollaccia borealis* Funk (TYPE) (Hyphomycetes)

*Pollaccia* state associated with purple-black leaf spots and "shot holes" on aspen in northern British Columbia and the Yukon. *Venturia* state described, and at this time, known, only from culture.

*V. macularis* (Fr.:Fr.) E. Müller & Arx

Syn. *Mycosphaerella macularis* (Fr.:Fr.) J. Schröt. in Cohn

*Didymosphaeria populifolia* Ellis & Everh.

*Venturia tremulae* Aderhold

Anamorph: *Pollaccia radiosa* (Lib.) Baldacci & Cif. (Hyphomycetes)

There is considerable difference of opinion with regards to the taxonomic disposition of this species. The above treatment (most commonly encountered in the literature) is according to Sivanesan, 1977 (Bibl. Mycol. 59:1–139). However, Morelet, 1985 (Crypt. Mycol. 6:101–107) considers *V. macularis* and *V. tremulae* to be separate taxa. Morelet described three varieties of *V. tremulae*, with only one, *V. tremulae* var. *grandidentatae*,

anamorph: *Pollaccia radiosa* (Lib.) Baldacci & Cif. var. *lethifera* (Peck in Sacc.), occurring on North American trembling aspen collected from eastern provinces and states. The anamorph of *V. macularis* sensu Morelet is unknown.

Another species strongly resembling the conidial state of our western *Venturia* (R. Hunt, Pacific Forestry Centre, pers. comm.) is *Pollaccia americana* Ondrej. This species was described from both eastern and western aspen collections (Ondrej 1972, European J. Forest Path. 2:140–146), but is not linked to a known *Venturia* state. Morelet (1985), however, considers *P. americana* a synonym of *P. radiosa* var. *lethifera*.

Microfungus associated with leaf blotch and blackening of succulent shoots, which take on a "shepherd's crook" appearance. Most common *Venturia* blight on aspen in British Columbia, especially in southern and central regions. Symptoms heaviest during damp springs and summers in dense, young stands.

### 1.3 Black Cottonwood – *Populus balsamifera* L. ssp. *trichocarpa* (Torr. & Gray) Brayshaw

***Aegerita*** Pers.

Hyphomycetes

Anamorphic state of a species of *Peniophora* Cooke (Basidiomycetes, Aphyllophorales); single collection.

***Alternaria alternata*** (Fr.:Fr.) Keissl.

Syn. *A. tenuis* Nees

Hyphomycetes

Common saprophytic mould associated with blotching of lower leaves in dense plantings and blackened stems and leaves of cuttings.

***Amphinema byssoides*** (Pers.:Fr.) J. Eriksson [R]

Syn. *Coniophora byssoides* (Pers.:Fr.) P. Karst.

*Peniophora byssoides* (Pers.:Fr.) Höhn. & Litsch.

Basidiomycetes, Aphyllophorales

***Amphisphaerella amphisphaerioides*** (Sacc. & Speg.) Kirschstein

Ascomycetes, Amphisphaeriales

Saprophytic microfungus immersed in wood of decorticated branches.

***Antrodia serialis*** (Fr.:Fr.) Donk

Syn. *Polyporus serialis* Fr.:Fr.

*Coriolellus serialis* (Fr.:Fr.) Murrill

*Trametes serialis* (Fr.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual to biennial, resupinate to effused-reflexed polypore, associated with brown cubical rot of dead conifers, and less commonly dead hardwoods.

***A. xantha*** (Fr.:Fr.) Ryvar den

Syn. *Poria xantha* (Fr.:Fr.) Cooke

Annual, resupinate, yellow polypore associated with brown cubical rot. Usually found on conifers, but occasionally on hardwoods.

***Aporpium caryae*** (Schwein.) Teix. & D.P. Rogers

Syn. *Polyporus caryae* Schwein.

Basidiomycetes, Tremellales

Annual, resupinate, poroid fruiting bodies with pinkish brown surface reddening when bruised. Associated with white rot of hardwood logs and slash; more commonly encountered in eastern North American hardwood forests.

***Arachnopeziza*** Fuckel

Ascomycetes, Helotiales

Unidentified species saprophytic on decorticated wood.

***Armillaria*** (Fr.:Fr.) Staude

Basidiomycetes, Agaricales

Brown mushroom associated with stringy yellow root and butt rot. Most likely to be *Armillaria sinapina* Bérubé & Dessureault, but not confirmed.

***Ascocoryne sarcoides*** (Jacq.) Groves & D.E. Wilson [R]

Ascomycetes, Helotiales

Anamorphs: *Coryne sarcoides* (Jacq.) Tul. & C. Tul. (Hyphomycetes)

*C. dubia* (Pers.:Fr.) S.F. Gray

*Phialophora* Medlar (Hyphomycetes)

***Aspergillus*** P. Mich. ex Link:Fr. [R]

Hyphomycetes

***Aureobasidium pullulans*** (de Bary) G. Arnaud [R]

Syn. *Pullularia pullulans* (de Bary) Berkhout

Hyphomycetes

***Basidiodendron grandinioides*** (Bourd. & Galzin) Luck-Allen

Syn. *Bourdotia grandinioides* Bourd. & Galzin

*Sebacina grandinioides* (Bourd. & Galzin) D.P. Rogers

Basidiomycetes, Tremellales

Saprophytic jelly fungus.

***Bjerkandera adusta*** (Willd.:Fr.) P. Karst.

Syn. *Polyporus adustus* (Willd.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual polypore with a grey to black pore surface and cream-coloured cap. Common in older stands, associated with white rot of logs and slash.

***Botryohypochnus isabellinus*** (Fr.) J. Eriksson

Syn. *Hypochnus isabellinus* Fr.

*Pellicularia isabellina* (Fr.) D.P. Rogers

Basidiomycetes, Aphyllophorales

Annual, felt-like, nonporoid fruiting bodies associated with white rot of hardwoods and conifers.

***Cadophora*** Lao [C]

Syn. *Phialophora* Medlar

Hyphomycetes

Should probably be transferred to *Phialophora*, but is a culture record only—no collection information recorded.

***Caliciopsis calicioides*** (Ellis & Everh.) Fitzp.

Ascomycetes, Coryneliales

Black, bristle-like microfungus found in bark fissures of living trees.

***Calocera cornea*** (Batsch:Fr.) Fr. [R]

Basidiomycetes, Dacrymycetales

## Black Cottonwood

*Ceriporia viridans* (Berk. & Broome) Donk

Syn. *Polyporus viridans* Berk. & Broome

*Poria griseoalba* (Peck) Sacc.

*P. rhodella* (Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white rot of hardwoods, rarely conifers.

*Ceriporiopsis aneirina* (Sommerf.:Fr.) Domanski

Syn. *Poria aneirina* (Sommerf.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate, cream-coloured polypore associated with soft, laminated white rot of *Populus* and *Betula*.

*C. pannocincta* (Romell) R.L. Gilbertson & Ryvarden

Syn. *Polyporus pannocinctus* Romell

*Poria pannocincta* (Romell) J. Lowe

*P. tacamahacae* Baxt.

Annual, resupinate polypore associated with white rot of hardwoods.

*Cerrena unicolor* (Bull.:Fr.) Murrill

Syn. *Daedalea unicolor* (Bull.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual conks with a labyrinthine pore layer, causing white rot of dead hardwoods. In eastern Canada, it is symbiotic with the wood wasp *Tremex columba* on *Fagus*, but this wasp has not yet been reported in British Columbia.

*Chondrostereum purpureum* (Pers.:Fr.) Pouzar

Syn. *Stereum purpureum* Pers.:Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate, reddish purple, nonporoid fruiting bodies in wounds or on slash. Associated with white rot of hardwoods, rarely conifers.

*Cladosporium sessile* Ellis & Barth.

Hyphomycetes

Saprophytic mould on leaf tissue.

*Clitocybe truncicola* (Peck) Sacc.

Basidiomycetes, Agaricales

Saprophytic mushroom on wood.

*Coccomyces* de Not.

Ascomycetes, Rhytismatales

Bark saprophyte. One collection from Vancouver Island.

*Coprinus* Pers. [C,R]

Basidiomycetes, Agaricales

Culture record only.



***Corioloopsis gallica*** (Bull.:Fr.) Ryvarden

Syn. ***Trametes hispida*** Bagl.

Basidiomycetes, Aphyllophorales

Annual, shelf-like polypore associated with white rot, predominately on *Populus* and *Salix*, less commonly on other hardwoods, and rarely on conifers.

***Corticium roseum*** Pers.:Fr.

Syn. ***Aleurodiscus roseus*** (Pers.:Fr.) Höhn. & Litsch.

***Laeticorticium roseum*** (Pers.:Fr.) Donk

Basidiomycetes, Aphyllophorales

Resupinate, nonporoid fruiting bodies associated with white rot of hardwoods, rarely conifers.

***Crepidotus fulvotomentosus*** Peck

Basidiomycetes, Agaricales

Small saprophytic mushroom on wood, associated with white rot.

***Cristinia helvetica*** (Pers.) Parmasto

Syn. ***Hydnum helveticum*** Pers.

Basidiomycetes, Aphyllophorales

Resupinate, hydroid fruiting bodies associated with white rot of *Populus*.

***Cryptodiaporthe salicella*** (Fr.:Fr.) Petr. [C,R]

Ascomycetes, Diaporthales

Anamorph: ***Discella microsperma*** (G. Johnst.) Sutton (Coelomycetes)

***Cryptosphaeria lignyota*** (Fr.:Fr.) Auersw.

Syn. ***Diatrype lignyota*** (Fr.:Fr.) Fr.

***Cryptosphaeria populina*** (Pers.:Fr.) Sacc.

Ascomycetes, Diatrypales

Anamorph: ***Cytosporina*** (Sacc.) Sacc. (= ***Libertella*** Desmaz.) (Coelomycetes)

Microfungus associated with cankers and dieback, frequently following wounds. Discolouration and decay of the heartwood and sapwood precedes canker development, extending up to a metre beyond the canker. The ***Cytosporina*** state is easily isolated from infected wood.

***Cucurbitaria staphula*** Dearn. ex R.H. Arnold & Russell

Ascomycetes, Dothideales

Anamorph: ***Dichomera*** Cooke (Coelomycetes)

Saprophytic microfungus on wood.

***Cylindrobasidium laeve*** (Pers.:Fr.) Chamuris

Syn. ***Corticium laeve*** Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies; on cottonwood, willow, and maple logs and slash in British Columbia.

***Cyphellopsis anomala*** (Pers.:Fr.) Donk

Syn. ***Cyphella anomala*** (Pers.:Fr.) Pat.

Basidiomycetes, Agaricales

Small, downward-pointing cupulate fruiting bodies associated with white rot of hardwoods.

## Black Cottonwood

*Cytospora* Ehrenb.:Fr.  
Coelomycetes

Anamorph of a *Valsa* Fr., nom. cons. prop. (Ascomycetes, Diaporthales), often associated with orange discolouration and cankers around wounded or otherwise stressed bark.

*Dacrymyces deliquescens* (Mérat) Duby var. *deliquescens* [R]  
Basidiomycetes, Dacrymycetales

*D. deliquescens* (Mérat) Duby var. *ellisii* (Coker) Kennedy [R]

*Daedaleopsis confragosa* (Bolton:Fr.) J. Schröt.  
Syn. *Daedalea confragosa* (Bolton:Fr.) Fr.  
Basidiomycetes, Aphyllophorales

Annual, shelf-like fruiting bodies with maze-like pores, associated with white rot of dead hardwoods, rarely conifers.

*Datronia mollis* (Sommerf.:Fr.) Donk  
Syn. *Trametes mollis* (Sommerf.:Fr.) Fr.  
*T. serpens* Fr.  
Basidiomycetes, Aphyllophorales

Annual, effused-reflexed to resupinate polypore associated with white rot of dead hardwoods.

*D. stereoides* (Fr.:Fr.) Ryvar den  
Syn. *Polyporus sterioides* Fr.:Fr.  
*P. planellus* (Murrill) Overh.

Annual, resupinate polypore associated with white rot of dead cottonwood and conifers in British Columbia.

*Diaporthe eres* Nitschke [R]  
Syn. *D. ambigua* Nitschke  
Ascomycetes, Diaporthales  
Anamorph: *Phomopsis oblonga* (Desmaz.) Traverso (Coelomycetes)

*Diaporthe* Nitschke  
Unidentified species (immature) on bark.

*Diatrype macounii* Ellis & Everh. [R]  
Ascomycetes, Diatrypales

*Diplodia tumefaciens* (Shear) Zalasky  
Syn. *Macrophoma tumefaciens* Shear  
Coelomycetes

Microfungus associated with branch and stem swellings on *Populus*. The teleomorph, *Keissleriella emergens* (P. Karst.) Bose (Ascomycetes, Dothideales), has not been reported from British Columbia; elsewhere in Canada it has been isolated in culture from diseased roots.

*Diplomitoporus lenis* (P. Karst.) R.L. Gilbertson & Ryvar den [R]  
Syn. *Poria lenis* (P. Karst.) Sacc.  
Basidiomycetes, Aphyllophorales

***Discina perlata*** (Fr.) Fr.

Ascomycetes, Pezizales

Found adjacent to the root system of an old cottonwood, but is considered to occur primarily on soil as a saprophyte.

***Drepanopeziza populorum*** (Desmaz.) Höhn.

Ascomycetes, Helotiales

Anamorph: ***Marssonina populi*** (Lib.) Magnus (Coelomycetes)

The ***Drepanopeziza*** state is rare in Canada. The ***Marssonina*** state is common, associated with orange-brown leaf spotting and blotching, and premature defoliation of susceptible trees.

***Epicoccum*** Link:Fr. [R]

Hyphomycetes

***Eutypa maura*** (Fr.:Fr.) Fuckel

Syn. ***E. acharii*** Tul.

Ascomycetes, Diatrypales

Anamorph: ***Cytosporina acharii*** (Sacc.) Grove (Coelomycetes)

Distribution outside Europe is questionable.

***Exidia glandulosa*** Fr.:Fr.

Basidiomycetes, Tremellales

Saprophytic jelly fungus on wood.

***Exidiopsis fuliginea*** Rick

Syn. ***Sebacina adusta*** Burt

Basidiomycetes, Tremellales

Saprophytic jelly fungus on hardwoods and conifers.

***Flammulina velutipes*** (Curtis:Fr.) Singer

Syn. ***Collybia velutipes*** (Curtis:Fr.) P. Kumm.

Basidiomycetes, Agaricales

Brown mushrooms fruiting in clumps on or around stumps, logs, and roots. Associated with spongy, white sapwood rot of living and dead hardwoods.

***Fomes fomentarius*** (L.:Fr.) J. Kickx fil.

Basidiomycetes, Aphyllophorales

Perennial polypore associated with mottled white heart rot on living hardwoods.

***Fomitopsis pinicola*** (Sw.:Fr.) P. Karst.

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

Basidiomycetes, Aphyllophorales

Perennial, shelf-like conk with white pore surface and reddish band around margin, associated with brown cubical rot. More commonly found on conifers and *Prunus*; occasionally on *Populus* and *Betula*.

## Black Cottonwood

*Fusarium lateritium* Nees:Fr. [R]  
Hyphomycetes

*Ganoderma applanatum* (Pers.) Pat.  
Syn. *Fomes applanatus* (Pers.) Gill.  
Basidiomycetes, Aphyllophorales

Perennial, shelf-like polypore commonly known as "artist's conk." Pore surface darkens permanently when damaged. Associated with white root and butt rot of living and dead hardwoods and conifers.

*Gloeocystidiellum karstenii* (Bourd. & Galzin) Donk  
Syn. *Gloeocystidium karstenii* Bourd. & Galzin  
Basidiomycetes, Aphyllophorales

Resupinate, nonporoid fruiting bodies associated with white rot of hardwoods, especially *Populus* logs and slash, and occasionally conifers.

*G. porosum* (Berk. & M.A. Curtis) Donk  
Syn. *Corticium porosum* Berk. & M.A. Curtis

Resupinate, nonporoid fruiting bodies associated with white rot of hardwood and conifer logs and slash.

*Gloeoporus dichrous* (Fr.:Fr.) Bres.  
Syn. *Polyporus dichrous* Fr.:Fr.  
Basidiomycetes, Aphyllophorales

Annual, resupinate to shelf-like polypore associated with white rot of dead hardwoods, rarely conifers.

*Grandinia arguta* (Fr.:Fr.) Jülich  
Syn. *Hyphodontia arguta* (Fr.:Fr.) J. Eriksson  
*Odontia arguta* (Fr.:Fr.) Quéél.  
Basidiomycetes, Aphyllophorales

Annual, resupinate fruiting bodies with flattened teeth, associated with white rot of hardwoods and conifers.

*Gymnopilus spectabilis* (Fr.:Fr.) A.H. Sm. [C]  
Syn. *Pholiota spectabilis* (Fr.:Fr.) Gill.  
Basidiomycetes, Agaricales

Large brown mushroom associated with white rot of hardwood and conifer logs and slash.

*Hapalopilus nidulans* (Fr.) P. Karst. [R]  
Syn. *Polyporus rutilans* Pers.:Fr.  
*Hapalopilus rutilans* (Pers.:Fr.) Murrill  
*Polyporus nidulans* Fr.:Fr.  
Basidiomycetes, Aphyllophorales

*Helicogloea lagerheimii* Pat. [R]  
Basidiomycetes, Auriculariales

*Hericium coralloides* (Scop.:Fr.) S.F. Gray  
Syn. *H. ramosum* (Bull.) Letell.  
Basidiomycetes, Aphyllophorales

Annual, white, coral-like hydroid fruiting bodies associated with white, spongy heart rot. Cultural and morphological studies by Ginns 1984 (*Mycotaxon* 20:39–43) have separated two distinct North American taxa previously labelled as *H. coralloides*. Collections from eastern North American hardwoods (rarely conifers) are now considered to be a separate species, *H. americanum* Ginns. *Hericium coralloides* is widespread throughout North America, and commonly collected in British Columbia.

*Heterochaete spinulosa* (Berk. & M.A. Curtis) D. Reid  
 Syn. *Radulum spinulosum* Berk. & M.A. Curtis  
*Eichleriella spinulosa* (Berk. & M.A. Curtis) Burt  
 Basidiomycetes, Tremellales

Jelly fungus associated with white rot of logs and slash. Unusual host and distribution record—usually reported from tropical and subtropical areas.

*Hyaloscypha hyalina* (Pers.:Fr.) Boud.  
 Ascomycetes, Helotiales

Saprophytic discomycete on rotting wood and debris.

*Hyphoderma inusitata* (Jacks. & Deard.) Ginns (TYPE)  
 Syn. *Peniophora inusitata* Jacks. & Deard.  
 Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with white rot of *Populus*.

*H. mutatum* (Peck) Donk  
 Syn. *Corticium mutatum* Peck  
*Peniophora mutata* (Peck) Höhn. & Litsch.

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods.

*H. sambuci* (Pers.) Jülich  
 Syn. *Lyomyces sambuci* (Pers.) P. Karst.  
*Hyphodontia sambuci* (Pers.) J. Eriksson  
*Peniophora sambuci* (Pers.) Burt  
*Corticium cretaceum* (Fr.) Cooke ex Sacc.

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods and conifers.

*H. setigerum* (Fr.:Fr.) Donk

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods and conifers.

*Hypochnicium analogum* (Bourd. & Galzin) J. Eriksson  
 Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods.

*H. vellereum* (Ellis & Cragin) Parmasto

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwood logs and slash.

## Black Cottonwood

*Hypoxylon multiforme* (Fr.:Fr.) Fr. [R]

Ascomycetes, Sphaeriales

Anamorph: *Nodulisporium* G. Preuss (Hyphomycetes)

*H. vogesiacum* (Pers.) Sacc. var. *macrospora* J.H. Miller

Anamorph: *Nodulisporium* G. Preuss (Hyphomycetes)

Saprophytic microfungus on dead branches. Rarely collected in British Columbia to date.

*Hypsizygus tessulatus* (Bull.:Fr.) Singer

Basidiomycetes, Agaricales

Saprophytic mushroom on wood.

*H. ulmarius* (Bull.:Fr.) Redhead

Syn. *Pleurotus ulmarius* (Bull.:Fr.) P. Kumm.

Saprophytic mushroom on wood.

*Inocybe* (Fr.) Fr. [R]

Basidiomycetes, Agaricales

*Inonotus glomeratus* (Peck) Murrill

Syn. *Polyporus glomeratus* Peck

Basidiomycetes, Aphyllophorales

Annual, resupinate fruiting bodies with pores when fertile but often collected without a pore layer present. Associated with white heart rot of living and dead hardwoods.

*I. obliquus* (Pers.:Fr.) Pilát [R]

Syn. *Polyporus obliquus* (Pers.:Fr.) Fr.

*Poria obliqua* (Pers.:Fr.) P. Karst.

*Intextomyces contiguus* (P. Karst.) J. Eriksson & Ryvarden [R]

Syn. *Corticium contiguum* P. Karst.

Basidiomycetes, Aphyllophorales

*Irpex lacteus* (Fr.:Fr.) Fr.

Syn. *Sistotrema lacteum* Fr.

*Hydnum lacteum* Fr.:Fr.

*Polyporus tulipiferae* (Schwein.) Overh.

Basidiomycetes, Aphyllophorales

Annual fruiting bodies with pores that split early in development to form tooth-like projections. Associated with white heart rot of dead hardwoods.

*Junghuhnia nitida* (Pers.:Fr.) Ryvarden

Syn. *Poria nitida* (Pers.:Fr.) Cooke

*P. attenuata* (Peck) Peck

*P. eupora* (P. Karst.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white heart rot of dead hardwoods, rarely conifers. Infrequently collected in the Pacific Northwest.

*Kuehneromyces mutabilis* (Schaeff.:Fr.) Singer & A.H. Sm.

Syn. *Pholiota mutabilis* (Schaeff.:Fr.) P. Kumm.

Basidiomycetes, Agaricales

Mushroom associated with white rot of hardwoods and conifers. Often seen fruiting on the cut end of logs.

*Laeticorticium expallens* (Bres.) J. Eriksson & Hjortst.

Syn. *Corticium expallens* Bres.

*Phlebia expallens* (Bres.) Parmasto

Basidiomycetes, Aphyllophorales

Resupinate, nonporoid fruiting bodies on bark and wood. *Laeticorticium* is now considered to be a synonym of *Corticium*; this species should probably be redispersed to the latter genus.

*Lentinellus ursinus* (Fr.:Fr.) Kühner

Basidiomycetes, Agaricales

Mushroom associated with white rot of hardwood and conifer logs and slash.

*L. vulpinus* (Fr.:Fr.) Kühner & Maire

Syn. *Lentinus vulpinus* (Sow.:Fr.) Fr.

Wood decay mushroom.

*Leucostoma nivea* (Hoffm.:Fr.) Höhn. [R]

Syn. *Valsa nivea* (Hoffm.:Fr.) Fr.

Ascomycetes, Diaporthales

Anamorph: *Cytospora nivea* Sacc. (Coelomycetes)

*Libertella* Desmaz. [R]

Coelomycetes

Unidentified anamorph of Diatrypaceae (Ascomycetes). Possibly an anamorph of a species of *Cryptosphaeria* Grev.

*Linospora tetraspora* G.E. Thompson

Ascomycetes, Diaporthales

Microfungus associated with large, black leaf blotches. Heavy blighting occasionally occurring during damp summers in coastal British Columbia.

*Lophodermium* Chev.

Ascomycetes, Rhytismatales

Microfungus fruiting on bark of dead fallen branches. Single collection; possibly undescribed.

*Marasmius tremulae* Vél. [R]

Basidiomycetes, Agaricales

Small mushroom fruiting on fallen leaves of black cottonwood in North America. Occurs on leaves of *Populus tremula* L. in Eurasia and Iceland.

*Melampsora occidentalis* H. Jacks.

Basidiomycetes, Uredinales

Foliar rust of cottonwood, balsam poplar, and some hybrid poplars. Uredinial and telial states on *Populus* are associated with yellow-orange leaf spots and premature defoliation. Alternate (aecial) hosts in the Pinaceae include *Abies*, *Larix*, *Picea*, *Pinus*, *Pseudotsuga*, and *Tsuga*.

## Black Cottonwood

### *Melanomma fuscidulum* Sacc.

Ascomycetes, Dothideales

Saprophytic microfungus on wood.

### *Meruliopsis corium* (Fr.:Fr.) Ginns

Syn. *Byssomerulius corium* (Fr.:Fr.) Parmasto

*Merulius corium* (Fr.:Fr.) Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate, reticulately pored fruiting bodies associated with white rot of hardwood and conifer logs, dead branches, and slash.

### *Mycosphaerella populicola* G.E. Thompson

Ascomycetes, Dothideales

Anamorph: *Septoria populicola* Peck (Coelomycetes)

*Septoria* state associated with leaf spotting, blotching, and premature chlorosis and defoliation, which can be heavy during damp summers in coastal areas of the province. The *Mycosphaerella* state has rarely been collected, and cankers are not associated with this fungus in British Columbia to date.

### *M. populifolia* (Cooke) House [R]

### *M. populorum* G.E. Thompson

Anamorph: *Septoria musiva* Peck (Coelomycetes)

This species is reported as occurring in the Pacific Northwest in most North American host-fungus lists, but critical examination of herbarium collections has shown that they have been based on either young anamorphic fruiting bodies of *M. populicola* (in which conidia are somewhat shorter), or have been misidentified and are in fact good collections of *M. populicola*. It is extremely doubtful that this species actually occurs in the Pacific Northwest, and lack of *Septoria*-induced cankers in our region substantiates this observation.

### *M. tassiana* (de Not.) Johans.

Anamorph: *Cladosporium herbarum* (Pers.:Fr.) Link (Hyphomycetes)

Frequently encountered saprophytic microfungus on many woody and herbaceous plant species.

### *Nectria inventa* Pethybr.

Ascomycetes, Hypocreales

Anamorphs: *Verticillium tenerum* (Pers.:Fr.) Link (Hyphomycetes)

*V. cinnabarinum* (Corda) Reinke & Berthier

Single collection from a cottonwood whip.

### *Neofabraea populi* G.E. Thompson

Ascomycetes, Helotiales

Anamorph: *Cryptosporiopsis* Bubák & Kab. (Coelomycetes)

Small brown apothecia erumpent in clusters from bark, associated with branch and stem cankers of *Populus*. Other members of this genus have been considered synonyms of *Pezicula* Tul. & C. Tul.



***Ophiostoma piliferum*** (Fr.:Fr.) Syd. & P. Syd. [R]

Syn. ***Ceratocystis pilifera*** (Fr.:Fr.) C. Moreau

Ascomycetes, Ophiostomatales

Anamorph: ***Sporothrix*** L. Hektoen & C.F. Perkins ex J. Nicot & F. Mariat  
(Hyphomycetes)

***Oxyporus corticola*** (Fr.:Fr.) Ryvarden

Syn. ***Polyporus corticola*** Fr.:Fr.

***Poria corticola*** (Fr.:Fr.) Cooke

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white rot of hardwoods and conifers.  
Circumglobal—present in all forest regions of North America.

***O. similis*** (Bres.) Ryvarden

Syn. ***Poria similis*** Bres.

Annual, resupinate polypore associated with white rot of dead hardwoods and conifers.

***Panus rudis*** Fr.

Syn. ***Lentinus strigosus*** (Schwein.:Fr.) Fr.

***Panus fragilis*** O.K. Miller

Basidiomycetes, Agaricales

Mushroom associated with white rot of hardwood and conifer logs and slash.

***Peniophora aurantiaca*** (Bres.) Höhn. & Litsch.

Syn. ***P. shearii*** Burt

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods. Most commonly encountered on *Alnus*.

***P. polygonia*** (Pers.:Fr.) Bourd. & Galzin

Syn. ***Corticium polygonium*** Pers.:Fr.

***Cryptochaete polygonia*** (Pers.:Fr.) P. Karst.

Annual, resupinate, pinkish, nonporoid fruiting bodies associated with white rot of *Populus* logs and slash.

***P. rufa*** (Fr.:Fr.) Boidin

Syn. ***Cryptochaete rufa*** (Fr.:Fr.) P. Karst.

Annual, resupinate, reddish pink, nonporoid fruiting bodies occurring on wounds and dead wood. Associated with stained wood column with scattered pink to brownish pink pockets of decay.

***Peziza emileia*** Cooke

Ascomycetes, Pezizales

Brown discomycete fruiting on well-decayed *Populus* slash. Commonly saprophytic on soil and duff.

***P. repanda*** Pers.

Brown discomycete saprophytic on old decayed hardwood stumps and slash.

## Black Cottonwood

***Phaeocalicium populneum*** (Brond.:Duby) A. Schmidt

Ascomycetes, Caliciales

Black, bristle-like microfungus fruiting on bark of dead *Populus* branchlets. Common in British Columbia.

***Phaeoramularia maculicola*** (Rom. & Sacc.) Sutton

Hyphomycetes

Microfungus associated with grey leaf spots, which are usually small and angular.

***Phanerochaete carnos***a (Burt) Parmasto [R]

Syn. ***Peniophora carnos***a Burt

Basidiomycetes, Aphyllophorales

***P. sordida*** (P. Karst.) J. Eriksson & Ryvarden

Syn. ***Corticium sordidum*** P. Karst.

***Peniophora sordida*** (P. Karst.) Burt

***P. cremea*** (Bres.) Sacc. & Syd.

***Phanerochaete cremea*** (Bres.) J. Eriksson

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwoods and occasionally conifers.

***P. tuberculata*** (P. Karst.) Parmasto

Syn. ***Corticium tuberculatum*** P. Karst.

Annual, resupinate, nonporoid fruiting bodies on wood.

***Phellinus ferreus*** (Pers.) Bourd. & Galzin

Syn. ***Polyporus ferreus*** Pers.

***Poria ferrea*** (Pers.) Overh.

Basidiomycetes, Aphyllophorales

Perennial, resupinate polypore associated with white rot of dead hardwoods and conifers.

***P. ferruginosus*** Bourd. & Galzin

Syn. ***Polyporus ferruginosus*** (Schrad.:Fr.) Bourd. & Galzin

***Poria ferruginosa*** (Schrad.:Fr.) P. Karst.

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with laminated white rot of dead hardwoods and conifers.

***P. igniarius*** (L.:Fr.) Quél.

Syn. ***Fomes igniarius*** (L.:Fr.) J. Kickx. fil.

Perennial, hoof-shaped polypore on living hardwoods, associated with white heart rot. This name was at one time also used for a closely related species on trembling aspen, which is now recognized as a distinct taxon: ***P. tremulae*** (Bondartsev) Bondartsev & Borisov.

***P. viticola*** (Schwein.:Fr.) Donk

Syn. ***Polyporus viticola*** Schwein.:Fr.

***Fomes viticola*** (Schwein.:Fr.) J. Lowe

***F. tenuis*** P. Karst.

Perennial, resupinate polypore associated with white rot of dead hardwoods and conifers.

*Phialocephala bactrospora* W.B. Kendr. [C,R]  
 Hyphomycetes  
 Culture record only.

*Phlebia albida* Fr. [R]  
 Basidiomycetes, Aphyllophorales

*P. radiata* Fr.  
 Syn. *Merulius merismoides* Fr.:Fr.  
*Phlebia merismoides* (Fr.:Fr.) Fr.

Annual, resupinate, nonporoid fruiting bodies associated with white rot of dead hardwoods and occasionally conifers. Also associated with decay of wood products.

*Pholiota populnea* (Pers.:Fr.) Kuyper & Tjall.-Beukers  
 Syn. *Pholiota destruens* (Brond.) Gill.  
 Basidiomycetes, Agaricales

Mushroom associated with white rot of *Populus* logs and wood.

*Phoma* Sacc., nom. cons.  
 Coelomycetes

*Pleospora* Rabenh. ex Ces. & de Not., nom. cons.  
 Ascomycetes, Dothideales

Unidentified species saprophytic on bark and plant debris.

*Pleurotellus hypnophilus* (Berk.) Sacc.  
 Syn. *Crepidotus herbarum* (Peck) Sacc.  
 Basidiomycetes, Agaricales

Mushroom associated with white rot of hardwoods and conifers.

*Pleurotus dryinus* (Pers.:Fr.) P. Kumm.  
 Basidiomycetes, Agaricales

Laterally stalked, gilled mushroom associated with white rot of living and dead hardwoods.

*P. ostreatus* (Jacq.:Fr.) P. Kumm.

Laterally stalked, gilled mushroom associated with white rot of living and dead hardwoods.

*P. subareolatus* Peck

Laterally stalked, gilled mushroom associated with spongy white rot of living and dead hardwoods.

*Pluteus atricapillus* (Batsch) Fayod  
 Syn. *P. cervinus* (Schaeff.:Fr.) P. Kumm.  
 Basidiomycetes, Agaricales

Large gilled mushroom saprophytic on fallen decayed wood.

## Black Cottonwood

*Polyporus badius* (Pers.:S.F. Gray) Schwein.

Syn. *Grifola badia* Pers.:S.F. Gray

*Polyporus picipes* Fr.

Basidiomycetes, Aphyllophorales

Annual, stipitate polypore associated with white rot of dead hardwoods and conifers.

*P. elegans* Bull.:Fr.

Annual, stipitate polypore associated with white rot of dead hardwoods.

*P. melanopus* Fr.:Fr.

Annual, stipitate, terrestrial polypore associated with buried wood of hardwoods and conifers.

*P. squamosus* (Huds.:Fr.) Fr.

Syn. *Boletus squamosus* Huds.:Fr.

Annual, large, stipitate polypore associated with white heart rot of living and dead hardwoods.

*Postia caesia* (Schrad.:Fr.) P. Karst. [R]

Syn. *Polyporus caesius* (Schrad.:Fr.) Fr.

*Oligoporus caesius* (Schrad.:Fr.) R.L. Gilbertson & Ryvarden

*Tyromyces caesius* (Schrad.:Fr.) Murrill

Basidiomycetes, Aphyllophorales

*Protodontia oligacantha* Martin (TYPE)

Basidiomycetes, Tremellales

Pale, thin, resupinate, saprophytic jelly fungus on wood.

*Pseudoclitocybe cyathiformis* (Fr.:Fr.) Singer

Syn. *Clitocybe cyathiformis* (Bull.:Fr.) P. Kumm.

Basidiomycetes, Agaricales

Mushroom on wood and woody debris.

*Punctularia strigoso-zonata* (Schwein.) Talbot

Syn. *Merulius strigoso-zonata* Schwein.

*Phlebia strigoso-zonata* (Schwein.) C.G. Lloyd

Basidiomycetes, Aphyllophorales

Annual, resupinate, wrinkled fruiting bodies associated with spongy white rot of hardwoods.

*Radulodon americanus* Ryvarden

Basidiomycetes, Aphyllophorales

Annual, resupinate, hydroid fruiting bodies associated with stringy white rot of hardwoods. Early records of this fungus are attributed to *R. casearum*, but in fact the latter species is a different, rare taxon.

*Ramularia* Unger

Hyphomycetes

Microfungus associated with leaf spots.

***Schizophyllum commune*** Fr.:Fr.

Basidiomycetes, Aphyllophorales

Annual, white, mushroom-like fruiting bodies associated with spongy white rot of hardwoods and conifers. Common on *Populus* slash.

***Schizopora paradoxa*** (Schrad.:Fr.) Donk

Syn. ***Irpex paradoxus*** (Schrad.:Fr.) Fr.

***Poria versipora*** (Pers.) Romell

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore with pores that split, becoming tooth-like. Associated with white rot of hardwoods.

***Scutellinia scutellata*** (L.:Fr.) Lambotte

Ascomycetes, Pezizales

Small, red discomycete saprophytic on wood.

***Scytinostroma galactinum*** (Fr.) Donk

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

Basidiomycetes, Aphyllophorales

Resupinate, nonporoid fruiting bodies associated with white rot of hardwoods and conifers.

***Sistotrema brinkmannii*** (Bres.) J. Eriksson [C]

Syn. ***Odontia brinkmannii*** Bres.

Basidiomycetes, Aphyllophorales

Annual, resupinate, poroid to hydroid fruiting bodies associated with white rot of hardwood and conifer logs and slash. This taxon will probably be split into several morphologically similar species.

***S. raduloides*** (P. Karst.) Donk

Syn. ***Trechispora raduloides*** (P. Karst.) D.P. Rogers

Annual, resupinate, poroid to hydroid fruiting bodies associated with white rot of aspen and cottonwood, rarely conifers.

***Spongipellis delectans*** (Peck) Murrill

Syn. ***Polyporus delectans*** Peck

Basidiomycetes, Aphyllophorales

Annual, shelf-like polypore associated with mottled white rot of living (wounded) or dead hardwoods.

***S. spumeus*** (Sowerby:Fr.) Pat. [R]

***Steccherinum ciliolatum*** (Berk. & M.A. Curtis) R.L. Gilbertson & Budington

Syn. ***Hydnum ciliolatum*** Berk. & M.A. Curtis

***Odontia ciliolata*** (Berk. & M.A. Curtis) L.W. Miller

Basidiomycetes, Aphyllophorales

Annual, resupinate, hydroid fruiting bodies associated with white rot of hardwood logs and slash.

## Black Cottonwood

***S. fimbriatum*** (Pers.:Fr.) J. Eriksson

Syn. ***Hydnum fimbriatum*** Pers.:Fr.

***Odontia fimbriata*** (Pers.:Fr.) Fr.

Annual, resupinate, hydroid fruiting bodies associated with white rot of hardwood and conifer logs and slash.

***S. ochraceum*** (Pers.:Fr.) S.F. Gray

Syn. ***Hydnum ochraceum*** Pers.:Fr.

Annual, effused-reflexed, hydroid fruiting bodies associated with white rot of hardwood, occasionally conifer, logs and slash.

***Stereum ostrea*** (Blume & Nees:Fr.) Fr. [R]

Syn. ***Thelephora ostrea*** Blume & Nees:Fr.

Basidiomycetes, Aphyllophorales

***Stictis radiata*** Pers.:Fr.

Ascomycetes, Ostropales

Common saprophytic microfungus immersed in stem tissues of a wide variety of woody and herbaceous hosts.

***Subulicystidium longisporum*** (Pat.) Parmasto

Syn. ***Peniophora longispora*** (Pat.) Höhn.

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with white rot of hardwood logs and slash.

***Taphrina populina*** (Fr.:Fr.) Fr.

Ascomycetes, Taphrinales

Microfungus associated with yellow leaf spots and blisters on native and hybrid *Populus*.

***T. populi-salicis*** Mix

Microfungus associated with yellow leaf spots and blisters on *Populus* and *Salix*.

***Tomentella calcicola*** (Bourd. & Galzin) M. Larsen

Syn. ***Caldesiella calcicola*** (Bourd. & Galzin) M. Christiansen

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies saprophytic on hardwoods.

***T. coerulea*** (Bres.) Höhn. & Litsch.

Syn. ***T. papillata*** Höhn. & Litsch.

Annual, resupinate, nonporoid fruiting bodies saprophytic on hardwoods and conifers.

***T. ferruginea*** (Pers.:Fr.) Pat.

Syn. ***Hypochnus ferruginea*** (Pers.:Fr.) Fr.

***Grandinia coriaria*** Peck

Annual, resupinate, nonporoid fruiting bodies saprophytic on hardwoods and conifers.

***T. jaapii*** (Bres.) Bourd. & Galzin, nom. nud. [R]

*Tomentellastrum badium* (Link) M. Larsen

Syn. *Tomentellastrum floridanum* (Ellis & Everh.) M. Larsen

Basidiomycetes, Aphyllophorales

Annual, resupinate, nonporoid fruiting bodies associated with organic debris.

*Trametes hirsuta* (Wulfen:Fr.) Quél.

Syn. *Polyporus hirsutus* Wulfen:Fr.

Basidiomycetes, Aphyllophorales

Annual, shelf-like or effused-reflexed polypore associated with white rot of dead hardwoods, rarely conifers.

*T. pubescens* (Schumach.:Fr.) Pilát [R]

Syn. *Polyporus pubescens* Schumach.:Fr.

*T. suaveolens* (L.:Fr.) Fr.

Annual, shelf-like polypore with an anise scent; associated with white heart rot of living aspen and cottonwood and their stumps.

*T. versicolor* (L.:Fr.) Pilát

Syn. *Polyporus versicolor* L.:Fr.

*Coriolus versicolor* (L.:Fr.) Quél.

Annual, shelf-like polypore associated with white heart rot of dead hardwoods, occasionally conifers.

*Trechispora mollusca* (Pers.:Fr.) Liberta [R]

Basidiomycetes, Aphyllophorales

*Tremella mesenterica* Retz.:Fr.

Basidiomycetes, Tremellales

Yellow jelly fungus associated with white rot of dead branches and slash of hardwoods and conifers.

*Trichaptum biforme* (Fr.) Ryvarden

Syn. *Polyporus biformis* Fr.

*P. pergamenus* Fr.

*Hirschioporus pergamenus* (Fr.) Bondartsev & Singer

Basidiomycetes, Aphyllophorales

Annual, shelf-like, frequently imbricate polypore with violet pores often splitting to form spines. Associated with white pocket rot of aspen and cottonwood logs and slash.

*T. subchartaceum* (Murrill) Ryvarden

Syn. *Coriolus subchartaceus* Murrill

*Polyporus subchartaceus* (Murrill) Overh.

Annual, shelf-like polypore with a violaceous pore layer, associated with white pocket rot of aspen and cottonwood logs and slash.

*Trichoderma* Pers.:Fr. [R]

Hyphomycetes

## Black Cottonwood

***Tulasnella calospora*** (Boud.) Juel [R]

Syn. ***Gloeotulasnella calospora*** (Boud.) D.P. Rogers  
Basidiomycetes, Tulasnellales

***Tympanis spermatispora*** (Nyl.) Nyl. [R]

Ascomycetes, Helotiales  
Anamorph: ***Sirodothis populnea*** (Thuem.) Sutton & Funk (Coelomycetes)

***Tympanis*** Tode:Fr.

Small, black discomycete emerging in clusters from bark (immature collections).

***Typhula*** Fr.:Fr., emend. Berthier

Basidiomycetes, Aphyllophorales

Unidentified species from yellow sclerotia on leaves; single collection.

***Tyromyces galactinus*** (Berk.) J. Lowe

Syn. ***Polyporus galactinus*** Berk.  
Basidiomycetes, Aphyllophorales

Annual, shelf-like polypore associated with white rot of dead hardwoods.

***Uncinula adunca*** (Wallr.:Fr.) Lév.

Syn. ***Uncinula salicis*** (DC.) G. Wint. in Rabenh.  
Ascomycetes, Erysiphales

Powdery mildew on *Populus* and *Salix* foliage and twigs.

***Valsa sordida*** Nitschke

Ascomycetes, Diaporthales  
Anamorph: ***Cytospora chrysosperma*** (Pers.:Fr.) Fr. (Coelomycetes)

Microfungus associated with orange discolouration and cankering of wounded or stressed bark, and on recently dead trees. Common and widespread on *Populus* and *Salix*; also occurs on other hardwoods.

***Venturia populina*** (Vuill.) L. Fabricius

Ascomycetes, Dothideales  
Anamorph: ***Pollaccia elegans*** Servazzi (Hyphomycetes)

Microfungus attacking black and balsam poplars and TXD hybrids in British Columbia. ***Pollaccia*** state most commonly found during growing season, occurring in olive-coloured areas on blighted tissues. ***Venturia*** state maturing on overwintered dead tissues. Associated with black leaf blotch and shoot dieback, the latter often forming a characteristic "shepherd's crook."



## 1.4 *Populus* sp. and Hybrid Poplars

T = *P. balsamifera* L. ssp. *trichocarpa* (Torr. & Gray) Brayshaw

D = *P. deltoides* J. Bartram ex Marsh.

M = *P. maximowiczii* A. Henry

***Antrodia crassa*** (P. Karst.) Ryvarden

Syn. ***Poria crassa*** (P. Karst.) Sacc.

Basidiomycetes, Aphyllophorales

Perennial, resupinate polypore associated with brown rot of conifers; rarely reported from hardwoods. On *Populus* sp.

***Bisporella citrina*** (Batsch:Fr.) Korf & S. Carpenter

Syn. ***Helotium citrinum*** (Hedw.) Fr.

Ascomycetes, Helotiales

Yellow, saprophytic discomycete on hardwood and conifer wood and slash. Infrequently collected on *Populus* sp. in British Columbia.

***Calathella erucaeformis*** (Fr.) D. Reid [R]

Basidiomycetes, Agaricales

Record from *Populus* sp.

***Caliciopsis*** Peck

Ascomycetes, Coryneliales

Unidentified species saprophytic on bark of dead branches of TXD hybrids.

***Coniophora arida*** (Fr.) P. Karst. var. ***arida*** (Fr.:Fr.) P. Karst. [R]

Basidiomycetes, Aphyllophorales

Record from *Populus* sp.

***C. puteana*** (Fr.) P. Karst. var. ***puteana*** (Schumach.:Fr.) P. Karst. [R]

Syn. ***C. cerebella*** (Pers.) Pers.

Record from *Populus* sp.

***Cyphellopsis confusa*** (Bres.) D. Reid [R]

Basidiomycetes, Agaricales

Record from *Populus* sp.

***Diaporthe columbiensis*** Ellis & Everh. [R]

Ascomycetes, Diaporthales

Record from *Populus* sp.

***D. eres*** Nitschke

Syn. ***D. ambigua*** Nitschke

Anamorph: ***Phomopsis oblonga*** (Desmaz.) Traverso (Coelomycetes)

Associated with blackstem of (usually newly planted) TXD hybrid poplar cuttings in British Columbia. ***Phomopsis*** state more commonly seen.

## **Populus sp. and Hybrid Poplars**

### ***Drepanopeziza populorum*** (Desmaz.) Höhn.

Ascomycetes, Helotiales

Anamorph: ***Marssonina populi*** (Lib.) Magnus (Coelomycetes)

The ***Drepanopeziza*** state is rare in Canada. The ***Marssonina*** state is common, associated with orange-brown leaf spotting and blotching, and premature defoliation in susceptible hybrid clones. Occasionally associated with cankering of stems in some TXD hybrid stool beds.

### ***Eutypella stellulata*** (Fr.:Fr.) Sacc. [R]

Syn. ***Valsa stellulata*** (Fr.:Fr.) Fr.

Ascomycetes, Diatrypales

Anamorph: ***Cytosporina stellulata*** Sacc. (Coelomycetes)

Record from *Populus* sp.

### ***Exidiopsis grisea*** (Pers.) Bourd. & Maire

Basidiomycetes, Tremellales

Saprophytic jelly fungus on wood of *Populus* sp.

### ***Flagelloscypha citrispora*** (Pilát) D. Reid [R]

Basidiomycetes, Agaricales

Record from *Populus* sp.

### ***Glomerella cingulata*** (Stoneman) Spauld. & H. Schrenk [C]

Ascomycetes, Phyllachorales

Anamorph: ***Colletotrichum gloeosporioides*** (Penz.) Penz. & Sacc. in Penz. (Coelomycetes)

Isolated from TXD hybrid poplar cuttings with blackstem symptoms.

### ***Haplotrichum curtisii*** (Berk.) Holubova-Jechova

Syn. ***Acladium curtisii*** (Berk.) M.B. Ellis

***Oidium curtisii*** (Berk.) Linder

Hyphomycetes

Asexual stage of ***Botryobasidium vagum*** (Berk. & M.A. Curtis) D.P. Rogers (Basidiomycetes, Aphyllophorales). Associated with white rot of hardwood and conifer wood. One record only from British Columbia on an old *Populus* sp. windthrow.

### ***Hymenochaete spreta*** Peck

Basidiomycetes, Aphyllophorales

One record only, from *Populus* sp.

### ***Hypoxylon rubiginosum*** (Pers.:Fr.) Fr. [R]

Ascomycetes, Sphaeriales

Anamorph: ***Nodulisporium*** G. Preuss (Hyphomycetes)

Two records only, from *Populus* sp.

### ***Inonotus rheades*** (Pers.) Bondartsev & Singer

Syn. ***Polyporus rheades*** Pers.

***P. vulpinus*** Fr.

Basidiomycetes, Aphyllophorales

Annual, resupinate polypore associated with white heart rot of living and dead hardwoods. On *Populus* sp.

***Linospora tetraspora*** G.E. Thompson

Ascomycetes, Diaporthales

Microfungus associated with large, black leaf blotches on many TXD and other hybrids. Heavy blighting occasionally occurring during damp summers in coastal British Columbia.

***Marssonina tremulae*** (Lib.) Kleb.

Syn. ***Marssonina brunnea*** (Ellis & Everh.) Magnus

Coelomycetes

Anamorph of ***Drepanopeziza tremulae*** Rimpau (Ascomycetes, Helotiales), but the teleomorph has not been reported from British Columbia. Microfungus associated with leaf spotting, browning, and premature defoliation. Also found in association with superficial cankers and stem dieback of TXD hybrid whips in British Columbia.

***Melampsora medusae*** Thuem. f.sp. ***deltoidae***

Basidiomycetes, Uredinales

Foliar rust endemic in eastern North America on *Populus deltoides* J. Bartram ex Marsh., but this form, pathogenic to TXD hybrids, was detected for the first time in British Columbia in 1993 in commercial hybrid poplar plantations in the Fraser Valley and on Vancouver Island. Capable of causing heavy defoliation and mortality of susceptible hybrid clones, especially in areas where the aecial host, *Larix*, is present. Some TXD and TXM clones show resistance.

***M. occidentalis*** H. Jacks.

Foliar rust of cottonwood, balsam poplar, and some hybrid poplars, although the majority of TXD hybrids planted for commercial use in British Columbia are resistant to this rust. Uredinial and telial states on *Populus* are associated with yellow-orange leaf spots and premature defoliation. Alternate (aecial) hosts in the Pinaceae include *Abies*, *Larix*, *Picea*, *Pinus*, *Pseudotsuga*, and *Tsuga*.

***Menispora glauca*** Pers. [R]

Hyphomycetes

Record from *Populus* sp.

***Mycosphaerella populicola*** G.E. Thompson

Ascomycetes, Dothideales

Anamorph: ***Septoria populicola*** Peck (Coelomycetes)

***Septoria*** state associated with leaf spotting, blotching, and premature chlorosis and defoliation of TXD hybrids in commercial plantations. The ***Mycosphaerella*** state has rarely been collected, and cankers are not associated with this fungus in British Columbia to date.

***M. tassiana*** (de Not.) Johans.

Anamorph: ***Cladosporium herbarum*** (Pers.:Fr.) Link (Hyphomycetes)

Frequently encountered saprophytic microfungus on many woody and herbaceous plant species. One collection on TXD hybrid.

## **Populus sp. and Hybrid Poplars**

### ***Neofabraea populi*** G.E. Thompson

Ascomycetes, Helotiales

Anamorph: ***Cryptosporiopsis*** Bubák & Kab. (Coelomycetes)

Small brown apothecia erumpent in clusters from bark, associated with branch and stem cankers of *Populus*. Other members of this genus have been considered synonyms of ***Pezicula*** Tul. & C. Tul.

### ***Panellus ringens*** (Fr.) Romagnesi

Syn. ***Panus salicinus*** Peck

Basidiomycetes, Agaricales

Wood decay mushroom with a hairy cap and off-centre stalk. On *Populus* sp.

### ***Pellidiscus pallida*** (Berk. & Broome) Donk [R]

Basidiomycetes, Agaricales

Record from *Populus* sp.

### ***Pseudocercospora salicina*** (Ellis & Everh.) Deighton

Syn. ***Cercospora salicina*** Ellis & Everh.

Hyphomycetes

The sexual stage, ***Mycosphaerella togashiana*** Ito & T. Kobayashi (Ascomycetes, Dothideales), has not been reported from British Columbia. One record associated with leaf spot on TXD hybrid poplar.

### ***Taphrina populina*** (Fr.:Fr.) Fr.

Ascomycetes, Taphrinales

Microfungus associated with yellow leaf spots and blisters on native and hybrid *Populus*. Occasionally causing heavy blistering in dense TXD plantations, but not associated with mortality.

### ***Trechispora microspora*** (P. Karst.) Liberta [R]

Basidiomycetes, Aphyllophorales

Record from *Populus* sp.

### ***Valsa sordida*** Nitschke

Ascomycetes, Diaporthales

Anamorph: ***Cytospora chrysosperma*** (Pers.:Fr.) Fr. (Coelomycetes)

Microfungus associated with orange discolouration and cankering of wounded or stressed bark, and on recently dead trees. Common and widespread on *Populus* (including TXD hybrids) and *Salix*; also occurs on other hardwoods.

### ***Venturia populina*** (Vuill.) L. Fabricius

Ascomycetes, Dothideales

Anamorph: ***Pollaccia elegans*** Servazzi (Hyphomycetes)

Microfungus attacking black and balsam poplars and TXD hybrids in British Columbia. ***Pollaccia*** state most commonly found during growing season, occurring in olive-coloured areas on blighted tissues. ***Venturia*** state maturing on overwintered dead tissues. Associated with black leaf blotch and shoot dieback, the latter often forming a characteristic "shepherd's crook." In hybrid plantations in moist coastal areas *Venturia* blight is sometimes associated with leader cankering and breakage.

## 2. FUNGI LISTED BY TAXONOMIC GROUP, CROSS-REFERENCED BY HOST

### Host Codes

- 1 = *Populus balsamifera*  
2 = *P. tremuloides*  
3 = *P. balsamifera* ssp. *trichocarpa*  
4 = *Populus* sp. and hybrid poplars

### I. Ascomycetes

#### a) Amphisphaeriales

- Amphisphaerella amphisphaerioides* 2,3  
*Hyponectria populi* 2

#### b) Caliciales

- Phaeocalicium populneum* 1,2,3  
*Phaeocalicium* sp. 2

#### c) Coryneliales

- Caliciopsis calicioides* 1,2,3  
*Caliciopsis* sp. 4

#### d) Diaporthales

- Cryptodiaporthe salicella* 2,3  
*Cryptodiaporthe* sp. 2  
*Diaporthe columbiensis* 4  
*D. eres* 3,4  
*Diaporthe* sp. 3  
*Leucostoma nivea* 2,3  
*Linospora tetraspora* 1,3,4  
*Valsa sordida* 1,2,3,4  
*Valsa* sp. 1,2,3

#### e) Diatrypales

- Cryptosphaeria lignyota* 2,3  
*Diatrype macounii* 3  
*Eutypa maura* 3  
*Eutypella stellulata* 4

#### f) Dothideales

- Cucurbitaria staphula* 2,3  
*Cucurbitaria* sp. 2  
*Glyphium corrugatum* 2  
*Hysterographium fraxini* 2  
*Karschia* sp. 2  
*Keissleriella emergens* (*Diplodia tumefaciens*) 2,3  
*Melanomma fuscidulum* 3

*M. pulvis-pyrius* 2

*Mycosphaerella populicola* 1,2,3,4

*M. populifolia* 3

*M. populorum* 1,3

*M. tassiana* 2,3,4

*M. togashiana* (*Pseudocercospora salicina*) 4

*Pleospora* sp. 2,3

*Rhytidiella baranyayi* 2

*Teichospora* sp. 2

*Venturia borealis* 2

*V. macularis* 2

*V. populina* 1,3,4

#### g) Erysiphales

*Uncinula adunca* 2,3

#### h) Helotiales

*Arachnopeziza* sp. 3

*Ascocoryne sarcoides* 3

*Bisporella citrina* 4

*Chlorociboria aeruginosa* 2

*Ciborinia whetzellii* 2

*Dasyscyphus* sp. 2

*Drepanopeziza populi-albae* 2

*D. populorum* 2,3,4

*D. tremulae* (*Marssonina tremulae*) 2,4

*Encoelia fascicularis* 2

*E. pruinosa* 2

*Hyaloscypha hyalina* 3

*Neofabraea populi* 2,3,4

*Perrotia flammea* 2

*Tympanis alnea* 2

*T. conspersa* 2

*T. spermatiospora* 2,3

*Tympanis* sp. 3

#### i) Hypocreales

*Nectria inventa* 3

**j) Lahmiales***Lahmia kunzei* 1,2**k) Opegraphales***Leciographa gallicola* 2**l) Ophiostomatales***Ceratocystis fimbriata* 2*Ceratocystis* sp. 2*Ophiostoma piliferum* 3**m) Ostropales***Stictis radiata* 2,3**n) Pezizales***Discina perlata* 3*Peziza emileia* 3*P. repanda* 3*Scutellinia scutellata* 1,3**o) Phyllachorales***Glomerella cingulata* 4**p) Rhytismatales***Coccomyces* sp. 3*Lophodermium* sp. 3**q) Sordariales***Coniochaeta ligniaria* 2*C. pulveracea* 2*Lasiosphaeria* sp. 2**r) Sphaeriales***Hypoxyylon fuscum* 1,2*H. mammatum* 2*H. multiforme* 2,3*H. novemexicanum* 2*H. rubiginosum* 4*H. serpens* 2*H. vogesiacum* var. *macrospora* 3**s) Taphrinales***Taphrina populina* 2,3,4*T. populi-salicis* 3**II. Basidiomycetes****a) Agaricales***Armillaria sinapina* 1,2*Armillaria* sp. 3*Calathella erucaeformis* 4*Clitocybe truncicola* 3*Coprinus* sp. 3*Crepidotus fulvotomentosus* 2,3*C. mollis* 2*Cyphellopsis anomala* 3*C. confusa* 4*Flagelloscypha citrispora* 4*Flammulina velutipes* 2,3*Gymnopilus spectabilis* 1,2,3*Hohenbuehelia unguicularis* 2*Hypsizygus tessulatus* 3*H. ulmarius* 3*Inocybe* sp. 3*Kuehneromyces mutabilis* 2,3*Lentinellus cochleatus* 2*L. ursinus* 3*L. vulpinus* 3*Marasmius epiphyllus* 2*M. tremulae* 3*Panellus ringens* 4*Panus rudis* 2,3*Pellidiscus pallida* 4*Pholiota alnicola* 2*P. aurivella* 2*P. populnea* 3*Pleurotellus hypnophilus* 3*Pleurotus dryinus* 3*P. ostreatus* 2,3*P. subareolatus* 1,2,3*Pluteus atricapillus* 3*Pseudoclitocybe cyathiformis* 3**b) Aphyllophorales***Amphinema byssoides* 3*Antrodia crassa* 4*A. malicola* 2*A. serialis* 3*A. xantha* 2,3*Bjerkandera adusta* 1,2,3*Botryobasidium vagum* (*Haplotrichum curtisii*) 4*Botryohypochnus isabellinus* 3*Ceraceomyces serpens* 2*Ceriporia purpurea* 2*C. viridans* 3*Ceriporiopsis aneirina* 2,3*C. pannocincta* 3*Cerrena unicolor* 2,3*Chondrostereum purpureum* 2,3*Coniophora arida* var. *arida* 4*C. olivacea* 2*C. puteana* var. *puteana* 4*Corioloopsis gallica* 2,3*Corticium roseum* 2,3*Cristinia helvetica* 3*Crustoderma dryinum* 2*Cylindrobasidium laeve* 3

*Cystostereum murrayi* 2  
*Daedaleopsis confragosa* 2,3  
*Datronia mollis* 3  
*D. stereoides* 3  
*Diplomitoporus lenis* 3  
*Fibulomyces mutabilis* 2  
*Fomes fomentarius* 1,3  
*Fomitopsis cajanderi* 2  
*F. pinicola* 2,3  
*Ganoderma applanatum* 1,2,3  
*Gloeocystidiellum karstenii* 3  
*G. porosum* 3  
*Gloeophyllum separium* 2  
*Gloeoporus dichrous* 2,3  
*Grandinia arguta* 3  
*G. spathulata* 2  
*Hapalopilus nidulans* 2,3  
*Hericium coralloides* 1,2,3  
*Hymenochaete spreta* 4  
*Hyphoderma inusitata* 3  
*H. karstenii* 2  
*H. mutatum* 2,3  
*H. sambuci* 3  
*H. setigerum* 3  
*Hypochnicium analogum* 3  
*H. vellereum* 3  
*Inonotus cuticularis* 1,2  
*I. glomeratus* 1,2,3  
*I. obliquus* 3  
*I. radiatus* 2  
*I. rheades* 2,4  
*Intextomyces contiguus* 3  
*Irpex lacteus* 2,3  
*Junghuhnia nitida* 2,3  
*Kavinia albouviridis* 2  
*Laeticorticium expallens* 3  
*Meruliopsis corium* 3  
*Oxyporus corticola* 2,3  
*O. similis* 3  
*Peniophora aurantiaca* 3  
*P. polygonia* 2,3  
*P. rufa* 1,2,3  
*Phanerochaete carnosa* 3  
*P. sanguinea* 2  
*P. sordida* 2,3  
*P. tuberculata* 3  
*Phellinus ferreus* 3  
*P. ferruginosus* 2,3  
*P. igniarius* 3  
*P. tremulae* 2  
*P. viticola* 3  
*Phlebia albida* 3  
*P. radiata* 2,3  
*P. tremellosus* 2

*Piloderma byssinum* 2  
*Polyporus badius* 2,3  
*P. elegans* 2,3  
*P. melanopus* 3  
*P. squamosus* 3  
*Postia caesia* 2,3  
*Punctularia strigoso-zonata* 2,3  
*Radulodon americanus* 2,3  
*Resinicium bicolor* 2  
*Schizophyllum commune* 2,3  
*Schizopora paradoxa* 3  
*Scytinostroma galactinum* 3  
*Sistotrema brinkmannii* 3  
*S. raduloides* 2,3  
*Skeletocutis nivea* 2  
*Spongipellis delectans* 3  
*S. spumeus* 3  
*Steccherinum ciliolatum* 2,3  
*S. fimbriatum* 3  
*S. ochraceum* 3  
*Stereum ostrea* 3  
*Subulicystidium longisporum* 3  
*Tomentella calcicola* 3  
*T. coerulea* 3  
*T. ferruginea* 3  
*T. jaapii* 3  
*Tomentellastrum badium* 3  
*Trametes hirsuta* 3  
*T. ochracea* 2  
*T. pubescens* 2,3  
*T. suaveolens* 3  
*T. versicolor* 2,3  
*Trechispora microspora* 4  
*T. mollusca* 3  
*T. vaga* 2  
*Trichaptum bifforme* 2,3  
*T. subchartaceum* 2,3  
*Typhula* sp. 3  
*Tyromyces galactinus* 3

#### c) Auriculariales

*Helicogloea lagerheimii* 3

#### d) Dacrymycetales

*Calocera cornea* 2,3

*Dacrymyces deliquescens* var. *deliquescens* 3

*D. deliquescens* var. *ellisii* 3

#### e) Tremellales

*Aporpium caryae* 2,3

*Basidioidendron grandinioides* 3

*Exidia glandulosa* 3

*Exidiopsis fuliginea* 3

*E. grisea* 4

*Heterochaete spinulosa* 3  
*Protodontia oligacantha* 3  
*Tremella mesenterica* 2,3

#### f) Tulasnellales

*Tulasnella calospora* 3

#### g) Uredinales

*Melampsora albertensis* 2  
*M. medusae* 2  
*M. medusae* f.sp. *deltoidae* 4  
*M. occidentalis* 1,3,4  
*Uredo* sp. 2

### III. Coelomycetes

*Colletotrichum gloeosporioides* (*Glomerella cingulata*) 4  
*Cryptosporiopsis* sp. (*Neofabraea populi*) 2,3,4  
*Cytospora chrysosperma* (*Valsa sordida*) 1,2,3,4  
*C. nivea* (*Leucostoma nivea*) 2,3  
*Cytospora* sp. 1,2,3  
*Cytosporina acharii* (*Eutypa maura*) 3  
*C. stellulata* (*Eutypella stellulata*) 4  
*Cytosporina* sp. (*Cryptosphaeria lignyota*) 2,3  
*Dichomera* sp. (*Cucurbitaria staphula*) 2,3  
*Diplodia tumefaciens* 2,3  
*Discella microsperma* (*Cryptodiaporthe salicella*) 2,3  
*Libertella* sp. 2,3  
*Marssonina castagnei* (*Drepanopeziza populi-albae*) 2  
*M. populi* (*Drepanopeziza populorum*) 2,3,4  
*M. tremulae* 2,4  
*Phoma* sp. 2,3  
*Phomopsis oblonga* (*Diaporthe eres*) 3,4  
*Seimatosporium etheridgei* (*Leciographa gallicola*) 2  
*Septoria musiva* (*Mycosphaerella populorum*) 1,3  
*S. populicola* (*Mycosphaerella populicola*) 1,2,3,4  
*Sirodothis inversa* (*Tympanis alnea*) 2  
*S. populnea* (*Tympanis spermatispora*) 2,3

### IV. Hyphomycetes

*Aegerita* sp. 3  
*Alternaria alternata* 3  
*Aspergillus* sp. 3  
*Aureobasidium pullulans* 3  
*Cadophora* sp. 3

*Chalara* sp. (*Ceratocystis fimbriata*) 2  
*Cladosporium herbarum* (*Mycosphaerella tassiana*) 2,3,4  
*C. sessile* 3  
*Coryne sarcoides* (*Ascocoryne sarcoides*) 3  
*C. dubia* (*Ascocoryne sarcoides*) 3  
*Epicoccum* sp. 2,3  
*Fusarium lateritium* 2,3  
*Geniculosporium serpens* (*Hypoxyylon serpens*) 2  
*Geniculosporium* sp. (*Hypoxyylon mammatum*) 2  
*Graphium* sp. 2  
*Haplotrichum curtisii* 4  
*Leptographium* sp. 2  
*Menispora glauca* 4  
*Nodulisporium* sp. (*Hypoxyylon multiforme*, *H. novemexicanum*, *H. rubiginosum*, and *H. vogesiacum* var. *macrospora*) 2,3,4  
*Phaeoramularia maculicola* 2,3  
*Phialocephala bactrospora* 3  
*Phialophora* sp. (*Ascocoryne sarcoides*, *Coniochaeta ligniaria*) 2,3  
*Pollaccia borealis* (*Venturia borealis*) 2  
*P. elegans* (*Venturia populina*) 1,3,4  
*P. radiosa* (*Venturia macularis*) 2  
*Pseudocercospora salicina* 4  
*Ramularia* sp. 3  
*Sporidesmium* sp. 2  
*Sporothrix* sp. (*Ophiostoma piliferum*) 3  
*Trichoderma* sp. 2,3  
*Verticillium tenerum* (*Nectria inventa*) 3  
*Virgariella* sp. (*Hypoxyylon fuscum*) 1,2

### V. Myxomycetes

*Trichia decipiens* 2

### VI. Agonomycetes

*Sclerotium bifrons* (*Ciborinia whetzellii*) 2