

Final Report

Epigeous Fungal Surveys in Mid Seral Stands on the Willamette National Forest

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The purpose of the project is to determine whether any of the epigeous fungal species on the Regional Forester’s 2008 Special Status Species lists are found in mid-seral (30-80 years) stands within different plant associations on the Sweet Home and Middle Fork Ranger Districts of the Willamette National Forest. These stands are where the U.S. Forest Service (USFS) is conducting timber harvests on the west side of the Cascade Mountains in Region 6. Use of a single year pre-disturbance survey protocol has been deemed impractical, and thus no pre-project surveys are conducted for the Sensitive epigeous fungal species. The likelihood of occurrence and potential effects to Sensitive fungal species in proposed project areas is analyzed in a Biological Evaluation as required by agency policy. However, information from strategic surveys such as this project help to inform such analyses of proposed project areas.

Methods

In September 2009, a GIS analysis was conducted to determine where mid seral stands in the western hemlock series and Pacific silver fir series on Sweet Home Ranger District and in the Douglas-fir series and mixed conifer series on Middle Fork Ranger District occurred. Plant associations follow those identified in *Plant Associations of the West Central Cascades* (McCain and Diaz 2001). Five stands were randomly selected per plant association (Figures 1 and 2). Botanists visited stands to determine whether they were typed correctly by series and if they were not, they moved to the next randomly selected stand on the list. Ultimately 3 stands per plant association were selected and sampled for a total of 12 stands, ranging in size from between 20 and 30 acres each (see attachments 1 and 2).

Plant Series	Sweet Home Ranger District	Middle Fork Ranger District
Western Hemlock Series	3 stands	--
Pacific Silver Fir Series	3 stands	--
Douglas-fir Series	--	3 stands
Mixed Conifer Series	--	3 stands

The survey methods followed the *Sporocarp Survey Protocol for Macrofungi* (Van Norman et al., 2008) with two fall and two spring visits using intuitive-controlled surveys. Thirty-one Sensitive, thirty-seven Strategic, and one hundred eighty-one survey and manage species were targeted by these surveys (see attached list). Voucher specimens of potential target species were collected as per Region 6 Special Status Species policy.

Sweet Home Ranger District Surveys

Western Hemlock Series

Sweet Home Ranger District surveys in the western hemlock series took place in fall 2009 and spring 2010. Surveys occurred in stands numbered 3002610, 3003519, and 3000531. Two other stands were surveyed once but dropped: 1207 was mistyped and was actually remnant old growth and stand 1410 fell within the age parameters but access for fall surveys was blocked by snow. Stand 0531 was the replacement for these 2 stands.

Stand 2610 is in the western hemlock/Oregon grape-salal plant association. It is an 80 year old unmanaged stand, consisting primarily of Douglas-fir with a dense canopy of 70-85%. The stand has a south aspect and steep, rocky slopes, with a midpoint elevation of 3100 feet. Fall surveys were conducted November 2 and November 16, 2009. Spring surveys were conducted on April 19 and May 3, 2010. Very few fungal sporocarps were encountered. We located a few *Hydnum repandum*. In May a few *Gyromitra esculenta* were located. No specimens resembling sensitive or strategic species were found.

Stand 3519 is in the western hemlock/Oregon grape-salal plant association. It is a 40 year old managed stand, consisting primarily of Douglas-fir with a dense canopy of 70-85%. The stand has an east aspect and gentle slopes, with a midpoint elevation of 2800 feet. Fall surveys were conducted on October 29 and November 17, 2009. Three *Ramaria* species were collected, none of which are considered rare. The specimen identifications were verified by *Ramaria* expert Efren Cazares as *R. sandaracina* (2) and *R. flavigelatinosa*. Spring surveys were conducted on April 19 and May 3, 2010. Several *Sarcosoma latakense* were located, however they are no longer considered rare. In May *Hydnum repandum*, *Gyromitra esculenta*, and *Sarcosoma latakense* were found but no sensitive or strategic species were located in any survey.

Stand 0531 is in the western hemlock/Oregon grape and western hemlock/Pacific rhododendron-salal plant associations. It is a 70 year old unmanaged stand, consisting primarily of Douglas-fir and western hemlock with a dense canopy of 70-85%. The stand has north and east aspects with a midpoint elevation of 2700 feet. Spring surveys were conducted on April 16 and April 30, 2010. **A strategic species, *Sarcodon fuscoindicus*, was located during fall 2010 surveys. However this species was removed from the Regional Forester's Special Status Species list in the December 2011 update.** It remains on the survey and manage list as does *Ramaria stuntzii*.

Pacific Silver Fir Series

Surveys in the Pacific silver fir series were conducted on Sweet Home Ranger District in fall 2010 and spring of 2011. The following stands were selected for survey: 5002958, 5003110 and 5003255.

Stand 2958 is a 40 year old managed stand in the Pacific silver fir/Alaska huckleberry/bunchberry plant association. The stand is primarily composed of Pacific silver fir, noble fir and western hemlock, with a dense canopy of 70-85%. There are north and west aspects, and the midpoint elevation is 4000 feet. No

sensitive or strategic fungal species were located but 2 species on the survey and manage list were documented: *Ramaria celerivirescens* (voucher ID: KFL1012, 11/2/10) and *Sparassis crispa*.

Stand 3110 is in the Pacific silver fir/Alaska huckleberry/bunchberry plant association. It is on average a 70 year old stand with the dominant overstory composed of Pacific silver fir, noble fir and western hemlock. The canopy is dense, 80-85%. The stand is located on north and west aspects. The midpoint elevation is 3800 feet. Surveys were conducted in the fall of 2010 and 2011 on this unit. Mushroom production was not prolific either year, spring or fall. No sensitive or strategic species were located but two survey and manage species were documented: *Ramaria rubrievanescentes* (RSM1104 10/31/11) and *Ramaria araiaspora*.

Stand 3255 is in the Pacific silver fir/Devil's club plant association. It is a 40 year old managed stand consisting primarily of noble fir and Douglas-fir with a variable canopy cover. The stand has a southeast aspect with a midpoint elevation of 4200 feet. It is diverse in structure and species and is moist to wet with many salmonberry/devil's club openings. No sensitive or strategic species or survey and manage species were located.

Middle Fork Ranger District Surveys

Douglas-Fir Series

Middle Fork surveys in the Douglas-fir series were conducted in stands 8007590, 5000209 and 8007193 in the fall of 2009 and spring 2010. One other stand was surveyed in the fall of 2009 and replaced because it had over a 45% slope. Steep slopes generally do not provide good habitat for fungi. It was replaced with stand 8007193.

Stand 7590 is in the Douglas-fir/Dwarf Oregon grape plant association. It is a 60 year old, relatively flat stand with varying canopy cover throughout (approximately 40% open canopy). It is very swampy with a special habitat in over 1/5 of the plot. A single fall survey was conducted on November 10, 2009. Snow precluded a second survey. Spring surveys were conducted May 18 and June 7, 2010. **The only confirmed Sensitive or Strategic species of the 2009/2010 season, *Cudonia monticola*, was found on this plot in the spring survey (see attachment #2 –sighting form).** This sighting was entered into the NRIS TESP database.

Stand 0209 is in the PSME/MANE2-GASH plant association. It is located on a steep hillside with few understory plants. The canopy was almost entirely closed. This is a 50 year old stand with tall PSME. Very few fungal sporocarps were present in the spring. Fall surveys occurred on November 3, 2009. Snow precluded a second fall survey. Spring surveys were conducted on May 10 and 24, 2010. No target species were located. Fall diversity was higher than spring.

Stand 7193 is in the PSME/MANE2-GASH plant association. It is a 40-50 year old Douglas-fir stand with abundant salal, sword fern and Oregon grape. There is a high diversity of herbaceous species and Pacific rhododendron well-distributed throughout. There is a closed canopy over much of the plot; however there is a 15-foot wide swath of open canopy (due to power-line), which splits the site in two. A single fall survey was completed on November 5, 2009; the second survey was partially snowed out so it was resurveyed in fall 2010. Spring surveys were completed May 21 and June 3, 2010. No target species were located.

Mixed Conifer (Douglas-fir/Ponderosa pine/Incense cedar) Series

Middle Fork Ranger District surveys in the mixed conifer plant association were conducted in stands 5003181, 5004204 and 8006498 in fall 2010 and spring 2011. Conditions in the fall and spring of 2010 were rainy and highly favorable for mushroom surveys. We found a high diversity of mushrooms in all of our surveys.

Stand 3181 is in the PSME/MANE2 plant association. It is a 44 year old stand with varying canopy cover throughout (approximately 40% open canopy). Slopes range from 15 to 20% and several small springs are in the unit. Fall surveys were conducted on September 29 and October 20, 2010. Spring surveys were took place May 10 and 23, 2011. No rare fungal species were located but mushrooms of 25 other fungal species were found during surveys. *Sarcosphaera coronaria*, a survey and manage species, was found in the spring survey.

Stand 6498 is in the PSME/MANE2 plant association. It is a brushy 42 year old stand at 3500 feet. This stand is situated between two older mixed-conifer stands. There are small, dry open habitats in this unit. No rare mushrooms were located during spring or fall surveys, but 22 different species of fungi were found. Fall surveys were conducted September 30 and October 20, 2010. Spring surveys were done May 11 and 23, 2011.

Stand 4204 is in the PSME/MANE2 plant association. It is a 40-50 year old Douglas-fir stand with Oregon grape. There is a high diversity of herbaceous species and Pacific rhododendron well-distributed throughout. The unit is approximately 50 feet from Staley Creek and the terrain is varied, but mostly flat. No rare fungal species were located but, diverse fungi, vascular plants and moss and lichen were seen in this unit. Fall surveys were completed September 28 and October 19, 2010. Spring surveys were conducted May 12 and 26 2011.

Conclusion

Neither 2009 nor 2010 were excellent years for fungal sporocarp production in the northern part of the Forest (Sweet Home District). Fall 2010 was much better for fungal production in the southern part of the Forest (Middle Fork District). This kind of variability at such a small geographic scale illustrates one of the difficulties in surveying for fungal species; their fruiting is very sensitive to small scale precipitation patterns.

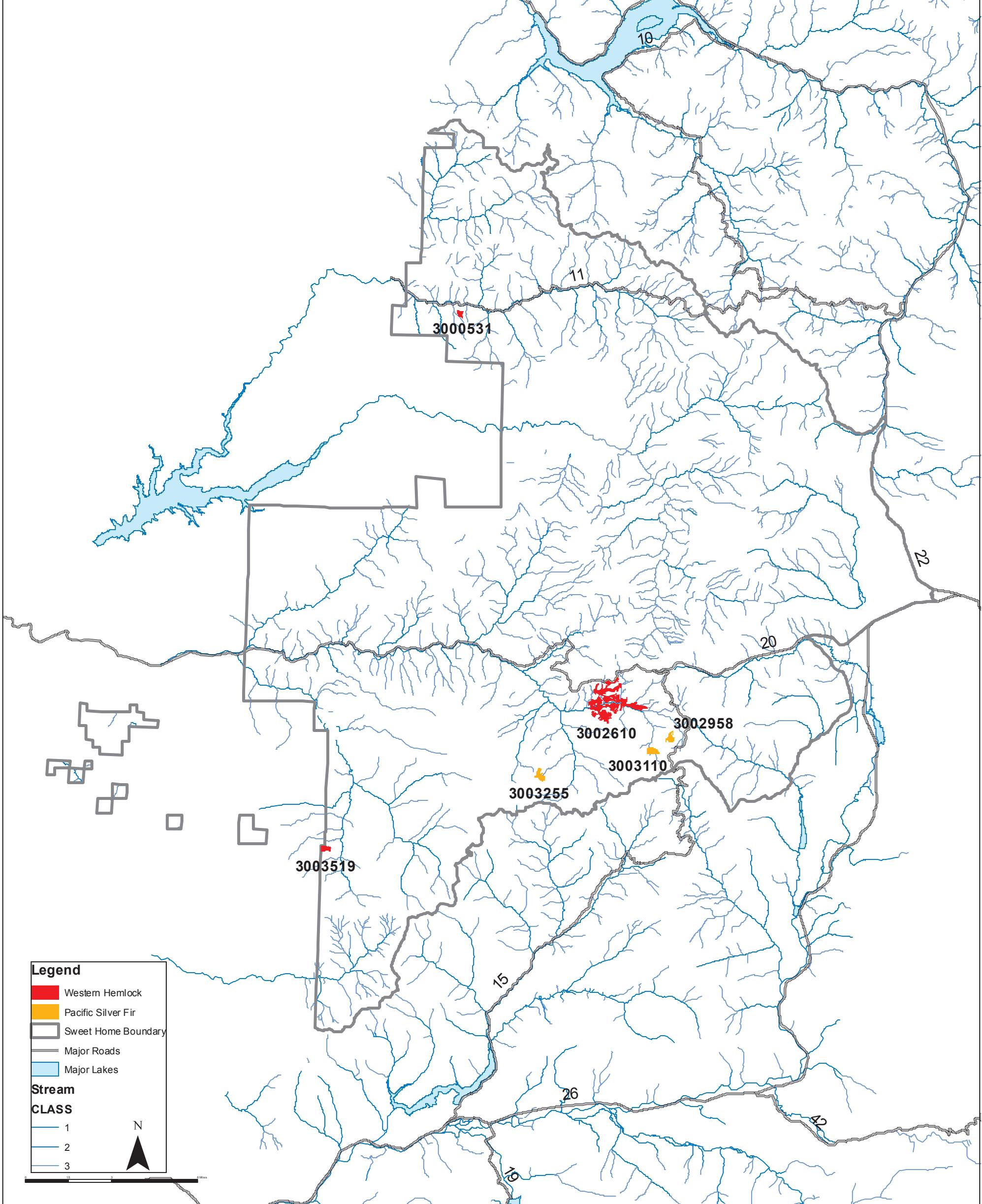
In the twelve mid-seral stands we surveyed, we documented a sensitive or strategic fungal species in two stands or in only 0.02% of surveys conducted (2 locations found in 12 stands each surveyed 4 times over 2 years). We have confirmed that a single year of surveys, even with 4 visits, is too few to find all the fungal species, especially those that rarely fruit

Because so few rare populations were documented, it is impossible to extrapolate whether any one plant association has more rare fungi than another. A few rare species were found in mid seral stands, confirming that not all of the target species are obligate old-growth associates. We recommend leaving some host trees in mid seral managed stands in western Oregon to provide hosts for rare fungi.

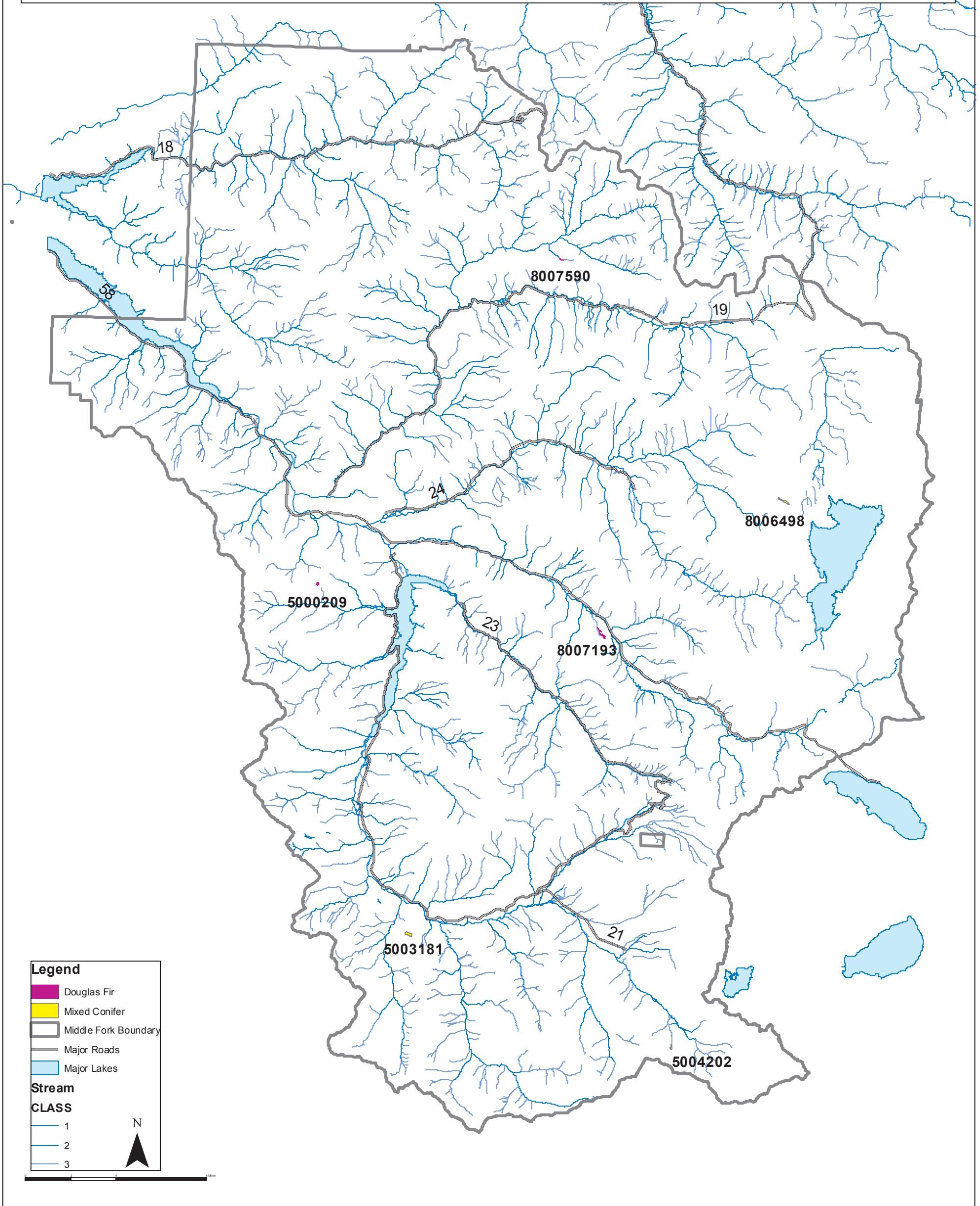
References

- McCain, C. and N. Diaz. 2001. Plant Associations of the West Central Cascades. R6-NR-ECOL-TP-02-02. U.S. Department of Agriculture, Forest Service, Region 6, Portland, Oregon. (available from <http://ecoshare.info/category/publications/>)
- Van Norman, K., J. Lippert, D. Rivers-Pankratz, R. Holmes, and C. Mayrsohn. 2008. Sporocarp Survey Protocol for Macrofungi, version 1.0. Portland, OR. Interagency Special Status/Sensitive Species Program. U.S. Department of Interior, Bureau of Land Management, Oregon/Washington and U.S. Department of Agriculture, Forest Service, Region 6. 16 pp. (available from <http://www.fs.fed.us/r6/sfpnw/issssp/inventories/monitoring.shtml>)

Mid-Seral Stands Surveyed for Fungi 2009-2011 on Sweet Home Ranger District



Mid-Seral Stands Surveyed for Fungi 2009-2011 on Middle Fork Ranger District



Appendix A:
Fungus Field Survey Site Form
ISSSP Project Willamette NF

Date: 2 and 16 November, 2009; 19 April, 3 May 2010

Surveyors: Alice Smith and Krista Lopez

Stand Number: 3002610

Plant Association: TSHE/MANE2-GASH

Habitat description: 80 year old unmanaged stand, consisting primarily of Douglas-fir with a dense canopy of 70-85%. The stand has a south aspect and steep rocky slopes, with a midpoint elevation of 3100 feet.

Plant species list in unit:

Trees

Pseudotsuga menziesii

Tsuga heterophylla

Acer circinatum

Shrub

Mahonia nervosa

Gaultheria shallon

Rhododendron macrophyllum

Herbs

Polystichum munitum

Whipplea modesta

Results

Very few fungi encountered. Located a few *Hydnum repandum*. No specimens resembling sensitive or strategic species were found.

The 2nd visit was done on 3 May 2010 and no specimens resembling sensitive or strategic species were found. A few *Gyromitra esculenta* were located.

Fungus Field Survey Site Form
ISSSSP Project Willamette NF

Date: 29 October and 17 November, 2009; 19 April and 3 May, 2010

Surveyors: Alice Smith and Krista Lopez

Stand Number: 3003519

Plant Association: TSHE/MANE2-GASH

Habitat description: 40 year old managed stand, consisting primarily of Douglas-fir with a dense canopy of 70-85%. The stand has an east aspect and gentle slopes, with a midpoint elevation of 2800 feet.

Plant species list in unit:

Trees

Pseudotsuga menziesii

Tsuga heterophylla

Acer circinatum

Cornus nuttallii

Shrub

Mahonia nervosa

Gaultheria shallon

Rhododendron macrophyllum

Holodiscus discolor

Rubus ursinus

Herbs

Polystichum munitum

Viola sempervirens

Xerophyllum tenax

Pteridium aquilinum

Results

Several *Sarcosoma latahense* were located, however they are no longer considered rare. No sensitive nor strategic species were located.

A second spring visit was done on 3 May 2010. *Hydnum repandum*, *Gyromitra esculenta*, and *Sarcosoma latahense* were found but no sensitive or strategic species were located.

Fungus Field Survey Site Form
ISSSSP Project Willamette NF

Dates Surveyed Fall: 18 October 2010, 1 Nov 2010

Dates Surveyed Spring: 27 April and 16 May 2011

Surveyors: Alice Smith and Krista Lopez

Stand Number: 3000531

Plant Association: TSHE/MANE2, TSHE/RHMA3-GASH

Habitat description: 70 year old unmanaged fire history stand, consisting primarily of Douglas-fir and western hemlock with a dense canopy of 70-85%. The stand has north and east aspects with a midpoint elevation of 2700 feet.

Plant species list in unit:

Trees

Pseudotsuga menziesii

Thuja plicata

Pinus lambertiana

Tsuga heterophylla

Acer circinatum

Acer macrophyllum

Shrub

Mahonia nervosa

Gaultheria shallon

Rhododendron macrophyllum

Vaccinium parvifolium

Herbs

Polystichum munitum

Xerophyllum tenax

Linnaea borealis

Viola sempervirens

Whipplea modesta

Blechnum spicant

Stand # 3000531

Results

Sensitive or Strategic Species Located:

**Sarcodon fuscoindicus* 10/18/10 (Strategic at time of survey; dropped from list in 12/2011 update)

Other Fungi Located:

Cortinarius sg.telamoni

Cortinarius violaceus

Ramaria gelatinosa var. *oregonensis*

**Ramaria stunztii*

Ramaria spp.

Gomphus floccosus

Helvella lacunosa

Hypomyces lactifluorum

Hygrophorus burneus

Lepiota clypeolaria

Armillaria ponderosa

Pseudohydnum gelatinosum

Hydnum repandum

**Craterellus tubaeformis*

Plectania sp.

Guepiniopsis alpines

Russula spp.

Rozites caperata

*Included in Attachment 1 of Settlement Agreement as Survey and Manage Species

Fungus Field Survey Site Form
ISSSSP Project Willamette NF

Dates Surveyed Fall: 2 November and 15 November 2010

Dates Surveyed Spring: 8 July and 20 July 2011

Surveyors: Alice Smith and Krista Lopez (2010); Alice Smith and Ryan Murdoff (2011)

Stand Number: 3002958

Plant Association: ABAM/VAAL/COCA13

Habitat description: 40 year old managed stand, consisting primarily of Pacific silver fir, noble fir and western hemlock with a dense canopy of 70-85%. The stand has north and west aspects with a midpoint elevation of 4000 feet.

Plant species list in unit:

Trees

Abies amabilis

Abies procera

Tsuga heterophylla

Tsuga mertensiana

Pseudotsuga menziesii

Acer circinatum

Shrub

Vaccinium alaskensis

Vaccinium membranaceum

Rubus ursinus

Rubus lasiococcus

Rhododendron macrophyllum

Pachystima myrsinoides

Herbs

Cornus canadensis

Smilacina stellata

Anemone deltoidea

Archly triphylla

Clintonia uniflora

Polystichum munitum

Xerophyllum tenax

Linnaria borealis
Asarum caudatum

Results

A black bear was seen in this stand on 7/8/11.

Sensitive or Strategic Species Located:

None

Other Fungi Located:

**Ramaria celerivirescens* (KFL1012, 11/2/10)

* *Sparassis crispa*

Amanita sp.

Discina perlata

Cantharellus cibarius

Craterellus tubaeformis

Sarcosoma latahensis

Gyromitra esculenta

Calvatia sp.

Cortinarius sp.

Polyporus hirtus

Helvella lacunosa

Pseudohydnum gelatinosum

Naematoloma fasciculare

Russula spp.

Lactarius rubrilacteus

*Survey and Manage Species in Attachment 1 of Settlement Agreement

Fungus Field Survey Site Form
ISSSSP Project Willamette NF

Dates Surveyed Fall: 9 November 2010, 17 October and 31 October 2011

Dates Surveyed Spring: 8 July and 20 July 2011

Surveyors: Alice Smith and Krista Lopez (2010); Alice Smith and Ryan Murdoff (2011)

Stand Number: 3003110

Plant Association: ABAM/VAAL/COCA13

Habitat description: 60-80 year old natural stand, consisting primarily of Pacific silver fir, noble fir and western hemlock with a dense canopy of 80-85%. The stand has north and west aspects with a midpoint elevation of 3800 feet.

Plant species list in unit:

Trees

Abies amabilis

Abies procera

Tsuga heterophylla

Thuja plicata

Pseudotsuga menziesii

Acer circinatum

Shrubs

Berberis nervosa

Vaccinium alaskensis

Rubus ursinus

Rubus lasiococcus

Rhododendron macrophyllum

Pachystima myrsinoides

Herbs

Campanula scouleri

Cornus canadensis

Trillium ovatum

Chimophylla menziesii

Pyrola secunda

Anemone deltoidea

Achlys triphylla

Herbs, con't

Adenocaulon bicolor
Clintonia uniflora
Polystichum munitum
Xerophyllum tenax
Linnaea borealis
Asarum caudatum
Smilacina stellata

Results

A second fall survey was not completed in 2010 due to snowfall however two fall visits were completed in 2011. Fungi were not prolific in year, spring or fall. A banded male spotted owl followed us around on 7/20/11.

Sensitive or Strategic Species Located:

None

Other Fungi Located

**Ramaria rubrievanescens* RSM1104 10/31/11

Discina perlata

**Craterellus tubaeformis*

Sarcosoma latahensis

**Ramaria araiaspora*

Ramaria flavigelatinosa var. *carnisalmonea*

Ramaria gelatinosa var. *oregonensis*

Ramaria sandaracina var. *euosma*

*Survey and Manage Species in Attachment 1 of Settlement Agreement

Fungus Field Survey Site Form
ISSSSP Project Willamette NF

Dates Surveyed Fall: 20 October 2010, 19 October 2011 and 2 Nov 2011

Dates Surveyed Spring: 27 June 2011 and 11 July 2011

Surveyors: Alice Smith and Krista Lopez (2010); Alice Smith and Ryan Murdoff (2011)

Stand Number: 3003255

Plant Association: ABAM/OPHO

Habitat description: 40 year old managed stand, consisting primarily of noble fir and Douglas-fir with a variable canopy cover. The stand has a southeast aspect with a midpoint elevation of 4200 feet. It is diverse in structure and species and is moist to wet with many salmonberry/devil's-club openings.

Plant species list in unit:

Trees

Abies amabilis

Abies procera

Chamaecyparis nootkatensis

Taxus brevifolia

Tsuga heterophylla

Tsuga mertensiana

Pseudotsuga menziesii

Acer circinatum

Alnus sitchensis

Shrub

Berberis nervosa

Vaccinium alaskensis

Vaccinium membranaceum

Oplopanax horridum

Ribes lacustre

Rosa gymnocarpa

Rubus ursinus

Rubus parviflora

Rubus spectabilis

Rhododendron macrophyllum

Pachystima myrsinoides

Stand # 3003255

Herbs

Cornus canadensis
Disporum hookeri
Smilacina stellata
Anemone deltoidea
Achlys triphylla
Clintonia uniflora
Galium oreganum
Lycopodium clavatum
Polystichum munitum
Oxalis trilliifolia
Xerophyllum tenax
Linnaria borealis
Asarum caudatum

Results

No sensitive or strategic species were located. We were unable to conduct a 2nd visit in 2010 due to snowfall; however, two fall visits were conducted in 2011.

Sensitive or Strategic Species Located:

None

Other Fungi Species Located:

Amanita sp.
Bondarzewia mesenterica
Lactarius rubrilacteus
Naematoloma fasciculare
Pleurotus porrigens
Calvatia sp.
Helvella lacunosa
Laccaria amethystine
Cortinarius sp.
Russula rosacea
Polyporus elegans

Fungus Field Survey Site Form
ISSSP Project Willamette NF

Date: 10 November 2009, 17 May 2010, 10 June 2010

Surveyors: Molly Juillerat, Kate Richards, Jamie Selig and Adrienne Marble

Stand Number: 8007580 (Plot 3)

Plant Association: TSHE- RHMA3, GASH

Habitat description: Flat stand with varying canopy cover throughout. (approximately 40% open canopy) It is very swampy with a special habitat in over 1/5 of the plot.

Plant species list in unit:

Trees

Acer circinatum
Acer macrophyllum
Chrysolepsis chrysophylla
Picea engelmannii
Pinus monticola
Pseudotsuga menziesii
Rhamnus purshiana
Sorbus sitchensis
Taxus brevifolia
Thuja plicata
Tsuga heterophylla

Shrub

Berberis nervosa
Blechnum spicant
Ceanothus velutinus
Gautheria shallon
Gautheria ovatifolium
Pachistima myrsinites
Polystichum munitum
Pteridium aquilinum
Ribes sanguineum
Rosa gymnocarpa
Vaccinium parvifolium
Whipplea modesta
Rubus ursinus

Herbs

Adenocaulon bicolor
Anaphalis margaritacea

Anemone deltoidea
Campanula scouleri
Chimophila umbellatum
Chrysanthemum leucanthemum
Cirsium vulgare
Clintonia uniflora
Cornus canadensis
Chimophila menziesii
Fragaria virginiana
Linnaea borealis
Lysichiton americanum
Hieracium albiflorum
Osmorhiza chilensis
Pedicularis racemosa

Results

Fall Survey Results	Spring Survey Results
<i>Aagaricus subrutilescens</i>	<i>Amanita oemmata</i>
<i>Boletus appendiculatus</i>	<i>Amanita spp.</i>
<i>Boletus zellerii</i>	<i>Camarophyllus pratensis</i>
<i>Calocera viscosa</i>	<i>Collybia spp.</i>
<i>Cantharellus cibarius</i>	<i>Gymnomitra esculenta</i>
<i>Cantharellus infundibuliformis</i>	<i>Gymnopilus bellulus</i>
<i>Cantharellus subalbidus</i>	<i>Hydnum repandum</i>
<i>Chlorociboria aeruginascens</i>	<i>Hyrophorus spp.</i>
<i>Clitocybe nuda</i>	<i>Marasmius oreades</i>
<i>Coltricia perennis</i>	<i>Marasmius spp.</i>
<i>Cortinarius spp.</i>	<i>Mycena aurantiidisca</i>
<i>Cudonia circinans</i>	<i>Mycena spp.</i>
<i>Dermocybe sanguinea</i>	<i>Nidularia polunata</i>
<i>Ganoderma applanatum</i>	<i>Phaeocollybia lilariefolia</i>
<i>Gomphus floccosus</i>	<i>Plactania melastoma</i>
<i>Gomphidius subroseus</i>	<i>Pleutus spp.</i>
<i>Gymnopus peronatus</i>	<i>Pseudohydnum gelatinosum</i>
<i>Gyromitra infula</i>	<i>Trimetes versicolor</i>
<i>Helvella lacunosa</i>	
<i>Hydnum repandum</i>	
<i>Hyrophoropsis aurantiaca</i>	
<i>Hyrophorus eburneus</i>	
<i>Hypomyces lactifluorum</i>	
<i>Laccaria amethysteo-occidentalis</i>	
<i>Laccaria laccata</i>	
<i>Lactarius deliciosus</i>	
<i>Lactarius subplinthoagalus</i>	
<i>Lactarius volemus</i>	
<i>Lycoperdon niarescens</i>	
<i>Marasmiellus candidus</i>	
<i>Mycena aurantiidisca</i>	
<i>Mycena epipterygia</i>	
<i>Naematoloma fasciculare</i>	
<i>Otidea onotica</i>	
<i>Panaeolus foenisecii</i>	
<i>Pholiota spumosa</i>	
<i>Pleurocybella porrigens</i>	
<i>Polyporus melanopus</i>	
<i>Pseudohydnum gelatinosum</i>	
<i>Ramaria cystidiophora</i>	
<i>Russula brevipes</i>	
<i>Russula emetic</i>	

<i>Russula xerampelina</i>	
<i>Sparrassis crispa</i>	
<i>Trametes versicolor</i>	
<i>Tremella mesenterica</i>	
<i>Xylaria hypoxylon</i>	

Fungus Field Survey Site Form
ISSSSP Project Willamette NF

Date: 3 November 2009, 10 May 2010, 24 May 2010

Surveyors: Molly Juillerat, Kate Richards, Jamie Selig and Adrienne Marble

Stand Number: 500209 (Plot 4)

Plant Association: TSHE-RHMA3/MANE2

Habitat description Located on a steep hillside with few understory plants. The canopy was almost an entirely closed. Tall PSME stand with smaller ABAM and TSHE trees moving in.

Plant species list in unit:

Trees

Acer circinatum
Acer macrophyllum
Alnus rubra
Calocedrus decurrens
Pseudotsuga menziesii
Tsuga heterophylla

Shrub

Berberis nervosa
Holodiscus discolor
Gautheria shallon
Polysticum munitum
Rhododendron macrophyllum
Rubus ursinus
Vaccinium parvifolium

Herbs

Calypso bulbosa
Chimophila umbellata
Fragaria virginiana
Mitella
Thalictrum occidentale
Trillium ovatum

Results

Fall Survey Results	Spring Survey Results
<i>Collybia spp.</i>	<i>Clitocybe spp.</i>
<i>Cortinarius odorifer</i>	<i>Cortinarius spp.</i>
<i>Fomitopsis pinicola</i>	<i>Fomitopsis pinicola</i>
<i>Gomphidius subroseus</i>	<i>Gandoderma tsugae</i>
<i>Gomphus floccosus</i>	<i>Hvdnum repandum</i>
<i>Helvella lacunosa</i>	<i>Hvilocomium spindens</i>
<i>Hvdnum scabrosum</i>	<i>Marasmius oreades</i>
<i>Hvarocybe conica</i>	<i>Mycena spp.</i>
<i>Hvpholoma fusciculare</i>	<i>Naematoloma fasciculare</i>
<i>Laccaria amethysteo-occidentalis</i>	<i>Trametes versicolor</i>
<i>Lactarius deliciosus</i>	<i>Tremella mesenterica</i>
<i>Lepiota spp.</i>	
<i>Macrotvphula juncea</i>	
<i>Mycena spp.</i>	
<i>Mycena strobilinoides</i>	
<i>Naematoloma fasciculare</i>	
<i>Pseudohvdnum aelatinosum</i>	
<i>Ramaria manipes</i>	
<i>Ramaria spp.</i>	
<i>Russula brevipes</i>	
<i>Suillus caerulescens</i>	
<i>Suillus spp.</i>	
<i>Thelephora terrestris</i>	
<i>Trametes versicolor</i>	
<i>Tremella mesenterica</i>	
<i>Xeromphalina campanella</i>	

Fungus Field Survey Site Form
ISSSP Project Willamette NF

Date: 5 November 2009, 21 May 2010, 3 June 2010

Surveyors: Molly Juillerat, Kate Richards, Jamie Selig and Adrienne Marble

Stand Number: 8007193 (Plot 9)

Plant Association: TSHE-RHMA3/MANE2

Habitat description: 40-50 year old PSME stand with abundant GASH, POMU and MANE2. High herb species diversity and RHMA3 well distributed throughout. Closed canopy over much of the plot, however there is a 15' wide swath of open canopy (due to power-line) which splits the site in two.

Plant species list in unit:

Trees

Acer circinatum
Acer macrophyllum
Populus balsamifera
Pseudotsuga menziesii
Salix spp
Tsuga heterophylla

Shrub

Berberis nervosa
Gaultheria shallon
Polystichum munitum
Pteridium aquilinum
Rhododendron macrophyllum
Rubus lasiococcus
Symphoricarpos mollis
Vaccinium parvifolia
Whipplea modesta

Herbs

Asarum caudatum
Anemone deltoidea
Corallorhiza maculata
Daucus carota
Elymus elymoides
Galium triflorum
Goodyear oblongifolia
Hieracium albiflorum
Hypericum perforatum

Lactuca muralis
Chrysanthemum leucanthemum
Trientalis latifolia
Viola sempervirens

Results

Fall Survey Results	Spring Survey Results
<i>Agaricus augustus</i>	<i>Amanita gemmata</i>
<i>Agaricus spp.</i>	<i>Amanita ocreata</i>
<i>Amanita calyptрата</i>	<i>Auriscalpium vulgare</i>
<i>Amanita spp.</i>	<i>Clavulina rugosa</i>
<i>Boletus zelleri</i>	<i>Contumyces rosella</i>
<i>Cantharellus cibarius</i>	<i>Coprinus spp.</i>
<i>Clitocybe nuda</i>	<i>Cortinarius spp.</i>
<i>Clitocybe odora</i>	<i>Geastrum sarcatum</i>
<i>Collybia acervata</i>	<i>Gymnopilus sapineus</i>
<i>Collybia spp.</i>	<i>Helvella leucomelaena</i>
<i>Coltricia perennis</i>	<i>Hysterangium crassirhachis</i>
<i>Coprinus lagopus</i>	<i>Inocybe spp.</i>
<i>Coprinus comatus</i>	<i>Lycoperdon spp.</i>
<i>Cortinarius phoenicea</i>	<i>Maramiellus candidus</i>
<i>Fomitopsis officinalis</i>	<i>Marasmius oreades</i>
<i>Gomphidius oregonensis</i>	<i>Naematoloma fasciculare</i>
<i>Gomphidius subroseus</i>	<i>Nidula spp.</i>
<i>Hebeloma crustuliniforme</i>	<i>Polyporus spp.</i>
<i>Helvella crispa</i>	<i>Tremella mesenterica</i>
<i>Helvella lacunosa</i>	
<i>Hericium abietis</i>	<i>Cudonia monticola</i>
<i>Hygrophoropsis aurantiaca</i>	
<i>Hygrophorus ebureus</i>	
<i>Hypholoma fasciculare</i>	
<i>Inocybe jurana</i>	
<i>Laccaria amethysteo-occidentalis</i>	
<i>Lactarius rubrilacteus</i>	
<i>Lycoperdon nigrescens</i>	
<i>Morganella pyriformis</i>	
<i>Mycena aurantiidisca</i>	
<i>Mycena clavicularis</i>	
<i>Mycena haematopus</i>	
<i>Mycena strobilinoides</i>	
<i>Nidula candida</i>	
<i>Panaeolus foenicisii</i>	
<i>Phaeolus schweinitzii</i>	
<i>Pleurocybella porrigens</i>	
<i>Polyporus melanopus</i>	
<i>Russula amoenolens</i>	

<i>Russula emetica</i>	
<i>Russula xerampelina</i>	
<i>Scleroderma verrucosum</i>	
<i>Stropharia ambigua</i>	
<i>Suillus caerulescens</i>	
<i>Trametes versicolor</i>	
<i>Tremella mesenterica</i>	
<i>Tricholoma flavovirens</i>	
<i>Xeromphalina campanella</i>	

Fungus Field Survey Site Form ISSSSP Project Willamette NF

Stand Number: 5003181

Date: September 29 and October 20, 2010 and May 10 and 23, 2011

Surveyors: Daniel Thomas, Lin Kyan and Anna Bonnette

Plant Association: PSME/MANE2

Habitat description Stand 3181 is in the PSME/MANE2 plant association. It is a 44 year old stand with varying canopy cover throughout (approximately 40% open canopy). Slopes range from 15 to 20% and several small springs are in the unit. No rare fungus species were located but 25 different fungus species were found during surveys.

Plant species list 3181

Trees

Abies grandis
Pseudotsuga menziesii
Acer circinatum
Acer macrophyllum
Pinus ponderosa
Pinus contorta
Thuja plicata

Shrubs

Corylus cornuta
Gaultheria shallon
Holodiscus discolor
Mahonia nervosa
Rhododendron macrophyllum
Rosa gymnocarpa
Rubus ursinus
Symphocarpus albus

Herbs

Adiantum pedatum
Anemone deltoidea
Asarum caudatum
Chimophila umbellatum
Campanula scouleri
Fragaria vesca
Polystichum munitum
Trientalis borealis
Viola sempervirens
Xerophyllum tenax
Pteridium aquilinum

Fungi 3181

Fall 2010	Spring 2011
<i>Armillariella mellea</i>	<i>Cantharellus infundibuliformis</i>
<i>Coltricia perennis</i>	<i>Cantharellus tubaeformis</i>
<i>Dermocybe sanguinea</i>	<i>Hydnum umbilicatum</i>
<i>Gomphidius glutinosus</i>	<i>Inocybe maculata</i>
<i>Gomphidius oregonensis</i>	<i>Laccaria amethysteo-occidentalis</i>
<i>Gomphidius subroseus</i>	<i>Morchella deliciosa</i>
<i>Gomphus floccosus</i>	<i>Plectania melastoma</i>
<i>Helvella lacunosa</i>	<i>Polyporus melanopus</i>
<i>Hydnellum aurantiacum</i>	<i>Ramaria</i> spp
<i>Hypomyces lactifluorum</i>	<i>Sarcosphaera coronaria</i>
<i>Lactarius deliciosus</i>	<i>Trametes versicolor</i>
<i>Lactarius rubrilacteus</i>	
<i>Lactarius scrobiculatus</i>	
<i>Lepiota cristata</i>	
<i>Lepiota clypeolaria</i>	

<i>Lycoperdon perlatum</i>
<i>Mycena spp.</i>
<i>Nidularia spp</i>
<i>Onnia tomentosa</i>
<i>Panaeolus campanulatus</i>
<i>Russula brevipes</i>
<i>Russula rosacea</i>
<i>Russula xerampelina</i>
<i>Suillus fuscotomentosus</i>
<i>Trametes hirsuta</i>

Results: No sensitive or strategic species were located. However, *Sarcosphaera coronaria*, a survey and manage fungus, was located in a spring survey.

Fungus Field Survey Site Form ISSSP Project Willamette NF

Stand Number: 5004204

Date: September 28 and October 19, 2010 and May 10 and 23, 2011

Surveyors: Daniel Thomas, Lin Kyan, Anna Bonnette, Adrienne Marble, Kate Richards and Justine Bartow-Funk

Plant Association: TSHE/RHMA3-MANE2-NWO

Habitat description: Stand 4204 is a TSHE/RHMA3-MANE2-NOW plant association. Unit is fifty feet East of Staley creek. Two creeks border the northern and southern ends of unit, whereas one creek crosses through the middle of unit. Forest canopy is a young mix of conifers. Most of the unit is diverse in vascular and non vascular plants with non-natives occurring adjacent to creeks. No rare fungus species were located but 40 different fungus species were found during surveys.

Plant species list in unit 4204

Trees

Abies grandis

Acer circinatum

Acer glabrum

Acer macrophyllum

Alnus rubra

Calocedrus decurrens

Chrysolepsis chrysophylla

Pseudotsuga menziesii

Salix sitchensis

Salix lasiandra

Taxus brevifolia

Thuja plicata

Tsuga heterophylla

Shrubs

Gaultheria shallon

Holodiscus discolor

Pachystima myrsinites

Mahonia aquifolium

Mahonia nervosa

Rhododendron macrophyllum

Rubus parviflorus

Rubus ursinus

Symphocarpos albus

Vaccinium parvifolium

Herbs

Anaphalis margaritacea

Actaea rubra

Anemone deltoidea

Asarum caudatum

Athyrium filix-femina

Chimophila umbellatum

Campanula scouleri

Clinopodium douglassii

Corallorhiza maculata

Fragaria virginiana

Galium trifolium

Hieracium albiflorum

Leucanthemum vulgare

Linnaea borealis

Maianthemum

stellatum

Petasites palmatus

Polystichum munitum

Pyrola picta

Trientalis borealis

Viola sempervirens

Xerophyllum tenax

Pteridium aquilinum

Veratrum viride

Whipplea modesta

Fungi 4204

Fall Survey Results	Spring Survey Results
<i>Amanita ocreata</i>	<i>Amanita gemmata</i>
<i>Boletus erythropus</i>	<i>Cantharellus infundibuliformis</i>
<i>Cantharellus cibarius</i>	<i>Gyromitra esculenta</i>
<i>Cantharellus infundibuliformis</i>	<i>Hydum umbilicatum</i>
<i>Cantharellus tubaeformis</i>	<i>Inocybe assimilata</i>
<i>Cortinarius balteatus</i>	<i>Neourmula pouchetii</i>
<i>Cortinarius vibratilis</i>	<i>Nidularia pulvinata</i>
<i>Dentinum repandum</i>	<i>Paxillus involutus</i>
<i>Dermocybe phoenicea</i>	<i>Plectania spp.</i>
<i>Gomphidius oregonensis</i>	<i>Polyporus spp</i>
<i>Gomphidius subroseus</i>	<i>Ramaria spp.</i>
<i>Gomphus floccosus</i>	
<i>Helvella lacunosa</i>	
<i>Hypholoma fasciculare</i>	
<i>Laccaria laccata</i>	
<i>Lactarius rubrilacteus</i>	
<i>Lycoperdon perlata</i>	
<i>Lyophyllum decastes</i>	
<i>Morqanella spp.</i>	
<i>Mycena aurantidisca</i>	
<i>Mycena purpurefusca</i>	
<i>Pleuteus cervinus</i>	
<i>Polyporus melanopus</i>	
<i>Ramaria acrisiccescens</i>	
<i>Russula brevipes</i>	
<i>Russula rosacea</i>	
<i>Russula xerampelina</i>	
<i>Suillus caeruleus</i>	
<i>Suillus lakei</i>	
<i>Thelephora terrestris</i>	

Results: No sensitive or strategic species were located.

Fungus Field Survey Site Form ISSSSP Project Willamette NF

Stand Number: 5006498

Date: September 30 and October 20, 2010 and May 10 and May 23, 2011

Surveyors: Daniel Thomas, Lin Kyan, Anna Bonnette, Kate Richards and Justine Bartow-Funk

Plant Association: PSME/MANE2-GASH

Habitat description: Stand 6498 is a PSME/MANE2-GASH plant association. This unit was very brushy on a semi-steep slope. The unit is a young stand situated between old stands of mixed conifer forest. No rare fungus species were located but 26 different fungus species were found during surveys.

Plant species list in unit 6498

Trees

Acer macrophyllum
Alnus rubra
Arbutus menziesii
Calocedrus decurrens
Chrysolepsis chrysophylla
Pinus lambertiana
Pinus ponderosa
Pseudotsuga menziesii
Thuja plicata
Tsuga heterophylla

Shrubs

Arctostaphylos columbiana
Gaultheria shallon
Holodiscus discolor
Mahonia aquifolium
Mahonia nervosa
Pachystima myrsinites
Rhododendron macrophyllum
Ribes roezlii
Rosa gymnocarpa
Rubus parviflorus
Rubus ursinus
Symphocarpus albus
Vaccinium parvifolium

Herbs

Achlys triphylla
Actaea rubra
Anemone deltoidea
Cladonia spp.
Chimophila umbellatum
Fragaria vesca
Goodyeara oblongifolia
Linnaea borealis
Maianthemum stellata
Orthilia secunda
Petasites palmatus
Polystichum munitum
Pterospora andromedea
Pteridium aquilinum
Trientalis borealis
Trillium ovatum
Whipplea modesta

Fungi 6498

Fall Survey Results	Spring Survey Results
<i>Cantharellus subalbidus</i>	<i>Cantharellus infundibuliformis</i>
<i>Clitocybe nebularius</i>	<i>Helvella lacunosa</i>
<i>Cortinarius balteatus</i>	<i>Hydum umbilicatum</i>
<i>Fomitopsis pinicola</i>	<i>Nidula spp.</i>
<i>Gomphidius glutinosus</i>	<i>Mycena spp.</i>
<i>Gomphidius oreagonensis</i>	<i>Phaeolus schweinitzii</i>
<i>Gomphidius subroseus</i>	<i>Plectania spp.</i>
<i>Dentinum repandum</i>	
<i>Dermocybe phoenicea</i>	
<i>Laccaria amethysteo-occidentalis</i>	
<i>Lactarius deliciosus</i>	
<i>Lactarius rubrilacteus</i>	
<i>Lycoperdon perlata</i>	
<i>Russula brevipes</i>	
<i>Russula occidentalis</i>	

<i>Russula rosacea</i>	
<i>Russula xerampelina</i>	
<i>Suillus fuscotomentosus</i>	
<i>Suillus lakei</i>	

Results: No sensitive or strategic species were located.

Appendix B
Fungal Species Surveyed for in Mid-Seral Stand Surveys on the Willamette NF

Sensitive Fungal Species

Scientific Name	Documented or Suspected
<i>ALPOVA ALEXSMITHII</i>	D
<i>BOLETUS PULCHERRIMUS</i>	D
<i>BRIDGEOPORUS NOBILISSIMUS</i>	D
<i>CHOIROMYCES VENOSUS</i>	S
<i>CHROOGOMPHUS LOCULATUS</i>	D
<i>CORTINARIUS BARLOWENSIS</i>	D
<i>CUDONIA MONTICOLA</i>	D
<i>CYSTANGIUM IDAHOENSIS</i>	D
<i>DESTUNTZIA RUBRA</i>	D
<i>GASTROBOLETUS IMBELLUS</i>	D
<i>GASTROBOLETUS VIVIDUS</i>	D
<i>GOMPHUS KAUFFMANII</i>	D
<i>GYMNOMYCES FRAGRANS</i>	D
<i>HELVELLA CRASSITUNICATA</i>	D
<i>LEUCOGASTER CITRINUS</i>	D
<i>MYTHICOMYCES CORNEIPES</i>	D
<i>OCTAVIANA MACROSPORA</i>	S
<i>PHAEOLLYBIA ATTENUATA</i>	D
<i>PHAEOLLYBIA DISSILIENS</i>	D
<i>PHAEOLLYBIA PSEUDOFESTIVA</i>	D
<i>PHAEOLLYBIA SIPEI</i>	D
<i>PSEUDORHIZINA CALIFORNICA</i>	D
<i>RAMARIA AMYLOIDEA</i>	D
<i>RAMARIA AURANTIISICCESCEN</i>	D
<i>RAMARIA LARGENTII</i>	D
<i>RAMARIA GELATINIAURANTIA</i>	D
<i>RAMARIA SPINULOSA</i> VAR. <i>DIMINUTIVA</i>	S
<i>RHIZOPOGON EXIGUUS</i>	S
<i>RHIZOPOGON INQUINATUS</i>	D
<i>SOWERBYELLA RHENANA</i>	D
<i>STAGNICOLA PERPLEXA</i>	S

Strategic Fungal Species

Scientific Name	Documented or Suspected
<i>ACANTHOPHYSIUM FARLOWII</i>	S
<i>ALBATRELLUS CAERULEOPORUS</i>	D
<i>ALBATRELLUS DISPANSUS</i>	S
<i>ALBATRELLUS SKAMANIUS</i>	D
<i>ARCANGELIELLA CRASSA</i>	S
<i>CHOIROMYCES ALVEOLATUS</i>	D
<i>CHRYSOMPHALINA GROSSULA</i>	D
<i>CLAVARIADELPHUS SUBFASTIGIATUS</i>	S
<i>DENDROCOLLYBIA RACEMOSA</i>	D
<i>DESTUNTZIA FUSCA</i>	D
<i>FEVANSIA AURANTIACA</i>	D
<i>GLOMUS RADIATUM</i>	D
<i>HYDNOTRYA INORDINATA</i>	D
<i>HYDROPUS MARGINELLUS</i>	S
<i>LEUCOGASTER ODORATUS</i>	D
<i>MYCENA HUDSONIANA</i>	D
<i>MYCENA QUINAULTENSIS</i>	D
<i>MYCENA TENAX</i>	D
<i>OCTAVIANIA CYANESCENS</i>	D
<i>PHAEOCOLLYBIA LILACIFOLIA</i>	S
<i>PLECTANIA MILLERI</i>	D
<i>PODOSTROMA ALUTACEUM</i>	S
<i>PSEUDALEURIA QUINAULTIANA</i>	S
<i>RAMARIA CONJUNCTIPES</i> VAR. <i>SPARSIRAMOSA</i>	D
<i>RAMARIA MACULATIPES</i>	D
<i>RAMARIA RUBRIBRUNNESCENS</i>	S
<i>RAMARIA THIERSII</i>	D
<i>RHIZOPOGON ABIETIS</i>	D
<i>RHIZOPOGON ATROVIOLACEUS</i>	D
<i>RHIZOPOGON CLAVITISPORUS</i>	S
<i>RHIZOPOGON ROGERSII</i>	S
<i>RHIZOPOGON SEMIRETICULATUS</i>	D
<i>RHIZOPOGON SUBCINNAMOMEUS</i>	D
<i>RHIZOPOGON SUBCLAVITISPORUS</i>	D
<i>RHIZOPOGON SUBPURPURASCENS</i>	D
<i>RICKENELLA SWARTZII</i>	S
<i>TRICHOLOMOPSIS FULVESCENS</i>	S

Survey & Manage Fungal Species

Anthophysium farlowii
Albatrellus avellaneus
Albatrellus caeruleoporus
Albatrellus ellisii
Alpova alexsmithii
Alpova olivaceotinctus
Arcangeliella camphorata
Arcangeliella crassa
Arcangeliella lactarioides
Asterophora lycoperdoides
Asterophora parasitica
Baeospora myriadophylla
Balsamia nigrens
Boletus haematinus
Boletus pulcherrimus
Bridgeoporus nobilissimus
Catathelasma ventricosa
Chalciporus piperatus
Chamonixia caespitosa
Choiromyces alveolatus
Choiromyces venosus
Chroogomphus loculatus
Chrysomphalina grossula
Clavariadelphus ligula
Clavariadelphus occidentalis
Clavariadelphus sachalinensis
Clavariadelphus subfastigiatus
Clavariadelphus truncatus
Clavulina castanopes var. *lignicola*
Clitocybe senilis
Clitocybe subditopoda
Collybia bakerensis

Collybia racemosa
Cordyceps ophioglossoides
Cortinarius barlowensis
Cortinarius boulderensis
Cortinarius cyanites
Cortinarius depauperatus
Cortinarius magnivelatus
Cortinarius olympianus
Cortinarius speciosissimus
Cortinarius tabularis
Cortinarius umidicola
Cortinarius valgus
Cortinarius variipes
Cortinarius verrucisporus
Cortinarius wiebeae
Cudonia monticola
Cyphellostereum laeve
Dermocybe humboldtensis
Destuntzia fusca
Destuntzia rubra
Dichostereum boreale
Elaphomyces anthracinus
Elaphomyces subviscidus
Endogone acrogena
Endogone oregonensis
Entoloma nitidum
Fayodia bisphaerigera
Galerina cerina
Galerina heterocystis
Galerina sphagnicola
Gastroboletus imbellus
Gastroboletus ruber
Gastroboletus subalpinus
Gastroboletus turbinatus

Gastroboletus vividus
Gastrosuillus amaranthii
Gastrosuillus umbrinus
Gautieria magnicellaris
Gautieria otthii
Gelatinodiscus flavidus
Glomus radiatum
Gomphus bonarii
Gomphus clavatus
Gomphus kauffmanii
Gymnomyces abietis
Gymnomyces nondistincta
Gyromitra californica
Hebeloma olympianum
Helvella crassitunicata
Helvella elastica
Hygrophorus karstenii
Hygrophorus vernalis
Hypomyces luteovirens
Hygrophorus karstenii
Hygrophorus vernalis
Hypomyces luteovirens
Leucogaster citrinus
Leucogaster microsporus
Macowanites chlorinosmus
Macowanites lymanensis
Macowanites mollis
Marasmius applanatipes
Martellia fragrans
Martellia idahoensis
Mycena hudsoniana
Mycena overholtsii
Mycena quinaultensis
Mycena tenax

<i>Mythicomyces corneipes</i>	<i>Ramaria concolor f. marrii</i>	<i>Sarcodon fuscoindicus</i>
<i>Neolentinus adhaerens</i>	<i>Ramaria concolor f. tsugina</i>	<i>Sedecula pulvinata</i>
<i>Neolentinus kauffmanii</i>	<i>Ramaria conjunctipes var. sparsiramosa</i>	<i>Sowerbyella rhenana</i>
<i>Nivatogastrium nubigenum,</i>	<i>Ramaria coulterae</i>	<i>Sparassis crispa</i>
<i>Octavianina cyanescens</i>	<i>Ramaria cyaneigranosa</i>	<i>Spathularia flavida</i>
<i>Octavianina macrospora</i>	<i>Ramaria gelatiniaurantia</i>	<i>Stagnicola perplexa</i>
<i>Octavianina papyracea</i>	<i>Ramaria gracilis</i>	<i>Thaxterogaster pavelekii</i>
<i>Otidea leporina</i>	<i>Ramaria hilaris var. olympiana</i>	<i>Tremiscus helvelloides</i>
<i>Otidea smithii</i>	<i>Ramaria largentii</i>	<i>Tricholoma venenatum</i>
<i>Phaeocollybia attenuata</i>	<i>Ramaria lorithamnus</i>	<i>Tricholomopsis fulvescens</i>
<i>Phaeocollybia californica</i>	<i>Ramaria maculatipes</i>	<i>Tuber asa</i>
<i>Phaeocollybia dissiliens</i>	<i>Ramaria rainierensis</i>	<i>Tuber pacificum</i>
<i>Phaeocollybia fallax</i>	<i>Ramaria rubella var. blanda</i>	<i>Tylopilus porphyrosporus</i>
<i>Phaeocollybia gregaria</i>	<i>Ramaria rubribrunnescens</i>	
<i>Phaeocollybia kauffmanii ,</i>	<i>Ramaria rubrievanescens</i>	
<i>Phaeocollybia olivacea</i>	<i>Ramaria rubripermanens</i>	
<i>Phaeocollybia oregonensis</i>	<i>Ramaria spinulosa var. diminutiva</i>	
<i>Phaeocollybia piceae</i>	<i>Ramaria stuntzii</i>	
<i>Phaeocollybia pseudofestiva</i>	<i>Ramaria suecica</i>	
<i>Phaeocollybia scatesiae</i>	<i>Ramaria thiersii</i>	
<i>Phaeocollybia sipei</i>	<i>Ramaria verlotensis</i>	
<i>Phaeocollybia spadicea</i>	<i>Rhizopogon abietis</i>	
<i>Phellodon atratus</i>	<i>Rhizopogon atroviolaceus</i>	
<i>Pholiota albivelata</i>	<i>Rhizopogon brunneiniger</i>	
<i>Podostroma alutaceum</i>	<i>Rhizopogon chamaleontinus</i>	
<i>Polyozellus multiplex</i>	<i>Rhizopogon ellipsosporus</i>	
<i>Pseudaleuria quinaultiana</i>	<i>Rhizopogon evadens var. subalpinus</i>	
<i>Ramaria abietina</i>	<i>Rhizopogon exiguus</i>	
<i>Ramaria amyloidea</i>	<i>Rhizopogon flavofibrillosus</i>	
<i>Ramaria araiospora</i>	<i>Rhizopogon inquinatus</i>	
<i>Ramaria aurantiisiccescens</i>	<i>Rhizopogon truncatus</i>	
<i>Ramaria botryis var. aurantiiramosa</i>	<i>Rhodocybe speciosa</i>	
<i>Ramaria celerivirescens</i>	<i>Rickenella swartzii</i>	
<i>Ramaria claviramulata</i>	<i>Russula mustelina</i>	