

**Final Report**  
**Interagency Special Status/Sensitive Species Program**  
**Inventory and Conservation Planning**  
**South Zone 2016/2017 Special Status Fungi Inventory Surveys**

Douglas M. Goldenberg, Botanist, Northwest Oregon District BLM  
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Introduction

There are many Special Status fungi, and several have been found in the South Zone<sup>1</sup> of the Northwest Oregon District (see Siuslaw and Upper Willamette Field Offices Special Status Fungi List, attached). No pre-disturbance clearance surveys are planned for Special Status fungi, yet the BLM is committed to making some effort to conserve these species and to ensure that agency actions do not contribute to a need to list these species. Currently, direction is to not perform pre-disturbance clearance surveys, but rather to consider management of known sites coupled with broad scale inventories as adequate for the management of the species. This report describes fungi surveys conducted to locate Special Status fungi sites in forest stands, for the purpose of subsequent site monitoring and management as well as background range, distribution and habitat information. The surveys specifically helped fill a geographic information gap by surveying areas outside of areas previously surveyed on the Eugene District, including the West Eugene Wetlands, which has about 250 acres of forest and woodlands, besides wet prairies. These surveys helped fulfill the Northwest Oregon BLM's commitment to pursue broad-scale inventories. Fiscal year 2016 funding was used to fund surveys in fall 2016 and spring 2017.

Methods

In the fall of 2016 and spring of 2017, 715 acres were surveyed by contract for all Special Status fungi documented or suspected in the South Zone. Surveys targeted 20 Sensitive Species, 98 Strategic Species, 15 Oregon Biodiversity Information Center (ORBIC) List 3 Species, 5 ORBIC List 4 Species and 11 Review species (see list, Attachment 2). Units were picked at random from the Forest Operations Inventory GIS layer (see map, Attachment 1). Units were chosen at random to reduce bias and allow habitat relations to be explored. A unit was chosen non-randomly in the West Eugene Wetlands, based on access to a large forested block in this unique area. Generally only units with adjacent open, drivable roads were chosen, to reduce surveyor travel time. Units older than 30 years were selected, due to the tree and shrub density and expected poor habitat of younger units. Also excluded were FOI units without an age, units

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<sup>1</sup> The Eugene District and Salem Districts merged to become the Northwest Oregon District 10/2/16. The former Eugene District, consisting of the Siuslaw and Upper Willamette Field Offices, is informally referred to as the South Zone of the Northwest Oregon District.

smaller than 10 acres, isolated coastal tracts, and units with active timber sales. Stratification was used to assure an approximately equal split among the Field Offices and three age classes: 30-70 years, 80-190 years, and 200 plus years. The contract cost was \$31.16 per acre, plus an incentive payment of \$35.00 per target fungal species site reported.

The survey contract had the following characteristics:

- Surveys were for both epigeous and hypogeous fungi.
- To fulfill the fungi survey protocol (VanNorman et al. 2008) each unit was to be surveyed two times at three week intervals during the height of the fall and spring fruiting seasons, generally between October 21 and December 21, and between May 10 and July 10. Surveys were to be started at once if conditions were productive for sporocarps, or delayed if conditions were too dry or cold and unproductive. The final fall survey visit could be waived if persistent snow or a persistent hard freeze ended the fungal fruiting season early. The fungi survey protocol requires at least 2 survey visits but with more than two visits being preferable. Considering the usual weather patterns in the Eugene area, the protocol would probably result in each unit being surveyed 3 times in the fall, and 6 times in the spring. However, previous data found that the majority of sites could be found with only two visits per season. Two visits per season should result in more areas being surveyed, and more sites being found, given an overall limited budget.
- The intuitive controlled survey method was used to survey for both hypogeous and epigeous species.
- Hypogeous fungi were surveyed for by raking in the most likely habitats. Survey intensity was to be great enough so that inspection criteria were likely to be fulfilled.
- Inspection criteria centered on reduced payment in case of an excess of missed sites. In particular, a 20% deduction in payment for acres surveyed would be made if more than 2 sites and more than 20% of Special Status Sites were missed, as located during inspections and independently verified. The percentage of missed sites would be calculated as the additional sites found by the inspectors, divided by the sites found by both the inspector and contractor. For example, if the contractor locates 20 sites, and the inspectors locate more than an additional 5 missed sites, a 20% deduction would be made. To ensure inspection feasibility, the contractor was to inform the COR weekly of any units visited the previous week, so that an inspection could be made within one week.
- Vouchers of all potentially target species were collected for expert identifications as per ISSSSP/S&M policy, and fresh specimens were digitally photographed.

The survey units are described in Table 1. Stands with a birth date of 1810 or 1820 are the oldest in the South Zone, are considered old growth stands in the South Zone, and generally contain trees originating much earlier than 1810. The age class is determined by the dominant layer in the stand, normally the overstory. The Hansen unit, in the West Eugene Wetlands, did not have a forest age estimate.

Unit Number	RA	Age Class	Overstory Birth Date	Acres	Section	Sites Found
842943	Siu	140	1880	30	15S-6W-27	2
833920	Siu	80	1940	14	16S-7W-15	2
840960	Siu	210	1810	39	16S-8W-34	3
Hansen	Siu			40	17S-5W-24	2
841219	Siu	100	1920	24	17S-8W-27	1
833002	Siu	50	1971	21	18S-7W-29	5
843693	Siu	70	1945	56	18S-8W-28	1
830506	Siu	210	1810	80	19S-6W-35	4
830628	Siu	100	1920	18	19S-7W-31	1
832479	Siu	60	1952	16	20S-6W-15	1
843365	Siu	80	1940	28	20S-6W-23	1
812045	UW	50	1969	18	14S-1E-35	1
810583	UW	210	1810	62	15S-2W-29	7
810632	UW	70	1945	11	15S-2W-36	0
811595	UW	70	1945	31	18S-1E-23	4
820567	UW	60	1960	59	21S-2W-21	2
821291	UW	210	1810	63	23S-2W-5	0
821574	UW	130	1890	105	24S-1W-5	3
			TOTAL:	715		40

## Results

Fall visits occurred from November 7 to December 11, 2016. Spring visits occurred May 25 to June 28, 2017. Forty new sites representing twelve target fungal species were found (Tables 1 and 2). No additional sites found by the project inspector were target species. Four of the species found were new to the South Zone. Review species are generally species that appear to be rare and will be submitted by the field offices to ORBIC for consideration of their status. One taxon was newly added to the Review list, *Cystolepiota bucknallii*. *Cystolepiota bucknallii* is a European species, only rarely found in North America. It is also considered rare in Europe, and indicative of habitats with multiple rare species. It was located in an old growth forest of Douglas-fir, western hemlock and sword fern.

Species	SI Sites	UW Sites	Status (as of 2016)	Comments	Month
<i>Amanita novinupta</i>	1		Bureau Strategic	New to South Zone	May
<i>Annulohyphoxylon thouarsianum</i>	1		Review		Nov
<i>Cudoniella clavus</i>	4	6	Bureau Strategic	New to Siuslaw FO	May, Jun
<i>Cystolepiota bucknallii</i>		1	Review	New to South Zone	Nov
<i>Dendrocollybia racemosa</i>	12		Bureau Strategic		Nov, Dec
<i>Nolanea verna</i> var. <i>isodiametrica</i>		4	Bureau Strategic	New to South Zone	May, Jun
<i>Phaeocollybia californica</i>	2	3	Bureau Sensitive		Nov
<i>Phaeocollybia oregonensis</i>	1		Bureau Sensitive		Nov
<i>Pseudaleuria quinaultiana</i>		2	Bureau Strategic	New to South Zone	May
<i>Rickenella swartzii</i>	1		Bureau Strategic		Jun
<i>Stropharia albovelata</i>		1	Bureau Strategic	New to UW FO	Dec
<i>Vibrissea truncorum</i>	1		Bureau Strategic		Jun
TOTAL	23	17			

### Identification Issues

Identification of fungi to species continues to be difficult. Of 26 specimens turned in to taxa experts, only 23 specimens were correctly identified by the survey contractor. For the other specimens, different names were given by taxa experts than originally determined, but often the genus was correctly determined. In several cases the final determination by the taxa expert was a tentative confirmation (determined as cf.). Continued access to taxa experts is critical, especially for difficult genera such as *Phaeocollybia* and *Ramaria*.

### Contract Inspection

The contract inspection provision regarding missed sites was implementable. No collections found by the inspectors were a target species, representing missed sites. Using the inspector's results in comparison indicates that the contractor was probably finding sites at a good rate.

### Discussion

There was a relatively large number of sites of target fungal species found, as compared with previous surveys and given the acreage covered (Table 3). In general, there were poor years for fungi fruiting, coincident with years with fewer sites found, probably due to a warm, dry climate period from 2013 through 2015. According to the United States Drought Monitor (<http://droughtmonitor.unl.edu/>), September conditions in our area have been abnormally dry, to in a severe drought, from September, 2013 through September 2016 (but drought conditions

abated late October 2016). There have been changes made to the list of target species over the years, however, so that numbers are not strictly comparable.

This survey provided an increase in the understanding of these species' distribution and range. Ongoing Special Status fungi surveys continue to find species new to the South Zone (Table 3), emphasizing the unfinished nature of these surveys. Additionally, the list of species considered rare or possibly rare is likely to change over time, hence new information will likely continue to accrue.

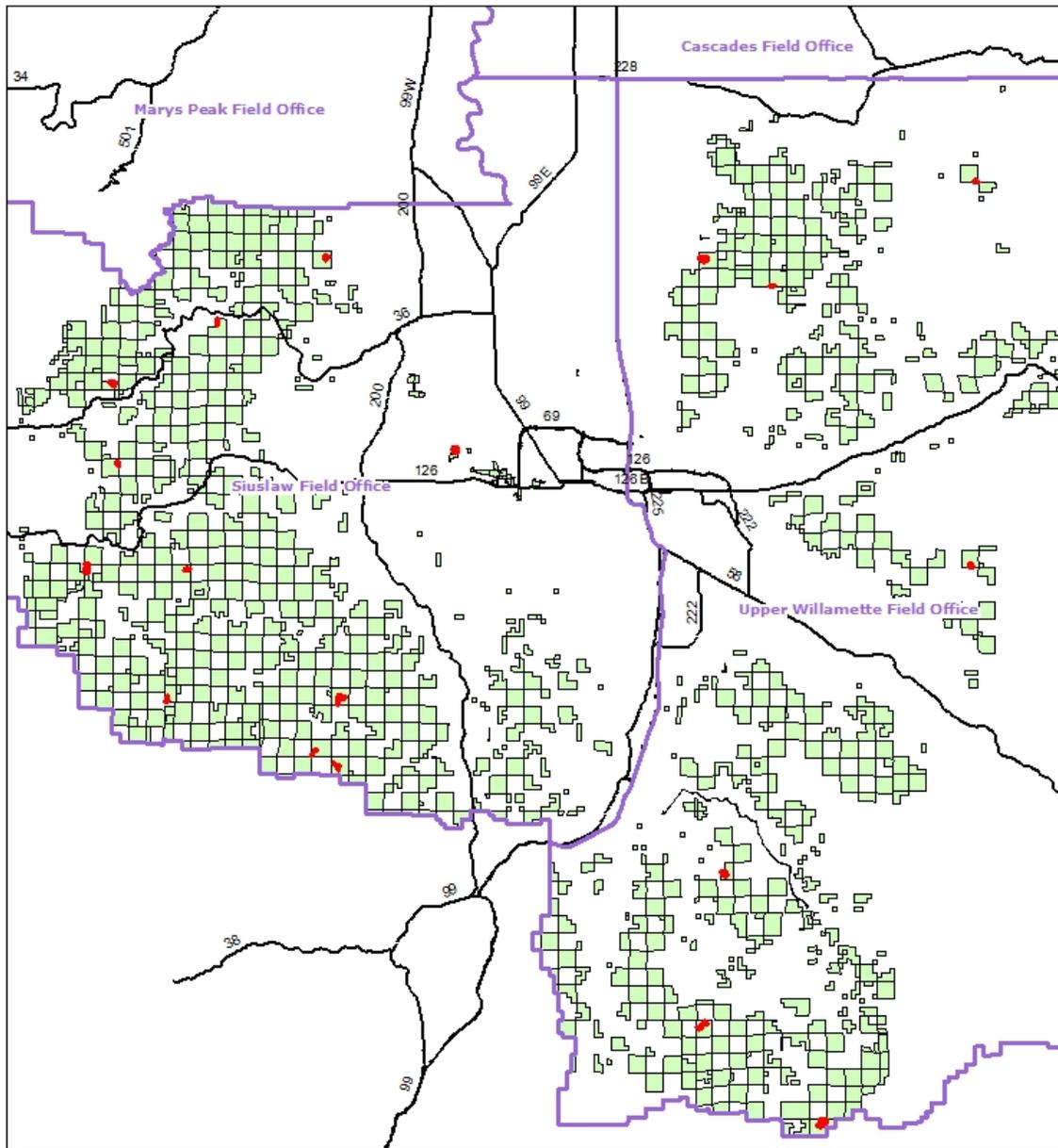
Table 3. Results from this and previous survey efforts for fungi in the South Zone.				
Year	Acres	Sites Found	Species New to the zone	Comments
Fall 2008	754	24	7	Single fall visit.
Fall 2010	593	53	5	3 fall visits.
Fall 2011	756	38	6	3 fall visits.
2012-2013	129	17	4	Visited every 3 weeks for one year.
Fall 2013, Spring 2014	656	18	2	2 fall and 2 spring visits.
Fall 2014, Spring 2015	668	12	4	2 fall and 2 spring visits.
Fall 2015, Spring 2016	902	17	8	2 fall and 2 spring visits.
Fall 2016, Spring 2017	715	40	4	2 fall and 2 spring visits.

### References

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.

### Acknowledgments

Many thanks to Stone Ecosurveys for performing the contracted field work.



Fungi Survey Units fall 2016 / spring 2017  
 Survey units are in red.

-  Field Office boundary
-  Fungi\_Units\_fall2016/spring2017
-  Highways
-  BLM Ownership

0 5 10 20  
 Kilometers

0 5 10  
 Miles

1:500,000 NAD 1983 Con US



Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Acanthophysium farlowii</i>	<u>Strategic</u> ORBIC List 3	Ne US, Canada, WA, Linn Co.	S	E	On recently dead twigs of <i>Abies</i> , <i>Tsuga</i> , PSME. 1400 feet in Linn Co. <b>May.</b>
<i>Albatrellus avellaneus</i>	<u>Sensitive</u> ORBIC List 1	CA, WA, Coos Co.	S	E	Terrestrial, assumed mycorrhizal with Pinaceae. Oct, Nov, Jan
<i>Albatrellus caeruleoporus</i>	<u>Strategic</u> ORBIC List 3	BC to CA, Eastern N.A., NS: Lane Co.	S	E	Terrestrial, assumed mycorrhizal with <i>Tsuga</i> . Sept-Dec.
<i>Albatrellus dispansus</i>	<u>Strategic</u> ORBIC List 3	Asia, e N.A., ID, AZ, Marion Co.	S	E	
<i>Albatrellus ellisii</i>	ORBIC List 4	CA, WA, ID, NS: <b>SI RA</b>	D	E	Forests. Oct-Jan. 500-6000' elevation. PSME, TSHE, ABAM, PICO, etc.
<i>Albatrellus skamanius</i>	<u>Strategic</u> ORBIC List 3	E Asia, WA, Marion Co.	S	E	
<i>Amanita novinupta</i>	<u>Strategic</u> ORBIC List 3	BC to ID, CA, NS: Lane Co.	S	E	
<i>Amogaster viridigleba</i> (= <i>Lepiota viridigleba</i> )	<u>Strategic</u> ORBIC List 3	CA, OR. NS. Douglas Co.	S	H	Under PSME in the Cascades. <b>June.</b> On BLM Strategic List as <i>Lepiota</i> .
<i>Arcangeliella camphorata</i> (= <i>Gastrolactarius camphoratus</i> )	<u>Sensitive</u> ORBIC List 1	BC, WA, to Coos and Lane Co.	S	H	Coast Range RA specimen verified by James Trappe, but no site report available. Mar-Jul, Oct, Nov. PSME, TSHE associate. 20-3000' elevation. On BLM Strategic List as <i>Gastrolactarius</i> .
<i>Arcangeliella crassa</i> (= <i>Gastrolactarius crassus</i> )	<u>Strategic</u> ORBIC List 3	CA, Coos, Douglas, Wasco Cos.	S	H	<i>Abies</i> , <i>Pinus</i> mixed conifer in CA, 6500'. Coos Co. site at 2200'. On BLM Strategic List as <i>Gastrolactarius</i> .
<i>Balsamia nigrens</i> (= <i>B. nigrescens</i> )	<u>Strategic</u> ORBIC List 3	CA to Benton Co., Yamhill Co.	S	H	Mar, Jun, Oct, Dec. <i>Abies</i> , <i>Quercus</i> , PSME, PIJE, low to mid elevation.
<i>Boletus regius</i>	<u>Strategic</u> ORBIC List 3	NS: <b>UW RA</b>	D	E	

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Bondarzewia mesenterica</i> (= <i>B. montana</i> )	Eugene District Review	BC to nCA, Europe; NS: <b>UW RA</b>	D	E	Late successional conifer forests, often associated with large stumps or snags; fruits from August to December. Locally rare. Large wood habitat indicator.
<i>Bryoglossum gracile</i>	<u>Sensitive</u> ORBIC List 2	Canada, Eurasia, WA, OR. NS: Will. NF.	S	E	On subalpine to arctic mosses. At 2000' Hehe Creek Lane Co. Aug-Oct.
<i>Catathelasma ventricosum</i>	ORBIC List 3	BC to CA, NS: Linn Co.	S	E	Forests, especially <i>Picea</i> and <i>Abies</i> . Sep-Jan.
<i>Chamonixia caespitosa</i>	<u>Sensitive</u> ORBIC List 2	WA to CA, NY, Europe. NS: Lincoln and Tillamook Co.	S	H	<i>Abies amabilis</i> , <i>Tsuga</i> , <i>Picea sitchensis</i> , <i>Pseudotsuga</i> . Jun-Nov. 7-5000' elevation.
<i>Choiromyces alveolatus</i>	<u>Strategic</u> ORBIC List 3	Western Cascades; NS: Linn, Douglas Cos.	S	H	<i>Abies</i> , <i>Tsuga</i> , <i>Pinus</i> , <i>Pseudotsuga</i> . May-Jul, Sept-Nov
<i>Choiromyces venosus</i>	<u>Sensitive</u> ORBIC List 2	OR, CA, WV, Europe. Lane County; NS: <b>UW RA</b>	D	H	Low elevation; hosts are <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> . Aug, Oct. 1400-1600' elevation.
<i>Chrysomphalina grossula</i>	<u>Strategic</u> ORBIC List 3	WA to CA. NS: Lane Co.	S	E	Coniferous debris, mixed forests and parks. <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> forests in PNW. Mar, Aug, Oct-Dec.
<i>Clavariadelphus subfastigiatus</i>	<u>Strategic</u> ORBIC List 3	WA to ID, CA, NS: Douglas Co.	S	E	Mixed conifers. Oct-Dec.
<i>Clavulina castanopes</i> var. <i>lignicola</i>	<u>Strategic</u> ORBIC List 3	BC to CA, NS: Lane Co.	S	E	On wood or bark. May, Oct, Nov.
<i>Clavulinopsis fusiformis</i>	<u>Strategic</u> ORBIC List 3	BC to OR, E North America, Eurasia	S	E	
<i>Clitocybe senilis</i>	ORBIC List 3	WA, Tillamook Co. E N.A., Europe.	S	E	Duff, conifer forests. Jul, Aug, Nov, Dec
<i>Conocybe subnuda</i>	<u>Strategic</u> ORBIC List 3	OR, Europe. NS: Multnomah Co.	S	E	
<i>Coprinopsis friesii</i>	Eugene District Review	North America, Eurasia. NS: <b>SI RA (WEW)</b>	D	E	Decaying grass blades, WEW. Nov. Verified by Trudell. In CA, found summer, thatch of grass, sedge, cattail.

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Cordyceps militaris</i>	Eugene District Review	North America, Europe. NS: <b>SI RA.</b>	D	E	Taxonomic questions. <i>Cordyceps</i> cf. <i>militaris</i> specimens with J. Spatafora may be a new or different species.
<i>Cordyceps ophioglossoides</i>	ORBIC List 3	WA to CA, E N.A., Eurasia. NS: Lane Co.	S	E	Parasitic on <i>Elaphomyces</i> . Sep-Nov.
<i>Cortinarius barlowensis</i>	<u>Sensitive</u> ORBIC List 2	WA to CA, NS: Lane Co.	S	E	Coastal to montane conifer forests. Sep-Nov. 25-5000' elevation. TSHE to TSME.
<i>Cortinarius cyanites</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Benton Co.	S	E	Forests. Aug-Nov.
<i>Cortinarius depauperatus</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Lincoln Co.	S	E	Moist conifer forests, <i>Picea</i> , <i>Thuja</i> , <i>Tsuga heterophylla</i> . May-Jul; Sep-Oct.
<i>Cortinarius valgus</i>	ORBIC List 3	WA to CA. NS: Lane Co.?	S	E	Conifer forests, <i>Abies</i> , <i>Picea</i> , <i>Pseudotsuga</i> , <i>Tsuga heterophylla</i> . Oct.
<i>Cudoniella clavus</i>	<u>Strategic</u> ORBIC List 3	BC to CA, North America, Europe	S	E	
<i>Cystangium idahoensis</i> (= <i>Martellia</i> i.)	<u>Sensitive</u> ORBIC List 1	OR, ID. NS: Lane Co., Willamette NF.	S	H	Associated with the roots of <i>Abies amabilis</i> , <i>A. lasiocarpa</i> , <i>A. procera</i> , <i>Picea engelmannii</i> , and <i>Tsuga mertensiana</i> from 1,200 to 1,650 m elevation. Sep, Oct.
<i>Dendrocollybia racemosa</i> (= <i>Collybia racemosa</i> )	<u>Strategic</u> ORBIC List 3	WA to CA, E N.A., Europe. NS: <b>UW, SI RA</b>	D	E	Forests, on remains of other mushrooms or leaf mulch. Feb, Aug, Sep-Dec.
<i>Dermocybe humboldtensis</i>	<u>Sensitive</u> ORBIC List 1	CA, OR, NS: Douglas Co.	S	E	Mycorrhizal, various Pinaceae. Nov. 1300-2000' elevation. PIPO, PSME, ABGR.
<i>Destuntzia fusca</i>	<u>Strategic</u> ORBIC List 3	Endemic to OR and CA. NS: H.J.Andrews Experimental forest, Lane Co.	S	H	Forms sporocarps beneath the soil associated with <i>Lithocarpus densiflorus</i> , <i>Pseudotsuga menziesii</i> & <i>Tsuga heterophylla</i> , below 1000 m elevation. Oct, Dec.
<i>Destuntzia rubra</i>	<u>Strategic</u> ORBIC List 1-ex	CA, OR in Linn Co.	S	H	Low elevation nw CA; PSME, ABGR, ARME, tanoak, redwoods. OR Cascades.
<i>Elaphomyces asperulus</i>	<u>Strategic</u> ORBIC List 3	OR, Europe. NS: Polk Co.	S	H	

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Elaphomyces decipiens</i>	<u>Strategic</u> ORBIC List 3	OR, CA, LA, MS, Europe. NS: Benton Co.	S	H	
<i>Elaphomyces reticulatus</i>	<u>Strategic</u> ORBIC List 3	OR, Eurasia. NS: Lane Co.	S	H	
<i>Endogone oregonensis</i>	<u>Strategic</u> ORBIC List 3	OR. NS: Douglas and Benton Co.	S	H	Mycorrhizal, <i>Picea sitchensis</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> . Feb, Jul, Sep-Nov.
<i>Galerina fuscobrunnea</i>	<u>Strategic</u> ORBIC List 3	OR. NS: Cascades in Wasco Co.	S	E	
<i>Gautieria magnicellaris</i>	<u>Strategic</u> ORBIC List 3	OR, CA, E N.A., Mex., Europe, NS: Deschutes Co.	S	H	<i>Abies concolor</i> in OR, pines in Mexico. July-Oct
<i>Genea compacta</i> (= <i>Gilkeya compacta</i> )	<u>Strategic</u> ORBIC List 3	Polk Co., Willamette Valley, to Mexico.	S	H	PSME, Pinus, Abies, Quercus. Feb.-Aug.
<i>Glomus pubescens</i>	<u>Strategic</u> ORBIC List 3	OR, NJ, Japan. NS: Coos and Douglas Co.	S	H	
<i>Gomphus kauffmanii</i>	<u>Strategic</u>	BC to ID, CA, NS: Lane Co.	S	E	<i>Pinus</i> and <i>Abies</i> . Aug-Dec, Jan. 200-7000' elevation. PSME, TSHE, ABAM, TSME.
<i>Gymnomyces californicus</i>	<u>Eugene District Review</u>	California. NS: <b>SI RA</b>	D	H	Rare species, previously endemic to CA. Possible first collection in OR in Siuslaw RA, needs verification.
<i>Gymnomyces compactus</i>	ORBIC List 3	Oregon: Clackamas, Douglas, Yamhill Co.	S	H	Under deep decayed fir wood. <b>June.</b>
<i>Gymnomyces cremeus</i>	ORBIC List 3	Oregon: Benton, Douglas Co.	S	H	
<i>Gymnomyces monosporus</i>	<u>Strategic</u> ORBIC List 3	Benton, Douglas Co.	S	H	<b>Jun, Jul</b>
<i>Gymnomyces nondistincta</i>	<u>Strategic</u> ORBIC List 1	Clackamas, Klamath Co.	S	H	ABAM, TSME. Oct. 6000-7000' elevation.
<i>Gymnomyces setigerus</i>	<u>Strategic</u> ORBIC List 3	WA, OR: Lane Co.	S	H	

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Gymnopilus punctifolius</i>	Eugene District <u>Review</u>	WA to n CA; NS: <b>SI, UW RA</b>	D	E	Fruits on well decayed (brown cubically rotted) large conifer stumps and snags; fruits Apr, Jun, August to December. Locally rare. Large wood habitat indicator.
<i>Hebeloma occidentale</i>	<u>Strategic</u> ORBIC List 3	Clackamas, Wasco Co.	S	E	
<i>Helvella crassitunicata</i>	<u>Sensitive</u> ORBIC List 2	Endemic to OR and WA. NS: Lane Co., Willamette NF.	S	E	Scattered or gregarious on soil along trails in montane regions with <i>Abies</i> spp. Jan, May, Aug-Oct. 1900-9200' elevation. PSME, TSHE, ABAM, TSME.
<i>Helvella elastica</i>	ORBIC List 3	WA to OR; NS: <b>UW, SI</b>	D	E	Typically gregarious on soil under conifers in damp areas in fall; Does not routinely fruit in recently heavily disturbed areas; may fruit in open areas under conifers; fruits April- Dec.
<i>Hemimycena pseudocrispula</i>	<u>Strategic</u> ORBIC List 3	Europe, Lane Co.	S	E	On wood.
<i>Hohenbuehelia petaloides</i>	Eugene District Review	Americas, Eurasia, Australia. Species complex; the material in the Pacific Northwest needs taxonomic work. NS: <b>SI RA.</b>	D	E	Jun-Nov. Verified ( <i>sensu lato</i> ) by S. Trudell, but "there are several similar species in that group and the species concepts are not applied in a consistent fashion, including by workers in the Pacific Northwest."
<i>Hydropus marginellus</i>	<u>Strategic</u> ORBIC List 3	WA to CA. NS: <b>SI RA, UW RA.</b>	D	E	Conifer wood, <i>Abies, Pinus</i> . Jun-Dec. Both June, Dec. on Eugene District.
<i>Hygrophorus albicarneus</i>	<u>Strategic</u> ORBIC List 3	OR. NS: Lane Co.	S	E	
<i>Hygrophorus albiflavus</i>	<u>Strategic</u> ORBIC List 3	Clackamas Co.	S	E	
<i>Hypomyces luteovirens</i>	ORBIC List 3	BC to CA. NS: Clackamas Co.	S	E	Parasitic crust on Russulaceae. Sep, Oct.
<i>Imaia gigantea</i>	<u>Strategic</u> ORBIC List 3	Japan, Appalachians, Douglas CO.	S	H	Sept, Oct.

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Ionomidotis irregularis</i>	<u>Eugene District Review</u>	North America, Eurasia. <b>NS: UW RA, SI RA.</b>	D	E	Globally rare, saprophytic on hardwoods, old growth associated. Ron Hamill SI RA collection needs verification. Nov.
<i>Leptonia caesiocincta</i>	<u>Strategic</u> ORBIC List 3	WA to CA, Europe. NS: Clackamas Co.	S	E	
<i>Leptonia exalbida</i>	ORBIC List 3	BC to CA. NS: Douglas Co.	S	E	
<i>Leptonia foliocontusa var. discolor</i>	ORBIC List 3	BC to CA. NS: Douglas Co.	S	E	
<i>Leptonia occidentalis var. occidentalis</i>	<u>Strategic</u> ORBIC List 1	Benton, Marion Cos.	S	E	Nov.
<i>Leptonia rosea var. marginata</i>	<u>Strategic</u> ORBIC List 2-ex	WA to CA, NS: Lane Co.	S	E	
<i>Leptonia striatula</i>	ORBIC List 3	WA, OR, Eastern NA. NS: Douglas Co.	S	E	
<i>Leptonia subeuchroa</i>	<u>Strategic</u> ORBIC List 2-ex	WA to CA. NS: Lane Co.	S	E	
<i>Leptonia violaceonigra</i>	<u>Strategic</u> ORBIC List 3	WA to CA. NS: Linn Co.	S	E	
<i>Leucogaster candidus</i>	<u>Eugene District Review</u>	<b>NS: UW RA</b>	D	H	Rare in the PNW. UW RA site needs verification.
<i>Leucogaster microsporus</i>	ORBIC List 4	WA to CA, NS: Lane Co.	S	H	PSME, TSHE. Jul-Nov
<i>Leucogaster odoratus</i>	<u>Strategic</u> ORBIC List 3	CA to Lane, Linn Cos.	S	H	
<i>Lyophyllum acutipes</i>	<u>Strategic</u> ORBIC List 1-X	Clackamas Co.	S	E	
<i>Lyophyllum furfurellum</i>	<u>Strategic</u> ORBIC List 1-X	Clackamas Co.	S	E	
<i>Lyophyllum lubricum</i>	<u>Strategic</u> ORBIC List 1-X	Clackamas Co.	S	E	

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Lyophyllum pallidum</i>	<u>Strategic</u> ORBIC List 1-X	West Cascades of Jefferson Co.	S	E	
<i>Lyophyllum solidipes</i>	<u>Strategic</u> ORBIC List 1-X	Clackamas Co.	S	E	
<i>Macowanites chlorinosmus</i>	<u>Strategic</u> ORBIC List 3	WA to CA. NS: Lane Co.	S	H	Coastal Sitka spruce and western hemlock. Jan, Jul-Nov.
<i>Martellia medlockii</i>	<u>Strategic</u> ORBIC List 3	Linn Co.	S	H	
<i>Melanogaster natsii</i>	ORBIC List 3	WA to CA, NS: Benton Co.	S	H	
<i>Melanophyllum haemospermum</i>	<u>Eugene District Review</u>	North America, Europe. NS: <b>SI RA.</b>	D	E	Taxonomic questions. Species complex; material in the Pacific Northwest is likely an unnamed endemic.
<i>Mycena gaultheri</i>	<u>Strategic</u> ORBIC List 3	Clackamas Co.	S	E	
<i>Mycena hudsoniana</i>	<u>Strategic</u> ORBIC List 3	WA and Lane Co.	S	E	<b>Apr-Jul.</b> Woody debris near snowbanks, usually >2300 feet.
<i>Mycena quinaultensis</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Lane Co.	S	E	On conifer needle duff, rarely wood. Oct-Dec
<i>Mycena tenax</i>	<u>Strategic</u> ORBIC List 3	WA to CA, E N.A., NS: Lane Co.	S	E	Duff under <i>Abies</i> , <i>Pseudotsuga</i> , <i>Picea</i> , <i>Sequoia</i> . Jun, Aug-Dec.
<i>Mythicomyces corneipes</i>	<u>Sensitive</u> ORBIC List 2	OR, WA, northern Europe. NS: Lane Co.	S	E	Margins of bogs among mosses, or wet soil under conifers or alders. Aug-Oct.
<i>Nemania serpens var. hydnicola</i>	Eugene District Review	Scandinavia, France, British Columbia. NS: <b>SI RA</b>	D	E	On <i>Fomitopsis pinicola</i> conks. Loring's voucher needs verification.
<i>Nolanea edulis var. concentrica</i>	<u>Strategic</u> ORBIC List 3	Lincoln Co.	S	E	
<i>Nolanea verna var. isodiametrica</i>	<u>Strategic</u> ORBIC List 3	OR, ID, WY. NS: Douglas Co.	S	E	
<i>Octavianina macrospora</i>	<u>Strategic</u> ORBIC List 1-X	Clackamas Co.	S	H	<i>Tsuga heterophylla</i> , 3200 feet elevation. <b>Aug.</b>

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Omphalina isabellina</i>	<u>Strategic</u> ORBIC List 3	Clackamas Co.	S	E	
<i>Otidea smithii</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: <b>UW</b>	D	E	On soil, duff, moss, PSME, TSHE, black cottonwood. 1200-3800' elevation. Nov, Dec, Feb.
<i>Phaeocollybia californica</i>	<u>Sensitive</u> ORBIC List 1	WA to CA, NS: <b>UW, SI</b>	D	E	Terrestrial, mycorrhizal, under conifers, coastal to montane moist forests. 300-4000' elevation. Apr-Jun, Sep-Jan.
<i>Phaeocollybia dissiliens</i>	<u>Strategic</u> ORBIC List 3	CA, OR, NS: Lane Co. NS: <b>UW, SI</b>	D	E	Terrestrial, mycorrhizal, under conifers, moist forests. Mostly coastal and Coast Range. 300-2500' elevation. Sept-Dec.
<i>Phaeocollybia gregaria</i>	<u>Sensitive</u> ORBIC List 1	Polk, Tillamook Cos.	S	E	Terrestrial, mycorrhizal, under conifers, moist forests. Coastal and Coast Range. 500-1500' elevation. Oct-Dec.
<i>Phaeocollybia lilacifolia</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: <b>SI RA</b>	D	E	Terrestrial, mycorrhizal, under conifers, moist forests. Oct.
<i>Phaeocollybia oregonensis</i>	<u>Sensitive</u> ORBIC List 1	BC to OR, NS: <b>SI RA</b>	D	E	Terrestrial, mycorrhizal, under conifers, moist forests. 800-3800' elevation. Aug, Oct, Nov.
<i>Phaeocollybia pseudofestiva</i>	<u>Strategic</u> ORBIC List 3	BC to CA, NS: <b>UW RA</b>	D	E	Mature mixed conifers and hardwoods. 35-3700' elevation. April, May, July, Sept-Jan.
<i>Phaeocollybia radicata</i>	<u>Strategic</u> ORBIC List 3	OR, CA, NS: <b>SI, UW RA</b>	D	E	Terrestrial, mycorrhizal, under conifers, moist forests. Oct-Dec.
<i>Podostroma alutaceum</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Lane Co.	S	E	Conifer forests, litter, dead wood. Apr, Jul-Dec.
<i>Polyozellus multiplex</i>	ORBIC List 4	WA to CA, ID, E N.A., Japan, NS: Lane Co.	S	E	<i>Abies</i> , montane conifer forests. Aug-Jan.
<i>Pseudoaleuria quinaultiana</i>	<u>Strategic</u> ORBIC List 3	WA to OR, NS: Lincoln Co.	S	E	Disturbed microsites (e.g. windthrow mounds) low elevation old growth, PISI, PSME, TSHE. <b>March-May, Sept.</b>
<i>Pseudorhizina californica</i> (= <i>Gyromitra c.</i> )	<u>Sensitive</u> ORBIC List 2	BC to CA, ID, NS: Linn Co., Douglas Co.	S	E	Well-rotted stumps or logs of conifers; humus in moist areas, along streams. Apr-Oct.

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Radiigera bushnellii</i>	<u>Strategic</u> ORBIC List 3	OR, Tillamook and Yamhill Co.	S	H	Coast Range, PSME forest. <b>May, Aug.</b>
<i>Ramaria abietina</i>	<u>Strategic</u> ORBIC List 3	WA to CA, ID, Eurasia, NS: Lane Co. NS: <b>UW, SI RA</b>	D	E	Conifer forests, often PSME, duff and debris. Aug-Dec., Jan-Mar. 1999 O'Dell Collection UW RA.
<i>Ramaria amyloidea</i>	<u>Sensitive</u> ORBIC List 2	WA to CA, NS: Lane Co.	S	E	Coniferous forests. 1800-5500' elevation. PSME, TSHE, ABAM, TSME. Jul-Nov.
<i>Ramaria aurantiisiccescens</i>	ORBIC List 4	WA to CA, NS: Lane Co. NS: <b>UW RA</b>	D	E	Coniferous forests. 560-7000' elevation, PSME, TSHE, ABAM, TSME. Sept-Jan.
<i>Ramaria botrytis</i> var. <i>aurantiiramosa</i>	<u>Strategic</u> ORBIC List 3	WA to OR, NS: Douglas Co.	S	E	Coniferous forests. Sept-Nov.
<i>Ramaria conjunctipes</i> var. <i>sparsiramosa</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: <b>SI RA</b>	D	E	Coniferous forests. Oct-Dec.
<i>Ramaria gelatinaurantia</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Clackamas Co.	S	E	Coniferous forests. 1600-3600' elevation, PISI, PSME, TSHE. Sept-Jan
<i>Ramaria gracilis</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NY, Europe, NS: Benton Co.	S	E	Conifer duff; humicolous on twigs and needles. Sept, Nov, Dec.
<i>Ramaria largentii</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Benton Co.	S	E	Coniferous forests. 1300-5100' elevation, PSME, TSHE, ABAM, ABGR. Mar, Jun, Sept-Nov.
<i>Ramaria maculatipes</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Lane Co.	S	E	Coniferous forests. Sept-Dec.
<i>Ramaria rainierensis</i>	<u>Strategic</u> ORBIC List 3	WA to CA, ID, NS: Coos Co.	S	E	Conifer duff; humicolous on twigs and needles. Mar, Dec.
<i>Ramaria rubella</i> forma <i>blanda</i>	<u>Sensitive</u> ORBIC List 2	BC to CA, TN, NS: Lane Co.	S	E	152-530' elevation, PISI, TSHE. On wood, <i>Picea</i> , <i>Alnus</i> . Oct, Nov.
<i>Ramaria rubribrunnescens</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: Douglas Co.	S	E	Coniferous forests. Sept-Nov
<i>Ramaria suecica</i>	<u>Strategic</u> ORBIC List 3	BC to CA, NS: <b>UW RA, SI RA</b>	D	E	On humus, conifer twigs and needles, sometimes deciduous litter. Oct, Nov.

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Ramaria tsugina</i> (= <i>R. concolor</i> f. <i>tsugina</i> )	<u>Strategic</u> ORBIC List 3	WA to CA, ID, NS: Coos Co.	S	E	On rotting conifer wood.. Sept-Oct.
<i>Rhizopogon abietis</i>	<u>Strategic</u> ORBIC List 3	CA, OR, ID, WY, E N.A. NS: Lane Co.	S	H	<i>Abies, Tsuga, Picea, Pinus.</i> July-Dec.
<i>Rhizopogon atroviolaceus</i>	<u>Strategic</u> ORBIC List 3	OR, ID, NS: Lane Co.	S	H	<i>Pseudotsuga, Abies, Tsuga, Picea, Pinus.</i> May-Oct.
<i>Rhizopogon brunneiniger</i>	<u>Strategic</u> ORBIC List 3	OR, CA, NS: Benton Co.	S	H	ABCO, PICO, PIMO, PSME, TSHE, TSME. Jun, Sept-Nov.
<i>Rhizopogon chamaleontinus</i>	<u>Sensitive</u> ORBIC List 2	OR, ID, NS: Josephine Co.	S	H	PSME, PILA. Tanoak at 900'. <b>Jun, Sept.</b>
<i>Rhizopogon clavitisporus</i>	<u>Strategic</u> ORBIC List 2	CR Lincoln Co., Cascades Clackamas Co., south to Klamath Ranges, ID	S	H	
<i>Rhizopogon elliposporus</i>	<u>Sensitive</u> ORBIC List 2	OR, CA, Jackson, Josephine Co.	S	H	PSME, PILA. 1080-4000' elevation, PSME, TSHE, TSME. Apr, Oct-Jan.
<i>Rhizopogon exiguus</i>	<u>Sensitive</u> ORBIC List 2	Endemic to OR, WA. NS: Lane Co. Mapleton.	S	H	85-4000' elevation, PSME, TSHE. Mar, Sept, Nov.
<i>Rhizopogon flavofibrillosus</i>	<u>Strategic</u> ORBIC List 3	OR, CA, ID, Montana. NS: Deschutes, Curry, Siskiyou, Josephine Co.	S	H	Associated with the roots of ABCO, ABLA, PIEN, PIAT, PICO, PILA, PIMU, PSME from 950 to 2350 m elevation. Mar, Apr, Jul, Nov.
<i>Rhizopogon inquinatus</i>	<u>Sensitive</u> ORBIC List 2	OR, ID, NS: Linn Co.	S	H	PIJE, PSME, TSHE, TSME. 1280-4400' elevation. Sept, Oct.
<i>Rhizopogon rogersii</i>	<u>Strategic</u> ORBIC List 3	OR, ID, NS: Polk Co.	S	H	Coast Range, Cascades, Blue Mountains; PSME, PIPO. <b>July.</b>
<i>Rhizopogon semireticulatus</i>	<u>Strategic</u> ORBIC List 3	WA to CA, ID. NS: Douglas and Linn Co.	S	H	Near sea level under PICO, to 4800'. PSME, PICO, PIPO, ABLA, Quercus, ARME. Apr- Jan.
<i>Rhizopogon subcinnamomeus</i>	<u>Strategic</u> ORBIC List 3	OR, ID, NS: <b>SI RA</b>	D	H	Fall.

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Rhizopogon subclavitisporus</i>	<u>Strategic</u> ORBIC List 3	OR, ID, NS: Lane Co. HJ Andrews.	S	H	PSME, mixed conifers. <b>July.</b>
<i>Rhizopogon subradicatus</i>	<u>Strategic</u> ORBIC List 2-ex	WA, OR, NS: Benton Co.	S	H	PIPO. Oct.
<i>Rhizopogon truncatus</i>	ORBIC List 4	OR, CA, E N.A., NS: Lane Co.	S	H	Pinaceae, particularly pines. Jan, Apr-Dec.
<i>Rickenella swartzii</i>	<u>Strategic</u> ORBIC List 3	WA to CA, MT, Europe, NS: <b>SI RA.</b>	D	E	Among mosses under hardwoods. May be parasitic on mosses. May-Jan. June, July, Aug. on Eugene District.
<i>Sarcodon fuscoindicus</i>	<u>Strategic</u> ORBIC List 3	WA to CA, NS: <b>SI RA</b>	D	E	On soil. 34-6500' elevation, PSME, TSHE, ABAM. Sept-Jan.
<i>Sowerbyella rhenana</i> (= <i>Aleuria rhenana</i> )	ORBIC List 3	w North America, CA, OR, WA. Europe and Japan. NS: <b>SI RA</b>	D	E	Fruits in duff of moist, relatively undisturbed, older conifer forests. 600-3600' elevation, PSME, TSHE, PIPO, PILA. May, Jul, Sept-Jan.
<i>Squamanita paradoxa</i>	<u>Strategic</u> ORBIC List 2-ex	Europe, BC, ID, OR. NS: Clackamas Co.	S	E	Parasitic on <i>Cystoderma</i> , which it transforms into a tan stem-like gall. Only a historic collection in OR. Nov.
<i>Stephensia bynumii</i>	<u>Strategic</u> ORBIC List 3	Clackamas, Marion Cos.	S	H	
<i>Stropharia albovelata</i> (= <i>Pholiota a.</i> )	<u>Strategic</u> ORBIC List 3	WA to CA, NS: <b>SI RA</b>	D	E	May, Aug-Dec. Under conifers in fall.
<i>Thaxterogaster pavelekii</i>	ORBIC List 1	WA to CA. NS: Lincoln Co.	S	H	Coastal PISI, PICO forests; possible at Heceta Dunes ACEC. 17-588' elevation. Mar-Jun, Nov.
<i>Tuber asa</i>	<u>Strategic</u> ORBIC List 3	OR, E N.A., Europe, NS: <b>UW</b>	D	H	PSME, TSHE, PIPO. Jan, Oct.. All North American <i>Tuber asa</i> are to be called <i>T. pseudoasa</i> .
<i>Tuber gardneri</i>	Eugene District Review	WA to Mexico. NS: <b>UW RA</b>	D	H	May-Sept. Verified by Castellano. Douglas-fir, pine, oak.
<i>Tuber pacificum</i>	<u>Strategic</u> ORBIC List 3	Coos, Lane and Polk Co., Coast Ranges	S	H	PSME, TSHE. <b>Feb, Jun, Jul.</b>

Species	Status	Range/Nearest Site	D/S	H/E	Habitat and Season
<i>Tuber quercicola</i>	ORBIC List 3	OR, CA. NS: Douglas or Linn Co.	S	H	
<i>Urnula craterium</i>	<u>Strategic</u> ORBIC List 2-ex	OR, E N.A., Eurasia. NS: Benton Co.	S	E	
<i>Vibrissea filisporea</i>	ORBIC List 3	OR, Eastern NA, Europe. NS: Marion Co.	S	E	
<i>Vibrissea truncorum</i>	<u>Strategic</u> ORBIC List 3	Scattered globally. NS: <b>SI RA.</b>	D	E	On dead wood in streams. <b>March</b>

D/S = Documented or Suspected on the Eugene District. H/E = Hypogeous/Epigeous

Season is determined from the GeoBOB database site report dates, or other sources. Bold font = not found October, November, December.

ex, X = Extirpated in OR, Extinct. ORBIC=Oregon Biodiversity Information Center

NS=Nearest site UW=Upper Willamette Resource Area SI=Siuslaw Resource Area

ORBIC List 1 contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.

ORBIC List 2 contains taxa that are threatened with extirpation or presumed extirpated from the state of Oregon.

ORBIC List 3 contains taxa for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

ORBIC List 4 contains taxa which are of conservation concern but are not currently threatened or endangered.

In range but excluded due to high elevation or other factors: *Alpova alexsmithii*, *Brauniella albipes*, *Chroogomphus loculatus*, *Clitocybe subditopoda*, *Cortinarius boulderensis*, *Fevansia aurantiaca*, *Gastroboletus imbellus*, *Gastroboletus ruber*, *Gastroboletus vividus*, *Gelatinodiscus flavidus*, *Glomus radiatum*, *Gymnomyces fragrans*, *Hebeloma oregonense*, *Hebeloma parcivelum*, *Hydnotrya inordinata*, *Hydnotrya michaelis*, *Macowanites mollis*, *Psathyrella gruberi*, *Psathyrella oregonensis*, *Ramaria thiersii*, *Rhizopogon masoniae*, *Rhizopogon subpurpurascens*, *Stagnicola perplexa*, *Tricholomopsis fulvescens*.

**This list may change during the course of the contract to accommodate changes in the status of species. Species may be added or deleted from this list.**