

**BIOLOGICAL EVALUATION FOR  
Proposed, Endangered, Threatened, and Sensitive Plants, Lichens,  
Bryophytes and Fungi  
Collawash Thin Project  
Clackamas River Ranger District  
Mt. Hood National Forest**

**INTRODUCTION**

This report evaluates the potential effects of the proposed action on Proposed, Endangered, Threatened, and Sensitive (PETS) plant species in accordance with The National Environmental Policy Act (42 USC 4321 et seq.) the federal Endangered Species Act (16 USC 1531 et seq.), and the National Forest Management Act (16 USC 1604 et seq.). To comply with the above, the Forest Service has set forth guidance in FSM 2670 that is designed to ensure Forest Service actions (1) do not contribute to the loss of viability of any native or desired non-native species or cause a trend toward federal listing for any species, (2) comply with the requirements of the Endangered Species Act; and (3) provide a process and standard which ensures that PETS species receive full consideration in the decision making process.

To achieve these objectives, all Forest Service projects, programs and activities are reviewed for possible effects on PETS species and the findings documented in the Decision Notice (FSM 2672.4). On the Mt. Hood National Forest there are no federally listed (proposed, endangered, threatened) plant species known to occur, however one federally threatened species (*Howellia aquatilis*) is suspected.

The Region 6 Regional Forester's Sensitive Species List as revised April, 2004 was used to determine species of vascular plants, fungi, bryophytes and lichens that are documented from or suspected to occur on the Mt. Hood National Forest.

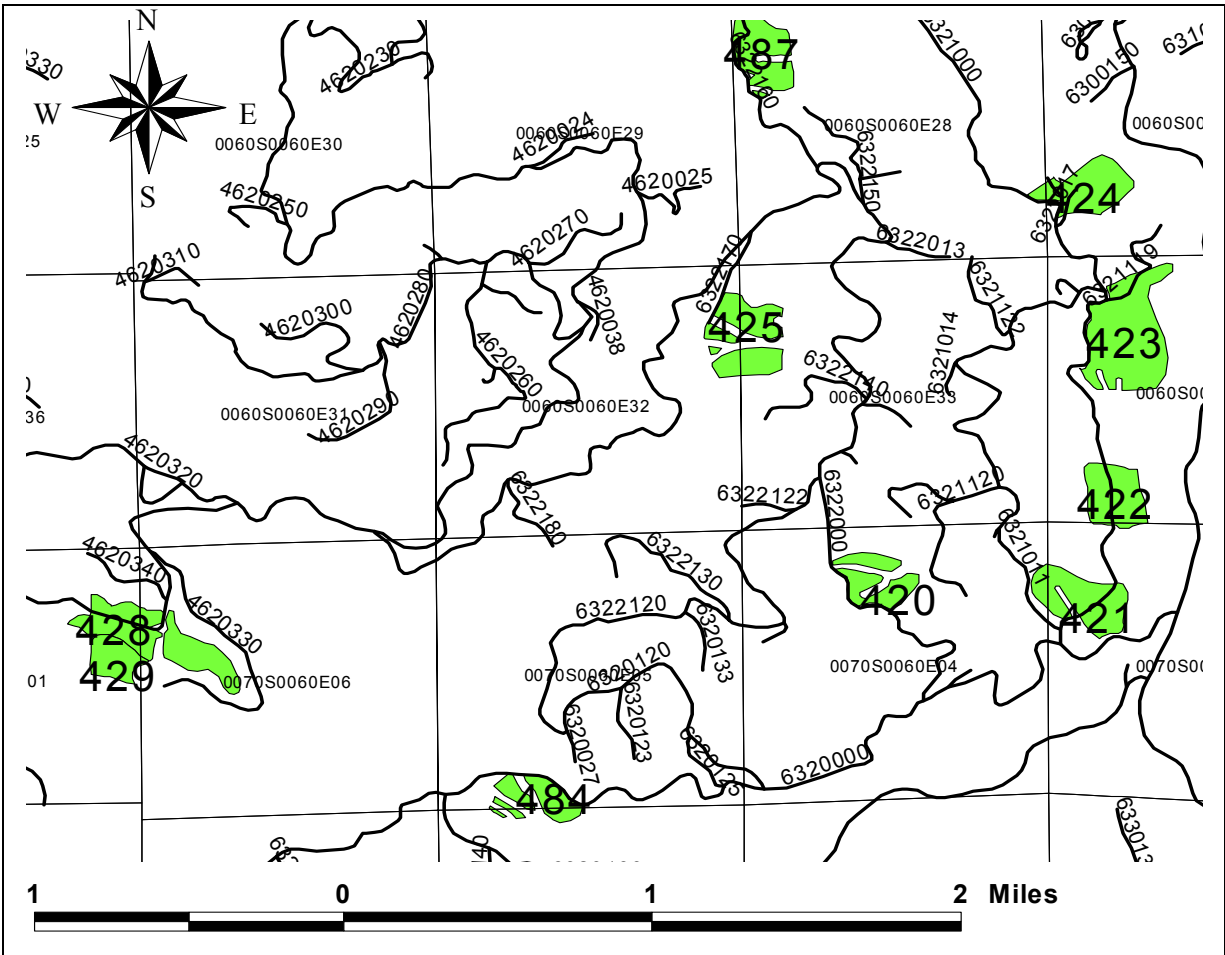
**PROJECT LOCATION & DESCRIPTION**

The project consists of approximately 292 acres located in the Collawash Watershed on the Clackamas River Ranger District (Map A).

- |           |  |
|-----------|--|
| Unit #420 | Located on Forest Road 6322 just north of its intersection with FS road 6320; T.7S. R.6E. Section 4. |
| Unit #421 | FS road 6321 near it intersection with road 6321-011, T.7S. R6E. Section 3.                          |
| Unit #422 | Road 6321, T.6S. R.6E. Section 34 SW ¼.  |
| Unit #423 | Intersection of FS Roads 6321 and 6321-119, T.6S. R.6E. Section 34.                                  |
| Unit #424 | FS Road 6321-117, T.6S. R.6E. Section 27.  |
| Unit #425 | Forest Road 6322-170, T.6S. R.6E. Section 33.  |

- Unit #428 Located west of road 4620-330, T.7S. R.5E. Section 6, T7S. R.6E. Section 1.
- Unit #429 This unit borders the southern boundary of unit 428.
- Unit #484 FS road 6320-015, T.7S. R.06E. Section 5.
- Unit #487 FS road 6322-160 near the road’s end, T.6S. R.6E. Section 28.

**MAP A. Collawash Thin Unit Locations**



**Proposed Action**

The proposed action will thin and harvest wood fiber. To accomplish project objectives, approximately 0.8 miles of temporary road construction will be needed. The proposed action is within the matrix land allocation and includes acreage within riparian reserves. The proposed action will be approximately 292 acres.

**Thinning:** The proposed action would “thin from below”, resulting in a residual stand of approximately 80 to 140 trees per acre. It is anticipated that harvested trees will be 10 to 15 inches

dbh. All skidding equipment will be restricted to designated skid trails and harvesters will operate on slash beds.

**Roads:** New temporary road construction is proposed to access landings. All temporary roads constructed would be obliterated and rehabilitated following completion of the project.

Table 1 displays the proposed action unit acreages and logging systems.

**Table 1 – Proposed Action**

Unit	Acres	Actions	Unit	Acres	Actions
420	20	S	425	33	S/H
421	30	GB/S	428a	18	GB/S
422	25	GB/S	428b	23	GB/S
423	57	S	429	14	S
424	27	GB/S	484	18	GB/S
487	27	S			

GB = Ground Based Logging, S = Skyline Logging, H = Helicopter Logging.

## METHODOLOGY

**Pre-Field Analysis:** Prior to any site visits, the following pertinent information was reviewed: Aerial photography, Regional Forester's list of PETS species (revised April, 2004), Mt. Hood PETS plant database, and the Interagency Species Management System (ISMS) with information on the project area. No PETS species are known to occur within or adjacent to the proposed project area. Based on habitat and range information, (herbarium records, technical manuals, plant atlases, etc.), PETS species that are known or suspected to occur on the Mt. Hood National Forest and have potential habitat within the proposed project area are shown in Table 2.

**TABLE 2.**

PETS Species Documented or Suspected From Mt. Hood NF				
Vascular Plants				
Species	Common Name	General Habitat	Survey Period	Potential Habitat?
<i>Agoseris elata</i>	tall agoseris	Moist-dry meadow	June-Aug	No
<i>Arabis sparsiflora</i> var. <i>atrorubens</i>	sicklepod rockcress	Dry meadow, shrub-steppe	May-Aug	No
<i>Aster gormanii</i>	Gorman's aster	Dry cliffs, talus, rock slopes above 3500'	June-Sept	No
<i>Astragalus tyghensis</i>	Tygh Valley milkvetch	Shrub-steppe grassland	May-Aug	No
<i>Botrychium lanceolatum</i>	lance-leaved grape fern	Sub-alpine meadow, glacial till	July-Sept	No

<i>Botrychium minganense</i>	Mingan moonwort	Forested wetlands	June-Sept	Yes
<i>Botrychium montanum</i>	mountain grape-fern	Forested wetlands	June-Sept	No
<i>Botrychium pinnatum</i>	pinnate grape fern	Forested wetlands	June-Sept	Yes
<i>Calamagrostis breweri</i>	Brewer's reedgrass	Sub-alpine, moist – dry meadows	June- Sept	No
<i>Carex livida</i>	pale sedge	Wet-dry meadow, fen	June-Sept	No
<i>Castilleja thompsonii</i>	Thompson's paintbrush	Rock outcrops east of the Cascade Crest	July-Aug	No
<i>Cimicifuga elata</i>	tall bugbane	Mesic mixed hardwood/ conifer forest	June-Sept	Yes
<i>Coptis trifolia</i>	3-leaflet goldthread	Edge of forested fens	June-July	No
<i>Corydalis aquae-gelidae</i>	cold water corydalis	Forested seeps and streams	June-Sept	Yes
<i>Diphasiastrum complanatum</i>	ground cedar	Open conifer forest	Apr-Nov	No
<i>Erigeron howellii</i>	Howell's daisy	Moist-dry cliffs, talus, rocky slopes	June-Sept	No
<i>Fritillaria camschatcensis</i>	Indian rice	Moist-dry meadow	June-Aug	No
<i>Howellia aquatilis var howellia</i>	howellia	Low elevation lakes and ponds	June- Sept	No
<i>Lewisia columbiana var. columbiana</i>	Columbia lewisia	Dry cliffs, talus, rocky slopes	June-Sept	No
<i>Lycopodiella inundata</i>	bog club-moss	Wet meadows and bogs	July-Sept	No
<i>Montia howellii</i>	Howell's montia	Moist-dry open lowland forest	April-July	Yes
<i>Ophioglossum pusillum</i>	adder's tongue	Wet-moist meadow	June-Sept	No

PETS Species Documented or Suspected From Mt. Hood NF

**Vascular Plants**

Species	Common Name	General Habitat	Survey Period	Potential Habitat?
<i>Phlox hendersonii</i>	Henderson's phlox	Sub-alpine, dry, rocky, Scree	July-Sept	No
<i>Potentilla villosa</i>	villous cinquefoil	Sub-alpine, dry, rocky, scree	July-Sept	No
<i>Ranunculus reconditus</i>	obscure buttercup	Shrub-steppe grasslands	April-June	No
<i>Romanzoffia thompsonii</i>	mistmaiden	Vernally wet cliffs	April-June	No
<i>Scheuchzeria palustris var.americana</i>	scheuchzeria	Wet meadow, bog, fen	June-Sept	No

<i>Sisyrinchium sarmentosum</i>	Pale blue-eyed grass	Moist-dry meadow	June-Aug	No
<i>Suksdorfia violacea</i>	Violet suksdorfia	Moist cliffs, talus, rocky slopes	May-July	No
<i>Taushia stricklandii</i>	Strickland's taushia	Moist-dry meadow	June-Sept	No
<i>Wolffia borealis</i>	Dotted water-meal	Pond, lake, gently flowing water	May-Sept	No
<i>Wolffia columbiana</i>	water-meal	Pond, lake, gently flowing water	May-Sept	No
<b>Bryophytes</b>				
<i>Rhizomnium nudum</i>	moss	Moist mineral soil in forest, 3000 – 5000 ft.	June - Oct	No
<i>Schistostega pennata</i>	green goblin moss	Moist mineral soil on rootwads	June- Oct	No
<i>Scouleria marginata</i>	moss	Rock and boulders in streams	May - Nov	No
<i>Tetraphis geniculata</i>	bent-awn moss	Large down wood in old growth forest	May- Oct	No
<b>Lichens</b>				
<i>Chaenotheca subroscida</i>	pin lichen	Boles of live trees and snags in moist forest.	May-Nov	Yes
<i>Dermatocarpon luridum</i>	Brook lichen	Rock submerged in streams	May-Nov	No
<i>Hypogymnia duplicata</i>	Ticker-Tape lichen	Conifer boles where > 90" inches of precipitation.	May - Oct	No
<i>Leptogium burnetiae</i> var. <i>hirsutum</i>	Jellyskin lichen	Bark of deciduous trees, down rotted logs and moss on rock.	May-Nov	Yes
<i>Leptogium cyanescens</i>	Blue jellyskin lichen	Moss and bark of deciduous trees.	May-Nov	Yes
<i>Lobaria linita</i>	Cabbage lungwort	Lower bole of conifers /often mossy boulders.	May-Nov	Yes
<i>Nephroma occultum</i>	Cryptic kidney lichen	Tree boles and branches in older forest habitat	May-Nov	No
<i>Pannaria rubiginosa</i>	Brown-eyed shingle lichen	conifer/deciduous tree bark in moist forest habitat.	May-Nov	Yes

PETS Species Documented or Suspected From Mt. Hood NF				
<b>Lichens</b>				
Species	Common Name	General Habitat	Survey Period	Potential Habitat?
<i>Peltigera neckeri</i>	Black saddle lichen	Many substrates in moist forest.	May-Nov	Yes
<i>Peltigera pacifica</i>	Fringed pelt lichen	On moss in moist forest habitats	May-Nov	Yes
<i>Pilophorus nigricaulis</i>	Matchstick lichen	Rock on cool, north-facing slopes.	May-Nov	No
<i>Pseudocyphellaria rainierensis</i>	specklebelly	boles of hardwoods and conifers in older forests..	May-Nov	No
<i>Ramalina pollinaria</i>	Chalky ramalina	Bark in moist, low-elevation habitats.	May-Nov	No

<i>Tholurna dissimilis</i>	Urn lichen	Branches of krummolz at moderate to high elev.	Jun-Oct	No
<i>Usnea longissima</i>	Methuselah's beard lichen	Branches of conifers and hardwoods in moist forest.	Apr-Nov	Yes
<b>Fungi</b>				
<i>Bridgeoporus nobilissimus</i>	noble polypore	Large true fir snags	May-Nov	No
<i>Cordyceps capitata</i>	earthtongue	Parasitic on truffles ( <i>Elaphomyces</i> spp.)	Sept-Oct	Yes
<i>Cortinarius barlowensis</i>	mushroom	Montane coniferous forest to 4000 ft.	Sept-Nov	Yes
<i>Cudonia monticola</i>	earthtongue	Spruce needles and coniferous debris.	Aug-Nov	No
<i>Gomphus kauffmanii</i>	mushroom	Terrestrial in deep humus under pine and true fir	Sep-Nov	No
<i>Gyromitra californica</i>	mushroom	On/adjacent to-rotted conifer stumps/ logs.	June	Yes
<i>Leucogaster citrinus</i>	truffle	With the roots of conifers to 6600 feet.	Aug-Nov	Yes
<i>Mycena monticola</i>	mushroom	Terrestrial in conifer forest above 3300 feet.	Aug-Nov	No
<i>Otidea smithii</i>	cup fungi	Under cottonwood, D.-fir and w. hemlock.	Aug-Dec	Yes
<i>Phaeocollybia attenuata</i>	mushroom	Terrestrial in conifer forest.	Oct-Nov	Yes
<i>Phaeocollybia californica</i>	mushroom	With silver fir, Doug.-fir and w. hemlock	May, Oct-Nov	Yes
<i>Phaeocollybia olivacea</i>	mushroom	Terrestrial in low-elevation conifer forest.	Oct-Nov	Yes
<i>Phaeocollybia oregonensis</i>	mushroom	Associated with roots of silver fir, Doug.-fir and w. hemlock.	Oct-Nov	Yes
<i>Phaeocollybia piceae</i>	mushroom	Terrestrial with true & Doug.-fir /w. hemlock.	Oct-Nov	Yes
<i>Phaeocollybia pseudofestiva</i>	mushroom	under mixed conifers and hardwoods.	Oct-Dec	Yes

PETS Species Documented or Suspected From Mt. Hood NF				
<b>Fungi</b>				
<i>Phaeocollybia scatesiae</i>	mushroom	With true fir and <i>Vaccinium</i> spp.	May, Oct-Nov	No
<i>Ramaria amyloidea</i>	coral fungi	Terrestrial under true fir, Doug.-fir and w. hemlock.	Sept.-Oct.	Yes
<i>Ramaria gelatiniaurantia</i>	coral fungi	Terrestrial under true fir, Doug.-fir and w. hemlock.	Oct.	Yes
<i>Sowerbyella rhenana</i>	cup fungi	Terrestrial under conifers.	Oct.-Dec.	Yes

**Field Surveys:** Field surveys were conducted within the project area between June 21 and 24, 2004 and September 9 and 10, 2004. With the exception of *Bridgeoporus nobilissimus*, surveys are not considered practical to detect the presence of PETS fungi species identified as having habitat within the proposed project area (FEIS 2004). It is assumed that these species are present in the project area where there is suitable habitat. Surveys to detect all other PETS species identified as having habitat in the project area are considered practical.

## FINDINGS

The forest in all units of this project is young and dominated almost exclusively by Douglas-fir (*Pseudotsuga menziessi*) with western hemlock (*Tsuga heterophylla*) being a major associate. The units have a variety of slopes and aspects with elevations generally between 2200 and 3200 feet. The trees in all units are closely spaced and form an almost complete canopy cover.

The most common plant association present is the Western Hemlock/Dwarf Oregon Grape/Swordfern. Here the herb layer is dominated by swordfern (*Polystichum munitum*) with bracken fern (*Pteridium aquillinum*), star-flower (*Trientalis latifolius*), trillium (*Trillium ovatum*), and vanilla leaf (*Achlys triphylla*) present in smaller amounts. A fairly dense shrub layer of vine maple (*Acer circinatum*) with minor amounts of drier site shrubs such as salal (*Gaultheria shalon*), baldhip rose (*Rosa pisocarpa*), and creeping snowberry (*Symphoricarpos mollis*) are common.

Smaller inclusions of Western Hemlock/Swordfern, Western Hemlock/Dwarf Oregon Grape and Western Hemlock/Dwarf Oregon Grape-Salal can also be found within the proposed project area. A description of these and similar plant associations can be found within the "Plant Association and Management Guide for the Western Hemlock Zone (Halverson *et al.* 1986).

PETS species detected by surveys: **NONE**

Species Assumed Present:	<i>Cordyceps capitata</i>	<i>Phaeocollybia olivacea</i>
	<i>Cortinarius barlowensis</i>	<i>Phaeocollybia oregonensis</i>
	<i>Gyromitra californica</i>	<i>Phaeocollybia piceae</i>
	<i>Leucogaster citrinus</i>	<i>Phaeocollybia pseudofestiva</i>
	<i>Otidea smithii</i>	<i>Ramaria amyloidea</i>
	<i>Phaeocollybia californica</i>	<i>Ramaria gelatiniaurantia</i>
	<i>Phaeocollybia attenuata</i>	<i>Sowerbyella rhenana</i>

## DETERMINATION OF EFFECT

### Proposed, Threatened and Endangered Species

*Howellia aquatilis* is generally confined to palustrine wetlands. No habitat of this type exists within the project area, thus the proposed action will have **NO EFFECT** on this threatened

species.

### **Sensitive Species**

Table 3 displays the impact of the proposed action on species that were targeted by the field survey. No PETS species were detected by the survey, however for the following fungi species, presence is assumed.

***Cordyceps capitata*** is a widespread but locally rare species documented from 38 sites in the western Cascade and Coast Ranges in Washington, Oregon and northern California. Two sites are known from Mt. Hood NF on Zigzag District. The species is parasitic on the fruiting body of *Elaphomyces* spp., a genus of underground-fruiting fungi in the truffle group. *Elaphomyces* are associated with the roots of conifers. The proposed action will not remove all host trees for *Elaphomyces*, and it is assumed that *C. capitata* will be able to persist. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. Tresender (2004) analyzed 31 studies that looked at the response of mycorrhizal fungi to nitrogen fertilization and found populations depressed by 15 percent at a 95 percent confidence interval. As *C. capitata* is dependent on the mycorrhizal *Elaphomyces* spp., it is assumed that nitrogen fertilization may impact individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing for this species.

***Cortinarius barlowensis*** is widely distributed, known from 16 sites in the western Cascades, Coast Range and Olympic Mountains of Washington and Oregon. There are three known sites from the Mt. Hood NF on the Zigzag District. Habitat is soil under conifers. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

***Gyromitra californica*** is distributed from British Columbia to northern California and east to Colorado, Montana and Nevada. It is known in Washington, Oregon and northern California from 35 sites, one of which is on the Mt. Hood NF, Hood River District. This species is found on well-rotted stumps and logs of conifers or in soil with rotted wood. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

***Leucogaster citrinus*** is endemic to the Pacific Northwest, known from western Washington, western Oregon and northern California and known from 45 sites. There are four sites from the Mt. Hood NF, Zigzag District. This truffle species is associated with the roots of conifers. The proposed action will not remove all host trees, so it is assumed that *L. citrinus* will be able to persist. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals as will the application of nitrogen fertilizer. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing for this species.

***Otidea smithii*** is known from 10 scattered sites in the western Washington, Western Oregon and northern California. On the Mt. Hood NF, there is one known location on Clackamas River District. This is found on soil under Douglas-fir, western hemlock and cottonwood. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend



toward federal listing.

***Phaeocollybia attenuata*** is endemic to the Pacific Northwest from western Washington and western Oregon to northern California where it is known from 131 sites. One site is known from the Mt. Hood NF on Zigzag District. This species is on soil under conifers. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

***Phaeocollybia californica*** is endemic to the Pacific Northwest, known from 34 sites in western Washington, western Oregon and northern California. No sites are known to occur on the Mt. Hood NF, however, there is a site on the adjacent Columbia River Gorge National Scenic Area. This species is terrestrial and associated with the roots of Douglas-fir, western hemlock and Pacific silver fir. The proposed action will not remove all host trees, so it is assumed that *P. californica* will be able to persist. Soil compaction, the creation of forage enhancement areas and nitrogen fertilization could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing for this species.

***Phaeocollybia olivacea*** is endemic to the Pacific Northwest, known from 92 sites in western Washington, western Oregon and northern California. There is one known site on the Mt. Hood NF on Zigzag District. This species is terrestrial under conifers. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

***Phaeocollybia oregonensis*** is endemic to the Pacific Northwest, known from 10 sites in the Oregon Coast Range and western Cascades. On Mt. Hood NF there are two sites from Zigzag District. This species is terrestrial and associated with the roots of Douglas-fir, western hemlock and Pacific silver fir. The proposed action will not remove all host trees, so it is assumed that *P. oregonensis* will be able to persist. Soil compaction, the creation of forage enhancement areas and nitrogen fertilization could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing for this species.

***Phaeocollybia piceae*** is endemic to the Pacific Northwest, known from 49 sites in western Washington, western Oregon and northern California. There is one known site on the Mt. Hood NF on Zigzag District. This species is terrestrial and associated with the roots of Douglas-fir, western hemlock and Pacific silver fir. The proposed action will not remove all host trees, so it is assumed that *P. piceae* will be able to persist. Soil compaction, the creation of forage enhancement areas and nitrogen fertilization could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing for this species.

***Phaeocollybia pseudofestiva*** is endemic to the Pacific Northwest, known from British Columbia south through western Washington, western Oregon to California. There are 36 known sites in Washington, Oregon and California, four of which are on the Mt. Hood NF, Zigzag District. The species grows on soil under conifers. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

*Ramaria amyloidea* is endemic to the Pacific Northwest from western Washington to northern California. It is currently known from 16 sites. Habitat for the species is soil in sites associated with true fir, Douglas-fir and western hemlock. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

*Ramaria gelatiniaaurantia* is endemic to the Pacific Northwest, known from 24 sites from western Washington to northern California. Two sites are located on the Mt. Hood NF, Clackamas River District. Habitat for the species is soil in sites associated with true fir, Douglas-fir and western hemlock. Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

*Sowerbyella rhenana* occurs in Europe, Japan and Northwest North America. In the Pacific Northwest, it is known from 55 sites in western Washington, western Oregon and northern California, including 2 sites from the Mt. Hood NF on Clackamas River and Zigzag Districts. Habitat for the species is soil under conifers. One collection was noted to occur under tanoak (*Lithocarpus densiflorus*). Soil compaction and the creation of forage enhancement areas could have a localized negative impact on individuals. The proposed action May Impact Individuals but is not likely to lead to a trend toward federal listing.

**Table 3.**

<b>Vascular Plants</b>			
<b>Species Name</b>	<b>Common Name</b>	<b>Species Likely Present in Project Area?</b>	<b>Impact of Project</b>
<i>Botrychium minganense</i>	mingan moonwort	No	No Impact
<i>Botrychium pinnatum</i>	pinnate moonwort	No	No Impact
<i>Cimicifuga elata</i>	tall bugbane	No	No Impact
<i>Corydalis aquae-gelidae</i>	cold water corydalis	No	No Impact
<i>Montia howellii</i>	Howell's montia	No	No Impact

<b>Lichens</b>			
<i>Chaenotheca subroscida</i>	pin lichen	No	No Impact
<i>Leptogium burnetiae</i> var. <i>hirsutum</i>	jellyskin lichen	No	No Impact
<i>Leptogium cyanescens</i>	blue jellyskin lichen	No	No Impact
<i>Lobaria linita</i>	lungwort	No	No Impact
<i>Pannaria rubiginosa</i>	brown-eyed shingle lichen	No	No Impact
<i>Peltigera neckeri</i>	black saddle lichen	No	No Impact
<i>Peltigera pacifica</i>	fringed pelt lichen	No	No Impact
<i>Usnea longissima</i>	Methuselah's beard lichen	No	No Impact
<b>Fungi</b>			
<i>Cordyceps capitata</i>	earthtongue	Yes	MII

<i>Cortinarius barlowensis</i>	mushroom	Yes	MII
<i>Gyromitra californica</i>	mushroom	Yes	MII
<i>Leucogaster citrinus</i>	truffle	Yes	MII
<i>Otidea smithii</i>	cup fungi	Yes	MII
<i>Phaeocollybia attenuata</i>	mushroom	Yes	MII
<i>Phaeocollybia californica</i>	mushroom	Yes	MII
<i>Phaeocollybia olivacea</i>	mushroom	Yes	MII
<i>Phaeocollybia piceae</i>	mushroom	Yes	MII
<i>Phaeocollybia oregonensis</i>	mushroom	Yes	MII
<i>Phaeocollybia pseudofestiva</i>	mushroom	Yes	MII
<i>Ramaria amyloidea</i>	coral fungi	Yes	MII
<i>Ramaria gelatiniaurantia</i>	coral fungi	Yes	MII
<i>Sowerbyella rhenana</i>	cup fungi	Yes	MII

MII = May Impact Individuals but not likely to lead to a trend toward federal listing.

**The Biological Evaluation is complete.**

/s/ Mark Boyll

Mark Boyll, Botanist

September 21, 2004

Date

**REFERENCES**

- Halverson, N.M., C. Topik and R. Van Vickle. 1986. Plant Association and Management Guide for the Western Hemlock Zone. Mt. Hood National Forest. USDA Forest Service, Pacific Northwest Region. R6-ECOL-232A-1986. Portland, OR.
- Tresender, Kathleen K. 2004. A Meta-Analysis of Mycorrhizal Responses to Nitrogen, Phosphorus, and Atmospheric CO<sub>2</sub> in Field Studies. *New Phytologist* 164(2), 347-355.
- USDA Forest Service and USDI Bureau of Land Management. 2004. Record of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl. Portland, OR.