

Oregon Status Factors

Elcode NFSM000127
Gname PHAEOCOLLYBIA PSEUDOFESTIVA
Gcomname

Number of Occurrences

C = 21- 80

Comments There are 21 known collections representing 19 occurrences of *Phaeocollybia pseudofestiva* in OR. Continued fungal surveys may uncover more sites. (Norvell 1998abc; ISMS 2002 data)

Number of Occurrences with Good Viability

D = Some (13-40) occurrences with good viability

Comments 21 occurrences are extant. 3 lie within permanently protected areas. 10 lie within late-successional and riparian forest reserves and so are protected at the present time.

Population Size

U = Unknown

Comments Records reflect only species occurrence, i.e. fruitbodies, not numbers of individuals. Genets of ectomycorrhizal fungi cannot be delimited without DNA sampling.

Range Extent

F = 20,000-200,000 km² (about 8,000-80,000 square miles)

Comments An endemic restricted to the northern spotted owl region in Pacific Northwest North America, in Oregon PHPS3 ranges from Oswald West State park south along the Pacific Coast and coast range to the Siskiyou NF near the California border and east to Mt Hood and south along the west slope of the Cascade range to the southern part of the Willamette National Forest. (Norvell 1998ac; ISMS Database 2002 and GIS map for PHPS3).

Area of Occupancy

U = Unknown

LU = Unknown

Comments Occupancy is highly spotty and cannot be extrapolated for this organism, which appears restricted to fairly complex environments. There are large areas of unsuitable habitat within the overall range. Area occupancy can only be roughly approximated from fungal fruitbodies as the vegetative organism is hidden from site within the substrate. PHPS3 is an ectomycorrhizal fungus with unknown biological and ecological requirements that determine how and when symbiotic associations are formed with partners. (Norvell 1990ab).

Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Long-term trend in population, range, area occupied, or number or condition of occurrences unknown

Comments Due to PHPS3's spotty distribution, it is difficult to project a long-term trend in population size, extent of occurrence, or area of occupancy. PHPS3 is ectomycorrhizal, so its trends are closely linked to the trees that are its symbiotic partners in LSOG forests where it forms mycorrhizal associations with conifers and/or fagaceous partners. Individuals are less dependent upon spore dispersal than upon mycelial interactions with other individuals and their mycorrhizal partners. Trends will also be determined by occurrence of hot fires, susceptibility to sudden oak death *Phytophthora* in southern Oregon, and human alteration of the habitats. (Norvell 2002 pers comm)

Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within $\pm 10\%$ fluctuation

Comments PHPS3 is an ectomycorrhizal fungus dependent upon the health of its symbiotic partner. Natural catastrophes or human activities that imperil the health of the tree partner will compromise both tree and fungus. Current occurrences are uncommon in Oregon, but 8-13 occur in permanent or temporary reserves. The species is believed to be relatively stable in Oregon over the short term (but see note above) (Norvell 1998a, 2002 pers comm; ISMS 2002 data).

Threats

G = Slightly threatened. Threats, while recognizable, are of low severity, or affecting only a small portion of the population, occurrences, or area. Ecological community occurrences may be altered in minor parts of range or degree of alteration falls within the natural variation of the type.

Scope	Low	Severity	Unknown	Immediacy	Low
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Comments Whatever threatens the extant forest will threaten the fungus. This species has almost exclusively been collected from late successional forests. Populations may be long-lived: it is possible that two collections made in California in 1935 and 1956 represent one population (Norvell 2002 pers comm). Like the forest, PHPS3 is threatened by hot fires, road construction or other development, and clearcutting (Norvell pers comm 2002). At least 13 occurrences are in currently protected areas in Oregon. (Norvell 1998a; ISMS 2002 data)

Number of Appropriately Protected and Managed Occurrences

B = Few (1-3) occurrences appropriately protected and managed

C = Several (4-12) occurrences appropriately protected and managed

D = Many (13-40) occurrences appropriately protected and managed

Comments ISMS (2002) and Norvell (1998ac) cite ~8-13 occurrences in protected areas: 3 in permanent protected preserves, 5 in late-successional reserves, and ~ 1-5 in riparian reserves. If governmental management policies dictate opening late-successional and/or riparian reserves to clearcutting, road construction, or other development, the number of protected and managed occurrences could decrease to 3 (Rank B). Additionally, many sites in temporary reserves may not be managed appropriately at the present time.

Intrinsic Vulnerability

U = Unknown

Comments Ectomycorrhizal fungal vulnerability is linked to that of the symbiotic partner (here trees). This fungus may be long-lived and is historically found in older stands. (Norvell pers comm 2002). It is vulnerable to anything that threatens the forest habitat, including hot fires, road construction and development, and clearcutting. PHPS3 has a highly sporadic and spotty distribution.

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

Comments PHPS3 is generally found in complex late-successional or old growth coniferous (mixed fagaceous-coniferous in southern Oregon and California) rainforests where it forms symbiotic partnerships with Pinaceae spp and possibly Quercus or Lithocarpus. Its precise biological and ecological requirements are unknown. It has been found only in the western northern spotted region in North America. It fruits generally late in the fall season. Like all Phaeocollybias, it is extremely patchy in distribution. (Norvell 1998ab).

Other Considerations

ORNHIC - List 3. Phaeocollybia pseudofestiva has no known synonyms. It is restricted to the northern spotted region of North America west of the Cascade crest, where it can be regarded as uncommon in Oregon. Southern populations occurring in mixed fagaceous-coniferous forests may be at risk to the sudden oak death Phytophthora.

Edition 11/21/2002 **Edauthor** Lorelei L Norvell

Grank S3? **Grank Date** 11/21/2002

Greasons

PHPS3 is uncommon in OR and only a few occurrences were uncovered during the recent fungal surveys. There are 19 confirmed extant occurrences, of which ~8-13 lie in currently protected forest reserves. It is endemic and restricted to the western northern spotted owl region in OR. Its extreme patchy distribution and unpredictable phenology preclude estimation of population size and area of occupancy. Stability of extant populations is unknown over the long term. The 6-11 unprotected occurrences may be threatened by road construction & development and clearcutting or heavy thinning. All occurrences are imperiled by hot fires.

BCD Sources

New Sources

Norvell. 1998a. The biology and taxonomy of Pacific Northwest species of Phaeocollybia Heim. 391 pp. ALSO Norvell. 1998b. . Observations on the development, morphology, and biology of Phaeocollybia. Mycological Research 102:615-630. ALSO Norvell. 1998c. ROD: Strategy 3 Fungal Species Evaluation (11 gilled Basidiomycete Strategy 3 species). Unpubl. report on file at the Regional Mycology Lab, Corvallis, Oregon. ALSO ISMS 2002 database and GIS map on PHPS3