

California Status Factors

Elcode NFSM000127
Gname PHAEOCOLLYBIA PSEUDOFESTIVA
Gcomname

Number of Occurrences

B = 6 - 20

Comments There are 17 known collections representing 10 occurrences of *Phaeocollybia pseudofestiva* in BC, WA, OR, and CA. Continued fungal surveys may uncover more sites. (Norvell 1998abc; ISMS 2002 data)

Number of Occurrences with Good Viability

C = Few (4-12) occurrences with good viability

Comments 8 occurrences are believed extant. 2 lie within permanently protected areas.

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

D = 1,000-5,000 km² (about 400-2,000 square miles)

Comments In California, *Phaeocollybia pseudofestiva* ranges from Crescent City south along the Pacific Coast to the Santa Cruz mountains. (Norvell 1998ac; ISMS Database 2002 and GIS map for *Phaeocollybia pseudofestiva*).

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 of occupancy can only be roughly approximated from fungal fruitbodies as the vegetative organism is hidden from site within the substrate. *Phaeocollybia pseudofestiva* 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 the spotty distribution of *Phaeocollybia pseudofestiva*, it is difficult to project a long-term trend in population size, extent of occurrence, or area of occupancy. *Phaeocollybia pseudofestiva* is ectomycorrhizal, so its trends are closely linked to the trees that are its symbiotic partners in

late-successional/old-growth 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 and human alteration of the habitats. Although its symbiotic association with *Quercus* or *Lithocarpus* is only suspected at this time (its more frequent occurrence in strictly coniferous forests suggests a preference for members of the Pinaceae, *Phaeocollybia pseudofestiva* may be at additional risk to the sudden oak disease *Phytophthora* (Norvell 2002 pers comm).

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

D = Declining. Decline of 10-30% in population, range, area occupied, 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 *Phaeocollybia pseudofestiva* 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 rare (10), and only 2 occur in currently protected reserves. The species may also be at risk to sudden oak disease *Phytophthora* (see above), Over the short term in California *Phaeocollybia pseudofestiva* can be considered more or less stable to declining (Norvell 1998a, 2002 pers comm; ISMS 2002 data).

Threats

D = Moderate, non-imminent threat. Threat is moderate to severe but not imminent for a significant portion of the population, occurrences, or area.

Scope	Moderate	Severity	Moderate	Immediacy	Low
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Comments Whatever threatens the extant forest will threaten this ectomycorrhizal fungus, restricted to late successional forests. Populations may be long-lived; it is possible that two collections made near Trinidad in 1935 and 1956 represent one population (Norvell 2002 pers comm). Natural catastrophes or human activities that imperil the health of the tree partner will compromise both tree and fungus. In California the species may also be at risk to sudden oak disease *Phytophthora*, although its symbiotic association with fagaceous species has not been demonstrated (Norvell pers comm 2002). At least 11 occurrence sites lie within permanently protected areas throughout the overall range. (Norvell 1998a; ISMS 2002 data)

Number of Appropriately Protected and Managed Occurrences

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

Comments ISMS (2002) and Norvell (1998ac) cite only 2 protected occurrences both in state or national parks.

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. *Phaeocollybia pseudofestiva* has a highly sporadic and spotty distribution.

Environmental Specificity

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

Comments *Phaeocollybia pseudofestiva* 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

Phaeocollybia pseudofestiva has no known synonyms.

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

Grank S2S3 **Grank Date** 11/21/2002

Greasons

In California, Phaeocollybia pseudofestiva occurs only along the coastal lowlands in the northern spotted owl region. Phaeocollybia pseudofestiva is rare in CA, with only 10 historical occurrences, of which 8 are considered extant. Only 2 occurrences are in protected forest reserves. Its patchy distribution and unpredictable phenology preclude estimation of population size and area of occupancy. One population may (based on historical data) have been sampled over a 21 year period. The stability of extant populations is unknown over the long term. The 6 unprotected occurrences may be threatened by road construction, development and clearcutting or heavy thinning. All occurrences are imperiled by hot fires and may be at risk to the sudden oak death Phytophthora.

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