

California Status Factors

Elcode NFSM000132
Gname PHOLIOTA ALBIVELATA
Gcomname

Number of Occurrences

A = 1 - 5

Comments Endemic to the northern spotted owl region of the US, there are only 4 occurrences represented by 12 collections of this species in California (Smith & Hesler 1968, Castellano et al. 1999, ISMS-ONH 2002). Castellano et al. (1999) note that many of the historical collections "have scant information that does not allow specific land allocation to be determined". Continued fungal surveys using additional taxonomic information provided in Norvell & Redhead 2000 may uncover additional sites (Norvell 2002 pers comm).

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments There is no information available on the number of extant occurrences of this species within California, although possibly the site occurring in a protected areas is extant. All other collections were made prior to 1968 on lands that may not still retain the original habitats. Data on recent occurrences are needed before a reliable number of extant occurrences can be estimated for the state.

Population Size

U = Unknown

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

Range Extent

E = 5,000-20,000 km² (about 2,000-8,000 square miles)

Comments An endemic restricted to the northern spotted owl region in western North America, in California this species appears restricted to Humboldt and Trinity counties. (Castellano et al. 1999, ISMS Database 2002 and GIS map for *Pholiota albivelata*)

Area of Occupancy

U = Unknown

LU = Unknown

Comments Area of occupancy can only be roughly approximated from fungal fruitbodies as the vegetative organism is hidden from site within the substrate. Saprophytic fungi have spotty distributions that are tied to the presence of appropriate substrates, which are unknown in this instance.

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 This species is saprophytic on fallen branches and other coniferous debris, usually in closed canopy mid-successional (Norvell & Exeter 2003) or late-successional/old-growth conifer rainforests (Norvell & Redhead 2000, Norvell 2002 pers comm) in areas where appropriate weather and microclimate regimes are present. Removal or destruction of coniferous debris and soil may imperil existing populations. This species is known only from Humboldt and Trinity Counties and appears not to have been collected from California within the past 40 years. Lack of recent data prevents determining either the long or short-term trend for the species in California. (Norvell 2002 pers comm).

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

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

Comments Lack of recent data prevents determining either the long or short-term trend for the species in California. (Norvell 2002 pers comm)

Threats

C = Substantial, non-imminent threat. Threat is moderate to severe but not imminent (> 10 years) for most of the population, occurrences, or area.

Scope	High	Severity	Moderate	Immediacy	Unknown
-------	------	----------	----------	-----------	---------

Comments It occurs within complex mid-successional to late-successional/old-growth coniferous forests and has recently been confirmed from a 55-year old aerially seeded and interplanted Douglas-fir plantation. Whatever threatens the general habitat, microclimates, and/or substrate can imperil this species. All populations are at risk to incidental catastrophic events, such as hot fires, and unmonitored human interference. Unprotected occurrences are at risk from logging activities such as brush/debris clearing after thinning operations. Populations are thought to be at risk to clean- and possibly clear-cutting (Norvell pers comm 2002). Data on recent occurrences are needed before the threats to California populations can be reliably estimated. (Norvell pers comm 2002).

Number of Appropriately Protected and Managed Occurrences

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

Comments ISMS-ONH (2002) lists only 1 protected site in a congressionally withdrawn reserve. It is not known whether that site still maintains an extant occurrence. It is unlikely that the site is managed specifically for this species at the present time.

Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

Comments Presumably vulnerable to removal coniferous litter and underlying soil and/or cutting and removal of all standing timber around the sites. The species has been confirmed at one site during two years, the second after an adjacent stand had been clear-cut. It would otherwise be considered vulnerable to alteration of microhabitats and microclimate regimes (stream diversion, road construction, development) and incidental catastrophic events (hot fires).

Environmental Specificity

C = Moderate. Generalist or community with some key requirements scarce.

Comments It occurs in complex mid-successional and late-successional/old-growth coniferous rainforests on downed woody debris within the *Tsuga heterophylla*/*Pseudotsuga menziesii* zone. Its precise biological and ecological requirements are unknown. It fruits in late to mid-autumn, usually with or slightly later than the common *Stropharia ambigua*. Its occurrence is unpredictable and patchy. (Norvell 2002 pers comm).

Other Considerations

This species is listed in the Record of Decision and the Northwest Forest Plan as *Pholiota albivelata* Murrill, *Mycologia* 4: 260. Norvell & Redhead (2000), who demonstrated that it represents a *Stropharia* species in all except spore color, transferred the species to *Stropharia albivelata*. Kirk (2002 pers comm) has entered the species in the Index of Fungi as *Stropharia albivelata* (Murr.) Norvell & Redhead *Mycotaxon* 76: 316. Alteration of the connecting "i" to "o" is in accordance with the St Louis Code of International Botanical Nomenclature.

Edition 11/26/2002 **Edauthor** Lorelei L Norvell

Grank S2? **Grank Date** 11/26/2002

Greasons

The species is saprophytic on coniferous debris in coniferous rainforests in Humboldt and Trinity counties in California. It is known in the state only from 4 historical sites sampled prior to 1968, 1 of which occurs within a currently protected reserve. The species unknown biology and patchy occurrence preclude estimation of population size, area of occupancy, and long-term trends. All populations are at risk to incidental catastrophic events such as wildfire and anything that removes or destroys the substrate and habitat. Data on recent occurrences are needed to establish the species as extant in the state, but it is suspected that the species may be at the southern limit of its range in extreme northwestern California. Continuation of fungal surveys by monitors who are looking for a *Stropharia* instead of a *Pholiota* may reveal additional known occurrences.

BCD Sources

New Sources

Norvell & Redhead. 2000. *Stropharia albivelata* and its basionym *Pholiota albivelata*. *Mycotaxon* 76: 315-320. ALSO Smith & Hesler. 1968. The North American species of *Pholiota*. NY: Hafner. ALSO Stuntz & Isaacs. 1962. Pacific Northwest fungi I. *Mycologia* 54: 272-298. ALSO Castellano et al. 1999. Handbook to Strategy 1 fungal species in the Northwest Forest Plan. USDA-FS PNWRS PNW-GTR-476. ALSO Norvell & Exeter. (2003 in edit). Ectomycorrhizal epigeous basidiomycete diversity in Oregon's coast montane *Pseudotsuga menziesii* forests. [New York Botanical Memoirs]. ALSO Kirk. 2002. (pers comm re nomenclatural rules and listing "Stropharia albivelata" as published in Norvell & Redhead 2002 as "Stropharia albivelata" in the Index of Fungi.) ALSO ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for PHAL17.