

Heritage Rank Status Factors

Elcode NFSM000003
Gname ALBATRELLUS CAERULEOPORUS

Gcomname

Number of Occurrences

C = 21- 80

Comments Presumably endemic to North America where it has been collected from 8 states and 3 provinces. Found in northeastern North America from Vermont to Michigan and in northwestern North America from BC, to CA, where it is considered rare. A total of approximately 33 collections cited in BPI, NY State Museum databases; Other collections held in WTU, OSC, and MICH also confirmed (Norvell 1995, Ginns 1994). Japanese reports represent A fletti. 9 occurrences in northern spotted owl region [Norvell 1995, Castellano 1999, ISMS database 2002] include 2 (CA), 3 (OR), and 4 (WA).

Number of Occurrences with Good Viability

B = Very few (1-3) occurrences with good viability

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

Comments Viability of eastern North American occurrences unknown, although one site has been collected from for approximately 27 years. In northern spotted owl region, 4 of 9 sites appear to be protected: 1 in Olympic National Park (WA), 1 in Honeymann State Park (OR); 2 in Redwood Ntl Pk (CA). Other sites in western and eastern North America may be threatened by development, fire or logging. As the species appears genuinely rare throughout its range, relatively few occurrences can be considered secure.

Population Size

U = Unknown

Comments Genets of ectomycorrhizal fungi cannot be delimited without DNA sampling.

Range Extent

G = 200,000-2,500,000 km² (about 80,000-1,000,000 square miles)

H = > 2,500,000 km² (greater than 1,000,000 square miles)

Comments North American endemic with disjunct populations: northeast North America (ON, NB, VT, NY, NJ, PA, MI) and western North America all west of the Cascade crest in BC, WA, OR, CA. Associated with Tsuga or (1 collection) Pinus.

Area of Occupancy

U = Unknown

LU = Unknown

Comments Cannot estimate area occupancy for mycorrhizal fungi as vegetative organism is underground and has unknown ecological requirements that determine how and when ectomycorrhizal associations are formed with host trees. Appears restricted to Tsuga.

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

D = Moderate Decline (decline of 25-50%)

E = Relatively Stable ($\pm 25\%$ change)

Comments Status of eastern historical sites and occurrences unknown. At least 5 populations are relatively stable in protected areas in western North America. Ectomycorrhizal fungal stability tied to the stability of the host trees, primarily *Tsuga* spp. Long-term threats include heavy logging (clear-cutting), fires, or development.

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 Status of eastern historical sites and occurrences unknown. In western North American, logging, fire hazards, and development may imperil unprotected sites; occurrences within protected forests (such as Olympic National Park and Redwood National Park) are assumed to be stable.

Threats

E = Localized substantial threat. Threat is moderate to severe for a small but significant proportion of the population, occurrences, or area. Ecological community occurrences are directly impacted over a small area, or in a small portion of their range, but threats require a long-term recovery.

Scope	Low	Severity	Moderate	Immediacy	Low
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Comments Status of eastern occurrences unknown. In western North America, possibly threatened by development, hot fires, and forest clearcutting or heavy thinning (probably not by low thinning).

Number of Appropriately Protected and Managed Occurrences

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

Comments ISMS [2002] database indicates one unprotected site, 5 sites in permanently protected areas, 2 sites in a late-successional reserve, and one possible site in a Riparian Reserve. The LSR and "RIP" sites may be imperiled if governmental management policies change. The number above reflects only the status of the western occurrences.

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 Life span of fungus is not known, although Ginns (1994) suggests that the organism or its community can be stable over at least 27 years. Generally long-lived but presumed slower-growing,

Environmental Specificity

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

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

Comments Dependent upon healthy mycorrhizal host trees (primarily *Tsuga*). Other environmental

requirements unknown.

Other Considerations

NRANK - N3? Although the range of collections is broad across North America, the fungus is known from only a few sites in the western temperate rainforest. Fruitbodies are striking enough in coloration and long-lasting enough that more collections should have been made in the west, particularly after implementation of Survey & Manage procedures. Can be assumed to be rare. *Albatrellus caeruleoporus* (Peck) Pouzar; synonym = *Polyporus caeruleoporus* Peck.

Edition 11/18/2002 **Edauthor** Lorelei L Norvell

Grank G3? **Grank Date** 11/18/2002

Reasons

Total estimated number of occurrences is approximately 40-60. A North American endemic that is uncommon in eastern North America and that is rare in western North America, where it has only 10 known occurrences. There are 5-8 currently protected occurrences in the northern spotted owl region of the United States. Fungal surveys have not been conducted in all forests so additional occurrences are anticipated. The species is mycorrhizal and dependent upon health and preservation of associated host trees (*Tsuga* and possibly other Pinaceae) which are valuable timber targets.

BCD Sources

New Sources

Castellano et al. 1999. Handbook to Strategy 1 Fungal Species in the Northwest Forest Plan. USDA-FS PNWRS PNW-GTR-476. ALSO Norvell. 1995. ROD: Strategy 1 Fungal Species Evaluation (30 gilled and non-gilled Basidiomycete Strategy 1 species). Unpubl. report on file in the Regional Mycology Lab, Corvallis, Oregon. ALSO Ginns, J. 1997. The taxonomy and distribution of rare or uncommon species of *Albatrellus* in western North America. *Canad. J. Bot.* 75: 261-273. ALSO Ginns, Redhead, Goward. 1998. Mushrooms, Lichens and other Fungi in Smith & Scudder, eds. Assessment of species diversity in the Montane Cordillera Ecozone. Burlington: Ecological Monitoring and Assessment Network, 1998. ALSO OSU collections data: <http://ocid.nacse.org/research/herbarium/myco/index.html> ALSO Ginns. 1994. *Albatrellus* (Fungi: Basidiomycota) in Michigan. *Michigan Botanist* 33: 74-90.