

Heritage Rank Status Factors

Elcode NFSM000034
Gname COLLYBIA BAKERENSIS

Gcomname

Number of Occurrences

D = 81 - 300
E = >300

Comments The number of occurrences outside the northern spotted owl region is not known. In the region in CA, OR, and WA, there are at least 155 documented occurrences represented by at least 168 collections of COBA11. Continued fungal surveys may uncover more sites. (Desjardin & Halling 1987; Williams 1975; ISMS-ONH 2002)

Number of Occurrences with Good Viability

F = Very many (>125) occurrences with good viability

Comments There is no information available on the number of extant occurrences outside the northern spotted owl region, although within its range *Collybia bakerensis* appears to be resilient and common. At least 120 occurrences within the region in CA and WA have been sampled within the past four years and so can be inferred to be extant.(ISMS-ONH 2002)

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

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

Comments Endemic to western North America, *Collybia bakerensis* ranges from the interior wet belt of British Columbia (columbian Mts) to the Rockies in colorado and along the Cascades to the Sierra Nevada in California (Redhead 1989; Desjardin & Halling 1987).

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 and/or bryophilous fungi have spotty distributions that are tied to the presence of appropriate substrates. The area of occupancy in this instance cannot be predicted. (Norvell 2002 pers comm.)

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 Collybia bakerensis is saprophytic on standing or fallen dead conifers (Abies near melting snow in California, Tsuga more northerly; Redhead 1989). Substrate removal or destruction imperils the species. In some northern spotted owl areas, Collybia bakerensis can be relatively common. Longevity of individuals and populations is unknown. Lack of adequate information on its biological requirements and/or the long-term availability of suitable substrates at known sites preclude estimating a long-term trend for Collybia bakerensis (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 Collybia bakerensis, a saprophyte on standing or fallen conifers (Abies in CA, Tsuga in CO or more northerly; Redhead 1989), may be relatively common in parts of its overall range. Incidental catastrophic events and/or removal of the standing or fallen conifers can imperil the fungus. In the northern spotted owl region, up to 128 occurrences lie in currently protected reserves. The species is inferred to be relatively stable over the short term (Norvell 2002 pers comm.).

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.

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|-------|-----|----------|-----|-----------|---------|
| Scope | Low | Severity | Low | Immediacy | Unknown |
|-------|-----|----------|-----|-----------|---------|

Comments Collybia bakerensis is found on standing or fallen dead Abies, Tsuga & Picea trees and would be at risk to whatever threatens the general habitat, microclimates, and/or substrate. 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 removal of coarse woody debris and/or standing host trees with current Collybia bakerensis populations (Desjardin & Halling 1987; Redhead 1989; Norvell pers comm 2002).

Number of Appropriately Protected and Managed Occurrences

U = Unknown whether any occurrences are appropriately protected and managed

Comments The number of protected occurrences outside the northern spotted owl region is not known. Within that region in California, Washington, and Oregon, ISMS-ONH (2002) cites 77-128 occurrences in protected areas: 6 in permanent protected reserves, 71 in late-successional reserves, and 71 either in riparian reserves or in the unprotected matrix. The opening of late-successional and/or riparian reserves to logging, road construction, or development, could decrease the protected & managed occurrences to 6. Some to many sites in temporary reserves may not be managed appropriately 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 Collybia bakerensis is vulnerable to removal or destruction of its substrate, presumed Abies in California, and Tsuga (occasionally Picea) in more northern parts of its range. It is also vulnerable to alteration of microhabitats and microclimate regimes (stream diversion, road construction, development) as well as incidental catastrophic occurrences such as wildfire.

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.
C = Moderate. Generalist or community with some key requirements scarce.

Comments *Collybia bakerensis* is generally found scattered to gregarious on fallen conifer logs; in California, typically on the bark of *Abies* soon after snow melt in the spring above 2500m in the Sierra Nevada and Cascade mountain ranges. In Colorado, Idaho, and Washington, typically on *Tsuga* (rarely *Picea*) July-October (Desjardin & Halling 1987). Its precise biological and ecological requirements are unknown.

Other Considerations

No synonyms are known for *Collybia bakerensis* A. H. Smith 1944. The fruitbody is small and inconspicuous and presumed to be more abundant than historical collections would indicate. Prior to the recent Survey & Manage surveys in Oregon, only one collection was known from that state; during the past four years, 71 occurrences have been confirmed.

Edition 11/24/2002 **Edauthor** Lorelei L Norvell

Grank G4 **Grank Date** 11/24/2002

Reasons

Collybia bakerensis is endemic to western North America. The number of sites outside the northern spotted owl region is unknown, but within the region *Collybia bakerensis* is now regarded as probably relatively common, with at least 155 occurrences confirmed, of which 77-128 lie in currently protected forest reserves. The fruitbody is small and inconspicuous and presumed to be more abundant than historical collections would indicate. *Collybia bakerensis* is a saprophyte on standing or fallen conifer trees. Its unknown biology precludes 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 standing or fallen host conifers.

BCD Sources

New Sources

Desjardin & Halling. 1987. California *Collybias* I. *Collybia bakerensis*: a common snowbank agaric. *Mycotaxon* 29: 321-337. ALSO Redhead. 1989. A biogeographical overview of the Canadian mushroom flora. *Can. J. Bot.* 67: 3003-3062. ALSO Williams. 1975. The collybioid fungi of western Washington. U of Washington PhD dissertation. ALSO ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for COBA11.