

Washington Status Factors

Elcode NFSM000013
Gname BAEOSPORA MYRIADOPHYLLA
Gcomname

Number of Occurrences

B = 6 - 20

Comments 17 occurrences represented by 18 collections of *Baeospora myriadophylla* in the northern spotted owl region of Washington were collected between 1939-1994. Continued fungal surveys may uncover more sites. (Desjardin 1987, Lennox 1979, Norvell 1998, ISMS-ONH 2002)

Number of Occurrences with Good Viability

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

Comments Within the northern spotted owl region in Washington, no occurrences are known to be extant. The 5 most recent collections (1991-1994) were made from decomposing logs in extremely moist habitats; these logs may have decomposed to the point that they no longer support the fungus.

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

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

Comments In the northern spotted owl region in Washington, *Baeospora myriadophylla* has been collected from the Olympic Peninsula and from the western Cascades from Verlot Campground in the Mt Baker-Snoqualmie National Forest south to Mt Rainier National Park [between 46.76 - 48.26 degrees of latitude & 121.44 -124.3 degrees of longitude] (Norvell 1998; ISMS Database 2002 and GIS map for *Baeospora myriadophylla*).

Area of Occupancy

A = <0.4 km² (less than about 100 acres)

LA = <4 km (less than about 2.5 miles)

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 can be assumed to be very small, generally the size of a collection. Within WA, for instance, the area of occupancy might be estimated at approximately 2 m² per collection, or 36 m² for the 18 known collections. (Norvell pers comm 2002) The overall area of occupancy worldwide is not known.

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 a saprophyte dependent upon appropriate weather and microclimate regimes and the presence of well-rotted *Abies* logs for its existence. Removal or destruction of such logs will remove the species. It has a wide but unpredictable and spotty distribution, with most occurrences found in Late-successional/Old-growth habitats where *Abies* is present. In Washington, *Baeospora myriadophylla* is rare. Longevity of individuals and populations is unknown. The lack of adequate information on its biological requirements precludes estimating a long-term trend for *Baeospora myriadophylla* (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 *Baeospora myriadophylla* is a saprophyte dependent upon the presence of large decomposing *Abies* logs. It appears restricted to Late-successional/Old-growth coniferous forests where *Abies* is present. Incidental catastrophic events and/or removal of the substrate or *Abies* trees can extirpate fungus. Extant occurrences of *Baeospora myriadophylla* in Washington are unknown but inferred to be infrequent to rare. At least 8 sites occur within habitats that preserve both logs and *Abies* trees. If extant, these populations are presumed to be stable or declining over the short-term.

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 *Baeospora myriadophylla* is found in Late-successional/Old-growth coniferous forests in decomposing to well-rotted large *Abies* logs. Whatever threatens the general habitat, microclimates, and/or substrate can imperil *Baeospora myriadophylla*. All populations are at risk to incidental catastrophic events, such as hot fires, and removal of either the log or surrounding *Abies* trees from the occurrence sites. Unprotected occurrences are at risk from logging activities such as brush clearing or removal of *Abies* trees and current populations (Norvell pers comm 2002).

Number of Appropriately Protected and Managed Occurrences

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

Comments Within the northern spotted owl region in WA, ISMS (2002) cites 8-9 occurrences in protected areas: 5 in permanent protected preserves, 3 in late-successional reserves, and 1 either in a riparian reserve or the unprotected matrix. The opening of late-successional and riparian reserves to logging, road construction, or development, could decrease the protected & managed occurrences to 5. It should be noted that some to many sites in temporary reserves may not be managed appropriately at the present time. NOTE: It is quite likely that many if not all of the sites are no longer extant. See species specificity and vulnerability for additional notes.

Intrinsic Vulnerability

A = Highly Vulnerable. Species is slow to mature, reproduces infrequently, and/or has low fecundity such that populations are very slow (> 20 years or 5 generations) to recover from decreases in abundance; or species has low dispersal capability such that extirpated populations are unlikely to become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are highly susceptible to changes in composition and structure that rarely if ever are reversed through natural processes even over substantial time

periods (> 100 years).

Comments Baeospora myriadophylla is particularly vulnerable to removal or complete decomposition of its host fir log or disappearance of live Abies to serve as future substrates for new individuals. It is also vulnerable to alteration of microhabitats and microclimate regimes (stream diversion, road construction, development).

Environmental Specificity

A = Very Narrow. Specialist or community with key requirements scarce.

Comments Baeospora myriadophylla is generally found in complex late-successional or old coniferous forests on decomposing to well-rotted Abies logs. Its precise biological and ecological requirements are unknown. It fruits during the moist fall and spring seasons. While it fruits whenever moisture is present, its phenology is unpredictable and occurrence is erratic. (Desjardin 1987, Norvell 1998).

Other Considerations

Baeospora myriadophylla (Peck) Singer in Rev. Myc. 3:193.1938 had several earlier synonyms, the most recent of which was Collybia myriadophylla, a name that is universally no longer used. BAMY3 has a worldwide distribution but is everywhere regarded as infrequent and/or rare.

Edition 2/24/2002 **Edauthor** Lorelei L Norvell

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Reasons

Baeospora myriadophylla is a saprophytic fungus dependent upon the presence of large decomposing Abies logs. Baeospora myriadophylla is known from WA within the northern spotted owl region from only 18 sites in Washington, of which 9 lie in protected forest reserves. These populations have not been demonstrated to be extant. The species is considered rare in the state and individual areas of occupancy are presumed very small. Its unknown biology and rarity preclude estimating population size and long-term trends. All populations are at risk to incidental catastrophic events such as wildfire and anything that removes or destroys the host Abies log and/or standing older Abies.

BCD Sources

New Sources

Desjardin. 1987. Agaricales of California. 7. Tricholomataceae I. Mad River Press. ALSO Lennox. 1979. Collybioid genera of the Pacific Northwest. Mycotaxon 9: 117-231. ALSO Norvell. 1998. 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-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for BAMY3;