

## Heritage Rank Status Factors

**Elcode** NFSM000013  
**Gname** BAEOSPORA MYRIADOPHYLLA

**Gcomname**

### Number of Occurrences

U = Unknown

**Comments** The number of sites for Europe and North America outside the northern spotted owl region is unknown. Everywhere the species is regarded as infrequent to rare. There are 17 occurrences represented by 18 collections of *Baeospora myriadophylla* in the northern spotted owl region of Washington. Continued fungal surveys may uncover more sites. (Desjardin 1987, Lennox 1979, Norvell 1998, ISMS-ONH 2002)

### Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

**Comments** The number of extant occurrences is unknown for Europe and North America outside of the northern spotted owl region. 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

H = > 2,500,000 km<sup>2</sup> (greater than 1,000,000 square miles)

**Comments** Known from Europe from France to Russia and north in Scandinavia, and from North America, where it has been documented from 10 states (MA, NY, NC, TN, OH, WI, MI, CO, WA, CA) and 6 provinces (NB, NS, QC, ON, MA, SK). In the northern spotted owl region in western North America, *Baeospora myriadophylla* has been only documented from Washington (Norvell 1998; ISMS Database 2002 and GIS map for BAMY3).

### Area of Occupancy

U = Unknown

LU = Unknown

**Comments** Area 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 m<sup>2</sup> per collection, or 36m<sup>2</sup> 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** BAMY3 is a saprophyte dependent upon appropriate weather and microclimate regimes and the presence of large decomposing 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 LSOG habitats where Abies is present. In the northern spotted region of North America, BAMY3 occurrences are rare. Longevity of individuals and populations is unknown. The lack of adequate information on its biological requirements and the availability of sufficient Abies at the known sites precludes estimating a long-term trend for BAMY3. (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** BAMY is saprophyte dependent upon the presence of large decomposing Abies logs. It appears restricted to LSOG coniferous forests where Abies is present. Incidental catastrophic events and/or removal of the substrate or Abies trees can extirpate fungus. Current occurrences of BAMY3 are unknown but inferred to be infrequent to rare. Short-term trends cannot be predicted worldwide.

## Threats

U = Unknown. The available information is not sufficient to assign degree of threat as above. (Severity, scope, and immediacy are all unknown, or mostly [two of three] unknown or not assessed [null].)

Scope	Unknown	Severity	Moderate	Immediacy	Unknown
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**Comments** BAMY3 is found in LSOG coniferous forests in well-decomposed Abies logs. Whatever threatens the general habitat, microclimates, and/or substrate can imperil BAMY3. 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

U = Unknown whether any occurrences are appropriately protected and managed

**Comments** The number of protected and managed occurrences worldwide is unknown. 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** BAMY3 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** BAMY3 is generally found in complex late-successional or old coniferous forests on well decomposed 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

NRANK - N2N4. *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

**Grank** G2G4      **Grank Date** 2/24/2002

## Reasons

BAMY is a saprophytic fungus dependent upon the presence of large decomposing Abies logs. BAMY is widely but sporadically distributed in Europe and North America and is known from WA within the northern spotted owl region and in California outside the region in high elevations in Sierra County. The number of sites outside that region are unknown, but within the region BAMY3 is known 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 regarded as rare throughout its range and individual areas of occupancy are presumed very small. Its unknown biology, wide distribution, 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.

Lennox. 1979. Collybioid genera of the Pacific Northwest. Mycotaxon 9: 117-231.

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.

ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for BAMY3;