Washington Status Factors

Elcode NFSM000064

Gname GALERINA ATKINSONIANA

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Number of Occurrences

U = Unknown

Comments In the northern spotted owl region of WA, only 4-12 documented occurrences of Galerina atkinsoniana have been confirmed (Roger 1998. pers comm; ISMS-ONH 2002 database). As this fungus has a boreal distribution, and as Oregon surveys have verified at least 40 occurrences for that site (still believed to under-represent by a large margin the number of collections suspected to exist in that state) these numbers must be regarded with suspicion. Continued fungal surveys may uncover more sites; the mushroom is very small, but has been collected numerous times in most Pacific Northwest mycoecological transect research studies. (Norvell & Exeter 2003, 2002 pers comm)

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments As the only known data are based on collections already reported in the literature, and as it is believed that Galerina atkinsoniana is probably common in Washington coniferous forests and protected riparian areas, there is no way to estimate the number of known viable occurrences.

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 Data on known occurrences are currently unavailable to this author (Norvell pers comm 2002). The available range data depicted by the ISMS (2002) GIS 8-5-2002 map for GAAT2 restricts distribution to Mt-Baker-Snoqualmie National Forest (the site of one intensive survey at Barlow Pass) and Mt. Rainier National Park (where Alexander Smith made most of his collections in the 1940's and early 1950's). The range probably extends throughout the state whereever there are healthy coniferous forests.

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 can be assumed to be very small, generally the size of a collection; however, the species is so common in well canopyied mossy coniferous forests that no estimates can be made of total occupancy.

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

E = Relatively Stable (±25% change)

Comments Galerina atkinsoniana is common enough throughout its boreal range that the species is regarded as stable over both the short and the long terms.

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 ±10% fluctuation

Comments Galerina atkinsoniana is common enough throughout its boreal range that the species is regarded as stable over both the short and the long terms.

Threats

H = Unthreatened. Threats if any, when considered in comparison with natural fluctuation and change, are minimal or very localized, not leading to significant loss or degradation of populations, occurrences, or area even over a few decades' time. (Severity, scope, and/or immediacy of threat considered Insignificant.)

Scope Insignificant Severity Low Immediacy Unknown

Comments Galerina atkinsoniana is found in boreal forests with full canopy and sufficient moss and needle litter. It has been reported from riparian areas or highly moist late-successional/old-growth forests with little to no distrubance (Roger 1998), but in Oregon it has also been collected from protected sites in recently thinned and clearcut stands (Norvell & Exeter 2003). It would appear that the primary threat to Galerina atkinsoniana is exposure to the full sun and loss of substrate. All populations are at risk to incidental catastrophic events, such as hot fires, and logging activities that destroy canopy coverage and expose previously moist areas to sun and wind. (Roger 1998. pers comm.; Norvell 2002 pers comm).

Number of Appropriately Protected and Managed Occurrences

U = Unknown whether any occurrences are appropriately protected and managed

Comments Within the northern spotted owl region in WA, ISMS (2002) cites only 2 protected occurrences. Given the large number of occurrences believed to occur for which there are no data, this author (Norvell 2002 pers comm) believes that there is no reliable information on the actual number of protected occurrences in Washington. Given the large number of congressional withdrawn reserves within the state, however, a large number of protected occurrences is to be anticipated.

Intrinsic Vulnerability

C = Not Intrinsically Vulnerable. Species matures quickly, reproduces frequently, and/or has high fecundity such that populations recover quickly (< 5 years or 2 generations) from decreases in abundance; or species has high dispersal capability such that extirpated populations soon become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are resilient or resistant to irreversible changes in composition and structure and quickly recover (within 10 years).

Comments Galerina atkinsoniana appears fairly resilient to many threats, at least in the central part of its range in the boreal forests where it is common. In the more southern latitudes toward the limits of its range, the species may be at risk to substrate removal (moss or leaf/needle litter) and lack of forest canopy that would alter its usual microhabitats and microclimate regimes.

Environmental Specificity

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

Comments Galerina atkinsoniana is generally found in boreal forests with full canopy and sufficient moss and needle litter. In Pacific Northwest North America it fruits during the summer and early autumn and can be quite common during warm, relatively dry seasons (Redhead. 1979Roger 1998. pers comm.Smith & Singer, 1964). Its precise biological and ecological requirements are unknown. (Norvell 2002 pers comm.)

Other Considerations

Galerina atkinsoniana has no known synonyms. It is a small, inconspicuous mushroom that is not readily identified in the field. Herbarium data for Galerina atkinsoniana are too few to reflect the actual number of occurrences believed to exist throughout its its range and it is inferred to be undercollected. Within the northern spotted owl region, ISMS-ONH 2002 data cannot be used to predict occurrences, range, or other basic trends for Galerina atkinsoniana.

Edition 11/25/2002 **Edauthor** Lorelei L Norvell

Grank S5 **Grank Date** 11/25/2002

Greasons

Known from Mt-Baker-Snoqualmie National Forest and Mt Rainier National Park. The range probably extends throughout the state whereever there are healthy coniferous forests. In the literature and in the ranking author's experience, Galerina atkinsoniana appears universally common within its range and habitat. Galerina atkinsoniana is generally found in boreal forests with full canopy and sufficient moss and needle litter. The number of occurrences is believed to be too numerous to track without a concerted effort, and there are a large number of protected appropriate forested and riparian reserves within the northern spotted owl region. While often abundant in collections, Galerina atkinsoniana does have a locally patchy abundance and is often collected near to or occasionally intermixed with the more common Galerina vittiformis.

BCD Sources

New Sources

Roger. 1998. Galerina atkinsoniana. From unpubl. report for Regional Mycology Lab in Corvallis, Oregon. ALSO Smith & Singer, 1964. A monograph of the genus Galerina Earle. New York: Hafner. ALSO Redhead. 1979. A study of the sphagnicolous fleshy basidiomycetes in the eastern sections of the Canadian boreal forest. U of Toronto PhD dissertation. ALSO Norvell & Exeter. (2003 in edit). Ectomycorrhizal epigeous basidiomycete diversity in Oregon's coast montane Pseudotsuga menziesii forests. [New York Botanical Memoirs]. ALSO Breitenbach & Kranzlin. 2000. Fungi of Switzerland, Volume 5: Agarics, 3rd part: Cortinariaceae. Lucerne: Edition Mykologia. ALSO Watling, Gregory, Orton. 1993. British fungus flora Agarics & Boleti 7. Edingurgh: Royal Botanic Garden. ALSO Wells & Kempton. 1969. Studies on the fleshy fungi of Alaska III. The genus Galerina. Lloydia 32: 369-387. ALSO ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for GAAT2