

Heritage Rank Status Factors

Elcode NFSM000064
Gname GALERINA ATKINSONIANA

Gcomname

Number of Occurrences

E = >300

Comments The number of occurrences worldwide of *Galerina atkinsoniana*, which is relatively common within its habitat, is not known. In the northern spotted owl region of the US, at least 50 occurrences represented by >92 collections of *Galerina atkinsoniana* have been confirmed from California, Oregon, and Washington (Roger 1998. pers comm; Norvell & Exeter. (2003; Norvell 2002 pers comm; ISMS-ONH 2002 database). 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

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

Comments There is no information available on the number of extant occurrences worldwide. Within the northern spotted owl region in the US, at least 26 are confirmed as probably extant. However, this species is believed common enough and so rarely collected within the northern parts of its range in the northern spotted owl region that those numbers do not appear to reflect the known extant occurrences (Roger pers comm; Norvell 2002 pers comm).

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 Known from Europe, Russia, and North America, *Galerina atkinsoniana* is boreal in distribution and "quite common" during warm relatively dry seasons (Smith & Singer, 1964; Redhead. 1979; Roger 1998. pers comm.). Within the northern spotted owl region in western North America, *Galerina atkinsoniana* ranges from the Canadian border south to California. (Smith & Singer, 1964; Redhead. 1979; Roger 1998. pers comm.; Norvell & Exeter. (2003; Breitenbach & Kranzlin. 2000 Watling, Gregory, Orton. 1993; Wells & Kempton. 1969; ISMS Database 2002 and GIS map for *Galerina atkinsoniana*).

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 ($\pm 25\%$ 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 $\pm 10\%$ 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
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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 disturbance (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 The number of protected occurrences outside the northern spotted owl region is unknown. Within the region, ISMS (2002) cites only 13 occurrences in protected areas. Given the large number of occurrences known to occur in that region, it appears that the actual number of protected occurrences is not known.

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. 1979 Roger 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 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 G5 **Grank Date** 11/25/2002

Reasons

Known from Europe, Russia, and North America. 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. In that region, more data are still needed at the southern edge of its range, in California. 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