

California Status Factors

Elcode NFSM000065
Gname GALERINA CERINA
Gcomname

Number of Occurrences

Comments In the northern spotted owl region of California, the ISMS-ONH 2002 database reports 3 and Roger (1998) confirmed 2 herbarium collections for the state, which may or may not be contained within the ISMS data. There are too many insufficient data to establish the number of actual occurrences for GACE in California. See "other"

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments The number of reported occurrences do not accurately reflect the number of actual occurrences; the data for California are not sufficient to approximate the number of viable occurrences within the state.

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

E = 5,000-20,000 km² (about 2,000-8,000 square miles)
F = 20,000-200,000 km² (about 8,000-80,000 square miles)

Comments The three known occurrences were all confirmed from what appears to represent the Jackson State Forest in Mendocino County in California. Given the number of occurrences confirmed after an intensive survey was made during 2000-2001 in Oregon, it is reasonable to assume that the California range extends south from the Oregon border to at least the Jackson state forest. (Norvell 2002 pers comm)

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 and in this instance cannot be predicted.

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 Given the number of occurrences in the literature and the number of recent confirmations in Oregon (Norvell 2002 pers comm), and the amount of appropriate habitat still available in all regions of the range, the long-term trend for GACE is regarded as stable worldwide. Within California, however, that trend cannot be predicted until more occurrences are verified..

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 Given the number of occurrences in the literature and the number of recent confirmations in Oregon (Norvell 2002 pers comm), and the amount of appropriate habitat still available in all regions of the range, the short-term trend for GACE is regarded as stable worldwide. Within California, however, the short-term trend cannot be predicted until more recent occurrences are verified from the state.

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.

Scope Low **Severity** Low **Immediacy** Low

Comments GACE is found in forested habitats and other places where there are large moss beds, bogs, or mossy hummocks. The primary threat to GACE is exposure to the full sun and substrate (moss) removal. 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 Insufficient data to predict for GACE in California. All three known occurrences lie within late-successional reserves. If the populations are extant, they can be viewed as protected.

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).

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 Given the wide distribution and common to frequent reports of GACE within its range, it appears fairly resilient to all but extended-drought and moss removal. See below.

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

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

Comments GACE is generally found in moist forests, sphagnum bogs, mossy hummocks, and other soggy areas. It is bryophilous and dependent upon *Polytrichum* and other mosses, although it has sometimes been found on humus in sphagnum bogs or burned areas. In the north temperate zone it is more common in the spring and early summer than in the fall. (Smith & Singer 1964; Roger 1998, Norvell pers comm). Its precise biological and ecological requirements are unknown.

Other Considerations

There are several varieties of *G. cerina* that are not differentiated for the purposes of this ranking. Redhead (1979) notes that while Smith & Singer, 1964 felt they had explained the nomenclatural confusion behind their use of a name also applied to another fungus, there is still some cause for a confusion in the historical literature, if not at the present time. The relatively few herbarium collections made within its range probably do not reflect the actual number of occurrences but more likely the fact that it is very small and inconspicuous and thus undercollected. (Norvell 2002 pers comm)

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Greasons

GACE fruitbodies are very small and inconspicuous and is presumed far more abundant than herbarium collections indicate. GACE is widely distributed throughout the globe and is known from North America, England, Europe, and South American. It is dependent on mosses, generally producing gregious small fruiting bodies on *Polytrichum* and other mosses, sometimes on humus in sphagnum bogs or burned area. In California all three occurrences have been verified in a small area frequently visited by mycology classes. It has a patchy distribution and spring phenology. There are too few data in California to rank *Galerina cerina* in the state at this time.

BCD Sources

New Sources

Smith & Singer, 1964. A monograph of the genus *Galerina* Earle. New York: Hafner. ALSO Roger. 1998. *Galerina cerina*. From unpubl. report for Regional Mycology Lab in Corvallis, Oregon. 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 Watling, Gregory, Orton. 1993. British fungus flora Agarics & Boleti 7. Edingurgh: Royal Botanic Garden. ALSO Moser. 1981. Keys to Agarics and Boleti. Phillips. ALSO ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for GACE.