

Heritage Rank Status Factors

Elcode NLCAL25060
Gname CALICIUM ABIETINUM
Gcomname black stubble

Number of Occurrences

E = >300

Comments Number of known occurrences worldwide is probably > 1000 (but this includes many historic). The number of known occurrences in North America = ca 55; Number of known occurrences in California = ca. 2; Number of known occurrences in Oregon = ca. 17; Number of known occurrences in Washington = ca. 4; Number of known occurrences in British Columbia = ca. 5. Although the number of extant occurrences worldwide is unknown, the North American occurrences (collections) are recent and are mostly extant.

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments It is impossible to determine how many known occurrences have good viability, particularly because this species occurs on non-permanent substrates. An educated guess would be that there are easily more than 125 viable occurrences remaining worldwide (including currently unknown occurrences). Possibly many more given the species' cosmopolitan range.

Population Size

U = Unknown

Comments

Range Extent

H = > 2,500,000 km² (greater than 1,000,000 square miles)

Comments Cosmopolitan. Known from southern Scandinavia (rare), Continental Europe, Asia, North and South America and Australasia (Tibell 1999). Within North America, distributed across Canada and the northern United States, extending southward along the west coast into northern California (Tibell 1975; Peterson, unpublished data, Rikkinen unpublished data).

Area of Occupancy

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

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

Comments Occupancy for epiphytic lichens and fungi can be difficult to estimate, particularly for calicioid species (including this species) which often occur as colonies covering only a few square centimeters on single tree trunk within a stand and then again several hundred meters away. The low occupancy rank is roughly estimated as the total worldwide distribution of the species; the actual coverage of the species condensed so as to be continuous may not be much more than a few hectares.

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

Comments Most calicioid lichens and fungi inhabit aged bark or wood in sheltered locations protected from direct rain interception. With the exception of this species occasionally using old weathered wooden fenceposts as a surrogate habitat, it is very restricted to snags and old wood of old trees (in the Pacific Northwest of North America, trees > 200 year old) (Tibell 1975; Tibell 1999; Peterson, unpublished data; Rikkinen, unpublished data). Removal of old-growth forest in North America and through the rest of the species' distribution has undoubtedly had severe impacts on the number of populations, population sizes, and average dispersal distance necessary to colonize new substrates.

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

Comments With advances in conservation, the removal of old-growth forests throughout the species range is slowing, but has not stopped.

Threats

C = Substantial, non-imminent threat. Threat is moderate to severe but not imminent (> 10 years) for most of the population, occurrences, or area.

Scope High Severity High Immediacy Low

Comments Worldwide, the species has gone through drastic declines since pre-industrial times. The Pacific Northwest, due to logging, has been no exception. However, the rate of loss in the Pacific Northwest has slowed. Although little is known about the reproductive and dispersal biology of this species, it is thought that the species can overcome some habitat fragmentation and, at this point, is fairly secure from extirpation. However, given the strong old-growth association of this species, it should not be ignored. That, combined with its relative infrequency in the Pacific Northwest warrens consideration in conservation actions.

Number of Appropriately Protected and Managed Occurrences

Comments

Intrinsic Vulnerability

Comments Although the species is limited to substrates that are very slow to develop and the maturation time required between colonization and reproduction is unknown, the species does demonstrate a remarkable ability to disperse to appropriate substrates once they are available, even when those substrates are rather isolated. This may be due to use of a dispersal vector such as birds or arthropods which target similar habitats. The fruiting bodies are very fragile, but this may actually aid in dispersal.

Environmental Specificity

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

Comments Within the Pacific coastal region of North America, the species occurs mainly in sparsely forested regions, becoming very rare in drier, non-forested and wetter, densely forested areas (Peterson, unpublished data).

Other Considerations

NRANK - N4. Recommended BC rank is S3.

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Greasons

This is a cosmopolitan species. While the total distribution of the species is quite large, frequency of the species has been greatly reduced over the past 200 years, with uncertain effects on the population biology of the species. Although it is quite infrequent through much of its range, it is common in others, and its ability to use weathered wooden fenceposts as a surrogate habitat may add some security to the species.

BCD Sources

New Sources

ISMS (Interagency Species Management System). 5 August, 2002.

Peterson, E. B. (Search of personal herbarium on 1 November, 2002) Address: Nevada Natural Heritage Program, 1550 E. College Parkway, Carson City, NV

Rikkinen, J. 2003. Calicioid lichens and fungi in the forests and woodlands of western Oregon. *Annales Botanici Fennici* (accepted, should come out in the first volume of 2003).

Selva, S., 7 November 2002. Personal communication. Address: Division of Natural and Behavioral Sciences, University of Maine at Fort Kent, Fort Kent, ME.

Tibell, L. 1975. The Caliciales of boreal North America. *Symbolae Botanicae Upsalienses* 21(2): 1-128.

Tibell, L. 1999. Caliciales. *Nordic Lichen Flora* 1: 20-93.