Oregon Status Factors

Elcode NLCAL25060

Gname CALICIUM ABIETINUM

Gcomname black stubble

Number of Occurrences

E = >300

Comments Number of known occurrences in Oregon = ca. 17.

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, particulary because this species occurrs on non-permanent substrates. My educated guess from many years of experience with calicioids would be that there are easily more than 125 (category F) viable occurrences remaining worldwide (including currently unknown occurrences).

Population Size

U = Unknown

Comments

Range Extent

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

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in sparsely forested regions, becoming very rare in drier, non-forested and wetter, densely forested areas (Peterson unpublished data). Found in the Coast Range and the northern Oregon Cascades.

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 occupancy given above 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

B = Large Decline (decline of 75-90%)

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Peterson unpublished data, Rikkinen unpublished data).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 or extinction. However, given the strong old-growth association of this species, it should not be ignored. That, combined with it's relative infrequency in the Pacific Northwest warrents consideration in conservation actions.

Number of Appropriately Protected and Managed Occurrences

Comments

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 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.

Environmental Specificity

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

Comments

Other Considerations

ONNHIC - List 4.

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Greasons

Known from about 17 collections in Oregon, three in Late Successional Reserves. Somewhat threatened, but small and possilbly more abundant. Less threatened due it its ability to occupy fenceposts.

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.