Heritage Rank Status Factors

Elcode NLCAL5E010

Gname THOLURNA DISSIMILIS

Gcomname tree urns

Number of Occurrences

D = 81 - 300

Comments Number of known occurences worldwide ca. 100; Number of known occurrences in North America: ca. 56 populations; Number of known occurrences in California = 1 (recenly discovered, not yet officially reported; Jovan, personal communication); Number of known occurrences in Oregon = 3-4 (ISMS, Rikkinen 2003?); Number of known occurrences in Washington = ca. 10; Number of known occurrences in British Columbia = ca. 37. Although the number of extant occurrences worldwide is unknown, the North American occurrences (collections) are recent and are mostly extant. Otto (1983) distribution map indicates about 47 populations in North America(mostly in British Columbia), including 4 in Washington and 1 in Oregon. Occurrances are interpreted similar to populations; 2 collections in close proximity are taken as one occurrence).

Number of Occurrences with Good Viability

E = Many (41-125) occurrences with good viability

Comments Nearly all known populations in North America are likely to have good viability, assuming no significant disturbances.

Population Size

U = Unknown

Comments

Range Extent

G = 200,000-2,500,000 km2 (about 80,000-1,000,000 square miles)

Comments Global distribution "A rare species mainly occurring in alpine and subalpine areas of Norway and Sweden [...] Also known from Central Europe, Northwestern Russia and North America (Newfoundland, British Columbia, Northwest Territories" (Tibell 1999). Tibell (1999) neglected to mention occurrences in the Cascades of Oregon, Washington, and Northern California (Otto 1983, Jovans personal communication)

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 of branches on a tree within a stand and then again several hundred meters to many kilometers 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

D = Moderate Decline (decline of 25-50%)

Comments Although most calicioid lichens and fungi inhabit aged bark or wood in sheltered locations protected from direct rain interception, this species is a distinct exception. This species occurrs on conifer twigs (primarily Abies) at the tops of trees and may occur in association with bird perches (the species may by nitrophilous). Most known occurrences are on krummholz trees at high elevations, but is one occurrence known in the Pacific Northwest from the upper branches of old-growth trees at lower elevations (McCune et al. 2002). The population trend for this species is particularly difficult to assess, as (a) it's frequency in the upper branches of trees at lower elevations is uncertain and (b) the impact of humans on krummholz trees is difficult to assess. Logging of the lower elevation habitats may have caused a significant decline. Ski recreation in upper elevation habitats may have also have caused a significant decline, but some known occurrences are from trees next to ski lodges that serve food and thus attract birds to perch on the trees.

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 High elevation populations are probably stable. The recent finding of the species in a lower elevation old-growth forest (McCune et al. 2000) suggests that the species may grow in habitats which are in decline.

Threats

E = Localized substantial threat. Threat is moderate to severe for a small but significant proportion of the population, occurrences, or area. Ecological community occurrences are directly impacted over a small area, or in a small portion of their range, but threats require a long-term recovery.

Scope	Unknown	Severity	Moderate	Immediacy	High

Comments Worldwide, the species has likely gone through some declines since pre-industrial times, though the extent of the decline is unknown. The extent of the decline in the Pacific Northwest is similarly unknown. 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 infrequency of this species, it should not be ignored in conservation actions. Additional surveys may reveal the species in lower elevation forests which would have two important implications: (1) the species is less rare than currently thought and (2) the species was probably more common at some point and has experienced a more significant decline than currently thought.

Number of Appropriately Protected and Managed Occurrences

U = Unknown whether any occurrences are appropriately protected and managed

Comments Although the number of protected occurrences is unknown, it is likely that the species is somewhat protected in the western United States by wilderness areas, which tend to be at higher elevations. If the species is found to be more frequent than previously known in lower elevation forests and less frequent than expected in krummholz habitats (the attraction of birds to ski lodges may bias our expectation of the species' frequency) then this protection status comment should be reconsidered.

Intrinsic Vulnerability

U = Unknown

Comments Vulnerability will be difficult to assess until we know the age of alpine trees that are inhabited, and the frequency of the species in lower elevation forest canopies.

Environmental Specificity

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

Comments

Other Considerations

NRANK - N3. Recommended BC rank is S3.

Edition 2/20/2003 **Edauthor** Eric B. Peterson

Grank G3G5 **Grank Date** 12/5/2002

Greasons

Although the alpine and subalpine species occurs across two continents (Eurasia and North America) and seems relatively secure through much of its distribution, it is known only from small, somewhat scattered populations across its range. The Cascades form the southern limits of the species range in North America.

BCD Sources

New Sources

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McCune, B, Rosentreter, R. Ponzetti, J.M. Shaw, D.C. 2000. Epiphyte habitats in an old conifer forest in western Washington, U.S.A. The Bryologist 103(3): 417-427.
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