

# California Status Factors

**Elcode** NLCAL5E010  
**Gname** THOLURNA DISSIMILIS  
**Gcomname** tree urns

## Number of Occurrences

A = 1 - 5

**Comments** Only one recently reported site in California.

## 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 km<sup>2</sup> (about 80,000-1,000,000 square miles)

**Comments**

## Area of Occupancy

A = <0.4 km<sup>2</sup> (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 occurs on conifer twigs (primarily *Abies*) at the tops of trees and may occur in association with bird perches (the species may be 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 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

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

**Grank** S1      **Grank Date** 11/17/2002

### **Greasons**

Recently found at a few sites in northern California, it is very rare, and at the extreme southern end of its range.

### **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. *Bryologist* 103(3): 417-427.

Otto, G. F. 1983. *Tholurna dissimilis* well established in Western North America. *Bryologist* 86(3): 263-265.

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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.