

Heritage Rank Status Factors

Elcode NLSM000008

Gname LEPTOGIUM RIVALE

Gcomname

Number of Occurrences

E = >300

Comments A total of 55 sites known in OR; extrapolated to 375 in total U.S. range. Also found in the Czech Republic, in Poland (5 sites per Guttova [2000]) and in Romania (1 population per Jorgensen [1994]).

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments

Population Size

E = 2,500-10,000 individuals

Comments Estimated 7500 for the U.S. populations alone.

Range Extent

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

Comments MT to CO, west to OR and CA (McCune & Geiser 1997). Also recently found in central Europe (Jorgensen 1994, Guttova 2000). Deleted from AK list (Goward & Thor 1992). Found in Estonia, but apparently endangered there.

Area of Occupancy

U = Unknown

LU = Unknown

Comments Limited to mountain streams and lakes within its range.

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

E = Relatively Stable ($\pm 25\%$ change)

Comments

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

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within $\pm 10\%$ fluctuation

Comments

Threats

H = Unthreatened. Threats if any, when considered in comparison with natural fluctuation and change, are minimal or very localized, not leading to significant loss or degradation of populations, occurrences, or area even over a few decades' time. (Severity, scope, and/or immediacy of threat considered Insignificant.)

Scope Insignificant **Severity** Insignificant **Immediacy** Insignificant

Comments Change in water level and water pollution are threats, including acid rain and eutrophication. The species' mountain habitat probably makes it less susceptible to threats than lowland species.

Number of Appropriately Protected and Managed Occurrences

Comments OR has 6 protected sites. WA has 4 protected sites.

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).

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).

Comments Slow-growers.

Environmental Specificity

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

Comments More-or-less submerged in cold, clear mountain streams or lakes. This specialized habitat certainly accounts for the few collections (Jorgensen 1994).

Other Considerations

NRANK - N3. Water pollution a threat, also water level changes.

Edition 2/20/2003 **Edauthor** Daphne Stone

Grank G3G5 **Grank Date** 12/19/2002

Reasons

Known from mountain ranges of the western U.S. (Rockies, Cascades, Sierra Nevada, others?) and also from parts of central Europe, but limited to streams and lakes within that range.

BCD Sources

New Sources

Guttova A. 2000. Three *Leptogium* species new to central Europe. *Lichenologist* 32(3) pp291-293.

Goward T, Thor G. 1992. Notes on the lichens and allied fungi of British Columbia I. *Bryologist* 95(1): 33-37.

McCune, B. and L. Geiser. 1997. *Macrolichens of the Pacific Northwest*. Oregon State University Press, Corvallis, Oregon. A co-publication with the U.S. Department of Agriculture Forest Service. 386 pp.
Estonian List accessed through www.lichen.com

Sierk HA. 1964. The genus *Leptogium* in North America north of Mexico. *Bryologist* 67(4): 245-317

Jorgensen PM. 1994. Further notes of European taxa of the lichen genus *Leptogium*, with emphasis on the small species. *Lichenologist* 26(1): 1-29

Brodo, Irwin M., Sharnoff, Sylvia D. and Stephen Sharnoff. 2001. *Lichens of North America*. Yale University Press. New Haven and London. 795 pp.