

Washington Status Factors

Elcode NLTEST5500

Gname BRYORIA TORTUOSA

Gcomname

Number of Occurrences

C = 21- 80

Comments About 32 occurrences.

Number of Occurrences with Good Viability

C = Few (4-12) occurrences with good viability

D = Some (13-40) occurrences with good viability

Comments

Population Size

Comments

Range Extent

F = 20,000-200,000 km² (about 8,000-80,000 square miles)

Comments BC to CA, inland to central BC and northern ID, occasionally in and west of the Cascades, and increasingly rare inland (McCune & Geiser 1997, Brodo et al. 2001). Washington range is about 48,400 square miles.

Area of Occupancy

G = 2,000-20,000 km² (500,000-5,000,000 acres)

LG = 20,000-200,000 km (about 12,500-125,000 miles)

Comments WA area occupied is about 1822 square miles.

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 Due to fire suppression, large patches of dead *Arctostaphylos* species provide lots of habitat for *B. tortuosa* in southern Oregon. These areas are now being cleared for fire protection. This will result in a large loss of habitat, but according to D. Stone (personal communication), *B. tortuosa* will likely remain in old pines in the area. Because *B. tortuosa* occupies transitional areas at the edge of the mountains, its habitat is subject to repeated human disturbance and encroachment by development. Its habitat at numerous historical locations has been destroyed (McCune & Geiser 1977).

Number of Appropriately Protected and Managed Occurrences

C = Several (4-12) occurrences appropriately protected and managed

Comments In Washington, at least 5 sites are protected.

Intrinsic Vulnerability

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 Appears to reproduce mostly by fragmentation (heavy and slow to spread); the largest populations are often found on shrubs beneath large pines.

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

Comments Dry pine savannah.

Other Considerations

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

Grank S3 **Grank Date** 11/30/2002

Reasons

32 populations are known, scattered throughout the western part of the state.

BCD Sources

New Sources

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

Brodo IM and DL Hawksworth. 1977. *Alectoria and allied genera in North America*. *Opera Botanica* 42: 1-164.

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.