Washington Status Factors

Elcode NLLEC5P420

Gname USNEA LONGISSIMA

Gcomname

Number of Occurrences

C = 21- 80

Comments Populations tend to be a single tree draped with the species--occasionally several trees. Probably about 26 populations in the state.

Number of Occurrences with Good Viability

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

Comments

Population Size

Comments It is infrequently encountered within even suitable habitat, but is often locally abundant at the sites where it does occur. Population size is difficult to assess: one whole tree may be covered by one individual. On the other hand, every fragment could give rise to a large thallus.

Range Extent

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

Comments In the USA the range is disjunct and includes Alaska to California, west of the Cascade Range crest (www.fs.fed.us). Range in WA is about 25,000 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 About 2,500 square miles.

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 Educated estimate is that the species is in moderate decline. Populations of U. longissima were reported to be declining by 1914 in the Americas (Howe, 1914).

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

Threats

B = Moderate and imminent threat. Threat is moderate to severe and imminent for a significant proportion (20-60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a moderate area, either causing irreversible damage or requiring a long-term recovery.

Scope	Moderate	Severity	High	Immediacy	Moderate

Comments U. longissima is impacted by habitat loss, air pollution, and commercial harvesting. It is extremely sensitive to air pollution (Insarova et al. 1992). and specific habitat demands and low dispersal ability make U. longissima very sensitive to environmental disturbances (Esseen 1981). Although the U.S. Pacific Northwest remains a relative stronghold for the species, U. longissima faces increasing pressure in the region from several factors common to all parts of its range, i.e. forestry (Haugan-Reidaret et al., 1994), air pollution, and land development (www.toyen.uio.no; see web citations).
The species is also commercially harvested for florist use.

Number of Appropriately Protected and Managed Occurrences

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

Comments WA has 7 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).

Comments Usnea longissima is best developed in old-growth forests and will probably not persist in short-rotation second-growth forests. In Scandinavia it seems very predictable in old growth stands (> 80 years) but is absent from young forests and does not appear to survive clear-cutting (Rolstad-Erlend and Rolstad-Jorund, 1996). It is concluded that old forests with ample diffuse light at lower and more humid canopy levels are likely essential for this species (Gauslaa, 1997). Dispersal is slow, by means of fragmentation. It is highly sensitive to air pollution.

Environmental Specificity

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

Comments Habitat is very near to year-round water or in fog zones.

Other Considerations

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

Grank S2 **Grank Date** 11/30/2002

Greasons

There are probably about 25 populations in the state. The species is highly sensitive to air pollution. It is also commercially collected for florist use.

BCD Sources

New Sources

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