

Washington Status Factors

Elcode NBHEP1Q040
Gname KURZIA MAKINOANA
Gcomname LIVERWORT

Number of Occurrences

A = 1 - 5

Comments There are 3 known sites in Washington.

Number of Occurrences with Good Viability

B = Very few (1-3) occurrences with good viability

Comments Estimated 3 occurrences in Washington with good viability.

Population Size

A = 1-50 individuals

Comments Estimated 10-50 individuals in Washington.

Range Extent

E = 5,000-20,000 km² (about 2,000-8,000 square miles)

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

Comments Estimated range is 20,000 square miles in Washington. Known from the the Cascade Range and Olympic Peninsula.

Area of Occupancy

A = <0.4 km² (less than about 100 acres)

LA = <4 km (less than about 2.5 miles)

Comments Estimated area of occupancy is 10 acres in Washington.

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 Long-term trend is relatively stable. This species is tiny and not well collected, and may just be rare at the southern edge of its range.

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 Short-term trend is stable, for reasons cited above.

Threats

D = Moderate, non-imminent threat. Threat is moderate to severe but not imminent for a significant portion of the population, occurrences, or area.

Scope Moderate Severity Moderate Immediacy Low

Comments Moderate, non-imminent threat in Washington, mainly just because of rarity.

Number of Appropriately Protected and Managed Occurrences

B = Few (1-3) occurrences appropriately protected and managed

Comments One protected occurrence in Washington.

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 Moderately vulnerable. Plants are small, but reproduce readily by spores, gemmae, and fragmentation of gametophytes. They are limited by their dependence on wood substrate of various decay classes and diameters that have become scarce in managed forests.

Environmental Specificity

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

Comments Narrow to moderate environmental specificity. Located on wet rocks, cliffs, bark, humus, peat, mucky soil, and rotten wood in shady, moist sites.

Other Considerations

There is disagreement as to whether records from the Pacific Northwest are *Kurzia makinoana*, an Asian species, or the more widespread *K. sylvatica*. Hong (1988) called it *K. sylvatica*.

Edition 2/20/2003 **Edauthor** John A. Christy and Judith Harpel

Grank S1 **Grank Date** 1/13/2003

Reasons

There are 3 known sites in Washington. Estimated 3 occurrences in Washington with good viability. Estimated 10-50 individuals in Washington. Estimated range is 20,000 square miles in Washington. Estimated area of occupancy is 10 acres in Washington. Long-term and short-term trends are relatively stable. Moderate, non-imminent threat in Washington. Moderately vulnerable. Narrow to moderate environmental specificity.

BCD Sources

New Sources

Christy, J.A. & D.H. Wagner. 1996. Guide for the identification of rare, threatened or sensitive bryophytes in the range of the northern spotted owl, western Washington, western Oregon, and northwestern California. USDI Bureau of Land Management. 200 pp.

USDA Forest Service, USDI Bureau of Land Management, USDI Fish and Wildlife Service. 2002. Interagency Species Management System [ISMS] database. Portland, Oregon.

Hong, W.S. 1988. The family Lepidoziaceae in North America west of the hundredth meridian. *Bryologist* 91: 326-333.