Heritage Rank Status Factors

Elcode NBHEP1Q040

Gname KURZIA MAKINOANA

Gcomname LIVERWORT

Number of Occurrences

D = 81 - 300

Comments Estimated 150-175 occurrences worldwide. The University of Alberta database has the most complete listing, with 125 records representing about 80 sites, mostly from Alaska and British Columbia. The ISMS database has 14 records, representing 4 sites in Washington and California. Inoue (1974) indicated about 65 sites for Japan.

Number of Occurrences with Good Viability

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

Comments Estimated 13-40 occurrences worldwide with good viability.

Population Size

D = 1,000-2,500 individuals

Comments Estimated 1000-2500 individuals worldwide.

Range Extent

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

Comments Estimated range is 100,000 square miles worldwide. Amphiberingian distribution (Taiwan, Japan, Alaska, British Columbia, Washington, Oregon, California). 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.

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 100 acres worldwide.

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 Long-term moderate decline of 25-50%. Logging has impacted habitat throughout most of the range of this taxon.

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 Short-term decline of 10-30% for reasons cited above.

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 Moderate Immediacy Moderate

Comments Moderate imminent threat worldwide. Logging is the primary threat, impacting populations most in the southern parts of its range.

Number of Appropriately Protected and Managed Occurrences

D = Many (13-40) occurrences appropriately protected and managed

Comments Estimated 20 protected occurrences worldwide.

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

C = Moderate. Generalist or community with some key requirements scarce.

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

NRANK - N2Q. Ranked S1 in Washington and Oregon. 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 G2G3Q **Grank Date** 1/13/2003

Greasons

Estimated 150-175 occurrences worldwide. Estimated 13-40 occurrences worldwide with good viability. Estimated 1000-2500 individuals worldwide. Estimated range 100,000 square miles worldwide. Estimated area of occupancy is 100 acres worldwide. Long-term moderate decline of 25-50%. Short-term decline of 10-30%. Moderate imminent threat worldwide. Estimated 20 protected occurrences worldwide. 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.
University of Alberta. 2002. Devonian Botanic Garden bryophyte database. Edmonton, Alberta. <http://www.devonian.ualberta.ca/devonian/bryosearch.cfm>.
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.
Inoue, H. 1974. Illustrations of Japanese Hepaticae, Vol. I. Tsukijii Shokan Publ. Co., Ltd., Tokyo.