

## California Status Factors

**Elcode** NBHEP1Q040  
**Gname** KURZIA MAKINOANA  
**Gcomname** LIVERWORT

### Number of Occurrences

A = 1 - 5

**Comments** One occurrence has been reported from 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*. The ISMS database has one record from California.

### Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

**Comments** It is not known if the single known population is viable. It was collected along a trail and may have been damaged by trail maintenance.

### Population Size

A = 1-50 individuals

**Comments** Estimated population size is 1-50.

### Range Extent

B = 100-250 km<sup>2</sup> (about 40-100 square miles)

**Comments** Estimated range is 40-100 square miles in California. Single known site is in Prairie Creek Redwood State Park.

### Area of Occupancy

A = <0.4 km<sup>2</sup> (less than about 100 acres)

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

**Comments** Estimated area of occupancy is less than 10 acres.

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

B = Large Decline (decline of 75-90%)

**Comments** Estimated long-term decline of 75-90%.

### 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** Estimated short-term decline of 10-30% from logging.

## Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

Scope High Severity Moderate Immediacy Moderate

Comments Substantial and imminent threat. Logging is principal threat.

## Number of Appropriately Protected and Managed Occurrences

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

Comments Single protected occurrence in Prairie Creek Redwood State Park, but it is not known if the population still exists. It was collected along a trail and may have been damaged by trail maintenance.

## 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

One occurrence has been reported from California. It is not known if the single known population is viable. Estimated population size is 1-50. Estimated range is 40-100 square miles in California. Estimated area of occupancy is less than 10 acres. Estimated long-term decline of 75-90%. Estimated short-term decline of 10-30%. Substantial and imminent threat from logging. Single protected occurrence, if still extant. 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.