Oregon Status Factors

Elcode NBHEP22083

Gname MARSUPELLA EMARGINATA VAR AQUATICA

Gcomname LIVERWORT

Number of Occurrences

A = 1 - 5

Comments Two occurrences known in Oregon, one composed of 5 subpopulations within a 1 mile radius. Both occurrences on the same stream, with probably additional populations located downstream.

Number of Occurrences with Good Viability

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

Comments Two occurrences in Oregon with good viability.

Population Size

B = 50-250 individuals

Comments Estimated 500-800 individuals in Oregon.

Range Extent

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

Comments Estimated range is 8,000-10,000 square miles in Oregon. Known from only one stream in the Cascade Range.

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 1-2 acres in Oregon.

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 Moderate long-term decline of 25-50% in Oregon. Long-term deterioration of water quality and riparian habitat may have caused local losses.

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% in Oregon, 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 Oregon. Long-term deterioration of water quality and riparian habitat may have caused local losses. Acid rain and global warming are imminent threats in some parts of the range.

Number of Appropriately Protected and Managed Occurrences

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

Comments Two protected occurrences in Oregon.

Intrinsic Vulnerability

C = Not Intrinsically Vulnerable. Species matures quickly, reproduces frequently, and/or has high fecundity such that populations recover quickly (< 5 years or 2 generations) from decreases in abundance; or species has high dispersal capability such that extirpated populations soon become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are resilient or resistant to irreversible changes in composition and structure and quickly recover (within 10 years).

Comments Not intrinsically vulnerable. Plants are small and fragile, but reproduce readily by spores and fragmentation of gametophytes. Plants will recolonize sites when suitable habitat and substrate are present, but this depends on the availability of inoculum from nearby populations.

Environmental Specificity

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

Comments Narrow environmental specificity. Located on rocks in cold montane streams, where perennially submerged.

Other Considerations

ORNHIC - List 2. Also known as Marsupella emarginata ssp. aquatica.

Edition 2/20/2003 **Edauthor** John A. Christy

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Greasons

Two occurrences known in Oregon. Two occurrences in Oregon with good viability. Estimated 500-800 individuals in Oregon. Estimated range is 8,000-10,000 square miles in Oregon. Estimated area of occupancy is 1-2 acres in Oregon. Moderate long-term decline of 25-50% in Oregon. Short-term decline of 10-30% in Oregon. Moderate, non-imminent threat in Oregon. Two protected occurrences in Oregon. Not intrinsically vulnerable. Narrow environmental specificity.

BCD Sources

Schuster, R.M. 1974. The Hepaticae and Anthocerotae of North America East of the Hundredth Meridian. Volume III. Columbia University, New York.

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.
Wagner, D.H. 1999. Report on Marsupella emarginata var. aquatica from Waldo Lake outlet stream. Report to

Willamette National Forest. Northwest Botanical Institute, Eugene. 10 pp. + maps.
USDA Forest Service, USDI Bureau of Land Management, USDI Fish and Wildlife Service. 2002. Interagency Species Management System [ISMS] database. Portland, Oregon.