

Oregon Status Factors

Elcode NBMUS54010
Gname ORTHODONTIUM GRACILE
Gcomname MOSS

Number of Occurrences

A = 1 - 5

Comments Two occurrences known in Oregon, one not seen since 1952. The ISMS database contains 6 records from the state, representing the 2 known localities.

Number of Occurrences with Good Viability

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

Comments The 2 known occurrences in Oregon have good viability.

Population Size

C = 250-1,000 individuals

Comments Estimated 1000 individuals in Oregon.

Range Extent

B = 100-250 km² (about 40-100 square miles)

Comments Estimated range is 75 square miles in Oregon. Known from the extreme southwestern corner of Curry County, from the Chetco River drainage south to the California border.

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 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 Long-term moderate decline of 25-50%. Logging of redwoods, particularly along stream terraces, probably reduced historic populations of *O. gracile*.

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, as logging of old-growth redwoods has diminished and some stands are protected. Competition from weedy *Orthodontium lineare* not a factor in Pacific Northwest, because it is not present.

Threats

G = Slightly threatened. Threats, while recognizable, are of low severity, or affecting only a small portion of the population, occurrences, or area. Ecological community occurrences may be altered in minor parts of range or degree of alteration falls within the natural variation of the type.

Scope Low Severity Low Immediacy Low

Comments Slightly threatened. Logging of old-growth redwood has diminished, but still persists in places. Norris (1987) reported that *O. gracile* was more abundant in old-growth redwood forest than in 100-year-old second-growth, indicating that the former provides more favorable habitat, and that logging may have caused some declines. Occurrence reported by Koch (1952) could not be relocated, as all redwoods in the park had been logged.

Number of Appropriately Protected and Managed Occurrences

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

Comments Two occurrences protected in Oregon.

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 and fragile, but reproduce readily by spores and fragmentation of gametophytes.

Environmental Specificity

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

Comments Narrow environmental specificity. In Oregon and California it grows on rotten wood, bark of living redwood trees, and sometimes on charred wood or below gaping wounds in trees, and is confined to redwood groves near the Pacific Ocean. Norris (1987) reported that it was more abundant in old-growth redwood forest than in 100-year-old second-growth, indicating that old-growth provides optimal habitat for this species.

Other Considerations

ORNHP - List 2. *Orthodontium gracile* has been confused with the very similar *Orthodontium pellucens* that occurs in similar habitat and is difficult to distinguish when sterile. Recent critical review of California specimens by Dan Norris has shown *O. gracile* to be more common and widespread than *O. pellucens*.

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

Grank S1 **Grank Date** 11/20/2002

Reasons

Two occurrences known in Oregon, one not seen since 1952. The 2 known occurrences in Oregon have good viability. Estimated 1000 individuals in Oregon. Estimated range is 75 square miles in Oregon. Estimated area of occupancy is 10 acres in Oregon. Long-term moderate decline of 25-50%. Short-term trend is stable. Slightly threatened. Two occurrences protected in Oregon. Moderately vulnerable. Narrow environmental specificity.

BCD Sources

Sharp, Aaron J. et. al. 1994: The Moss Flora of Mexico. Buck, William R., Thomas Wm.Wayt, Daniel F. Thomas, editors.

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.

New Sources

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

Norris, D.H. 1987. Long-term results of cutting on the bryophytes of the Sequoia sempervirens forest in northern California. Symp. Biol. Hungarica 35: 467-473.

Koch, L.F. 1952. Bryophytes of Chetco River Redwood State Park, Oregon. Madrono 11: 209-214.