

Heritage Rank Status Factors

Elcode PDFUM03046
Gname CORYDALIS CASEANA SSP AQUAE-GELIDAE
Gcomname Cold-water corydalis

Number of Occurrences

D = 81 - 300

Comments There are 57 occurrences in Oregon and 39 in Washington. However, the number of isolated populations is considerably fewer; many occurrences can be found within a single drainage.

Number of Occurrences with Good Viability

C = Few (4-12) occurrences with good viability

Comments In Oregon, there is 1 occurrence with over 6000 plants, 3 with 3000-6000, 1 with 2000-3000 and 3 with 1000-2000.

Population Size

F = 10,000-100,000 individuals

Comments There may be in excess of 50,000 individuals. But for the majority of the total range of the taxon, which is 75 miles x 30 miles, only a fraction of that area contains suitable habitat. In Oregon, there are approximately 30,000 plants.

Range Extent

D = 1,000-5,000 km² (about 400-2,000 square miles)

Comments The taxon is restricted to the western Cascades of Lane, Marion, Linn, Clackamas and Multnomah Counties in Oregon and Skamania and Clark Counties, Washington. Most of the Oregon occurrences are found in Clackamas County, with the other 4 counties having 1 or 2 populations.

Area of Occupancy

D = 20-100 km² (about 5,000-25,000 acres)

LD = 200-1,000 km (about 125-620 miles)

Comments Oregon populations occupy approximately 11,000 acres. It is assumed that Washington occurrences would cover at least the same area, if not less.

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 This corydalis grows along streams, creeks, and seeps within the national forests, which has given it some protection from the threats associated with timber harvest.

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 This corydalis grows along streams, creeks, and seeps within the national forests, which has given it some protection from the threats associated with timber harvest.

Threats

C = Substantial, non-imminent threat. Threat is moderate to severe but not imminent (> 10 years) for most of the population, occurrences, or area.

Scope High **Severity** High **Immediacy** Low

Comments

Number of Appropriately Protected and Managed Occurrences

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

Comments Almost all known occurrences are within National Forests, and within riparian buffers which affords some protection from timber harvest activities. However, Oregon populations are located in areas where there has been discussions of hydroelectric projects. Additionally, the Gifford Pinchot National Forest of Washington has a species management plan for this taxon.

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 Plants produce many seeds, and adults are long-lived, but seedlings appear to have a narrower range of potential habitat than adults, and at least in Washington there are not known instances of colonization of previously unoccupied habitats.

Environmental Specificity

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

Comments The taxon can survive under different canopy closure levels, but scouring of the stream banks as a result of increased flow and an increase of brushy vegetation within its habitat appear to have had negative effects. Corydalis may be restricted in water temperature requirements.

Other Considerations

NRANK - N3. Current name is *Corydalis caseana* ssp. *aqua-gelidae*; Oregon tracks as *Corydalis aquae-gelidae*. Earlier edition of rank form was by John Gamon (1993),

Edition 11/18/2002 **Edauthor** Vrilakas, Sue

Grank G5T3 **Grank Date** 11/18/2002

Reasons

The limited range of this Pacific Northwest endemic, and the fact that the habitat has been a high priority for timber harvest, are of concern, but are somewhat ameliorated by the overall number of occurrences (and the number of individuals) and the fact that recent measures to protect the northern spotted owl may also provide protection to this taxon. The overall species to which it belongs (*Corydalis caseana*) is considered widespread, abundant, and secure.

BCD Sources

New Sources

Gifford Pinchot National Forest. 1983. Species Management Guide for *Corydalis aquae-gelidae*. USDA Forest Service, Gifford Pinchot NF. 15 pp.