

Heritage Rank Status Factors

Elcode PPOPH010R0
Gname BOTRYCHIUM MINGANENSE
Gcomname Mingan's moonwort

Number of Occurrences

E = >300

Comments In Oregon, there are 115 known occurrences (ORNHIC 2002) and another 62 or so in Washington (ISMS 2002). It is estimated that there are at least 300 global occurrences, since this species is found in 18 other states and 12 provinces.

Number of Occurrences with Good Viability

E = Many (41-125) occurrences with good viability

Comments It is estimated that at least 41 occurrences are of good viability.

Population Size

F = 10,000-100,000 individuals

G = 100,000-1,000,000 individuals

Comments In Washington, more than 12,000 individuals have been recorded, and in Oregon, total plant numbers are reported to be about 3000. However, many occurrences have very few individuals; for example, most of the occurrences in Oregon were reported to have ten plants or fewer.

Range Extent

H = > 2,500,000 km² (greater than 1,000,000 square miles)

Comments One of the most widespread moonworts in North America, occurring in practically all parts of Canada and Alaska and throughout the western United States, south to Arizona, and in all the US/Canadian border states.

Area of Occupancy

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

E = 100-500 km² (about 25,000-125,000 acres)

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

LE = 1,000-5,000 km (about 620-3,000 miles)

Comments Plant populations are widespread and scattered, but plant numbers per population appear to be small (<15). Total area of occupancy estimated to be between 5,000-125,000 acres.

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

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

Threats

H = Unthreatened. Threats if any, when considered in comparison with natural fluctuation and change, are minimal or very localized, not leading to significant loss or degradation of populations, occurrences, or area even over a few decades' time. (Severity, scope, and/or immediacy of threat considered Insignificant.)

Scope Insignificant Severity Insignificant Immediacy Moderate

Comments

Number of Appropriately Protected and Managed Occurrences

C = Several (4-12) occurrences appropriately protected and managed

Comments At least 11 occurrences are within 2 different Wilderness Areas, and 2 are in 2 different Research Natural Areas (ORNHC 2002). Given the wide range of this species, it is assumed that more occurrences are found in areas designated with some kind of special management. Although it is doubtful that any of these special managed area manages for this species, Botrychium populations are still considered protected.

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 Most populations have very few individuals, although some occurrences have hundreds or thousands.

Environmental Specificity

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

Comments

Other Considerations

NRANK - N4

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Grank G4 **Grank Date** 11/20/2002

Reasons

Botrychium minganense is widespread, with a scattered distribution across most of Canada, into Alaska, and south into western United States to Arizona and along the Canadian/US border states. It is considered rare or uncommon where found, often with very few individuals per site. Some of the locations are protected in special management areas.

BCD Sources

New Sources

Interagency Species Management System. November 20002. ISMS data set. ISMS BLM and USFS, Portland, OR.

Oregon Natural Heritage Information Center. 2002. Oregon Natural Heritage Program data set. Oregon Natural Heritage Information Center, Portland, OR.