

Heritage Rank Status Factors

Elcode NBMUS1B040
Gname BUXBAUMIA VIRIDIS
Gcomname MOSS

Number of Occurrences

E = >300

Comments Estimated more than 300 occurrences worldwide. The University of Alberta database has the most complete listing with 45 records (some multiple collections from same site) from Alberta, British Columbia, and Idaho. The ISMS database contains 995 records from Washington, Oregon, and California, representing about 370 sites, but there are a limited number of voucher specimens and some records probably represent *B. piperi*.

Number of Occurrences with Good Viability

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

Comments Estimated 50 occurrences worldwide with good viability.

Population Size

E = 2,500-10,000 individuals

Comments Estimated 5000 individuals worldwide.

Range Extent

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

Comments Estimated range greater than 1,000,000 square miles worldwide. Range interruptedly circumboreal. Scotland, Scandinavia, Europe, Russia, Corsica, southwest Asia, China, western North America (British Columbia, Alberta, Idaho, Montana, Colorado, Washington, Oregon, California).

Area of Occupancy

B = 0.4-4 km² (about 100-1,000 acres)

LB = 4-40 km (about 2.5-25 miles)

Comments Estimated area of occupancy is 500 acres worldwide.

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 25-50% in Europe, United Kingdom, and Scandinavia, but more or less stable in North America.

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 10-30% in Europe, but more or less stable in North America.

Threats

E = Localized substantial threat. Threat is moderate to severe for a small but significant proportion of the population, occurrences, or area. Ecological community occurrences are directly impacted over a small area, or in a small portion of their range, but threats require a long-term recovery.

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

Comments Localized substantial threat. This species is widespread in Europe and Scandinavia, but is declining and listed as rare, threatened, or endangered in most countries. Listed as critically endangered in United Kingdom and vulnerable on the European Red Data List. In North America, populations remain robust. Causes for decline include changes in the microclimate of deforested areas, the decrease of decayed wood in forests, and diminishing mesic forest.

Number of Appropriately Protected and Managed Occurrences

E = Very many (>40) occurrences appropriately protected and managed

Comments Estimated 50 occurrences worldwide are protected and managed appropriately.

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. In North America, United Kingdom, and Scandinavia, the substrate is rotten conifer wood and peaty soil and humus, located in dense, shady and humid coniferous forests, from low elevation to subalpine. Rotten wood must be in an advanced stage of decay. In mainland Europe, it occurs on rotten wood of both coniferous and deciduous species, as well as weathered, acidic rocks.

Other Considerations

NRANK - N3. Declining and rare in Europe, United Kingdom, and Scandinavia, but much more abundant in North America. Listed as critically endangered in United Kingdom and vulnerable on the European Red Data List. S4 in Oregon, S3S4 in BC.

Edition 2/20/2003 **Edauthor** John A. Christy and Judith Harpel

Grank G3G4 **Grank Date** 1/13/2003

Reasons

Estimated more than 300 occurrences worldwide. Estimated 50 occurrences worldwide with good viability. Estimated 5000 individuals worldwide. Estimated range greater than 1,000,000 square miles worldwide. Estimated area of occupancy 500 acres worldwide. Moderate decline of 25-50% in Europe, UK, and

Scandinavia, but more or less stable in North America. Short-term decline of 10-30% in Europe, but more or less stable in North America. Localized substantial threat. Estimated 50 occurrences worldwide are protected. Not intrinsically vulnerable. Narrow environmental specificity.

BCD Sources

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New Sources

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