

Sphagnum lindbergii

Lindberg's sphagnum

Status

Federal status: G5? N?, Not listed

NH state status: S1, Not listed; proposed for endangered status (5/03)

ME state status: Not ranked or listed

Population trends are unknown locally and globally. Andrus et al (1992) indicate it is rare in the contiguous U.S. because it is at the edge of its range.

An expert panel was not held for *Sphagnum* species and those experts who did provide information about this species were not asked to identify viability outcomes.

Distribution

This is a northern species, occurring in North America primarily along the coast in Canada, Alaska, and Washington, and inland in New York and New Hampshire. Also found in Britain, Norway, Austria, and Japan.

In New Hampshire it is known from Mt. Monroe, in Bean's Grant in Coos County, and Mt. Jackson in Coos County. Both are on the WMNF. It is not known from Maine.

Habitat

In New Hampshire, *Sphagnum lindbergii* is restricted to alpine and subalpine peatlands. It is weakly minerotrophic, forming carpets in high elevation heath balds and bogs. Across its range, this species prefers peatlands with full sun, low to medium nutrient levels, and pH of 4.0-6.0

Limiting Factors

Ditching, flooding, draining, grading, and logging all can have substantial impacts on peatland habitats, which then affects the suitability of these habitats for *Sphagnum* species. Activities that change local hydrology cause the greatest changes in habitat suitability.

Sphagnum species, in the form of peat, are collected for a variety of purposes. This collection not only impacts the individual plants, it can make the habitat unsuitable for *Sphagnum* species.

Trampling can directly affect *Sphagnum* species and their peatland habitats.

Studies in Britain have shown changes in peatland habitats from acid rain, but studies in North America do not show similar results. Climate plays a key role in development and maintenance of peatlands, but what effect accelerated climate change will have is unknown.

Viability concern

Little is known about *Sphagnum* species, and the proposal by NHHI to list this species as endangered indicates concern for this species. NHHI recommended including those

Sphagnum species that are proposed for listing and are known to occur on the WMNF as species of potential viability concern.

Management activities that might affect viability

Activities that alter water levels in bogs and fens could impact habitat suitability, depending on the timing, regularity, and intensity of changes in water levels. Such activities might include construction, modification, or removal of dams, including removal of beaver-created dams. Road and trail construction or other activities that alter the hydrology of a pond or bog also could affect this species if it is present.

Recreational use and facility construction along pond, fen, and bog shores could reduce habitat suitability and increase the risk of direct impact to populations.

References

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- Cooke, S. 2001. Chapter 4: Ecology and taxonomy of *Sphagnum* in western Washington. *In: Kulzer, L., S. Luchessa, S. Cooke, R. Errington, and F. Weinmann. 2001. Characteristics of the low-elevation Sphagnum-dominated peatlands of western Washington: A community profile. Part 1: Physical, chemical, and vegetation characteristics. Accessed on 9/15/2003 at <http://dnr.metrokc.gov/wlr/dss/sphagnum-bogs.htm>*
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- NHNHI. 2001. Rare Sphagnum in the White Mountain National Forest, New Hampshire. Reports generated from the NHNHI database. DRED, New Hampshire Natural Heritage Inventory, Concord, NH.