

Listera convallarioides

Status

Federal status: G5 N?, Not listed

NH state status: S2, Threatened

ME state status: Not ranked or listed

No information was found to indicate population trends. About half of the NH occurrences are listed as historic, but whether this is a decline or a lack of recent surveys is unknown. Three of four populations on the WMNF are ranked as healthy, though a slightly different three face trampling or herbivory.

The expert panel indicated that range-wide it is currently probably a “B” outcome and either stable or improving slightly for the future. The panel thinks it is probably a “B” to “C” on the WMNF now and into the future due to limited population levels and associated risks.

Distribution

Listera convallarioides is a boreal species that ranges from Newfoundland and Nova Scotia west through southern British Columbia. In the western US, it is found in coastal areas south to mid-California and in the Rocky Mountains south to Colorado. In the northeast, it is found through most of Maine, northern New Hampshire and Vermont, and northeastern New York. Northern New England is at the southern edge of the species range.

New Hampshire has document 8 extant and 7 historic occurrences in Coos County and 2 historic occurrences in Bethlehem and Franconia in Grafton County. Five of these, four extant and one historic, are from the WMNF. These populations are in Pinkhams Grant, Sargents Purchase, Stark, and Bethlehem. This species is documented from seven Maine counties including Oxford County. Occurrence locations are not tracked by MNAP, so are not available at a town level.

Habitat

Listera convallarioides is found in wet woods, forested swamps, bogs, fens and seeps. It has also been found along borders of streams. In Vermont, it is closely associated with white cedar swamps. Populations on the White Mountain National Forest primarily inhabit forested seeps. Some references indicate a preference for deep shade in moist locations, though there are locations where the taxon grows along the borders of peatlands. NH records indicate that the species grows among mosses and other herbs as well as up through thick leaf litter in predominantly forested communities.

Limiting Factors

Two WMNF populations are proximal to heavily used hiking trails. One population shows signs of trampling impact and the other is vulnerable to similar impacts.

It is unclear whether herbivory is really a problem for the species viability, but herbivory does appear to be significant in some WMNF populations of *L. convallarioides* and is reported from other species of *Listera* as well.

If deep shade is preferred, changes in successional patterns in forests may affect the taxon. Typically orchids are dependant on specific fungi for successful germination. This species may be limited by the loss or absence of a fungal symbiont.

Viability concern

WMNF contains 33% of NH population and species is of concern in New Hampshire. Half of the WMNF populations are along heavily used trails, so are at risk from trampling. Uncertainties about impacts of harvest and other activities add to concerns.

Management activities that might affect populations or viability

Management efforts to keep people on trails would reduce potential for trampling impacts of known occurrences. Placing new or relocated trails near populations could result in negative impacts. Unknown if relocating trails away from known populations is feasible and whether existing trail could be sufficiently removed to prevent continued use.

Regeneration harvest likely would reduce habitat suitability by altering soil moisture levels. Changes to shading also might reduce habitat quality. In addition, regeneration harvest could attract additional deer and moose to an area and increase herbivory. What level of canopy removal reduces habitat suitability is unknown. Any management, such as harvest and road and trail construction, that would alter seep hydrology and soil moisture could reduce habitat quality.

References

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