

Dryopteris goldiana

Status

Federal status: G4 N4, Not listed

NH state status: S2, Threatened

ME state status: S2, Special Concern

There is no information on global trends. More than one-third of NH and ME occurrences are listed as historic, but with no indication of whether they have been looked for in recent years. Almost all WMNF occurrences are extant, but there is no information to indicate the health of these populations.

The expert panel indicated that the outcome both range-wide and on the WMNF is currently an A and is likely to remain an A into the future.

Distribution

This species occurs from southeastern Canada to the Carolinas, including Tennessee, Iowa, and Minnesota. Northern New England is near the northeastern edge of the species' range.

In New Hampshire, there are 30 documented occurrences (17 extant, 12 historic) in Coos, Carroll, Grafton, Cheshire, and Sullivan Counties. Of these, seven occurrences (6 extant, 1 historic) are known from WMNF. Five occurrences are on National Forest System lands in Albany, Benton, Ellsworth, Warren, and Pinkham's Grant; two occurrences are on lands along the Appalachian Trail that are managed by the Forest in Hanover and Lyme. In Maine this species is documented from 20 occurrences, seven of them historic, in Aroostook, Franklin, Kennebec, Oxford, Penobscot, Somerset, and Piscataquis Counties. One occurrence in Mason Township is in the WMNF.

Habitat

Dryopteris goldiana occurs in rich, mesic hardwood and mixedwood forests, seeps, and swamp edges. It is often found in wooded ravines and at the base of slopes and cliffs. There is usually dense ground cover and deep leaf litter, but a sparse shrub layer. In northern New England, this species prefers circumneutral soils below 2500' elevation.

There is some disagreement about whether canopy closure is necessary to long-term survival or simply beneficial. Based on occurrence data from northern New England, it appears to prefer late-successional and old growth forest habitats, but can survive in younger stages if other conditions are right. Whether populations in open habitats can survive until an area returns to mature forest is unknown. It is agreed that moisture is the habitat-defining feature, so that if canopy closure decreases, this species' need for moisture increases.

Limiting Factors

In New Hampshire, the availability of circumneutral habitats is a natural limitation.

Although there is some uncertainty about whether this species can survive substantial canopy removal, there is agreement that retaining moisture levels is imperative to maintaining populations. Regeneration harvests and development can reduce canopy

closure enough to reduce moisture levels critical to this species. Canopy loss or other activities that result in decreased moisture can make habitat unsuitable and impact populations.

Harvest and collection were concerns in the past.

Viability concern

WMNF contains 20% of NH population. Species is listed as Sensitive because at the time of the last list revision for the WMNF, only one occurrence was known and management activities have the potential to reduce populations.

Management activities that might affect populations or viability

In all but the wettest habitats, even-aged regeneration harvest can reduce canopy closure enough to reduce moisture levels critical to this species. Whether thinning or uneven-aged harvests would alter habitat conditions enough to impact populations is uncertain.

Other activities that alter canopy closure or hydrology in suitable habitat, such as road and trail construction and facility construction could reduce habitat suitability by altering moisture levels.

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