



Rare Plants of New Hampshire

Goldie's Fern, Goldie's Wood Fern

Dryopteris goldiana (Hooker ex Goldie) A. Gray

Shield fern family (Dryopteridaceae, sometimes placed in Aspleniaceae or Polypodiaceae)

What Does It Look Like?

This woodland plant is the tallest of the shield ferns. It is semi-evergreen with a short, stout, creeping basal stem that is about 1 cm (0.5 inches) thick.

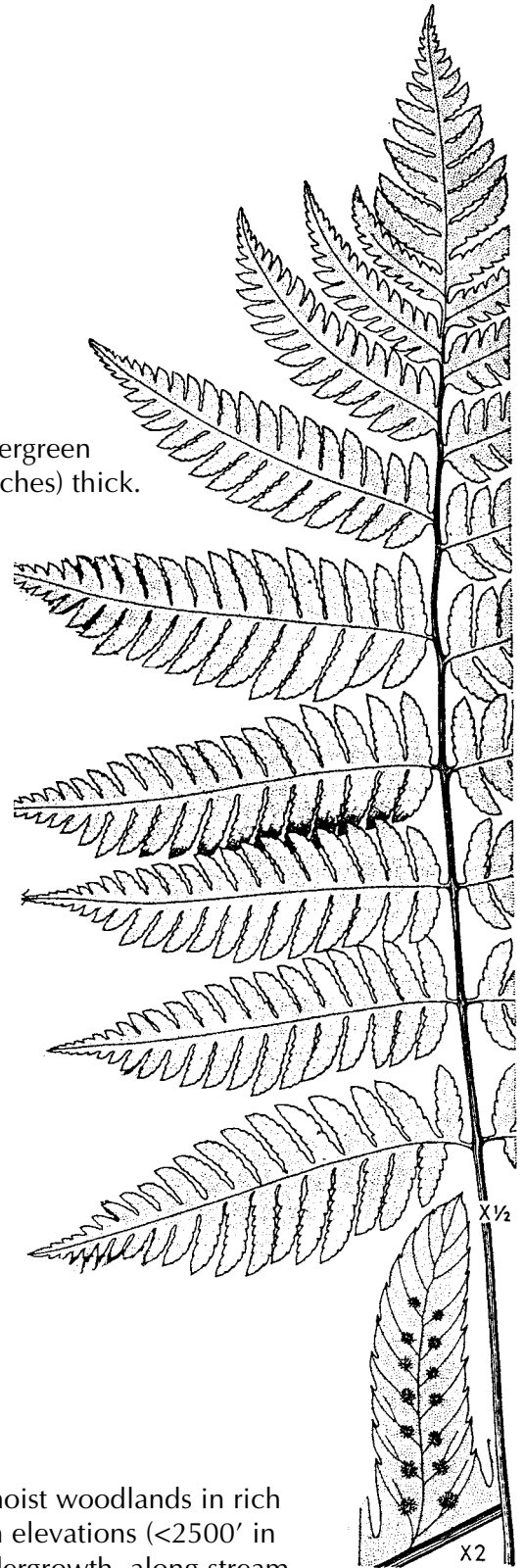
Leaves: The numerous fronds are egg-shaped or lance-shaped in outline, not much narrowed at the base and 75 to 120 cm (30-47 inches) long. The leaflets (pinnae) do not begin until nearly halfway up the stipe (leaf stalk). The lower stipes are covered with large pale brown scales that shade into a deeper tint near the base. Upper leaflets taper to an abrupt point and the lowest ones have 18 or more pinnules (next smaller leaf divisions).

Reproductive parts: Sporangia appear by mid to late June on fertile leaf-like fronds. The sori (dot-like clusters of sporangia) are arranged in a row on each side of the mid-vein and near to it (often touching it at maturity in July to October).

Similar species: None of the other shield ferns have such a long lower stipe, nearly half the entire leaf height. Also, the sori are close to the mid vein in this species, not halfway between the mid-vein and margins of the leaflets as in other shield ferns.

Where Is It Found?

Habitat: Across its range, Goldie's fern grows in cool, moist woodlands in rich circumneutral (near-neutral pH) soil at medium elevations (<2500' in New Hampshire), where there is not much undergrowth, along stream banks, and occasionally at the base of cliffs and slopes. In New Hampshire, it is most likely to be found in rich mesic forests and occasionally on the margins of floodplain forests, rich northern hardwood seepage forests, and enriched river terrace slopes.



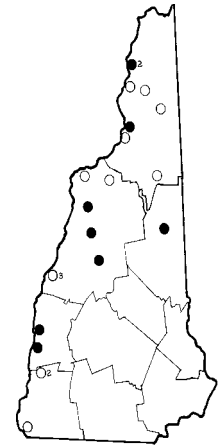


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Associated species:

Sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), yellow birch (*Betula alleghaniensis*), maidenhair fern (*Adiantum pedatum*), ostrich fern (*Matteuccia struthiopteris*), baneberry (*Actaea pachypoda*), Solomon's plume (*Smilacina racemosa*) whorled aster (*Aster acuminatus*), stinking Benjamin (*Trillium erectum*), ginseng (*Panax quinquefolium*), blue cohosh (*Caulophyllum thalictroides*), squirrel corn (*Dicentra canadensis*).

Distribution: New Brunswick west to Minnesota and south to northern Georgia and Tennessee.



Goldie's Fern in New Hampshire

- Historic Locations
- Verified since 1980

What Is Its Status?

Conservation status:

State listed as threatened in New Hampshire. Populations elsewhere are apparently stable, but it is imperiled in New Hampshire because of its rarity. Twenty-two occurrences of Goldie's fern have been recorded for the state. Most of the records are concentrated in northern and western New Hampshire; only 9 records have been confirmed since 1980.

Management: The habitat and distribution of Goldie's fern is similar to squirrel corn (*Dicentra canadensis*). It is a forest herb requiring canopy shade, and would probably not respond well to moderate or large canopy openings due to an increase in competition and decreased shade levels. However, controlled manipulations are not documented.

What Should You Do If You Find This Plant?

Please report sightings of this or other rare species to the New Hampshire Natural Heritage Inventory. Documentation should include: (1) location of the sighting on USGS topographic map or road map, with written directions for relocating the plant; (2) a photo of the plant; and (3) descriptive information including how many plants there are, whether any plants are flowering or fruiting, and comments about the surrounding vegetation. Information may be sent to NHHI/DRED, PO Box 1856, Concord, NH 03302-1856. If you have any questions, please call the New Hampshire Natural Heritage Inventory Program at (603) 271-3623.

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