

## *Petasites frigidus var. palmatus*

### Status

Federal status: G5T5 N?, Not listed

NH state status: S1, Endangered

ME state status: Not ranked or listed

It is naturally scarce in New Hampshire; much more common in Maine. Population trends are unknown or uncertain in northern New England.

Expert panel assumes it is doing okay, but doesn't know much, so guesses that it is probably a B now and in the future range-wide. Outlying populations may have declined, but the core of the range is probably stable since the species can tolerate some disturbance. On the WMNF, habitat isn't currently threatened but would have been historically, so there is probably less habitat now than in the past. Habitat now should be stable unless the species needs some disturbance. Rating for the WMNF is probably B to C now and into the future.

### Distribution

This species grows across Canada south into southern New England and New York, west to North Dakota, and south along the west coast to California.

In New Hampshire, it is documented from Bartlett, Colebrook, Columbia, Stewartstown, Success, and Greenfield. There may also be an occurrence in Keene. The Bartlett occurrence is on the WMNF. In Maine, it is known from Piscataquis, Franklin, Hancock, Cumberland, Penobscot, Aroostook, Washington, Waldo, Knox, and Somerset Counties, and Hebron in Oxford County.

### Habitat

*Petasites frigidus var. palmatus* commonly occurs in moist woods, fens, and swamps. In northern New England it is usually found associated with cedar swamps or calcareous seeps, though it also uses moist meadows and fens. In New Hampshire and Vermont, this species occurs on saturated soils in white cedar (*Thuja occidentalis*) swamps and in hardwood seepage forests or swamps. New Hampshire occurrences have also been recorded from a spring, a calcareous fen, and a calcareous seepage swamp.

It can occur in both mature and open habitats, and might benefit from some disturbance. Occurrences in New England are documented at elevations up to 2000'.

### Limiting Factors

What is limiting the species in northern New England, other than availability of calcareous habitat in New Hampshire, is uncertain. There may be reproductive issues at the southern edge of its range.

Threats to populations in Vermont and New Hampshire have been identified and include logging roads, skidder trails, soil disturbance, water level changes, harvest of cedar trees, trampling by hikers, and herbivory. How intensive any of these threats must be to affect this species was not described and probably depends on site conditions.

### Viability concern

Rare in New Hampshire, and restricted to a rare habitat, which has probably declined from historic levels. Unknown whether management will affect it, so listed on the Regional Forester's Sensitive Species list.

### Management activities that might affect populations or viability

The uncertainty about what might limit this species makes it difficult to determine what activities might affect populations or viability.

In northern New England, *Petasites frigidus* var. *palmatus* occurs in moist forested habitats and non-forested wetlands, so management that would affect local hydrology could reduce habitat suitability. It is uncertain whether timber harvest would impact this species, but substantial canopy removal could decrease moisture levels and nutrient availability, which could affect populations.

If a population occurs near a trail, management and education that would help keep hikers on designated that trail should benefit this species by limiting impacts to existing trail corridors.

### References

Cherniawsky, D. M., and R. J. Bayer. 1998. Systematics of North American *Petasites* (Asteraceae: Senecioneae). III. A taxonomic revision. *Canadian Journal of Botany* 76: 2061-2075.

Gleason, H. A., and A. Cronquist. 1991. *Manual of vascular plants of northeastern United States and adjacent Canada*. New York Botanical Garden, Bronx, New York, USA.

NHNHI. 2001. Information from the Biological Conservation Database. DRED, New Hampshire Natural Heritage Inventory, Concord, NH.

SVE Panel. 2002. GMNF/WMNF species viability evaluation expert panel notes on Rich Northern Hardwoods. Panel held June 3-4, 2002, Concord, NH

VNNHP. 2001. Information from the Biological Conservation Database. Vermont Agency of Natural Resources, Vermont Nongame and Natural Heritage Program, Waterbury, VT.

Voss, E.G. 1996. *Michigan Flora*. Vol 3. Cranbrook Institute of Science.