Species Status Assessment

Common Name	Sweet coltsfoot	**Date Updated:**	2024-02-01
Scientific Name	*Petasites frigidus var. palmatus*	**Updated By:**	Rachael A. Renzi
Family	Asteraceae		

Species Synopsis *(a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):*

Sweet coltsfoot (*Petasites frigidus* var. *palmatus*) is one of two species of *Petasites* in New York, but the only one native to the state (Werier et al. 2023). It is in the Aster family of the tribe Senecioneae (FNA 2006). Sweet Coltsfoot is found in all the Canadian Provinces, all the New England states, and west across the northernmost tier of the U.S. except Montana, and from Washington south into California (NYNHP 2024, NatureServe 2023). It is considered rare in most New England States and New York (NatureServe 2023). In NY, the plant's historical range covered much of the state; it was found in scattered locations from Albany north and west (NYNHP 2023, 2024). However, there are only two extant populations remaining, in Albany and Steuben Counties (NYNHP 2023). The number of historical populations outnumbers the extant populations, and while it is likely that some historical populations still exist, others have been extirpated by development or changes in hydrology and habitat (NYNHP 2023, 2024). *Petasites frigidus* var. *palmatus* grows in wet, calcareous, usually open habitats in NY, at the edge of forests, or in swamps (NYNHP 2023, 2024). There are currently no known threats to the plants in NY, but more research and surveys are needed to accurately assess the stability and distribution of the plant's presence. In addition, the plant is rarely found flowering, so investigations into the plant's demographics in NY and across its range may be needed (NYNHP 2023, 2024; MNHESP 2015).

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**

ii. New York: Endangered

b. Natural Heritage Program

i. Global: G5T5

ii. New York: S1 **Tracked by NYNHP?** On Active Tracking List

Other Ranks:

COSEWIC: Not listed in Canada
IUCN Red List: Not assessed by IUCN Red List

Status Discussion:

Petasites frigidus var. *palmatus* is Endangered in New York (Ring 2023). There are only two existing populations in the state. At both populations, over 100 plants were counted. There are 21 historical occurrences, and at least two populations known to be extirpated. Some historical records are probably extirpated by changes in hydrology or development of wetlands. Many of the historical populations have not been searched in detail, so it is expected that a few more populations could be found (NYNHP 2023, 2024). However, visits to two historical populations found no plants (NYNHP 2023).

II. Abundance and Distribution

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Unknown	Unknown	Unknown		
Northeastern US	Yes	Unknown	Unknown	Unknown		
New York	Yes	Unknown	Unknown	Unknown	E	
Connecticut	Yes	Unknown	Unknown	Unknown	S2	
Massachusetts	Yes	Unknown	Unknown	Unknown	S1	
New Jersey	No	-	-	-		
Pennsylvania	No	-	-	-		
Vermont	Yes	Unknown	Unknown	Unknown	S2	
Ontario	Yes	Unknown	Unknown	Unknown	S5	
Quebec	No	-	-	-		

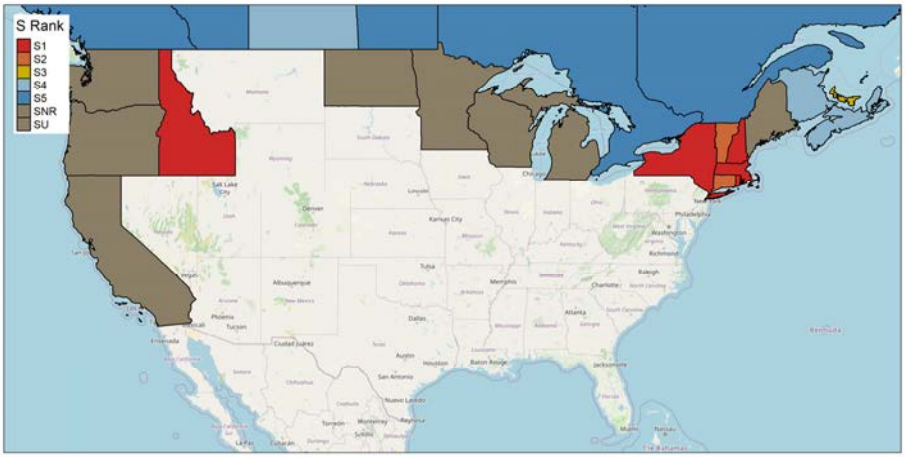

Figure 1: Petasites frigidus var. palmatus North American distribution.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	≥100km

III. NY Rarity and Trends

Trends Discussion

The two existing populations are in good habitat and were both visited in 2023, though a full survey for each is needed (NYNHP 2023). The vigor of a population tends to fluctuate from year to year, for example, counts at the same site can range from 0 plants to about 150 (NYNHP 2023). Due to the variable nature in the vigor of populations, it is difficult to assess trends of the two extant populations without further research. The number of extirpated sites outnumbers the number of extant sites, and likewise so does the number of historical sites (NYNHP 2023). This points to a downward trend in the number of populations in the state, but visits to historical populations are needed to determine their status, and thus determine an accurate trend (NYNHP 2023). Historical record counts include specimens that may not have been entered into NYNHP databases but tallied for description purposes. Thus, there is discrepancy between the total number of historical records and those displayed on the map.

Details of historic and current occurrence

Being at the southern extent of this taxon's range in eastern North America, the plant has always been rare in NY (NatureServe 2023). *Petasites frigidus* was historically found at scattered locations from Albany to the northern and western parts of the state (NYNHP 2023). Development and changes in hydrology have helped to extirpate some sites (NYNHP 2023). It is now only found in Albany County and Steuben County (NYNHP 2023). Based on data from surveys in 2023 and 1996, both populations likely have over 100 plants, even up to 1,000 plants (NYNHP 2023). It is more common in Canadian provinces (NatureServe 2023).

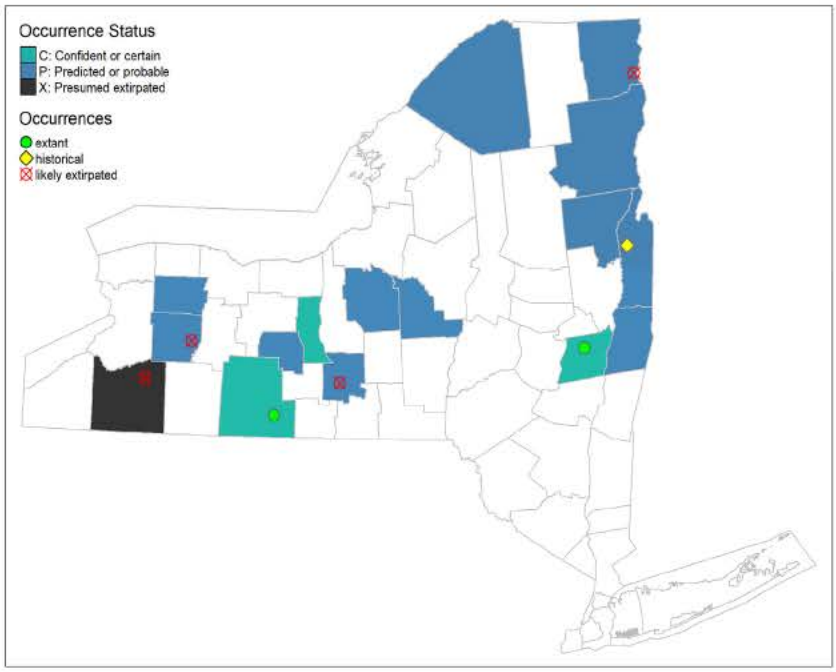

Figure 2: *NYS distribution for* Petasites frigidus *var.* palmatus.

Table 1. *Number of records (element occurrences) of* Petasites frigidus *var.* palmatus *grouped by the dates known to be extant (the years spanning first observation to last observation) and the number and percent of total of USGS 7.5 minute map quadrangles these observations fall within for New York State.*

Years	# of Records	# of distinct quads	% of quads in State
Pre-1995	7	11	1.1
1995-2004	1	1	0.1
2005-2014	1	1	0.1
2015-2023	0	0	0.0

Commented [RRA(1]: update the table directly? New biotics record updated december 2023 and another 2023 visit not added to biotics (Black creek SWAMP with Rich)

Monitoring in New York

The two extant populations were last visited in 2023 (NYNHP 2023). They had also been visited at least one other time in the last 30 years (NYNHP 2023). Both populations are on DEC managed land. Two historical populations were visited in the last 30 years, though no plants were found (NYNHP 2023). The remaining historical populations should be visited to assess the habitat and to search for plants.

IV. Primary Habitat or Community Type *(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):*

Northeastern Habitat Classification Macrogroup: Northern swamp, Northern Hardwood and Conifer forest.

NY Ecological Communities: Hemlock-hardwood swamp, Hemlock-northern hardwood forest, Red maple-tamarack peat swamp (Edinger et al. 2014, NYNHP 2023).

Habitat or Community Type Trend in New York

Declining: **Stable:** **Increasing:** **Unknown:** ✓

Time Frame of Decline/Increase:

Habitat Specialist **Yes:** ✓ **No:**

Habitat Discussion:

In New York this taxon has been found growing at the edges of forested, calcareous, northern swamps, or in wetter, open sites within upland forests (NYNHP 2024, Edinger et al. 2014) More information on the habitat preferences of this species in NY is needed. It is reportedly calciphilic in CT (Mehrhoff 1989). In North America, it has been found in low moist coniferous and mixed woods, including cedar and tamarack swamps and some rocky sites, as well as meadows, damp clearings, and swampy areas (Voss, 1996; Gleason & Cronquist 1991; Fernald 1950) It seems to bloom best along trails and after clearing (Voss 1996).

V. Species Demographics and Life History *(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):*

Petasites frigidus var. *palmatus* is a rhizomatous perennial herb. The flowers bloom before the leaves appear, in spring (NYNHP 2024). However, in NY and MA, the plant has rarely been found to flower (NYNHP 2023, 2024; MNHESP 2015). It may rely on clonal growth to maintain its population as well as an open habitat (Voss 1996). More research is needed on the plant's life cycle, pollinators, and dispersal methods in NY.

Table 2. *Phenology of* Petasites frigidus *var.* palmatus (NYNHP 2023).

Phenology	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flowering				■	■							
Fruiting					■	■	■					

VI. Threats

Potential threats could be any changes in hydrology that flood or permanently dry up the wetland habitat.

Are there regulatory mechanisms that protect the species or its habitat in New York?

Yes:	No:	✓	Unknown:

If yes, describe mechanism and whether adequate to protect species/habitat:

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

Establish sufficient buffers around populations to preserve the undisturbed aspect and hydrology of their habitat.

Complete Conservation Actions table using IUCN conservation actions taxonomy at link below. Use headings 1-6 for Action Category (e.g., Land/Water Protection) and associated subcategories for Action (e.g., Site/Area Protection) - https://www.iucnredlist.org/resources/conservation-actions-classification-scheme

Table 3. *Recommended conservation actions for* Petasites frigidus *var.* palmatus.

Conservation Actions	
Action Category	**Action**
Land/water protection	1.1. Site/area protection
Land/water protection	1.2. Resource & habitat protection
Land/water management	2.1. Site/area management
Land/water management	2.2. Invasive/problematic species control
Land/water management	2.3. Habitat & natural process restoration

VII. References

This SSA drew heavily from these resources:

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