

Species Status Assessment

Common Name	wild sweet William	Date Updated:	2024-02-01
Scientific Name	<i>Phlox maculata</i> ssp. <i>maculata</i>	Updated By:	Rachael A. Renzi
Family	Polemoniaceae		

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

Wild sweet William is a perennial forb in the phlox family. It is one of six species of phlox in New York, yet one of four that are native to the state (Werier et al. 2023). It occurs throughout the eastern United States and Canada (NautreServe 2023). There are seven existing occurrences in the state, and 16 historical occurrences. Three of the verified occurrences have 100 plants or less (NYNHP 2023, 2024). Overall, there are a few thousand plants in NY (NYNHP 2023). It is extant in three counties: Lewis, Chautauqua, and Cattaraugus, but historically found in eight (NYNHP 2023; Homer 1924). Being a successional species, *Phlox maculata* ssp. *maculata* thrives in wet open habitats, such as fens, marshes, swamps, and even roadside seeps (NYNHP 2024). These habitats are susceptible to invasion, canopy closure, changes in hydrology, or even too-much mowing in the case of roadside habitats (NYNHP 2023, 2024). Alteration of the habitat, such as by forest succession or repeated human disturbance may play a role in the loss of some of this plant's populations. For this reason, prescribed fire during the plant's dormant season may play an important role in maintaining the populations (MNDNR 2018).

I. Status

a. Current legal protected Status

i. Federal:		Candidate:	
ii. New York:	<u>Threatened</u>		

b. Natural Heritage Program

i. Global:	<u>G5T4T5</u>		
ii. New York:	<u>S2</u>	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:

Phlox maculata ssp. *maculata* is Threatened in New York (Ring 2023). There are seven existing occurrences in the state, and 16 historical occurrences. Three of the verified occurrences have 100 plants or less (NYNHP 2023, 2024). Overall, there are a few thousand plants in NY (NYNHP 2023). It is extant in three counties: Lewis, Chautauqua, and Cattaraugus (NYNHP 2023). Being a successional species, *Phlox maculata* ssp. *maculata* thrives in wet open habitats, such as fens, marshes, swamps, and even roadside seeps (NYNHP 2024). These habitats are susceptible to invasion, canopy closure, changes in hydrology, or even mowing in the case of roadside habitats (NYNHP 2023, 2024). Alteration of their habitat, such as succession or repeated human disturbance may play a role in the loss of some of this plant's populations.

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	T	
Connecticut	Yes	Unknown	Unknown	Unknown	SNR	
Massachusetts	Yes	Unknown	Unknown	Unknown	SNR	
New Jersey	Yes	Unknown	Unknown	Unknown	S2	
Pennsylvania	Yes	Unknown	Unknown	Unknown	SNR	
Vermont	Yes	Unknown	Unknown	Unknown	SNR	
Ontario	Yes	Unknown	Unknown	Unknown	SNA	
Quebec	No	-	-	-		

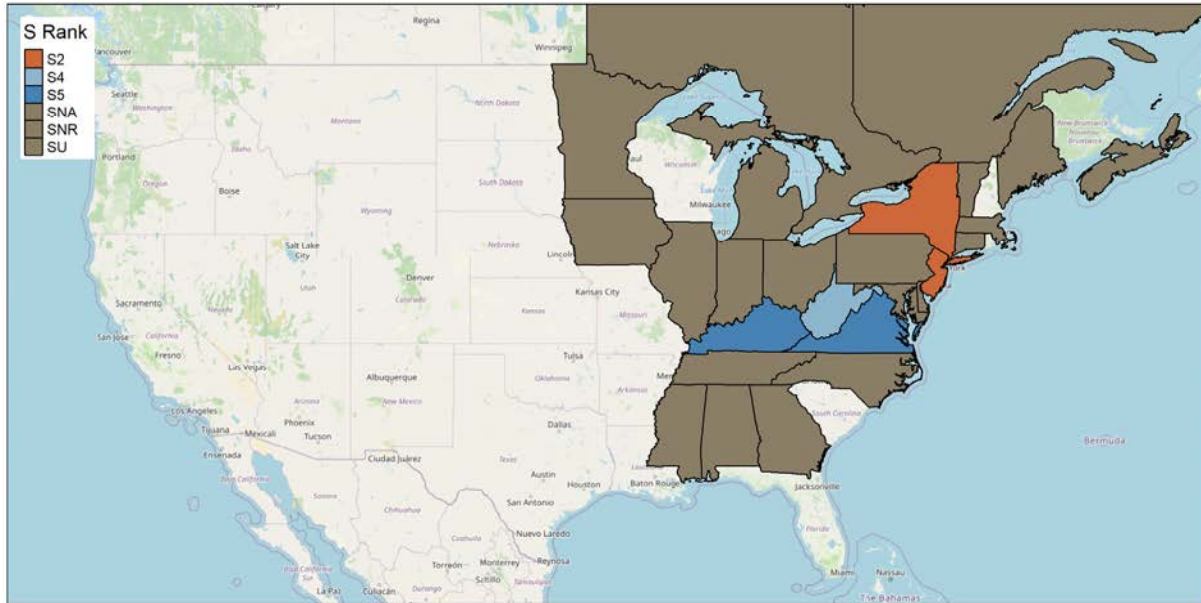


Figure 1: *Phlox maculata* ssp. *maculata* North American distribution.

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

III. NY Rarity and Trends

Trends Discussion

In 1924, the State Botanist Homer D. House described the occurrences of *Phlox maculata* throughout southern NY as “frequent.” It appears that the plant has become rarer over the last 100 years, due in part to loss of open wetland habitats (NYNHP 2023, 2024). There are now only 7 known existing populations and at least 16 historical occurrences (NYNHP 2023). Historical occurrences should be revisited, especially in the Tug Hill region, to assess habitat availability and survey for plants (NYNHP 2024). Three of the seven extant populations are “new” populations that have been discovered in 1993 or later (NYNHP 2023). It is unclear whether these new finds represent an upward trend or demonstrate a need for more surveys, as it is likely these populations existed before their recent documentation (NYNHP 2023, 2024). Of the extant populations, one has grown, while another has remained relatively stable over the last 100 years (NYNHP 2023). One population has declined in the number of plants, while another has become extirpated after repeated mowing (NYNHP 2023). Overall, it seems that *Phlox maculata* ssp. *maculata* has experienced a downward trend over the long term, but more data are needed to assess short-term trends across the state (NYNHP 2023).

Details of historic and current occurrence

In NY, *Phlox maculata* ssp. *maculata* is extant in three counties: Lewis, Cattaraugus, and Chautauqua (NYNHP 2023). It was frequently found in moist woods and along streams in southern NY 100 years ago, though it appears more rarely today (House 1924, NYNHP 2023). In the past, specimens were documented from eight counties, but House (1924) noted that

some of the northern and western NY records might have become established and naturalized by escaping from cultivation (Wherry 1932, House 1924). Its range is throughout the eastern U.S. west to Minnesota, Iowa, Illinois, Kentucky, Tennessee, and Mississippi, north into Ontario and Quebec (Kartesz 2015).

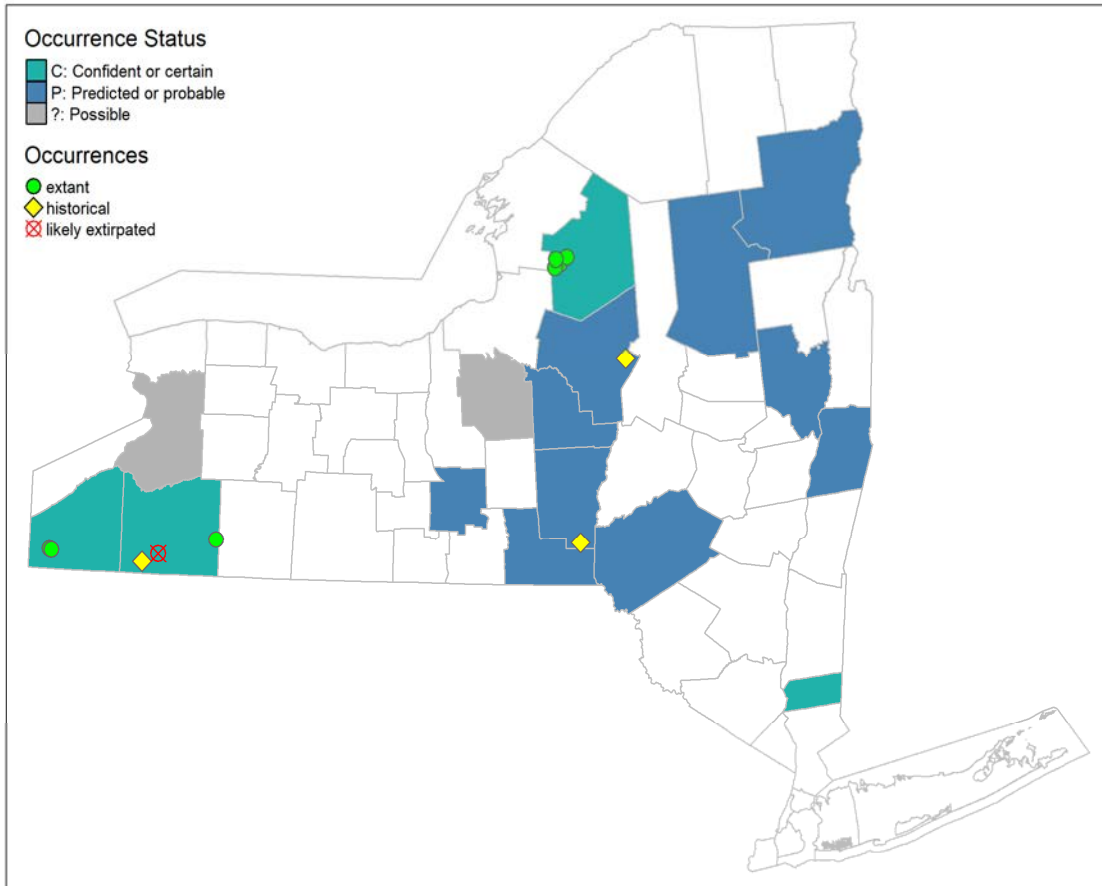


Figure 2: NYS distribution for *Phlox maculata ssp. maculata*.

Table 1. Number of records (element occurrences) of *Phlox maculata ssp. maculata* 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	9	11	1.1
1995-2004	3	3	0.3
2005-2014	3	1	0.1
2015-2023	1	1	0.1

Monitoring in New York

Two populations were surveyed in 2021, one was surveyed in 2005, and the remaining four were surveyed in 1991 or earlier (NYNHP 2023). Six populations are on land managed by the

NY DEC. The populations are not regularly monitored. Four populations have only been surveyed once (NYNHP 2023).

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

Northeastern Habitat Classification Macrogroup: Wet meadow / Shrub marsh.

NY Ecological Communities: Medium fen, Sedge meadow, Shrub 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 NY, this species has been found at open or shrubby wet sites, including fens, wet meadows, shrub swamps, cattail marshes, roadside seeps, and wet thickets (NYNHP 2024). Throughout North America, it is reported from low woods, wet meadows, and stream banks (Haines 1998; Gleason & Cronquist 1991). Voss (1996) reports that *Phlox maculata* ssp. *maculata* is very rare or local in fens and other wet places in Michigan. Wherry (1931) notes that it tends to grow in soil that is moist in spring, but dries out later in the season, and that the plants will die out if its moist habitat converts to forest.

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):

Phlox maculata ssp. *maculata* is a perennial forb. It tends to grow in open habitats; closure by forest succession may choke out the population (Wherry 1931; MNDNR 2018). It flowers in June and July, and because of the narrow corolla, is likely pollinated by long-tongued bees, butterflies, and moths (MDNDR 2018). Seeds are produced and dispersed in late summer and are likely dispersed by animals (NYNHP 2024; MNDNR 2018). The seeds may require cold stratification for germination but will germinate even under a thick layer of sod (MNDNR 2018).

Table 2. Phenology of *Phlox maculata* ssp. *maculate* (NYNHP 2023).

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

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