Species Status Assessment

Common Name	bristly smartweed	**Date Updated:**	2024-01-29
Scientific Name	*Persicaria setacea*	**Updated By:**	Rachael A. Renzi
Family	Polygonaceae		

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

Bristly smartweed (*Persicaria setacea*) is a perennial forb in the buckwheat family. It is named for its setaceous, or bristly, ocrea (Fernald 1950). It is one of 25 species of *Persicaria* in New York, and one of 12 that are native to the state (Werier et al. 2023). *P. setacea* is near the northeastern edge of its range in NY, yet it grows as far south to northern Argentina and southern Brazil (IPNI 2023). The plant tends to grow in shallow waters of pond shores, marshes, ditches, and stream corridors of red maple swamps in NY (NYNHP 2023, 2024). In the past, some sites have been lost due to alteration of the habitat, but no known threats exist of this plant today (NYNHP 2023, 2024). However, the overall trend for this plant in NY is negative (NYNHP 2023, 2024). There are 22 historical occurrences scattered throughout most of the state south of the Adirondacks, but only five populations are extant today (NYNHP 2023). The extant populations occur in Oswego, Wayne, and Suffolk Counties (NYNHP 2023, 2024). Four of the five populations are small; the most recent counts found zero plants at two sites, a dozen at a third site, 50 at the fourth, and hundreds at the fifth site (NYNHP 2023). The largest population proves the importance of surveying historic sites, as nearly 90 years passed before this population was resurveyed, updating it from its historical status to extant in 2018 (NYNHP 2023). In total, only a few hundred plants are known to exist in NY, and more surveys are needed to confirm this number (NYNHP 2023).

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**

ii. New York: Endangered

b. Natural Heritage Program

i. Global: G5

ii. New York: S1S2 **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:

Persicaria setacea is Endangered in New York (Ring 2023). There are five existing populations in the state, which make up the northern edge of the species' range. Two of these extant populations were visited more recently, yet no plants were found. There are 22 additional historical records from the late 1800s through the 1950s which need to be resurveyed. Two of the historical populations were visited in 1993 and 2006 yet no plants were found. One historical population no longer exists because its habitat has been destroyed. However, one historic population was found and re-ranked as extant in 2012. It is the largest population, with hundreds of plants.

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

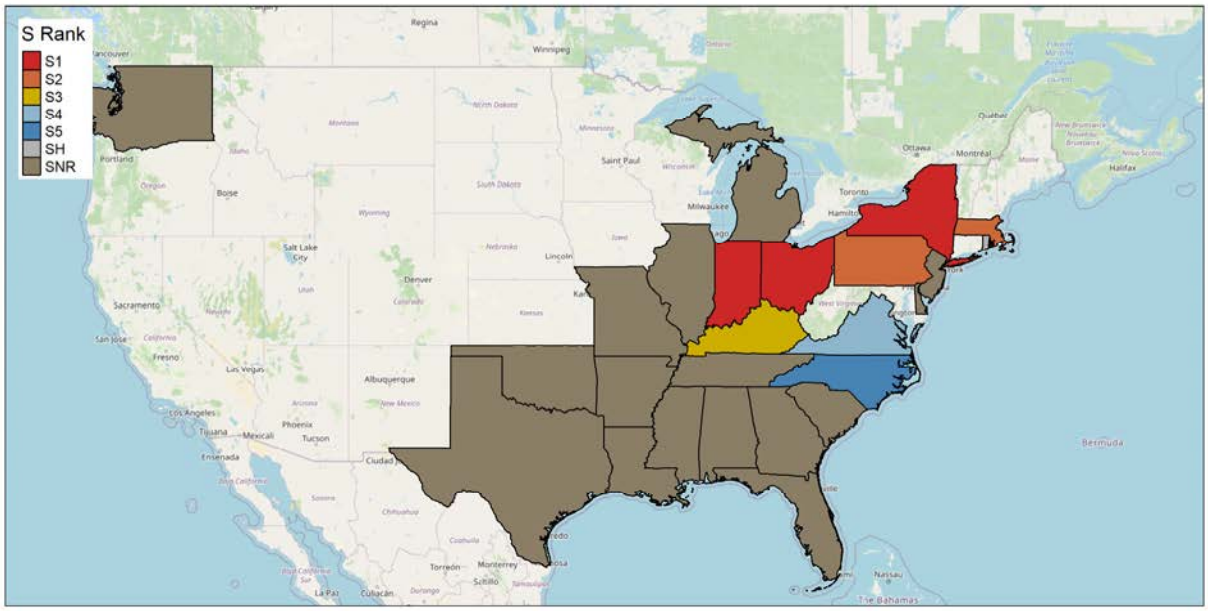

Figure 1: Persicaria setacea North American distribution.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	≥800km

III. NY Rarity and Trends

Trends Discussion

The long-term trend of this species is apparently negative. It seems to have severely declined over the last 100 years although more surveys to historic populations are needed to confirm this (NYNHP 2023, 2024). In 2012, one historic population on Long Island was found to have hundreds of plants (NYNHP 2023). This is now the largest known population in NY (NYNHP 2023). Recent surveys found no plants at two other known extant populations. This points to a negative trend in number of populations, but more surveys are needed to confirm that the plants no longer exist at those sites (NYNHP 2023).

Details of historic and current occurrence

Persicaria setacea ranges in the US from New York and Massachusetts in the northeast, south to Florida and west to Texas (NatureServe 2023). It is disjunct in Washington (NatureServe 2023). It appears farther south in Columbia, southern Brazil, and northern Argentina (IPNI 2023). It is considered globally secure (NatureServe 2023). In NY, it ranges from Long Island to just south of the Adirondacks. It is absent from the Southern Tier and many counties in eastern NY (NYNHP 2023, 2024). There are only five extant populations in NY, and most of the populations are small, with about 50 or less plants (NYNHP 2023). Recent visits to two of these populations found no plants; the habitat at one site was found altered (NYNHP 2023). Both sites are on Long Island (NYNHP 2023). Habitat modification and development extirpated some historical populations, yet surveys to additional historical populations are needed to update their status. There are 22 historical populations scattered throughout NY which have not been seen

since 1955 or earlier (NYNHP 2023). Though visits to two historical populations found no plants, one previously historical population last documented in the 1920s was found to have the largest population of *Persicaria setacea* in the state, with hundreds of plants extant in 2018 (NYNHP 2023). In total, there are no more than a few hundred plants in NY (NYNHP 2023).

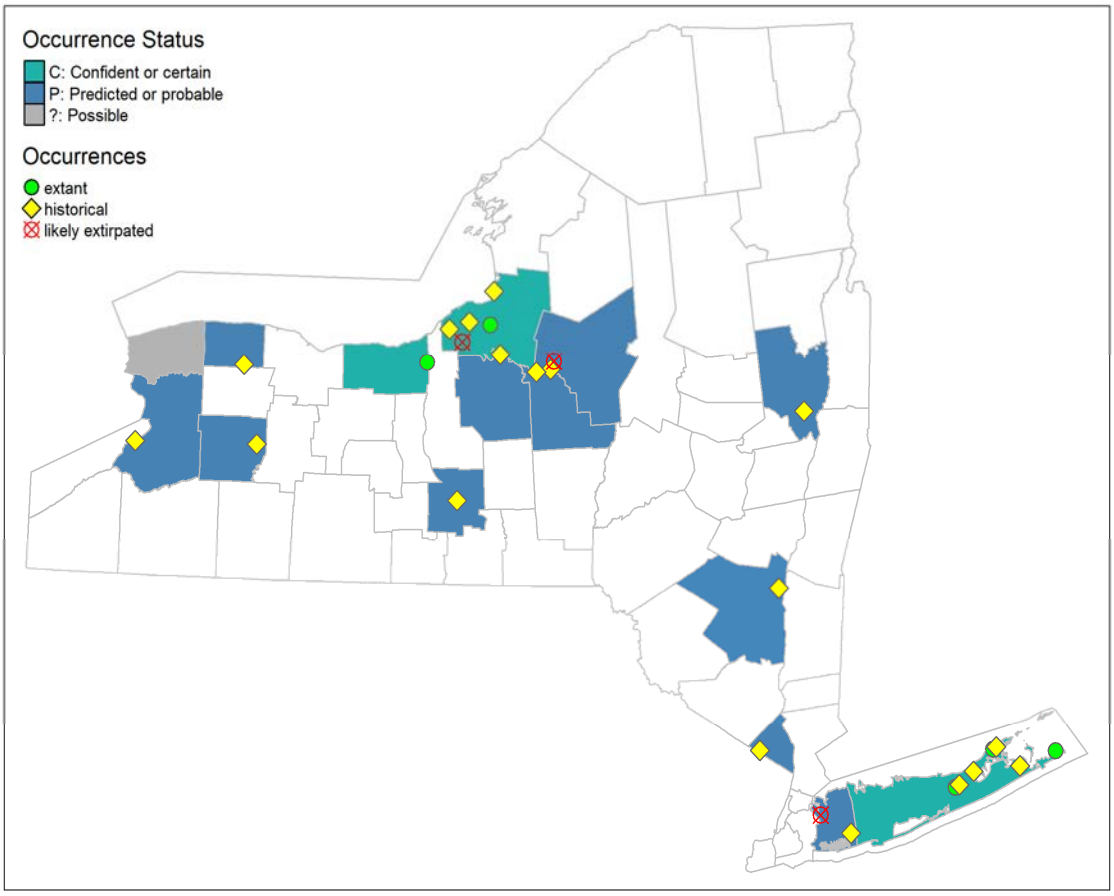

Figure 2. *NYS distribution for* Persicaria setacea.

Table 1. *Number of records (element occurrences) of* Persicaria setacea *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	24	27	2.7
1995-2004	3	3	0.3
2005-2014	1	1	0.1
2015-2023	1	1	0.1

Monitoring in New York

One population is in a nature preserve, and two are on municipal land. These populations are not monitored on a regular basis. Two populations have been visited at least three times since the 1920s. All the populations have been visited in or after 2000; in 2000, 2003, 2005, 2012, and 2018.

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

Northeastern Habitat Classification Macrogroups: Coastal plain pond, Central hardwood swamp, Emergent marsh.

NY Ecological Communities: Coastal plain pond shore, Ditch/artificial intermittent stream, Red maple-hardwood swamp, Shallow emergent marsh (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 species occurs in a variety of non-coniferous wetlands from pond shores to open marshes, ditches, and stream corridors within red maple swamps (NYNHP 2023, 2024). Throughout North America, *Persicaria setacea* is found in shallow waters of marshes, alluvial woods, and swamp forests (FNA 2005; Gleason & Cronquist 1991).

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):*

Swamp smartweed is a robust perennial wetland wildflower (NYNHP 2023). Its stems are formed by sending shoots out from the horizontal rhizome (Gibson 2024). It flowers in late summer and fruits in the fall (NYNHP 2023). Little is known about the life history of this species, and while many of the genus can form a persistent seed bank, variability within the genus makes it difficult to assume *P. setacea* does the same (Akari & Washitani 2001).

Table 2. *Phenology of* Persicaria setacea *in New York State (NYNHP 2023).*

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

VI. Threats

There are currently no known threats.

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:

Protect the wetland habitat of the species from development or changes in hydrology.

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

Establish and maintain natural buffers around the wetlands where this species occurs to preserve the natural hydrology and to keep out wetland invasive species.

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* Persicaria setacea.

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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