

Species Status Assessment

Common Name American spearwort **Date Updated:** 2024-02-27
Scientific Name *Ranunculus ambigens* **Updated By:** Rachael A. Renzi
Family Ranunculaceae

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

American spearwort is one of 24 species of *Ranunculus* in New York, and one of 17 considered native to the state (Werier et al. 2023). It is in the buttercup family. *Ranunculus ambigens* is near the northeastern edge of its range in NY, and it is endangered, historical, or even extirpated north of KY (NatureServe 2023).

This perennial herb grows in wet places such as water bodies shores, ditches, swamps, marshes, meadows, and fields (Native Plant Trust 2020; FNA 1993). In NY it is known historically from Cattaraugus, Oswego, and Suffolk Counties, but only from one population in Rockland County today. While the historical populations may still exist, they have not been visited since the 1940s or before. More surveys are needed, at both the extant and historical sites, to determine trends in NY. Overall, the high ratio of historical to extant records suggest a downward trend in NY (NYNHP 2023).

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**
ii. New York: Unlisted

b. Natural Heritage Program

i. Global: G4
ii. New York: S1S2 **Tracked by NYNHP?** On Active Tracking List

Other Ranks:

COSEWIC: Not listed in Canada
IUCN Red List: Least Concern

Status Discussion:

There is one extant population, last seen in 1994, in Harriman State Park. There are at least 26 historical occurrences (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	S1	
Massachusetts	Yes	Unknown	Unknown	Unknown	SH	
New Jersey	Yes	Unknown	Unknown	Unknown	S1	
Pennsylvania	Yes	Unknown	Unknown	Unknown	S2	
Vermont	No	-	-	-		
Ontario	No	-	-	-		
Quebec	No	-	-	-		

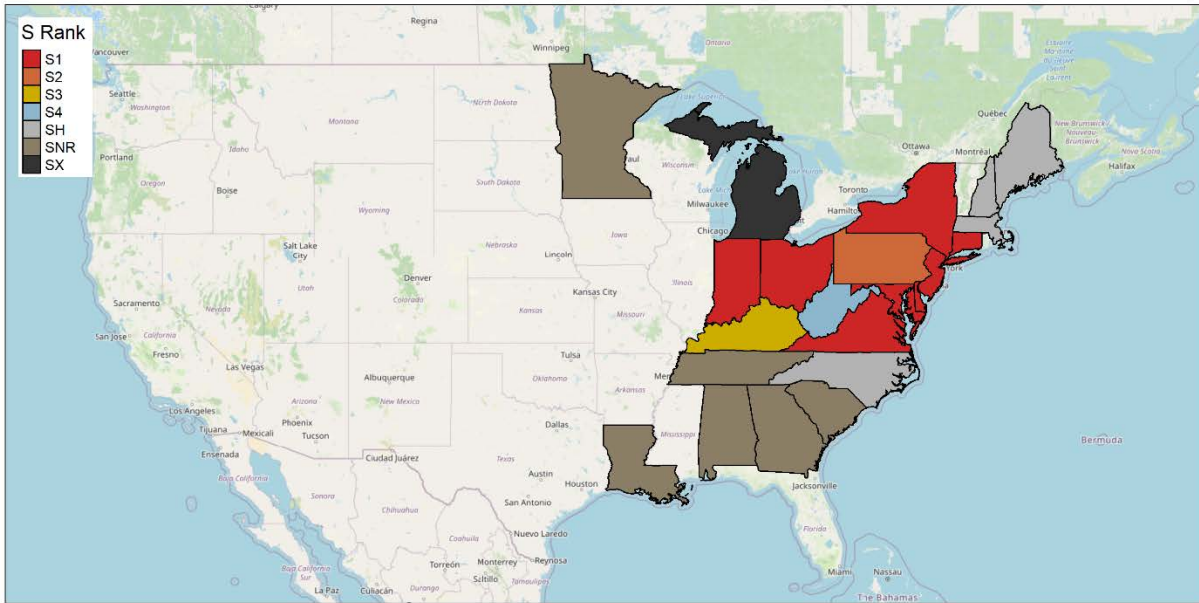


Figure 1. *Ranunculus ambigens* North American distribution.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	≥1000km

III. NY Rarity and Trends

Trends Discussion

There are not enough data to determine a trend in New York, as all of the occurrences have only been visited once, and most were visited between 1835 and 1947 (NYNHP 2023). The extant occurrence was last visited in 1994 (NYNHP 2023). The historical populations need to be revisited in order to determine their status.

Details of historic and current occurrence

Historically, populations were scattered throughout southern New York, but only one population is currently known as extant. It is unknown how many plants currently exist. Securing this population may keep its status from becoming historical like those of nearby New England states (NYNHP 2023).

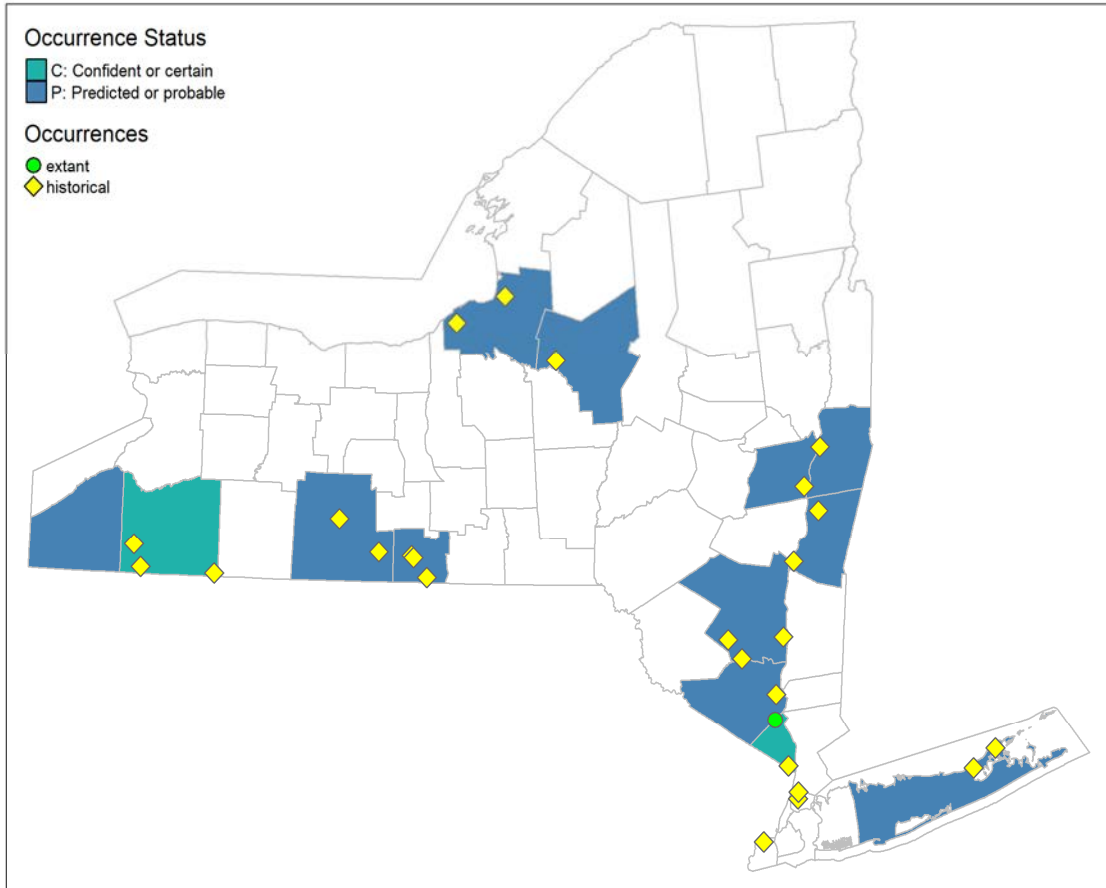


Figure 2. NYS distribution for *Ranunculus ambigenus*.

Table 1. Number of records (element occurrences) of *Ranunculus ambigenus* 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	26	49	5
1995-2004	0	0	0
2005-2014	0	0	0
2015-2023	0	0	0

Monitoring in New York

The lone known extant population occurs on State Park lands and currently is monitored on a 5 to 10-year cycle (NYNHP 2023).

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

Habitat or Community Type Trend in New York

Declining: Stable: Increasing: Unknown: ✓
 Time Frame of Decline/Increase:
 Habitat Specialist Yes: ✓ No:

Habitat Discussion:

Marshes, meadows and fields, shores of rivers or lakes, swamps (Native Plant Trust 2020). Creeks, ponds, ditches, marshes (FNA 1993).

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):

Ranunculus ambigens is a perennial herb species. It flowers from July to August and produces seeds shortly after (NYNHP 2023). The stems are decumbent, and the plant roots at the nodes (Whittemore 2020; Fernald 1936). In other *Ranunculus* species, the plants overwinter as rosettes, then produce stolons in late spring, which root at the nodes to produce daughter plants. Young plants, especially seedlings, tended to have a higher death rate than mature plants (Sarukhán and Harper 1973). More research is needed on the life cycle of this rare *Ranunculus* species in particular in the state.

Table 2. Phenology of *Ranunculus ambigens* in New York State (NYNHP 2023).

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

VI. 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:

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

More research is needed regarding threats to *Ranunculus ambigens* in NY.

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 *Ranunculus ambigenus*.

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:

New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry. 2023. Element Occurrence and Element Dataset. Albany, New York. [Exported 12/14/2023].

NatureServe. 2023. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. [Accessed 12/14/2023].

Werier, David, Kyle Webster, Troy Weldy, Andrew Nelson, Richard Mitchell, and Robert Ingalls. 2023 New York Flora Atlas. [S. M. Landry and K. N. Campbell (original application development), USF Water Institute. University of South Florida]. New York Flora Association, Albany, New York. [Accessed 11/21/2023].

Additional references:

Fernald, M. L. 1936. Contributions from the gray herbarium of Harvard University—no. CXIII. A new pondweed from Tennessee; *Pilea* in eastern North America; Memoranda on *Ranunculus*; The nomenclature of *Sassafras*; Memoranda on *Aruncus*; Studies in *Solidago*; Memoranda on *Antennaria*; Varieties of *Gnaphalium obtusifolium*; Minor forms and transfers. Contributions from the Gray Herbarium of Harvard University, 113, 165–239. <http://www.jstor.org/stable/41764186>

Ring, Richard M. 2023. New York Rare Plant Status Lists. New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry, Albany, NY. December 2023. 108 pp.

Sarukhan, Jose, and John L. Harper. 1973. Studies on Plant Demography: *Ranunculus repens* L., *R. bulbosus* L. and *R. acris* L.: I. Population flux and survivorship. Journal of Ecology. Vol. 61 (3). Pp 675-716. <http://www.jstor.org/stable/2258643>

Whittemore, Alan T. *Ranunculus ambigens*. In: Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico [Online]. 25+ vols. New York and Oxford. Vol. 3. http://floranorthamerica.org/Ranunculus_ambigens Accessed [3/21/2024].