Species Status Assessment

Common Name	spreading chervil	**Date Updated:**	2024-01-10
Scientific Name	*Chaerophyllum procumbens var. procumbens*	**Updated By:**	Kyle J. Webster
Family	Apiaceae		

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

Spreading chervil (*Chaerophyllum procumbens* var. p*rocumbens*) is an annual forb/herb in the Carrot Family (Apiaceae). *Chaerophyllum procumbens* occurs from the plains states of Nebraska, Kansas, and Oklahoma east and north to Iowa, Wisconsin, Ontario, and New York and south to Florida, Georgia, Alabama, and Mississippi (NYNHP 2023). It has two recognized varieties (Kartesz 1999). *C. procumbens* var. p*rocumbens* can be found throughout the range of *C. procumbens* (NatureServe 2023) and is the only variety known from New York (Werier et al. 2023). *C. procumbens* var. *shortii* is thought to be restricted to the Midwest (NatureServe 2023) and it not known from New York (Werier et al. 2023).

Chaerophyllum procumbens var. p*rocumbens* is seemingly restricted to rich floodplain forests in New York (Edinger et al. 2014, NYNHP 2023, 2024, Werier et al. 2023). There is currently only one extant population known from the state, consisting of 20-25 individuals when last surveyed in the 1990s (NYNHP 2023). None of the historical occurrences have been found, and two occurrences are presumed extirpated.

This species has always been rare in New York; however, it has clearly declined since the late 1800's (NYNHP 2023). The short-term trends are unknown. More surveys of historical populations and return visits to the extant population are needed to assess the short and long-term trends of *Chaerophyllum procumbens* var. p*rocumbens* in New York.

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:

Chaerophyllum procumbens var. procumbens is Endangered in New York (Ring 2023). There is one extant and seven historical occurrences in NY. The extant population occurs on private land and is very small, consisting of 20-25 individuals. None of the historical occurrences have been found and at least two are presumed extirpated.

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	No	-	-	-		
New Jersey	Yes	Unknown	Unknown	Unknown	S3	
Pennsylvania	Yes	Unknown	Unknown	Unknown	S5	
Vermont	No	-	-	-		
Ontario	Yes	Unknown	Unknown	Unknown	S1	
Quebec	No	-	-	-		

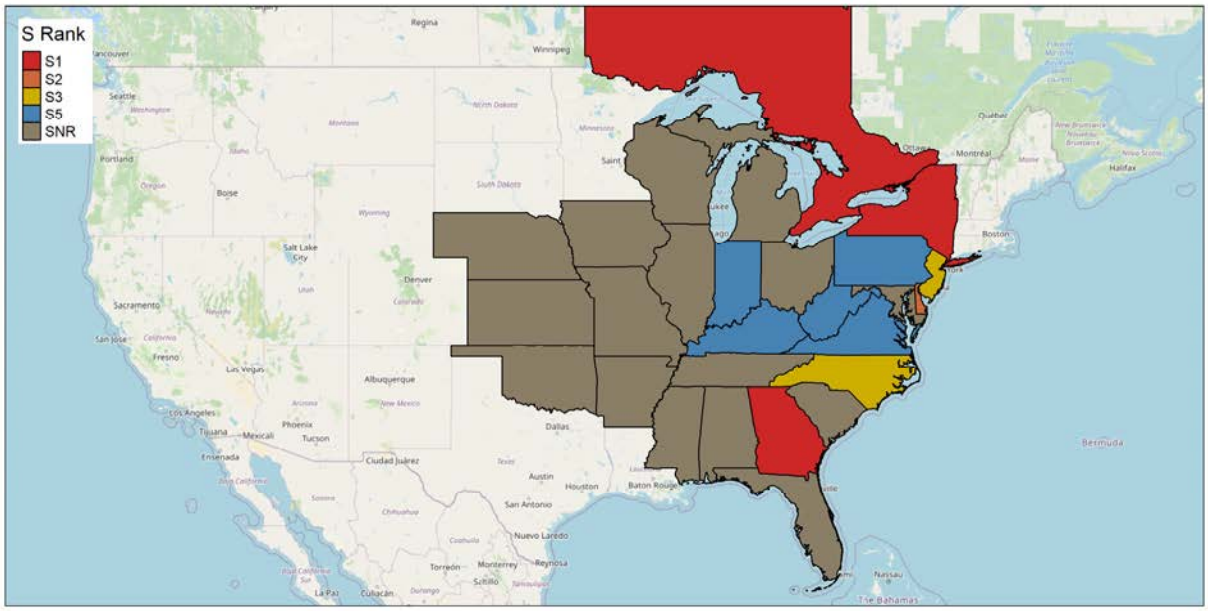

Figure 11: Chaerophyllum procumbens *var.* procumbens *North American distribution.*

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

Trends Discussion

The short-term trends for this species are unknown. The only verified extant site has been visited once, in the late 1990's. Population counts are lacking for all but this extant site. This species has clearly declined since the late 1800's, when most of the historical collections were made. Only one verified site is known, one historical occurrence was revisited twice but the population was not relocated, and another site was lost to development (NYNHP 2023). The other six historical sites have not been surveyed for. More surveys of historical populations and return visits to the extant population are needed to assess the short and long-term trends of *Chaerophyllum procumbens* var. p*rocumbens*.

Details of historic and current occurrence:

New York lies at the northern edge of *Chaerophyllum procumbens* var. p*rocumbens* range and records of its collection are limited to scattered locations in central and western New York. Occurrences have been documented in Chemung, Genesee, Monroe, Onondaga, Tompkins, and Wayne County. *Chaerophyllum procumbens* var. p*rocumbens* is currently only extant in Genesee County. There are approximately 20-25 individuals present in the state.

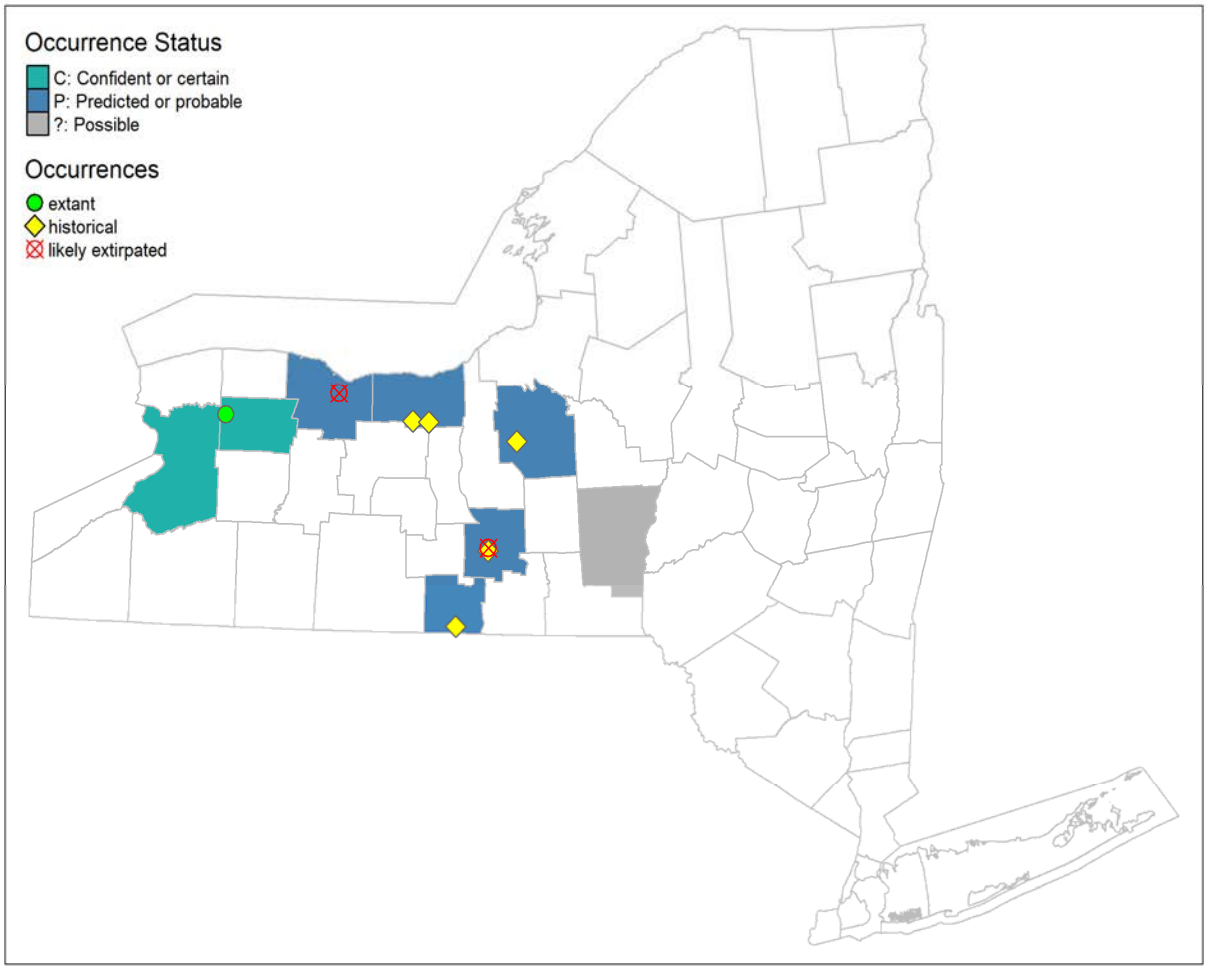

Figure 22: *NYS distribution of* Chaerophyllum procumbens *var.* procumbens.

Table 1. *Number of records (element occurrences) of* Chaerophyllum procumbens *var.* procumbens *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	0	0	0.0
2015-2023	0	0	0.0

Monitoring in New York

The only population in New York occurs on private land, is not regularly monitored, and has not been surveyed since 1998 (NYNHP 2023). More surveys are needed.

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

NY Natural Heritage Communities: Floodplain forest.

Habitat or Community Type Trend in New York

Declining:	**Stable:**	**ncreasing:**	**Unknown:** ✓

Time frame of decline/increase:

Habitat Specialist	**Yes:** ✓	**No:**

Habitat Discussion:

In New York, *Chaerophyllum procumbens* var. p*rocumbens* is only known to occur in rich floodplain forests (Edinger et al. 2014, NYNHP 2023, 2024, Werier et al. 2023). Moist woods and alluvial soil (Gleason and Cronquist 1993). Alluvial forests (Weakly 2023).

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):*

Chaerophyllum procumbens var. p*rocumbens* is an obligate winter annual (NYNHP 2023, Baskin et al. 2004) and one of the true spring ephemerals in the New York flora (Werier et al. 2023). Overall, very little information regarding this species is available. Baskin et al. (2004) provides information regarding the seed and germination ecology of the closely related *Chaerophyllum procumbens* var. *shortii* which is assumed here to also apply to *Chaerophyllum procumbens* var. p*rocumbens.* More research is needed research regarding the demographics and natural history of *Chaerophyllum procumbens* var. p*rocumbens* in New York.

The plants flower in May, produce mature fruit in June, and then senesce shortly thereafter (NYNHP 2023). The seeds of C. *procumbens* are then dispersed by wind or simple gravity, germinating that fall after exposure to summer temperatures (Baskin et al. 2004). The warm temperatures of summer are required for seeds to break dormancy (Baskin et al. 2004). Wisconsin populations also confined to floodplain forests experienced repeated submergence due to flooding prior to their fall germination (Baskin et al. 2004). Juvenile plants are winter-green and remain photosynthetically active above ground during winter (Baskin et al. 2004). This fall germination paired with active winter growth provides the plants additional time needed to fully flower and produce immature fruit by the time of canopy closure in May (Baskin et al. 2004).

Chaerophyllum procumbens var. p*rocumbens* has a large suite of potential pollinators including long and short-tongued bees, wasps, ants, flies and beetles (Hilty 2019, Wilhelm and Rericha 2017). Insect pollinators would only include species present in the early spring.

***Table** 2. Phenology of* Chaerophyllum procumbens *var.* procumbens *in New York State (NYNHP 2023).*

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

VI. Threats

No specific threats have been identified due to a lack of data. Given its habitat preference for floodplain forests, similar threats known to be impacting those communities are likely also threatening *Chaerophyllum procumbens* var. p*rocumbens*. These include the establishment and spread of invasive species, disruption of the hydrology within the floodplain, and logging. Small population size likely makes this species vulnerable to extirpation.

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:

The forest understory where this species occurs should be left undisturbed. Monitor and control the spread of invasive exotic plant species within the stands where this species occurs. Maintain the hydrologic integrity of the river and associated floodplain.

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 2. *Recommended conservation actions for* Chaerophyllum procumbens *var.* procumbens*.*

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:
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].

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].

New York Natural Heritage Program. 2024. Online Conservation Guide for Chaerophyllum procumbens. Available from: https://guides.nynhp.org/spreading-chervil/. [Accessed 01/10/2024].

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:
Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Gleason, Henry A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. The New York Botanical Garden, Bronx, New York. 910 pp.

Hilty, John. 2019. Flower-Visiting Insects of Wild Chervil. Insect Visitors of Illinois Wildflowers. https://www.illinoiswildflowers.info/flower_insects/plants/wild_chervil.htm. [Accessed 12/14/2023].

Holmgren, Noel. 1998. The Illustrated Companion to Gleason and Cronquist's Manual. Illustrations of the Vascular Plants of Northeastern United States and Adjacent Canada. The New York Botanical Garden, Bronx, New York.

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.

Wilhelm, Gerould, & Laura Rericha. 2017. Flora of the Chicago Region: A Floristic and Ecological Synthesis. Indiana Academy of Science. 1392 pp.

Voss, E.G. & A.A. Reznicek. 2012. Field Manual of Michigan Flora. The University of Michigan Press. Ann Arbor, Michigan. 990 pp.

Weakley, A.S. 2020. Flora of the southeastern United States. University of North Carolina Herbarium, North Carolina Botanical Garden, Chapel Hill, NC. Available from: https://ncbg.unc.edu/research/unc-herbarium/floras/