

Species Status Assessment

Common Name	small white snakeroot	Date Updated:	2024-03-19
Scientific Name	<i>Ageratina aromatica</i>	Updated By:	Richard M. Ring
Family	Asteraceae		

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

Small white snakeroot (*Ageratina aromatica*) is a perennial herb in the aster family (Asteraceae). It is one of just two species of *Ageratina* found in New York. In older taxonomic treatments the species was considered part of the genus *Eupatorium*. Small white snakeroot is currently known only from eastern Suffolk County, on Long Island, although there are historical records from the western Long Island, the New York City area, and Westchester County. The short term trend for the species is upward, albeit with only four known extant populations, and with more than 29 historical records, the long-term trend is downward. In New York *Ageratina aromatica* has been found growing at forest edges, including mown roadsides and trails, as well as in open, sandy woodlands. Elsewhere in the northeast it has been reported from dry, open woods, including burned sites (NYNHP 2024, Gleason and Cronquist 1991, Craine 2003).

I. Status

a. Current legal protected Status

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

b. Natural Heritage Program

i. Global:	<u>G5</u>		
ii. New York:	<u>S1</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:

Ageratina aromatica is Endangered in NY (Ring 2023). There are four occurrences considered extant in NY, although two of them have not been documented since 1992. There are 29 historical occurrences dating 1868 to 1936, all from Long Island or New York City. Each of the

known occurrences are small, ranging from a few plants to at most a dozen. Extensive development in this part of the state has greatly impacted the available habitat for Small White Snakeroot in NY (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	S1	
New Jersey	Yes	Unknown	Unknown	Unknown	S1	
Pennsylvania	Yes	Unknown	Unknown	Unknown	S2	
Vermont	No	-	-	-		
Ontario	No	-	-	-		
Quebec	No	-	-	-		

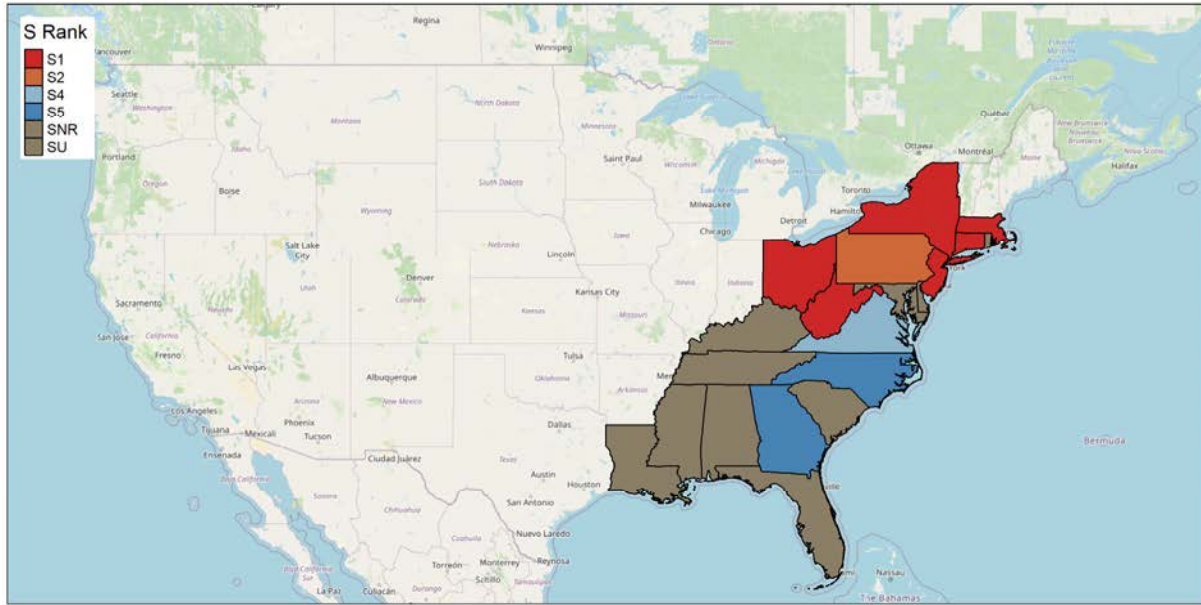


Figure 1 1: *Ageratina aromatica* North American distribution.

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

III. NY Rarity and Trends

Trends Discussion

Short term trends (<100 years)

Small white snakeroot was not documented in New York between 1936 and its rediscovery in 1991 – with four small populations now considered extant, the short term trend has been increasing, albeit still very limited in terms of number and overall size of populations. Three of the extant populations were not fully censused upon discovery, and the known extant populations is only a few dozen plants at most (NYNHP 2023).

Long term trends

With approximately 29 historical records from the late 19th and early 20th centuries, and only four known extant sites, the long term trend for this species appears to be decreasing. However additional field work is needed to search the many remaining historically known sites to fully elucidate the long term trends for small white snakeroot in the state. Despite extensive development in the NYC and Nassau County areas, there is still extensive barrens habitat present in Suffolk County which may harbor additional populations of this species.

Details of historic and current occurrence:

Comments on range: *Ageratina aromatica* is common in the southeastern U.S. and reaches the northeastern limit of its range in eastern NY and MA, where it is extremely rare. In NY it is

currently known only from Suffolk County on eastern Long Island, but it was historically known west to New York City and Staten Island, with a report from Westchester County.

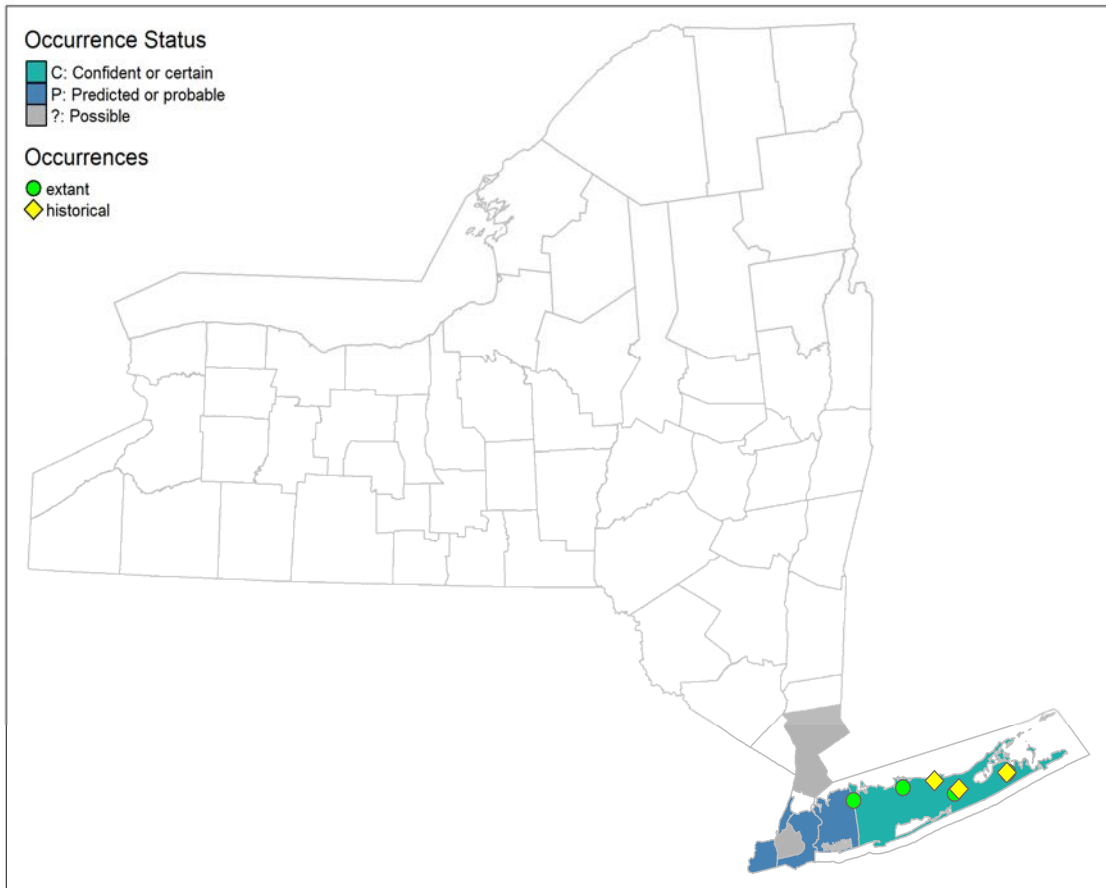


Figure 2 2: NYS distribution for *Ageratina aromatica*.

Table 1. Number of records (element occurrences) of *Ageratina aromatica* 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	31	5	0.5
1995-2004	0	0	0.0
2005-2014	1	1	0.1
2015-2023	1	1	0.1

Monitoring in New York

None of the known extant populations are currently monitored regularly, and two have not been found since the early 1990s.

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

NatureServe broad habitat types: Forest Edge, Forest - Hardwood, Old field, Forest/Woodland, Woodland - Hardwood, Savanna, Woodland – Mixed (NatureServe 2023).

NY Ecological Communities: Coastal oak-hickory forest, Pitch pine-scrub oak barrens, Coastal oak-heath forest (Edinger et al. 2014).

Habitat or Community Type Trend in New York

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

Habitat Discussion:

More information is needed on the habitat preferences of Small White Snakeroot in New York. It has been found growing on mowed roadsides, old railroad corridors that are now trails, and in dry woods (New York Natural Heritage Program 2024). In New England, the habitat for small white snakeroot is dry, open woods, primarily on south-facing, rocky hillsides or at the bases of rock ledges, usually in relatively sunny spots within oak-hickory forests (Craine 2003). In North America, the habitat is sandy soils, burned pinelands, turkey oak sand ridges, pine-oak and oak-hickory upland woods, old fields, roadsides, fencerows, moist sites (FNA 2006). Its habitat has also been described in dry woods, especially in sandy soil (Gleason and Cronquist 1991). In the southeast U.S., *Ageratina aromatica* occurs in woodlands and forests, usually xeric, and often fire-maintained, longleaf pine sandhills, and also woodland edges (Weakley 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):

Ageratina aromatica is a perennial wildflower species, with most plants surviving 5 to 10 years. It typically is found in clusters with stems of various ages all derived from a single genet (Craine 2003). It produces tiny white flowers grouped into dense heads, pollinated by bumbles and wasps. More research is needed to learn whether the species is self-compatible – that is, whether it requires fertilization via pollen from different individuals. If it is not self-compatible, the small and scattered populations of this species in NY may have difficulty reproducing sexually. Small white snakeroot can spread vegetatively via rhizomes, but is dependent on sexual reproduction from seeds to colonize new areas and to persist over time (Craine 2003). More information is needed on this species' dispersal abilities; given the small (3mm) seeds topped by fine hairs, they likely are primarily wind-dispersed, and if fully fertilized a single stem could produce up to 1500 seeds (Craine 2003). Small white snakeroot's ability to persist in the seedbank is unknown.

Table 2. Phenology of *Ageratina aromatica* in New York State (NYNHP 2023).

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

VI. Threats

Fire suppression is a threat to this disturbance-dependent species, as is colonization of disturbed sites by invasive species which thrive in ruderal habitats. Destruction of forests due to development is a potential threat to *Ageratina aromatica*'s habitat, although the known extant sites occur on conserved lands. The small and scattered populations suggest that genetic inbreeding of the remaining populations is likely a threat. Deer herbivory has been shown to prevent reproduction in Massachusetts populations of this species (Craine 2003), and is a threat to NY populations as well.

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)

This species grows in early successional habitats and management strategies should include methods to prevent natural succession from eliminating plants. Prescribed fire may be one strategy that would benefit the *Ageratina aromatica* and its habitat. Existing sites should be monitored and invasives species management conducted where needed, as well as protection from human disturbance.

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 *Ageratina aromatica*.

Conservation Actions	
Action Category	Action
Land/water protection	1.1. Site/area protection
Land/water protection	1.2. Resource & habitat protection

Conservation Actions	
Action Category	Action
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].

New York Natural Heritage Program. 2024. Online Conservation Guide for *Ageratina aromatica*. Available from: <https://guides.nynhp.org/small-white-snakeroot/> [Accessed 01/10/2024].

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:

Craine, Stephen I. 2003. *Ageratina aromatica* (L.) Spach(Lesser Snakeroot) Conservation and Research Plan for New England. New England Wildflower Society, Framingham, MA. 31pp.

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.

Flora of North America Editorial Committee. 2006. Flora of North America North of Mexico. Vol. 21. Magnoliophyta: Asteridae, Part 8: Asteraceae, part 3. Oxford Univ. Press, New York. xxii + 616 pp.

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.

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.

Mitchell, Richard S. 1986. A checklist of New York State plants. Bulletin No. 458. New York State Museum. 272 pp.

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.