## **Species Status Assessment**

Common Name southern wild comfrey Date Updated: 2024-03-14

Scientific Name Andersonglossum virginianum Updated By: Richard M. Ring

Family Boraginaceae

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

Southern wild comfrey, *Andersonglossum virginianum*, is a perennial herb in the Borage family Boraginaceae). There are three North American species in the genus *Andersonglossum*, and only two in New York, both of which are rare. The two (*A. virginianum* and *A. boreale*) were previously considered to be varieties of the same species, but are now considered to be distinct (Natureserve 2023). Southern Wild Comfrey reaches the northeastern limit of its range in NY state, and is found south to Florida, and west from Texas to Illinois.

Herbarium records indicate that the species has always been rare in NY, with historical records concentrated in the New York City region and Long Island. The only extant record, first documented by NY Natural Heritage Program in 2022, occurs in Dutchess County in the lower Hudson Valley. Many of Southern Wild Comfrey's historical populations have likely been extirpated by development, though there is still abundant habitat in the lower Hudson Valley. The extant population occurs in a rocky oak-hickory forest, where it is threatened by encroaching invasive species (NYNHP 2023).

## 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:**

Southern wild comfrey (*Andersonglossum virginianum*) is Endangered in New York (Ring 2023). There is only one extant population, and at least four historically known populations. The extant population, first surveyed by NYNHP in 2022, had a population of 179 plants then, and was threatened by nearby invasive barberry and swallowwort plants. The historical records are mostly from the New York City area and Long Island, with two questionable early records from Ontario and Cortland Counties in central NY.

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

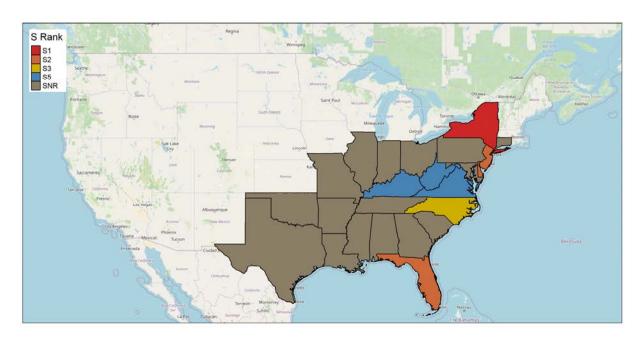


Figure 1 1: Andersonglossum virginianum North American distribution.

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**

## Short term trends (<100 years)

The rediscovery of this species as extant in NY at a previously unknown location in 2022 represents an increasing short-term trend, albeit from zero to a single known location. There are no specific locations to search for the historical collections (NYNHP 2023).

## Long term trends

Southern wild comfrey has always been rare in NY. The few historical collections of the species from the state are over 100 years old, and have not been documented since, so the long term trend appears to be downward.

#### **Details of Historic and Current Occurrence**

New York is at the northeastern edge of southern wild comfrey's range. Historically the species was only collected from Staten Island and nearby Long Island. In 2022 it was documented for the first time from Dutchess County in the Hudson Valley. There are two unconfirmed historical records from Cortland and Ontario Counties in central NY, though these may represent misidentifications or escapes from cultivation (NYNHP 2023).

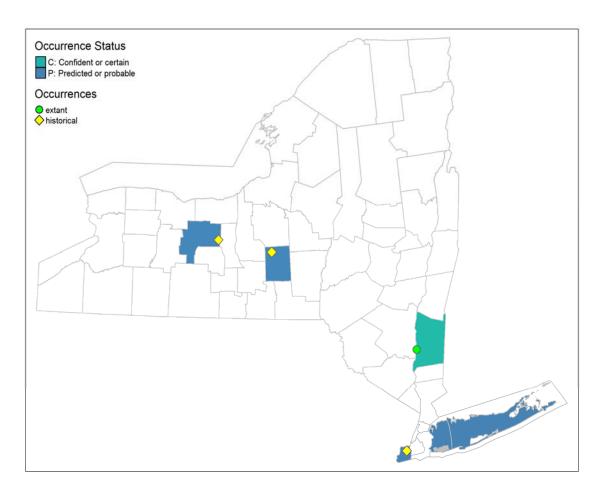


Figure 22: NYS distribution for Andersonglossum virginianum.

**Table 1.** Number of records (element occurrences) of Andersonglossum virginianum 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	3	9	0.9
1995-2004	0	0	0.0
2005-2014	0	0	0.0
2015-2023	1	1	0.1

## **Monitoring in New York**

There is no regular monitoring program for the lone known extant site in the state, which is on private land. Monitoring and management are badly needed to protect the existence of this species in the NY.

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

NY Ecological Communities: Appalachian oak-hickory forest, Coastal oak-beech forest, Limestone woodland, Oak-tulip tree forest, Post oak-blackjack oak barrens (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:**

The only known extant plant in NY occurs in a rocky oak-hickory woods on a south-facing slope, associated with *Cornus florida, Circaea canadensis, Carex* species, and the non-native species *Berberis thunbergii, Cardamine impatiens,* and *Cynanchum laeve* (New York Natural Heritage Program 2005, NYNHP 2023). Research suggests that canopy gaps may provide important microhabitat for the persistence or spread of populations of southern wild comfrey (Whigham *et al* 1993).

Elsewhere in its range it has been reported from rich open woods and wooded slopes (Rhoads and Block 2000), or simply upland woods (Gleason and Cronquist 1991), and open deciduous woods (Fernald 1970).

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):

Southern wild comfrey is a perennial herb species. Patches may persist for decades (NYNHP 2023). It does not reproduce or spread asexually by clones. Other members of the *Andersonglossum* genus have been found to be primarily pollinated by bees of the genus *Bombus*, and also found to be self-compatible, although this has not been studied specifically for Northern wild comfrey (Abrams and Brumback 2000). The flowers produce nutlets, covered in bristly hairs and dispersed via attachment to animal fur or human clothing.

Table 2. Phenology of Andersonglossum virginianum in New York (NYNHP 2023).

•	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flowering												
Fruiting												
Vegetative												

## VI. Threats

The one known extant population is protected from development in a private preserve, but is threatened by adjacent populations of invasive barberry and swallowwort (NYNHP 2023). Herbivory by deer is also a potential threat, although *Andersonglossum* plants contain alkaloids which may inhibit herbivory (van Dam *et al.* 1995). The historical populations and suitable habitat within the apparent range of this plant have been subject to intense commercial and residential development. Collection by humans for medicinal purposes may also be a threat to this species.

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:

Invasive species need to be kept away from the site in Dutchess County. Regular monitoring of that known site, and surveys at historical sites, are needed.

(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 Andersonglossum virginianum.

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:

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.

Fernald, M.L. 1950. Gray's manual of botany. 8th edition. D. Van Nostrand, New York. 1632 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.

Reschke, Carol. 1990. Ecological communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation. Latham, NY. 96 pp. plus xi.

Rhoads, Ann F. and Timothy A. Block. 2000. The Plants of Pennsylvania, an Illustrated Manual. University of Pennsylvania Press, Philadelphia, PA.

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.

USDA, NRCS. 2004. The plants database, version 3.5 (http://plants.usda.gov) http://plants.usda.gov/. National Plant Data Center http://npdc.usda.gov/npdc/index.html, Baton Rouge, LA 70874-4490 USA.

van Dam, N.M., Vuister, L.W.M., Bergshoeff, C. *et al.* 1995. The "Raison D'être" of pyrrolizidine alkaloids in *Cynoglossum officinale:* Deterrent effects against generalist herbivores. *J Chem Ecol* **21**, 507–523 https://doi.org/10.1007/BF02033698

Whigham, D.F., O'Neill, J. and Cipollini, M.L., 1993. Role of tree gaps in maintaining the population structure of a woodland herb: Cynoglossum virginianum L. *Plant Species Biology*.