Species Status Assessment

Common Name	northern wild comfrey	**Date Updated:**	2024-03-13
Scientific Name	*Andersonglossum boreale*	**Updated By:**	Richard M. Ring
Family	Boraginaceae		

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

Northern wild comfrey *(Andersonglossum boreale)* is a perennial herb species in the Borage family. It is one of only two species of *Andersonglossum* found in New York; the two were formerly classified as varieties of the same species, but are now regarded as distinct (Werier *et al.* 2024). NY is near the southern limit of the northern wild comfrey's range; it was known historically from New Jersey, Pennsylvania, and Ohio, but is no longer (Natureserve 2024). Within NY, northern wild comfrey was formerly known from much of the state, but is now apparently restricted to northern NY (NYNHP 2023). There are only four known extant populations in NY, one of them, on an island in Lake Champlain, with over 100 plants, and the others much smaller. Throughout its range, northern wild comfrey is known from openings, edges, canopy gaps, or other small disturbances in upland forests, located on somewhat rich (circumneutral or calcareous) soils (Abrams and Brumback 2000, NYNHP 2024). In terms of distribution throughout the state, as well as number of populations, northern wild comfrey has been trending downward in NY. A lack of fire or other disturbance to forest to create habitat may be a threat to the species. Additional surveys are needed to determine if northern wild comfrey could be found at historically known locations in the Catskills and elsewhere which have never been surveyed (NYNHP 2023).

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**

ii. New York: Endangered

b. Natural Heritage Program

i. Global: G5T4T5

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:

Andersonglossum boreale is Endangered in New York (Ring 2023). There are only four known populations in NY today, although there are more than two dozen historical collection sites from the state in the past. The overall population size is between 100 and 300 plants, with all but one known population small. The range appears to have contracted from its historical extent. There are historical collections from western and central NY as well as the Catskills, but extant populations are currently known only from northern NY. Additional searching is needed in the Catskills and elsewhere in it former range in the state.

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	Yes	Unknown	Unknown	Unknown	S1	
New Jersey	Yes	Unknown	Unknown	Unknown	SH	
Pennsylvania	Yes	Unknown	Unknown	Unknown	SH	
Vermont	Yes	Unknown	Unknown	Unknown	S1	
Ontario	Yes	Unknown	Unknown	Unknown	S4	
Quebec	No	-	-	-		

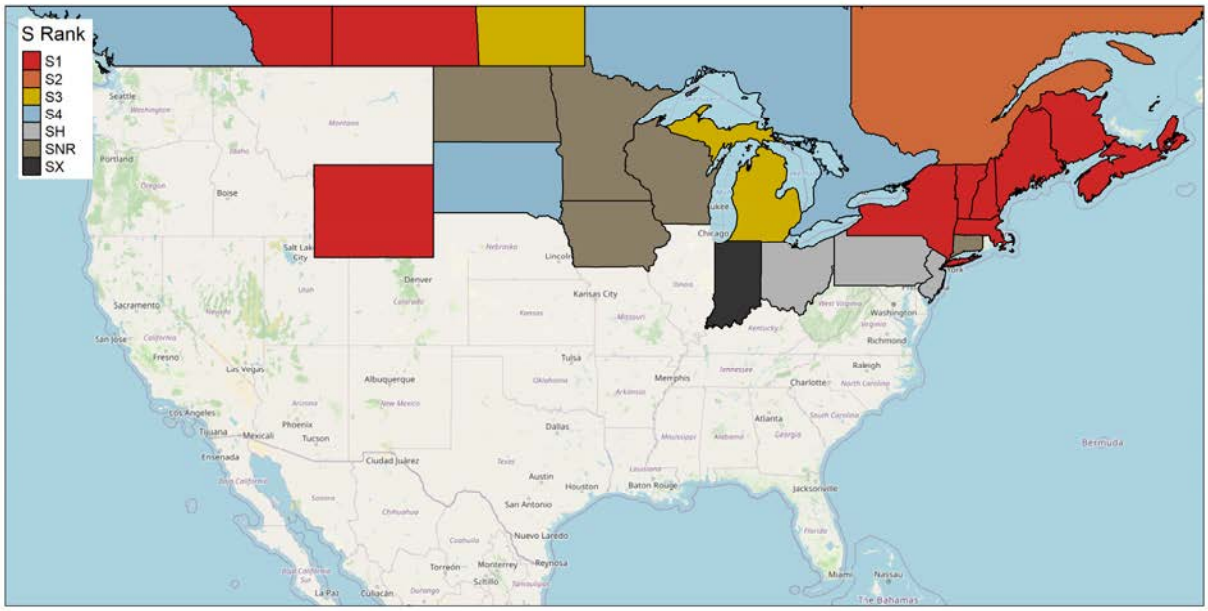


Figure 11: Andersonglossum boreale *North American distribution.*

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

In the early 1900s, there were at least two dozen populations of this plant scattered around the state. Based on museum collections, that number of populations was apparently stable through the 1950s. Today, there are only four known populations, and all of these are in the northern portion of the state. None of the historical populations present south of the Adirondack region are known today, indicating a dramatic decline in the last 100 years or so (NYNHP 2023, 2024).

Details of Historic and Current Occurrence

Historically, this plant was found throughout New York. Today, it appears to be restricted to the northern portions of the state. New York is near the southern edge of the range, and this range may be retracting northward. There are an estimated 100 to 300 plants, most known from a single population. Two of the known populations have been surveyed since 2019, and the other two have not been visited since 2010 or before.

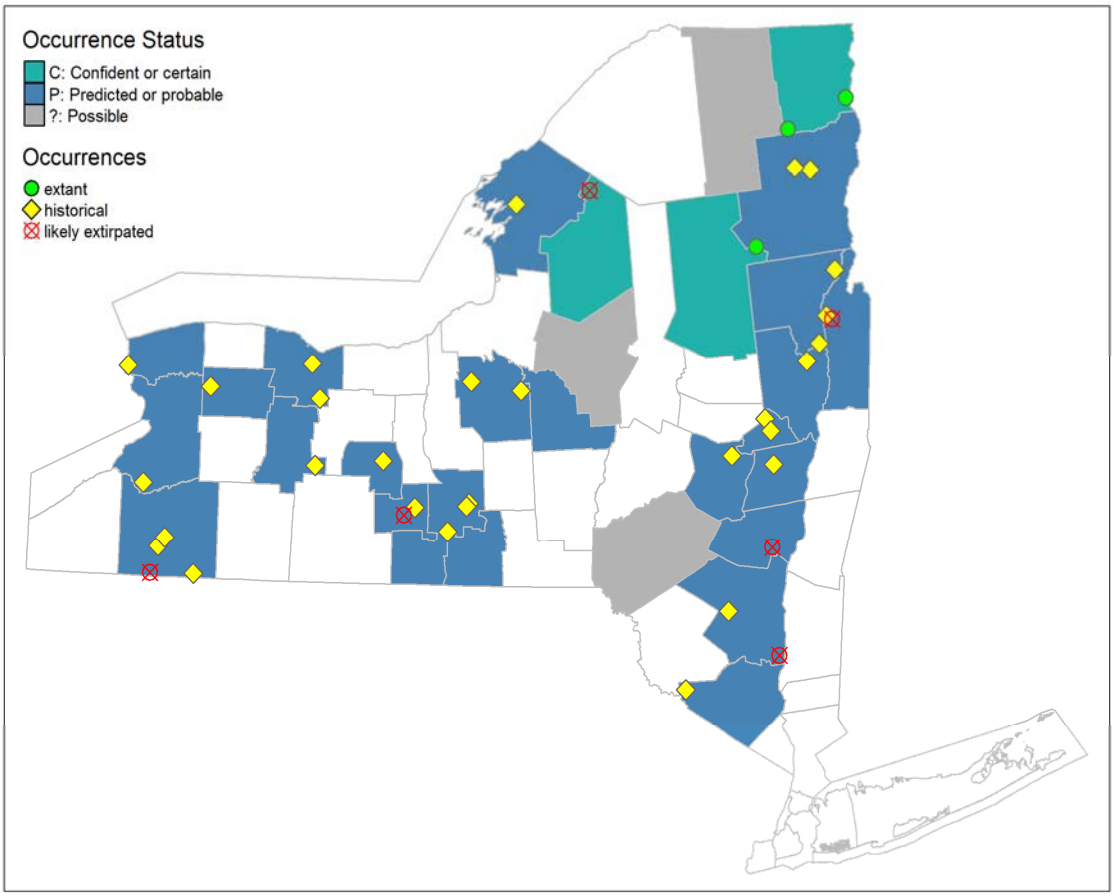


Figure 2 2: *NYS distribution for* Andersonglossum boreale. *The fourth population, found in 2023, is not shown on this map.*

Table 1. *Number of records (element occurrences) of* Andersonglossum boreale *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	37	68	6.9
1995-2004	1	2	0.2
2005-2014	2	3	0.3
2015-2023	2	3	0.3

Monitoring in New York

No regular monitoring program is in place for any of the extant populations, although three of them are on public NY State DEC lands.

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

NY Ecological Communities: Successional northern hardwoods, Beech-maple mesic forest, Limestone woodland, Unpaved road/path (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:**

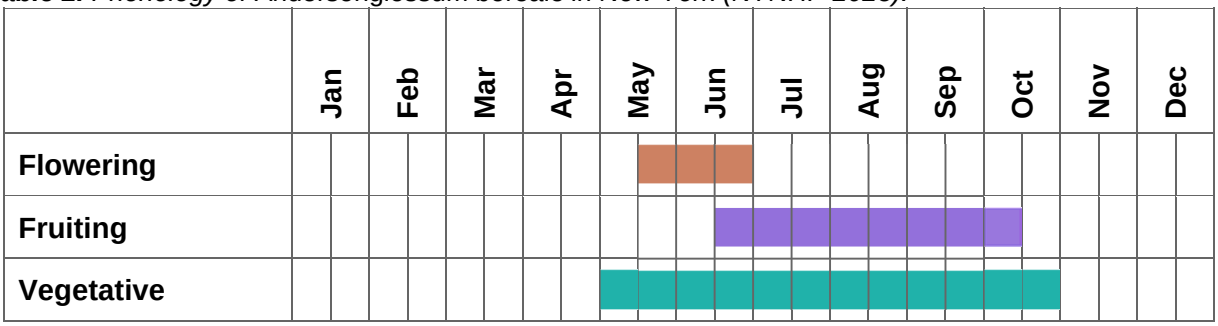
Habitat Discussion:

In New York, northern wild comfrey has been found along the borders of woods and thickets, along trails and pathways through woods, and within upland deciduous woods. It appears to prefer circumneutral or even calcareous areas. A survey of New England populations found that the species tends to grow in shallow, calcareous soils, often in very rocky soil or on steep slopes, and along either road or trail edges or other sites with partial openings and more available light than closed canopy forest (Abrams and Brumback 2000). Borders, openings, and clearings or under dense shade in coniferous or mixed woods (fir, cedar, spruce, pine, birch, aspen, and occasionally beech and maple), especially in sandy or rocky soil (Voss 1996).

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):*

Northern 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 boreale *in New York (NYNHP 2023).*



VI. Threats

The largest population known in NY has persisted for many decades and does not appear to be threatened (NYNHP 2023). However the other known populations are small and may be threatened by succession or shading. Fire suppression may be a threat to this species, which requires somewhat open habitat, and some of the largest New England populations are associated with fire (Abrams and Brumback 2000). Herbivory by deer is also a potential threat, although Andersonglossum plants contain alkaloids which may inhibit herbivory (van Dam et al 1995). Since the species' distribution in NY appears to be contracting northward from its historical range, climate change may also be a threat (NYNHP 2023). 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:

The management needs are not well understood at this point. This plant may do well in areas that receive small amounts of 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* Andersonglossum boreale.

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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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:

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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.

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Mitchell, Richard S. and Gordon C. Tucker. 1997. Revised Checklist of New York State Plants. Contributions to a Flora of New York State. Checklist IV. Bulletin No. 490. New York State Museum. Albany, NY. 400 pp.

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Voss, E.G. 1996. Michigan Flora. Part III. Dicots (Pyrolaceae-Compositae). Cranbrook Institute of Science Bulletin 61 and Univ. Michigan Herbarium. Ann Arbor, Michigan. 622 pp.