

Species Status Assessment

Common Name	Large-leaved Avens	Date Updated:	2024-02-13
Scientific Name	<i>Geum macrophyllum</i> var. <i>macrophyllum</i>	Updated By:	Gregory J. Edinger
Family	Rosaceae		

Species Synopsis

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

Large-leaved avens (*Geum macrophyllum* var. *macrophyllum*), also called bigleaf yellow avens, is a perennial forb/herb in the Rose Family (Rosaceae). There are ten species of *Geum* in NY of which eight are native to the state (Werier et al. 2023).

Large-leaved avens is found in eastern Canada and adjacent US states from Labrador to Ontario and Maine to Michigan, it is disjunct west to the Pacific Northwest, Idaho, and Montana. It is also found north to Alaska and East Asia. There are seven locations of large-leaved avens in NY with about 125 plants total in the state. Plant counts are needed at five locations ranked as "Extant" and four historical locations need to be checked. Most occurrences are found in Ulster County in the Catskill Mountains and Essex County in the Adirondacks, but it also occurs in Saratoga and Otsego counties (NYNHP 2023, 2024).

Large-leaved avens has been collected mostly from relatively high-elevation sites in the Catskills and Adirondacks, including mountain summits, stream headwaters, and shaded stream banks. Any human disturbance that would affect the woodland habitat where large-leaved avens grows, such as logging, or development, could be a threat. Woodland invasive species such as shrub honeysuckles (*Lonicera* spp.) or barberry (*Berberis* spp.) could also be a threat (NYNHP 2023, 2024). Large-leaved avens has recently been put on NY's rare plant active list and there have not been enough surveys of historical records to determine trends.

I. Status

There are seven locations of large-leaved avens in NY with about 125 plants total in the state (NYNHP 2023, 2024).

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:

There are seven locations of large-leaved avens in NY with about 125 plants total in the state. Plant counts are needed at five locations ranked as "Extant" and four historical locations need to be checked. Most occurrences are found in Ulster County in the Catskill Mountains and Essex County in the Adirondacks, but it also occurs in Saratoga and Otsego counties (NYNHP 2023, 2024).

II. Abundance and Distribution Trends

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	No	-	-	-		
Pennsylvania	No	-	-	-		
Vermont	Yes	Unknown	Unknown	Unknown	SNR	
Ontario	No	-	-	-		
Quebec	No	-	-	-		

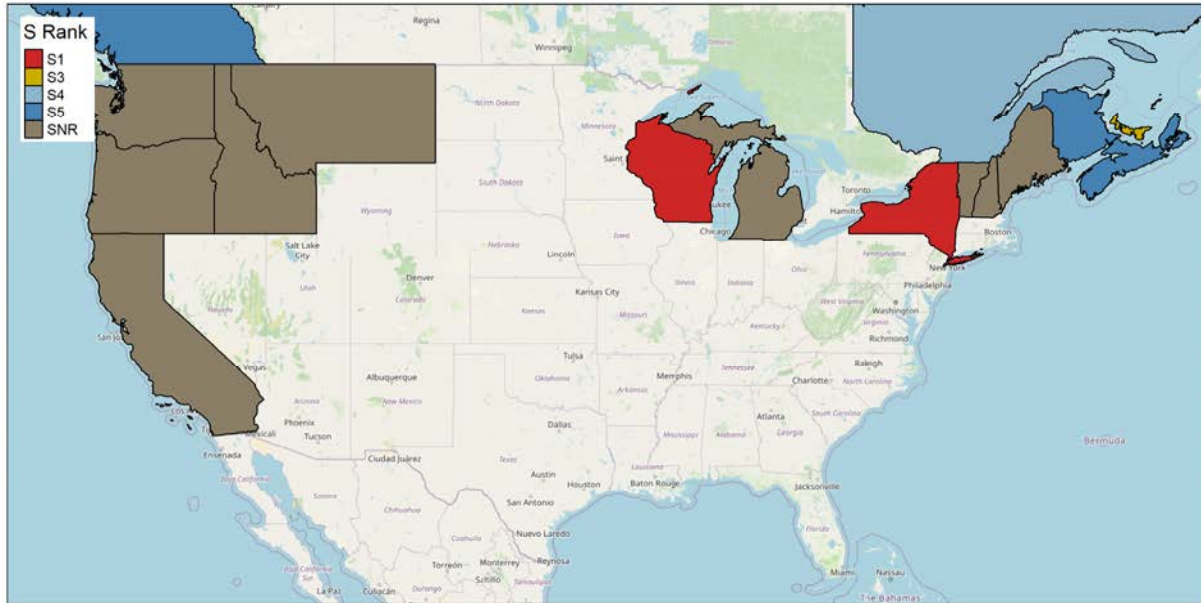


Figure 11: *Geum macrophyllum var. macrophyllum* North American distribution.

III. NY Rarity

Trends Discussion

Short-term Trends: Short-term trends are unknown because there has not been recent survey work to determine the present status of large-leaved avens in NY (NYNHP 2023, 2024).

Long-term Trends: Large-leaved avens has recently been put on NY’s rare plant active list and there have not been enough surveys of historical records to determine trends. Large-leaved avens is restricted to the higher elevations of the Adirondacks and Catskills, so its distribution is limited, but it may still be common in those habitats (NYNHP 2023, 2024).

(insert map of North American/regional distribution and status):

Details of historic and current occurrence:

Comments on range: Large-leaved avens is found in eastern Canada and adjacent US states from Labrador to Ontario and Maine to Michigan, it is disjunct west to the Pacific Northwest, Idaho, and Montana. It is also found north to Alaska and East Asia. There are seven locations of large-leaved avens in NY with about 125 plants total in the state. Plant counts are needed at five locations ranked as “Extant” and four historical locations need to be checked. Most occurrences are found in Ulster County in the Catskill Mountains and Essex County in the Adirondacks, but it also occurs in Saratoga and Otsego counties (NYNHP 2023, 2024).

(provide map, numbers, and percent of state occupied)

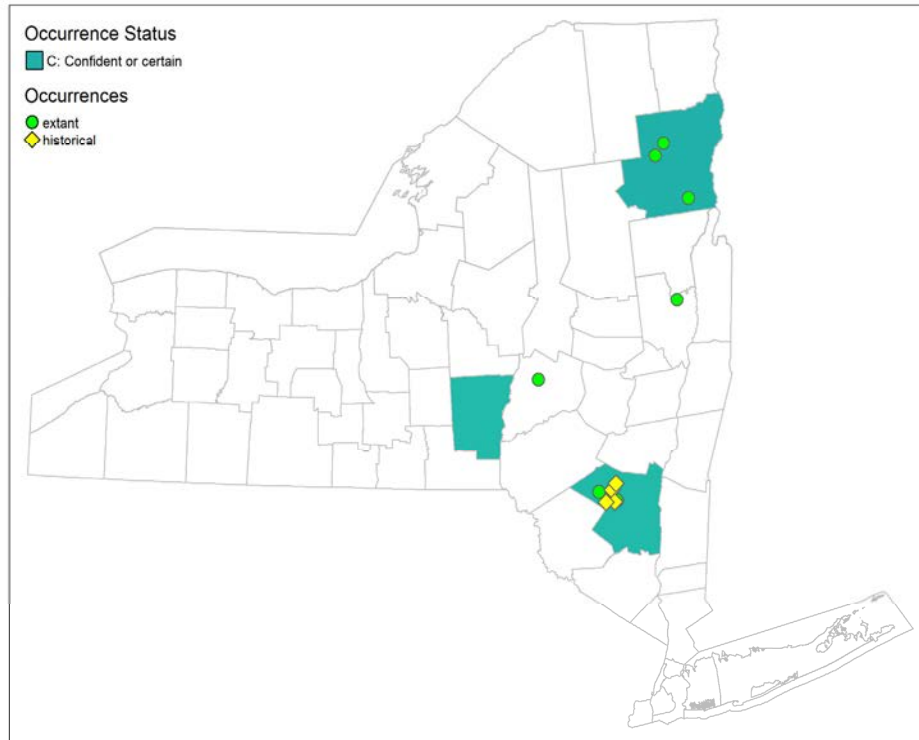


Figure 22: NYS distribution for *Geum macrophyllum* var. *macrophyllum*.

Table 1. Number of records (element occurrences) of *Geum macrophyllum* var. *macrophyllum* 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	5	6	0.6
1995-2004	0	0	0.0
2005-2014	3	3	0.3
2015-2023	3	3	0.3

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

Monitoring in New York

(specify any monitoring activities or regular surveys that are conducted in New York):

All seven extant locations of large-leaved avens have only been surveyed once. Survey dates range from 1984 to 2021 with three last observed in 2009. One extant population of large-leaved avens occurs on State Park land and is monitored on a ten-year rotation. One location is on NYS DEC State Forest and surveyed on a five-year rotation as part of the High Conservation Value Forest surveys. None of the other populations have been regularly monitored. Three populations are in NYS DEC Forest Preserve and worthy of monitoring (two of those populations are in the High Peaks of the Adirondacks and one is the Catskill Mountains) (NYNHP 2023).

IV. Primary Habitat or Community Type

(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):

NYNHP Ecological Communities: Beech-maple mesic forest, Mountain fir forest, Hemlock-northern hardwood forest, Mountain spruce-fir forest (Edinger et al. 2014, NYNHP 2023, 2024).

Habitat or Community Type Trend in New York

Declining:		Stable:		Increasing:		Unknown	✓
Time frame of decline/increase:							
Habitat Specialist	Yes:	✓	No:			(Coeff. of Conserv. > 7)	
Indicator Species	Yes:		No:				

Habitat Discussion:

More information is needed on the habitat affinities of large-leaved avens in New York State. It has been collected mostly from relatively high-elevation sites in the Catskills and Adirondacks, including mountain summits, stream headwaters, and shaded stream banks (NYNHP 2023, 2024). Moist woods and rocky ledges, sometimes weedy (Gleason and Cronquist 1991). Northern hardwoods, especially along borders, trails, clearings, and rivers; meadows and ditches (Voss 1985). Rich woods, damp thickets, and openings (Fernald 1950).

NY Flora Atlas habitat description: Seeps in cool hardwood and mixed hardwood-coniferous forests and openings in swamps (Werier et al. 2023).

V. Species Demographics and Life History

Table 2. Phenology of *Geum macrophyllum* var. *macrophyllum* in New York State.

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

Species Demographics and Life History Discussion

(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):

Large-leaved avens seed longevity is 3 to 5 years at 3 to 5 degrees C in sealed containers (Luna et al. 2004). The fruits of large-leaved avens are achenes, attached to an egg-shaped head (receptacle), and are animal-dispersed by the long, hooked, persistent styles (NYNHP 2024).

The growth habit is characterized as: Forb/herb

Growth duration is characterized as: Perennial

VI. Threats

Any human disturbance that would affect the woodland habitat where large-leaved avens grows, such as logging, or development, could be a threat. Woodland invasive species such as shrub honeysuckles (*Lonicera* spp.) or barberry (*Berberis* spp.) could also be a threat (NYNHP 2023, 2024).

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:

Management needs are unknown until more survey work is done.

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 *Geum macrophyllum* var. *macrophyllum*.

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

Conservation Actions	
Action Category	Action
Land/water management	2.3. Habitat & natural process restoration

VII. References

This SSA drew heavily from these resources:

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<https://NativePlantNetwork.org> (accessed 2024/03/25). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.

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