

# Species Status Assessment

<b>Common Name</b>	cut-leaved evening primrose	<b>Date Updated:</b>	2024-01-04
<b>Scientific Name</b>	<i>Oenothera laciniata</i>	<b>Updated By:</b>	Rachael A. Renzi
<b>Family</b>	Onagraceae		

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

Cut-leaved evening primrose is one of 17 species of *Oenothera* found in New York, but only one of seven species native to New York (Werier et al. 2023). *Oenothera laciniata* is in the evening primrose family. This perennial night-blooming forb occurs from Maine to South Dakota and south to South America (NatureServe 2023). It is at the northernmost edge of its native range in New York (NatureServe 2023). There are six extant populations in the state, all comprised of few individuals located on Long Island, a heavily developed region of New York (NYNHP 2023). Currently, the count of historic populations outnumbers the extant ones, which are small and unstable (NYNHP 2023). Though this species is stable throughout its range, not enough quantitative data has been collected on this plant to determine a trend in New York.

## I. Status

### a. Current legal protected Status

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

### b. Natural Heritage Program

<b>i. Global:</b>	<u>G5</u>		
<b>ii. New York:</b>	<u>S1</u>	<b>Tracked by NYNHP?</b>	On Active Tracking List

### Other Ranks:

COSEWIC: Not listed in Canada  
IUCN Red List: Not assessed by IUCN Red List

### Status Discussion:

*Oenothera laciniata* is Endangered in New York (Ring 2023). There are six existing populations *Oenothera laciniata* in disturbed areas where their habitat suitability changes from year to year. All of these populations are small and unstable. There are also 14 historical occurrences but

many of these are in human-disturbed areas like roadsides and along railroads where the plants may have been introduced (NYNHP 2023, 2024).

## II. Abundance and Distribution

<b>Region</b>	<b>Present?</b>	<b>Abundance</b>	<b>Distribution</b>	<b>Time Frame</b>	<b>Listing status or S-Rank</b>	<b>SGCN?</b>
<b>North America</b>	Yes	Unknown	Unknown	Unknown		
<b>Northeastern US</b>	Yes	Unknown	Unknown	Unknown		
<b>New York</b>	Yes	Unknown	Unknown	Unknown	E	
<b>Connecticut</b>	Yes	Unknown	Unknown	Unknown	SNR	
<b>Massachusetts</b>	Yes	Unknown	Unknown	Unknown	SNR	
<b>New Jersey</b>	Yes	Unknown	Unknown	Unknown	S4	
<b>Pennsylvania</b>	Yes	Unknown	Unknown	Unknown	S5	
<b>Vermont</b>	Yes	Unknown	Unknown	Unknown	SNR	
<b>Ontario</b>	Yes	Unknown	Unknown	Unknown	SNA	
<b>Quebec</b>	No	-	-	-		

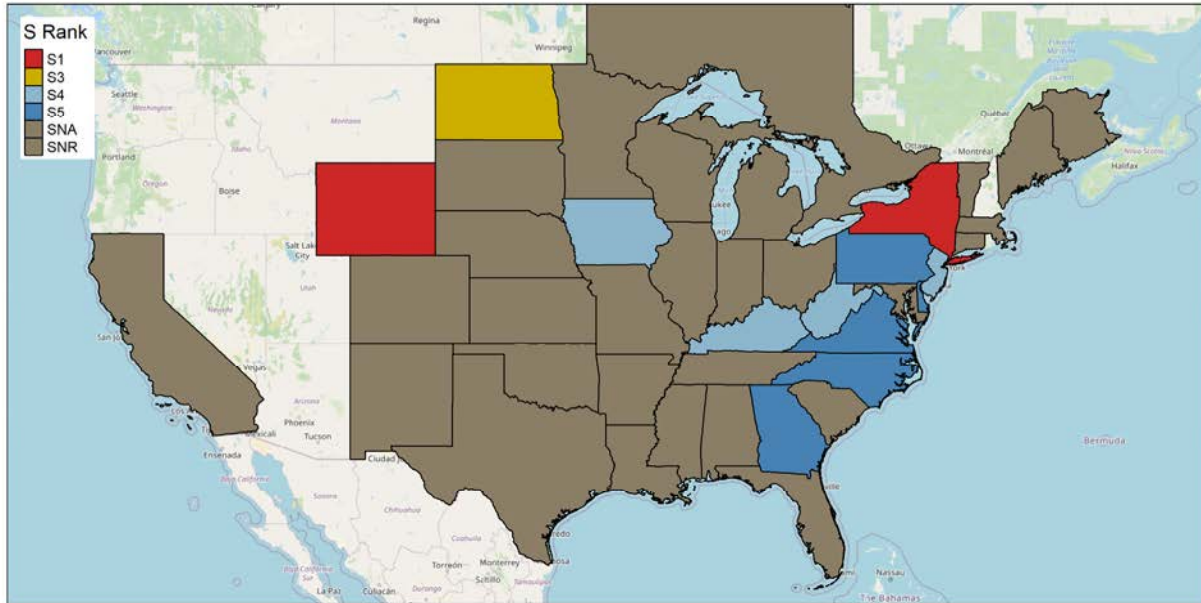


Figure 11. *Oenothera laciniata* North American distribution.

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

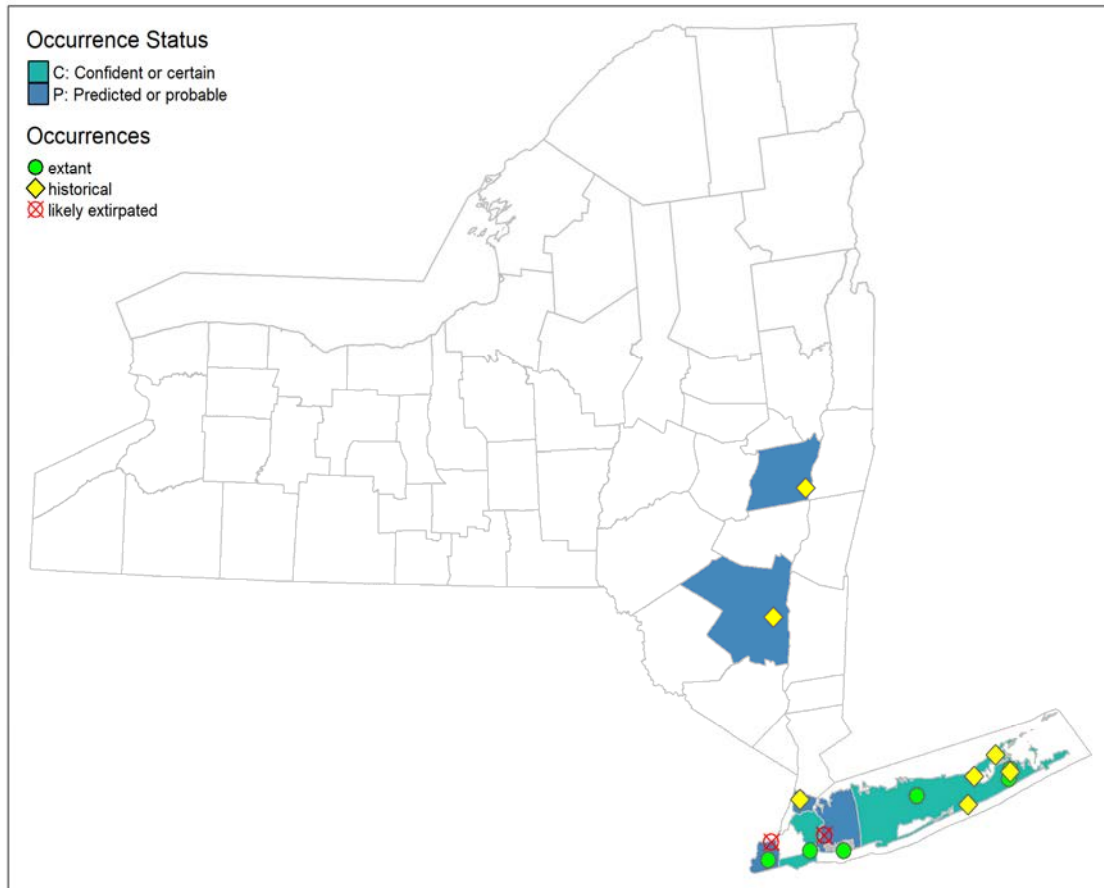
### III. NY Rarity and Trends

#### Trends Discussion

*Oenothera laciniata* occurs from Maine to South Dakota south to South America. It is at the northernmost edge of its native range in New York (NatureServe 2023). The extant populations are located on Long Island, which is heavily urbanized. Little quantitative data has been recorded on these populations, making trends difficult to assess (NYNHP 2023). This species was always very rare in New York, where it has shown up occasionally in disturbed areas at the edge of its range. It is expected that it will be present in small numbers for the foreseeable future (NYNHP 2023, 2024) Across its range, it is stable (NatureServe 2023).

#### Details of historic and current occurrence

This low herb ranges across Long Island where it is currently known from Suffolk and Queens counties. Each extant population in New York is comprised of a small number of individuals. It was likely extirpated in heavily urbanized area due to development or competition from invasive species. It is historically known from Staten Island, the Bronx, and up the Hudson River Valley in disturbed areas of Ulster and Albany counties. The population near Albany, however, may have been a serendipitous event. *Oenothera laciniata* may have hitched a ride north where it was collected at the Selkirk railroad yards in 1920. It has never been seen that far north again (NYNHP 2023, 2024).



**Figure 22.** NYS distribution for *Oenothera laciniata*

**Table 1.** Number of records (element occurrences) of *Oenothera laciniata* 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	11	13	1.3
1995-2004	2	2	0.2
2005-2014	1	1	0.1
2015-2023	4	4	0.4

### Monitoring in New York

One population occurs on State Park lands and is monitored on a 10-year rotation. None of the other populations are regularly monitored. Of the six extant populations, four have been visited in 2019 or later, one was visited in 2009, and one was visited in 1990 (NYNHP 2023).

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

Northeastern Habitat Classification Macrogroup: Coastal grassland & shrubland, Disturbed land pioneer / Successional shrublands & grasslands.

NY Ecological Communities: Maritime grassland, Successional old field (Edinger et al. 2014, NYNHP 2023).

**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, *Oenothera laciniata* is known exclusively from dry, sandy sites on Long Island, including successional old fields, sandy embankments, and disturbed areas of maritime grasslands (Fernald 1970; NYNHP 2023, 2024). It inhabits dry, usually sandy soil (Gleason & Cronquist 1991). It can be a weedy plant in disturbed places, having adapted to dry, full-sun conditions of barrens.

**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):

*Oenothera laciniata* is an herbaceous perennial forb that flowers at night. It is pollinated by long-tongue bees and the nectar is also a food source for other bees and flies (Hilty 2018). It frequents ruderal habitats and may rely on regular disturbance for reducing competition. An open habitat is thought to be important for seed germination and colonization (NYNHP 2024).

**Table 2.** Phenology of *Najas muenscheri* in New York State (NYNHP 2023).

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

**VI. Threats**

Its old field habitat is threatened by succession, improper mowing, and development. Exotic species and development may reduce available suitable habitat (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:**

This species relies on some disturbance to reduce competition from woody plants or more aggressive herbaceous plants, but too much disturbance to the plants will reduce or eliminate the population (NYNHP 2024). Direct disturbance should be prevented during the growing season. Any disturbance of its habitat to open it up for seed germination and colonization should occur when the plants are dormant. (NYNHP 2023, 2024).

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 *Oenothera laciniata*.

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.  
<https://www.nynhp.org/documents/39/ecocomm2014.pdf>

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.

Hilty, John. 2018. Ragged Evening Primrose. Prairie Wildflowers of Illinois. [web application]  
[https://illinoiswildflowers.info/prairie/plantx/rag\\_primrose.htm](https://illinoiswildflowers.info/prairie/plantx/rag_primrose.htm) [Accessed 01/04/2024].

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.

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.