

Species Status Assessment

Common Name Standley's goosefoot **Date Updated:** 2024-02-22
Scientific Name *Chenopodium standleyanum* **Updated By:** Kyle J. Webster
Family Amaranthaceae

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

Standley's Goosefoot (*Chenopodium standleyanum*) is an annual forb/herb in the Amaranth Family (Amaranthaceae). Its range includes most of the continental US east of the Rocky Mountains (NatureServe 2023, Flora North America 2004). *Chenopodium* has been subject to much taxonomic disagreement, however authors recognize approximately 100 species globally, 34 of which occur in North America (FNA 2003, Wahl 1952). There are nine species of *Chenopodium* in New York, of which three are native (Werier et al. 2023).

In New York, *Chenopodium standleyanum* has been found in disturbed places such as mowed lawns with trees and mowed roadside/pathways (NYNHP 2023, Edinger et al. 2014). It is currently only known from two populations in Orange and Rensselaer Counties (NYNHP 2023).

The short and long-term trends of *Chenopodium standleyanum* in New York are not known. No populations have been censused and the extant records have only been seen once. *Chenopodium standleyanum* has only recently been recognized by field botanists to be present in New York. More field surveys and herbarium review are needed to understand its abundance and distribution in the state.

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**
ii. New York: Unlisted

b. Natural Heritage Program

i. Global: G5
ii. New York: S1S3 **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 two extant and nine historical occurrences in the state. The nine historical occurrences are based on herbarium specimens and not included in the tables and figures below. Due to a lack of surveys and data, the trends of this species are not known.

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 | SU | |
| Massachusetts | Yes | Unknown | Unknown | Unknown | SNR | |
| New Jersey | Yes | Unknown | Unknown | Unknown | S2 | |
| Pennsylvania | Yes | Unknown | Unknown | Unknown | SNR | |
| Vermont | Yes | Unknown | Unknown | Unknown | SNR | |
| Ontario | Yes | Unknown | Unknown | Unknown | S2 | |
| Quebec | No | - | - | - | | |

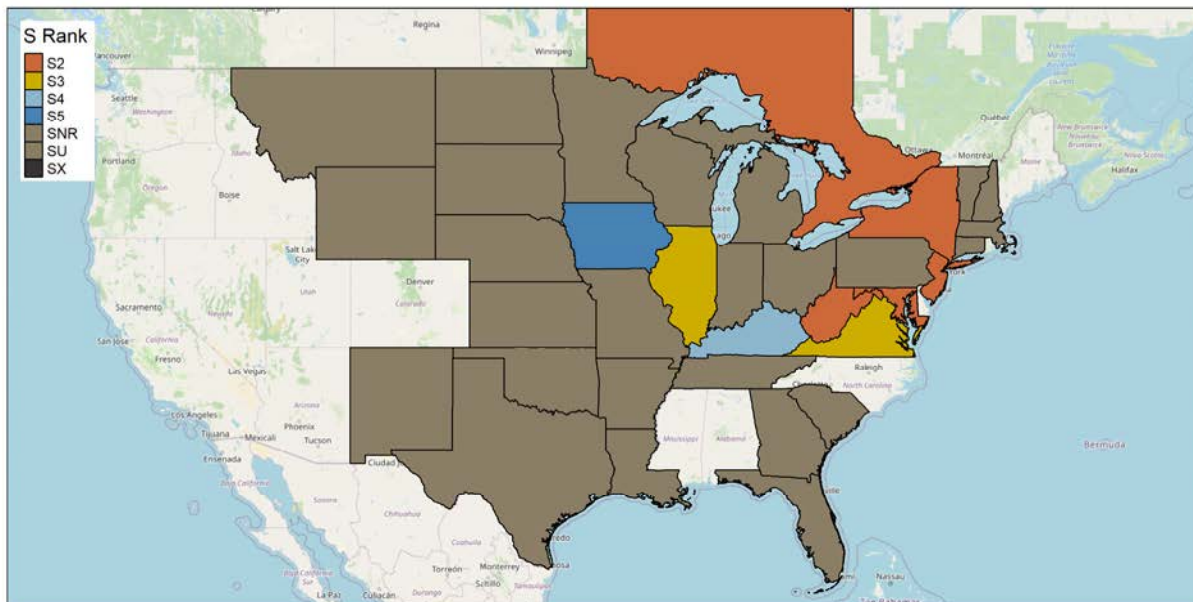


Figure 11: *Chenopodium standleyanum* North American distribution.

| 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

Trends Discussion

There is not enough data to determine the short and long-term trends of *Chenopodium standleyanum* in New York. No populations have been censused and the extant records have only been seen once. This species is difficult to identify and only recently recognized by field botanists in New York, so more populations may be present than is currently known.

Details of historic and current occurrence

Chenopodium standleyanum has been documented from Albany, Delaware, Montgomery, Orange, Rensselaer, and Ulster Counties, but is currently only known from two populations in Orange and Rensselaer Counties. New York is near the northern edge of its range, though it seems to be expanding northward into New England (Native Plant Trust 2024).

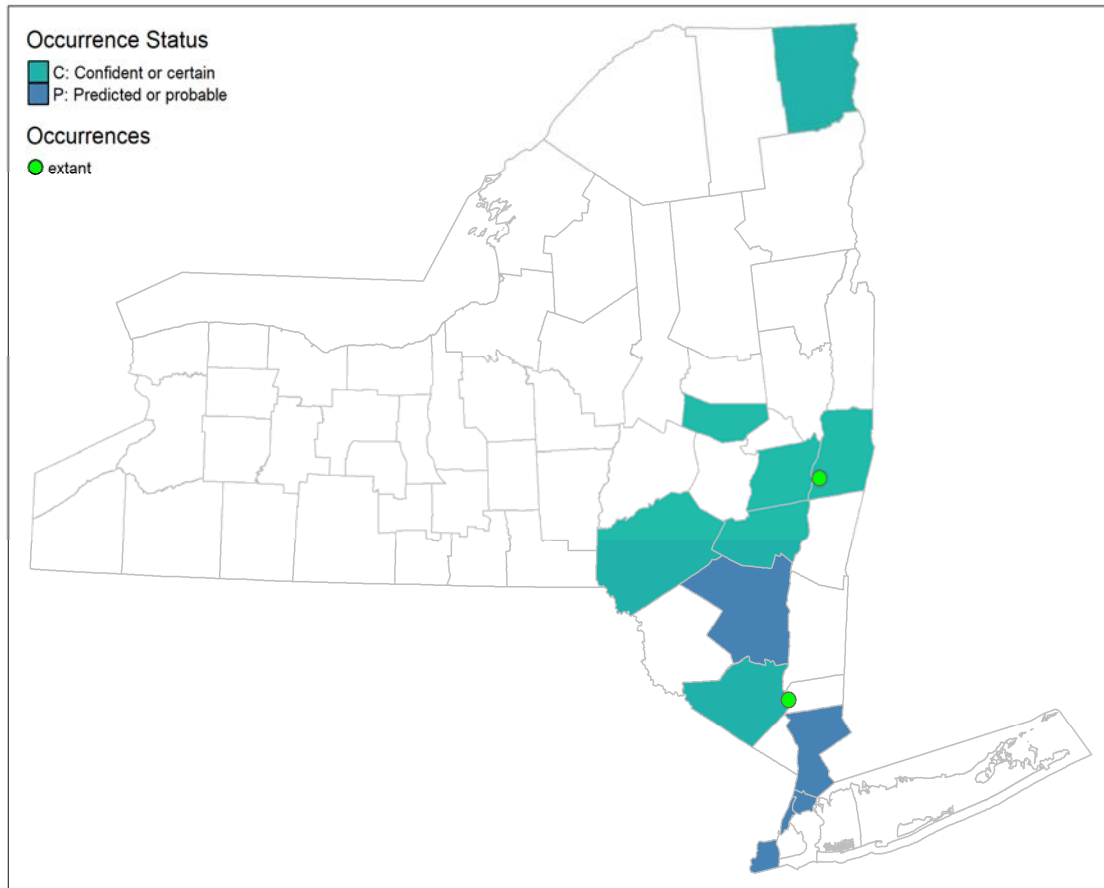


Figure 22: NYS distribution of *Chenopodium standleyanum*.

Table 1. Number of records (element occurrences) of *Chenopodium standleyanum* 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 | 2 | 2 | 0.2 |
| 1995-2004 | 1 | 1 | 0.1 |
| 2005-2014 | 1 | 1 | 0.1 |
| 2015-2023 | 1 | 1 | 0.1 |

Monitoring in New York

There are 11 populations known statewide, of which two are extant and nine are historical. One population occurs on US Military lands and one occurs on private land. None of the populations have been regularly monitored. The populations were last seen in 1991 and 2021 respectively.

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

NY Natural Heritage Communities: Mowed lawn with trees, mowed roadside/pathways.

Habitat or Community Type Trend in New York

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

Habitat Discussion:

Chenopodium standleyanum is found in disturbed places in mowed lawn with trees and mowed roadside/pathways (Edinger et al. 2014). Roadsides, railroads, waste areas (Native Plant Trust 2024). Shaded wooded area in disturbed soils (Flora North America 2004).

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):

Chenopodium standleyanum is a wind pollinated annual forb/herb (NYNHP 2023, Werier et al. 2023). It is assumed that *Chenopodium standleyanum* has a long seed bank persistence, but this has not been studied. Almost no natural history or demography studies are available regarding *Chenopodium standleyanum*. More research is needed.

Table 2. Phenology of *Chenopodium standleyanum* in New York State (NYNHP 2023).

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

VI. Threats

No threats have been identified at this time.

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:

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 *Chenopodium standleyanum*.

| 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:

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].

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].

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.

Flora of North America Editorial Committee. 2004. Flora of North America, North of Mexico. Volume 26. Magnoliophyta: Caryophyllidae, Part 1. Oxford University Press, New York. 584 pp.

Native Plant Trust. 2024. *Chenopodium standleyanum* — Standley's goosefoot. Go Botany 3.9. Framingham, Massachusetts. Available from:

<https://gobotany.nativeplanttrust.org/species/chenopodium/standleyanum/> [Accessed 2/22/2024].

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.