

# Four-flowered Loosestrife



*Lysimachia quadriflora*



Photo credits: Stephen M. Young

**Scientific Name** *Lysimachia quadriflora*  
Sims

**Family Name** Primulaceae  
Primrose Family

## Did you know?

The presence of *Lysimachia quadriflora* in New York was first publishing in the Flora of New York by John Torrey in 1843. It has never been found in any other place in the state besides the shores of Lake Erie in Buffalo and the Niagara River.

## Summary

**Protection** Endangered in New York State, not listed federally.

This level of state protection means: listed species are those with: 1) 5 or fewer extant sites, or 2) fewer than 1,000 individuals, or 3) restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or 4) species listed as endangered by U.S. Department of Interior.

**Rarity** G5?, S1

A global rarity rank of G5? means: Secure globally (most likely) - Conservation status is uncertain, but most likely common in the world; widespread and abundant (but may be rare in some parts of its range). More information is needed to assign a firm conservation status.

A state rarity rank of S1 means: This plant is endangered/critically imperiled in New York

because of extreme rarity (typically 5 or fewer populations or very few remaining individuals) or is extremely vulnerable to extirpation from New York due to biological factors.

## Conservation Status in New York

There are two existing populations. One population has over 1000 plants and the second one is small and has not been seen since 2000. There are five historical populations from the Niagara River and Lake Erie shoreline from the late 1800s to 1942. These are probably extirpated.

## Short-term Trends

One population has not been seen since the year 2000 so the populations may be declining although more study of the seed bank is needed to confirm this.

## Long-term Trends

This species has always been rare in New York but those populations in the Niagara River have decreased substantially. A new large population was found in 1990 in Erie County.

# Conservation and Management

## Threats

The plants may be subject to scouring during ice jams and turbulent waters during periods of high water. Trampling from tourists may reduce the seed bank by crushing the plants before they are able to set seed. Succession is also a threat if disturbance is eliminated from the area.

## Conservation Strategies and Management Practices

Limit public access to the area of the plants but at the same time remove trees and shrubs to limit succession.

## Research Needs

Research is needed to find the the best management practices to preserve the population at Niagara Falls.

## Habitat

All the known New York populations of this species were found in wet, calcareous habitats, including graminoid fens and dolomite riverside outcrops (NYNHP 2013). Moist prairies, meadows, roadsides, springs, swamps, bogs, other wetlands (FNA 2010). Fens, wet prairies, and calcareous marshy shores (Voss 1996). Moist or wet soil, especially on prairies (Gleason and Cronquist 1991). Calcareous bogs, swales, and shores (Fernald 1950).

## Associated Ecological Communities

### Calcareous Shoreline Outcrop

A community that occurs along the shores of lakes and streams on outcrops of calcareous rocks such as limestone and dolomite. The vegetation is sparse; most plants are rooted in rock crevices.

### Rich Graminoid Fen

A wetland of mostly grasses usually fed by water from highly calcareous springs or seepage. These waters have high concentrations of minerals and high pH values, generally from 6.0 to 7.8. Plant remains do not decompose rapidly and these grasses usually grow on older, undecomposed plant parts.

## Other Probable Associated Communities

Calcareous cliff community  
Cobble shore

## Associated Species

Orchard Grass (*Dactylis glomerata*)  
Wild Carrot (*Daucus carota*)  
Robin's Plantain (*Erigeron pulchellus*)  
Common Boneset (*Eupatorium perfoliatum*)  
Flat-top Fragrant Goldenrod (*Euthamia graminifolia*)  
Spotted Joepeyeweed (*Eutrochium maculatum*)  
Panicked Hawkweed (*Hieracium paniculatum*)  
A St. John's-wort (*Hypericum perforatum*)  
Common St. John's-wort (*Hypericum punctatum*)  
Path Rush (*Juncus tenuis*)  
Purple Loosestrife (*Lythrum salicaria*)  
Sulphur Cinquefoil (*Potentilla recta*)  
Virginia Mountain-mint (*Pycnanthemum virginianum*)  
Buckthorn (*Rhamnus cathartica*)  
Harger's Goldenrod (*Solidago canadensis*)

## Identification Comments

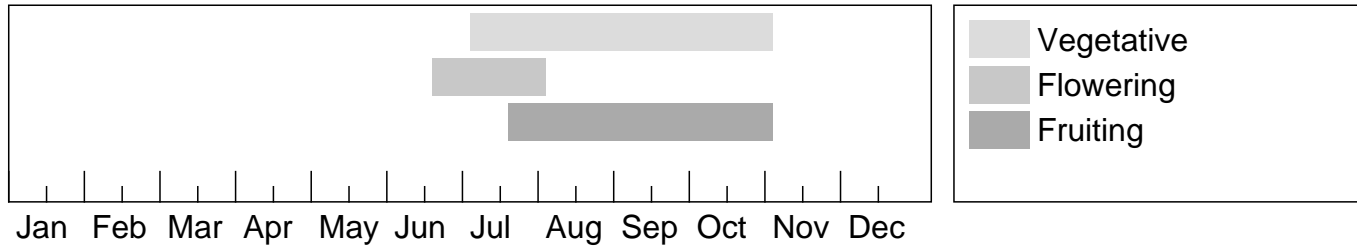
*Lysimachia quadriflora* is an erect, rhizomatous, perennial forb with 4-angled stems that grows (12-) 20 cm to 1 m tall. The leaves are opposite, entire, stiff, linear to narrowly lanceolate, and have revolute margins. They are 3.4 to 9 cm long by 0.2 to 0.6 cm wide, with 0.1 to 0.8 mm cilia at the leaf base near the nodes and have only one apparent vein. The flowers are borne singly or in whorls from the axils of the upper stem, on pedicels 0.5 to 2.8 cm long. The flowers are 5-parted with yellow petals that are sparsely streaked with brownish-violet (this is sometimes obscure) resin canals, and are 7 to 13 mm long and pointed, with stalked glands on their upper surfaces. The fruits are capsules 3.5 to 5 mm long and are typically glabrous (rarely with sparse stalked glands). (FNA 2010)

## Best Life Stage for Identifying This Species

For positive identification of *Lysimachia quadriflora* the entire stem with intact mature flowers is best.

## The Best Time to See

Flowering typically begins in mid-June and continues through late July. Fruiting typically occurs beginning in mid-July with fruits persisting until late October.



The time of year you would expect to find Four-flowered Loosestrife in New York.

## Similar Species

A number of similar *Lysimachia* species occur in New York. Most differ from *L. quadriflora* by having punctate (minutely dotted) leaves. *L. ciliata* and *L. hybrida* have leaves that are not punctate, but they are typically broader with more evident lateral veins, and not revolute as are *L. quadriflora*'s leaves (Haines 2011).

*Hypericum canadense* (Canada St John's wort) also may appear similar to *L. quadriflora* but can be distinguished by its numerous small flowers (3.2 to 6.3 mm wide), and shorter leaves (1.3 cm to 3.8 cm) with 1 to 3 veins.

## Taxonomy

Kingdom Plantae

└ Phylum Anthophyta

└ Class Dicots (Dicotyledoneae)

└ Order Primulales

└ Family Primulaceae (Primrose Family)

## Synonyms

*Steironema quadriflorum* ((Sims) A. S. Hitchc.)

## Additional Resources

## Links

### **New York Flora Atlas species page**

<http://newyork.plantatlas.usf.edu/Plant.aspx?id=2529>

### **USDA Plants Database**

<http://plants.usda.gov/java/nameSearch?mode=sciname&keywordquery=LYSIMACHIA+QUADRIFLORA>

### **NatureServe Explorer**

<http://natureserve.org/explorer/servlet/NatureServe?searchName=LYSIMACHIA+QUADRIFLORA>

### **Google Images**

<http://images.google.com/images?q=LYSIMACHIA+QUADRIFLORA>

### **Flora of North America**

[http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=242416814](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242416814)

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