

Species Status Assessment
for
Kankakee Mallow
(*Iliamna remota*)



Illinois Department of Natural Resources

April 2023

Section 1: Species Description

Taxonomy

Iliamna remota Greene (Family: Malvaceae) is commonly known as Kankakee mallow or Kankakee Globemallow (NatureServe, 2023). It was first identified as *Sphaeralcea acerifolia* by Nuttall, a Rocky Mountain species of mallow, after being discovered by schoolteacher Dr. E.J. Hill in 1872, but it was quickly assigned to a new genus called *Iliamna* by Greene, who separated it from its western look-alikes by calling it *Iliamna remota* (Fernald, 1908). A later population of similar plants was discovered in Virginia, which is now commonly known as *Iliamna corei* (Sherff), although the Virginia population has also been called *Phymosia remota* (Greene) Britton (which has been used to describe both the Virginia and Illinois populations), *Iliamna remota* var. *corei* (Sherff) based on certain physiological differences between the Illinois and Virginia populations, and *Iliamna rivularis*, which is a name usually reserved to a species of mallow within the Rocky Mountain Range. However, the USDA's website it shows that the range of *I. rivularis* includes the disjointed populations in Illinois, Indiana, and Virginia, which means that this article, at least, considers *I. rivularis*, *I. remota*, and *I. corei* to all be different varieties of the same species (Kartesz) (Strausbaugh and Core, 1932; NatureServe, 2023; Sherff, 1946; Prendusi, n.d.).

The current classification for *I. remota* is (NatureServe, 2023):

Kingdom: Plantae

Phylum: Anthophyta

Class: Dicotyledoneae

Order: Malvales

Family: Malvaceae

Its NatureServe Element Code is PDMAL0K080, and its USDA Plant Symbol is ILRE (NatureServe, 2023; USDA Plants Database, n.d.).

Physical Characteristics

I. remota is an herbaceous, perennial plant that stands anywhere from 1-2.5 m tall with coarse hairs on the stems and leaves, alternate and palmately lobed leaves, and a shallow and densely fibrous root system, with a root crown that can vegetatively reproduce in older plants. It has large, fragrant flowers that are white or lavender in color which bloom in July and August that produces hard seeds (McDonnell et al., 2006; Strausbaugh and Core, 1932; Sherff, 1946). *I. remota* differs from *I. corei* with its fragrant flowers and broader leaves with shallower lobes, while *I. corei* has non-fragrant flowers with narrower leaves and deeper lobes (Swinehart, 1998).

Habitat

The only known extant population of *I. remota* is located on [REDACTED] (also commonly called [REDACTED] or [REDACTED]), on the edges of a former cornfield and

stretching down steep, wooded slopes to the river. It grows in a loamy topsoil with a lot of gravel, allowing for good soil drainage. It is shade intolerant, and is threatened by woody encroachment (Sherff, 1946; McDonnell et al., 2006; Baskin et al. 1997).

Life History and Reproduction

I. remota seeds require hot fire to break dormancy and allow water into the seed to trigger germination in the wild, although laboratory experiments using mechanical scarification, sulfuric acid, dry heat, and boiling water are effective (Baskin et al. 1997; Baskin and Baskin, 1997). Flowers bloom in July and August, with seeds dropping at the end of September. These seeds can remain in the seed bank for at least 10 years and are viable for at least 4 years (McDonnell et al. 2012). Clearing canopy cover using fire encourages the most rapid germination and growth of the plant, which is shade intolerant (Baskin and Baskin, 1997). On Altorf Island, a rolling brush fire technique is used, setting up multiple small burn piles in the area when burning that promotes seeds to readily germinate near the edge of the brush piles, although too hot of a fire kills the seed and causes the soil to be sterilized (Kim Roman, personal communication).

Conservation Status

I. remota is globally ranked as G1 – Critically Imperiled given its incredibly limited range. It is ranked as **S1 – Critically Imperiled** in both **Illinois** and Virginia and is considered exotic or introduced in Indiana, although it is not considered an invasive plant (Figure 1). It is thought that the Indiana population was established by efforts by the Wildflower Preservation Society of Chicago in 1919 to extend the range of rare wildflowers by throwing seeds out of train windows to become established in the railroad rights-of-way. There is debate as to whether the population in Virginia was also established in this way, as, like the Indiana population, it is close to railway tracks. Currently, the Virginia population is being managed as if it was a native plant (NatureServe, 2023). In Illinois, the species was listed as endangered in 1980 due to its restricted geographical range and habitat, and the population is far removed from the rest of the species' range (Mankowski, 2012). It is not federally listed (USFWS, 2023).

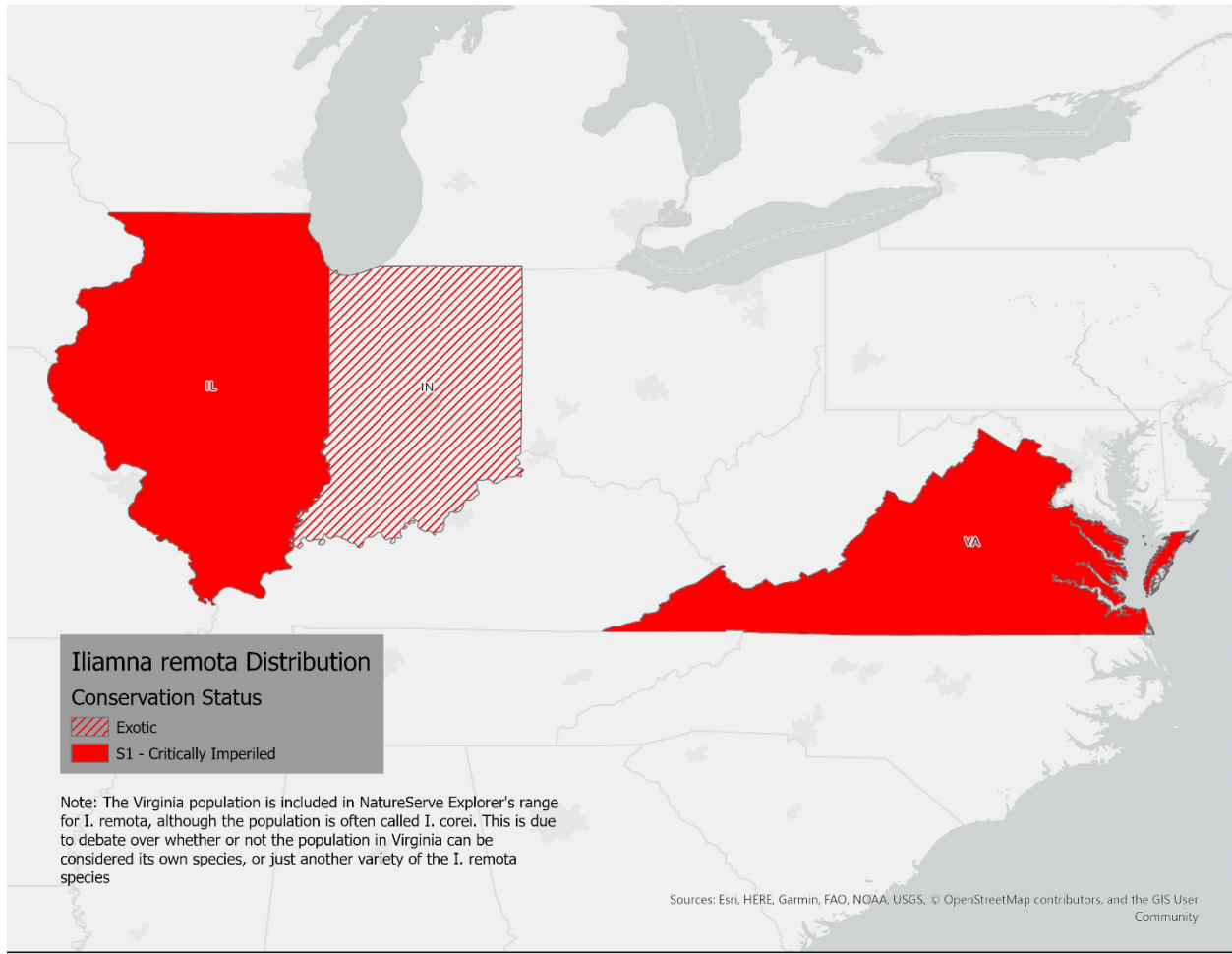


Figure 1: National Distribution and Conservation Status of *Iliamna remota*

Section 2: Range and Distribution

Range

Nationwide, the plant's only known native range is on a single island in Illinois. There is an introduced exotic population in Indiana, and there is debate as to whether the population in Virginia is native. The Virginia population is sometimes considered as a separate species, *I. corei*, although it is closely related to *I. remota* and is sometimes considered to be a separate variety (NatureServe, 2023).

Illinois Distribution

According to the Illinois Natural History Database, there are now three populations of *I. remota* in Illinois, although two are introduced populations and one of those introduced populations was severely injured from herbicide treatment on the nearby reed canary grass. The only native population is located on [REDACTED], with the herbicide-injured introduced

population found in [redacted], and the other population on the [redacted] (Figure 2).

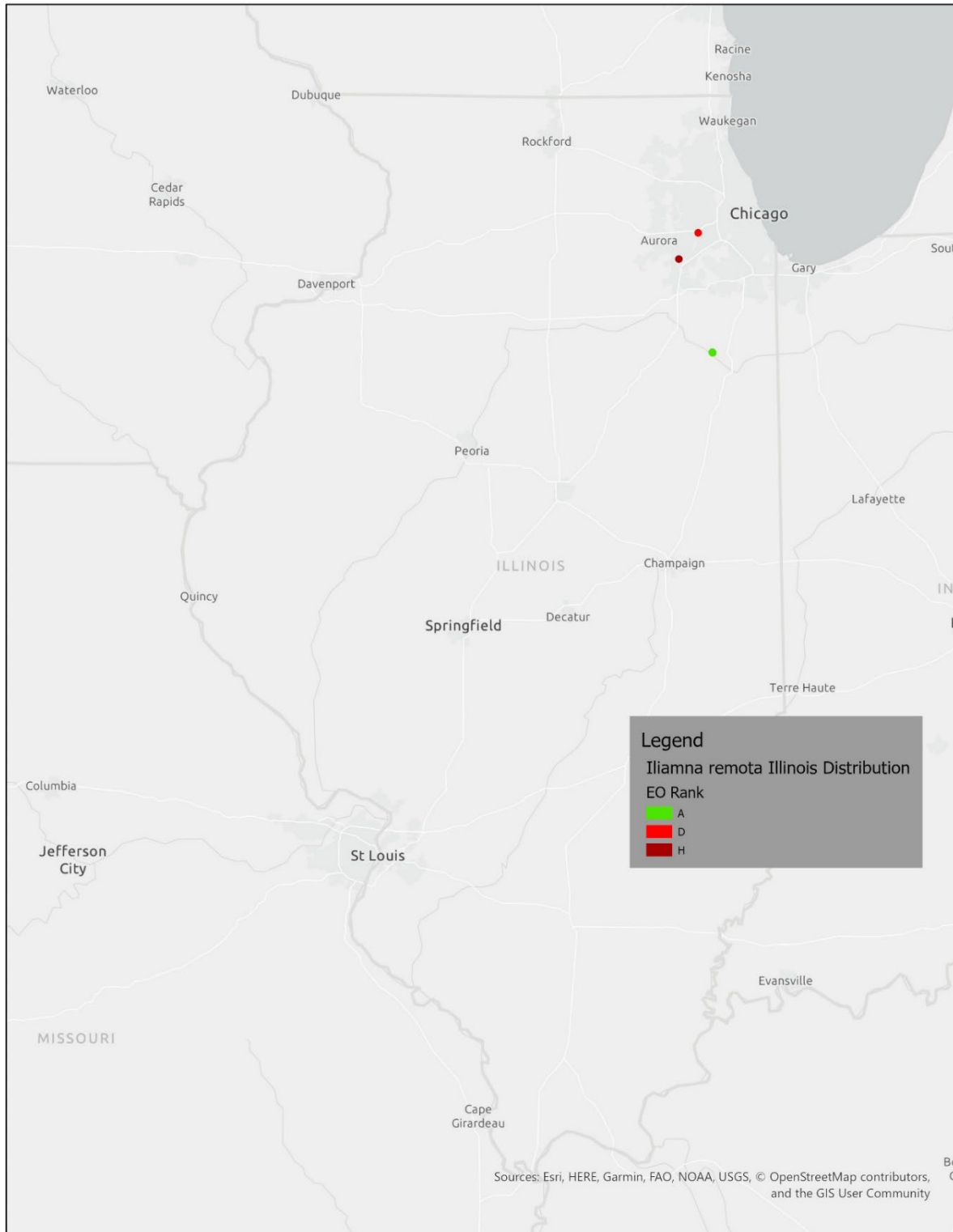


Figure 2: Illinois Distribution and EO Ranking of Illinois populations of *Iliamna remota*

Section 3: Abundance

The total acreage of the native population on [REDACTED] over the years measures to a total of 12.6 acres (Table 1). There can be over 1000 plants on the island at one time, although the population typically fluctuates between 200-600 individuals. Although the population at [REDACTED] numbered a healthy 200-400 plants in 2009 in just 1.7 acres, that number quickly dropped off to just a few individuals, and its last sighting was one sterile plant after what appeared to be an herbicide treatment of the reed canary grass. At [REDACTED], only 3 plants have ever been recorded in the Illinois Natural History Database (2023) in 2011, and those had been introduced into the planted prairie on the site. The total acreage of the population measures out to just under 2 acres, according to the database, meaning that the abundance at this site has been very low despite reintroduction efforts. Overall, both introduced populations in Illinois have a low abundance, although the native Illinois population appears to remain steadily abundant throughout its many decades of observation.

EO Number	Site Name	Last Observed Date	Plant Count at Last Observed Date	Acreage of EO
1	[REDACTED]	2018-07-18	504 stems	12.6
2	[REDACTED]	2020-07-12	1 stem	1.7
3	[REDACTED]	2011-08-25	3 plants	1.9

Table 1: Abundance Measure by EO

Section 4: Population Identification and Viability

This assessment uses NatureServe’s EO Rank values to determine the viability of the *I. remota* populations in Illinois. Guidance for determining these Element Occurrence Records is provided by NatureServe and used by the Illinois Natural Heritage Database, using the 1-kilometer default minimum separation distance between observations of *I. remota*. This means that any observation of *I. remota* in Illinois that was greater than 1 kilometer away from an existing Element Occurrence would be recorded as a new Element Occurrence.

The native population of *I. remota* is ranked A, given the longevity and abundance of the population as well as the ideal habitat that is owned by the state, and is regularly maintained by a dedicated group of volunteers (Kim Roman, personal communication). The population at [REDACTED] is given a rank D due to the severe population decline combined with the damage caused by the herbicide use in the area. The population at [REDACTED] is given a rank H, as it has not been surveyed since it was first found in 2011 (Table 2). Of these three EOs, only one is now found at a state-owned site (Illinois Natural Heritage Database, 2023).

EO Number	EO ID Number	Site Name	Last Observed Date	EO Rank	Justification
1	5248	[REDACTED]	2018-07-18	A	Long-lived population with high abundance in regularly maintained habitat.
2	8484	[REDACTED]	2020-07-12	D	Small population that has been declining for several years and recently severely damaged by herbicide use.
3	11730	[REDACTED]	2011-08-25	H	Has not been surveyed since initial observation.

Table 2: EO Rankings of *Iliamna remota*

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