

**Species Status Assessment**  
for  
**Shore St. John's-wort**  
**(*Hypericum adpressum*)**



*Photo taken by Doug McGrady in South Kingstown, RI*

Illinois Department of Natural Resources  
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## **Section 1: Species Description**

### Taxonomy

*Hypericum adpressum* W.P.C. Barton (Family: Clusiaceae) is commonly known as shore St. John's wort in Illinois, although it is also known as creeping St. John's wort (ITIS, 2023; NatureServe Explorer, 2023). There is a separate form of this species called *Hypericum adpressum* var. *spongiosum* that can occur alongside *Hypericum adpressum* in areas with more permanent water levels (Robinson, 1902; Enser, 2000).

The current classification for this species is (NatureServe Explorer, 2023):

Kingdom: Plantae

Phylum: Anthophyta

Class: Dicotyledoneae

Order: Theales

Family: Clusiaceae

Its NatureServe Element Code is PDCLU3010, and its symbol used for the USDA Plants Database is HYAD (NatureServe Explorer, 2023; USDA '*Hypericum adpressum*' W.P.C. Barton, 2023).

### Physical Characteristics

*H. adpressum* is a perennial plant with buds just above the ground that can be protected by a snow blanket (Taylor, 1915). It is described as “a rhizomatous or stoloniferous herb with stems that are 30-80 cm long, erect, and sparsely branched” (Edgin and Mankowski, 2013). The leaves are arranged in whorls, and have a linear-lanceolate or oblong, ascending shape, and are 3-6 cm long by 5-10 mm wide, tapering off at their base where several, smaller leaves grow. It has terminal flowers with subtle bracts and petals that are orange or yellow, with ovoid capsules that are 3-6 mm long and 2-2.5 mm wide and split into 3-5 cells, gradually narrowing towards its beak. However, these capsules can be incomplete due to an intrusion of the placenta. The flower styles are united to form a beak shape in the center of the flower, with many stamens surrounding it. Its “seeds are small, but larger than dust size” (Edgin and Mankowski, 2013).

They tend to have slender stems, although long periods in more permanent water can cause their stems to become thickened and spongy, which then identifies the plant as *Hypericum adpressum* form *spongiosum*. These forms can grow much taller, up to 1 m, but tend to bloom later than their non-spongy counterparts—in fact, it is noted that some of the smallest *H. adpressum* plants tend to flower early and with many flowers (Gillespie, 1959; Enser, 2000; Edgin and Mankowski, 2013; Bicknell, 1913; Robinson, 1902). When comparing garden-grown *H. adpressum* plants to their wild, parent population, it was found that the garden-grown plants (that had well-drained soil that would occasionally dry out) would profusely branch from the axils of the lower leaves, and that wild plants often had a shiny upper leaf surface in comparison to their garden-grown counterparts (Witsell, 2007).

*H. adpressum* has two look-alikes in Illinois: *Hypericum ellipticum* and *Hypericum sphaerocarpum* (USDA *Hypericum ellipticum* Hook.; USDA *H. sphaerocarpum* Michx). However, *H. ellipticum* tends to be 2-5 dm whereas *H. adpressum* 3 dm to 1 m in height. *H. adpressum* leaves have a revolute surface and an oval shape that's 4-6 times as long as it is wide, whereas *H. ellipticum* leaf surfaces are planar and have an elliptical shape that's 2-3 times as long as it is wide. *Hypericum adpressum* also tends to have longer overall leaves than *Hypericum ellipticum* (Enser, 2000).

When compared to *H. sphaerocarpum*, *H. adpressum* has revolute leaf margins, where *H. sphaerocarpum* has flat leaf margins. *H. sphaerocarpum* has globose seed capsules with only 4-8 seeds that measure from 2-2.7 mm long, while *H. adpressum* has ovoid capsules with many seeds that measure from 0.6-0.8 mm long. *H. sphaerocarpum* will often have woody lower stems and rootstocks, while *H. adpressum* is entirely herbaceous (Witsell, 2007).

### Habitat

*H. adpressum* habitat usually requires ephemeral, freshwater wetlands, although it can survive in more permanent inundation in its *spongiosum* form (Enser, 2000). In Illinois, the species can be found “growing in damp sands, gravels, and peats on the exposed shores of marshes and wet meadows and inundated margins of freshwater ponds with highly fluctuating water levels” (Edgin and Mankowski, 2013). Throughout much of northeastern Illinois, these plants can be found near sandy dunes or swales (Phillippe et al., 2011), and at Illinois' [REDACTED], most of the low, moist areas where the plant would occur between dunes are in agriculture, with an average annual temperature of 9.9°C, a high of 23.6°C in July, and a low of -5.7°C in January, The average annual precipitation for that area is 98 cm, with May having the most rainfall, and frost-free days range from 141 to 206 (Phillippe et al., 2010). In the Illinois Natural Heritage Database (2023), its habitat is recorded as depressions in wet and/or sand prairie, shrub prairie, successional wet mesic sand prairie that was a former agriculture field, bog-like areas with peat soil, damp and sandy open areas, vernal ponds, and disturbed wet prairie.

In other states, the plant lives in “moraine or outwash plains less than 10 miles inland from the Atlantic Ocean,” with ephemeral wetlands and sandy shores providing the needed habitat (Enser and Caljouw, 1989), natural depression wetlands in abandoned stream channel scars above present-day floodplains (Witsell, 2007), and in dry sand prairie in historic populations (Wibbenmeyer et al., 2010). The *spongiosum* form was discovered on the sandy shores of Flax Pond in Massachusetts (Robinson, 1902), and on the mainland of Massachusetts the water can occasionally become brackish when waves go over the barrier beach between the freshwater ponds and the Atlantic Ocean (Harshberger, 1925).

In Illinois, according to the Illinois Natural Heritage Database (2023), associates include *Rhexia virginica*, *Polygala* species, *Ludwigia* species, *Scirpus cyperus*, *Lythrum salicarium*, *Nepata cataria*, *Polygonum careyi*, *Carex cumulate*, *Rhynchospora capitellata*, and *Rotala ramosior* at [REDACTED]. At [REDACTED], noted nearby plants included *Spiraea tomentosa*, *Onoclea sensibilis*, *Thelypteris palustris*, *Agrimonia parviflora*, *Agrostis hyemalis*,

*Carex longii*, *Chamaecrista fasciculata*, *Cicuta maculate*, *Eleocharis palustris*, *Eleocharis wolfii*, *Euthamia gymnospermoides*, *Hypericum majus*, *Juncus brachycarpus*, *Potentilla simplex*, *Pycnanthemum virginianum*, *Solidago canadensis*, *Solidago gigantea*, *Spartina pectinate*, *Scirpus cyperinus*, *Populus tremuloides* seedlings, *Spiraea tomentosa*, *Agrimonia parviflora*, *Eleocharis verrucosa*, *Iris shrevei*, *Lythrum alatum*, *Pycnanthemum virginianum*, and *Rhexia virginica*. Edgin and Mankowski (2013) list *Cephalanthus occidentalis*, *Juncus effusus*, *Juncus nodatus*, *Carex lurida*, *Carex jorii*, *Carex ozarkana*, *Carex gigantea*, *Dulichium arundinaceum*, *Rhynchospora glomerata*, *Scirpus cyperinus*, *Rhexia virginica*, *Xyris jupicai*, *Viola lanceolata*, *Eleocharis quadrangulata*, *Sagittaria platyphylla*, *Hypericum lobocarpum*, *Triadenum walteri*, and *Panicum rigidulum* all as plants nearby to the Illinois *H. adpressum* populations.

### Life History and Reproduction

This plant usually begins sprouting underwater, “either wholly submerged or showing emersed leafy tips” (Bicknell, 1913). Once waters begin to recede however, the plant grows quickly. In Illinois the plant blooms in July and August, although it blooms a little later in New England from late July to early September (Edgin and Mankowski, 2013; Enser, 2000). It is observed that smaller plants in the driest areas tend to flower earlier and more aggressively (Bicknell, 1913).

### Conservation Status

*H. adpressum* is globally ranked as G3 – Vulnerable. At the state level, it has no status rank in Kentucky, and is ranked S2 – Imperiled in Delaware, Massachusetts, New York, Rhode Island, and South Carolina. It is ranked as **S1 – Critically Imperiled** in Arkansas, Georgia, **Illinois**, Indiana, Maryland, Michigan, Missouri, New Jersey, Tennessee, and Virginia. It is ranked as SH – Possibly Extirpated in Connecticut, North Carolina, and West Virginia, and SX – Presumed Extirpated in Pennsylvania (NatureServe Explorer, 2023). It is listed as endangered in Illinois, although it is not federally listed (Illinois Natural Heritage Database, 2023; USFWS, 2011). In a new review of plant s-ranks, *H. adpressum* is proposed to be re-listed as S2 – Imperiled in the state of Illinois (Illinois Natural Heritage Database, 2023).

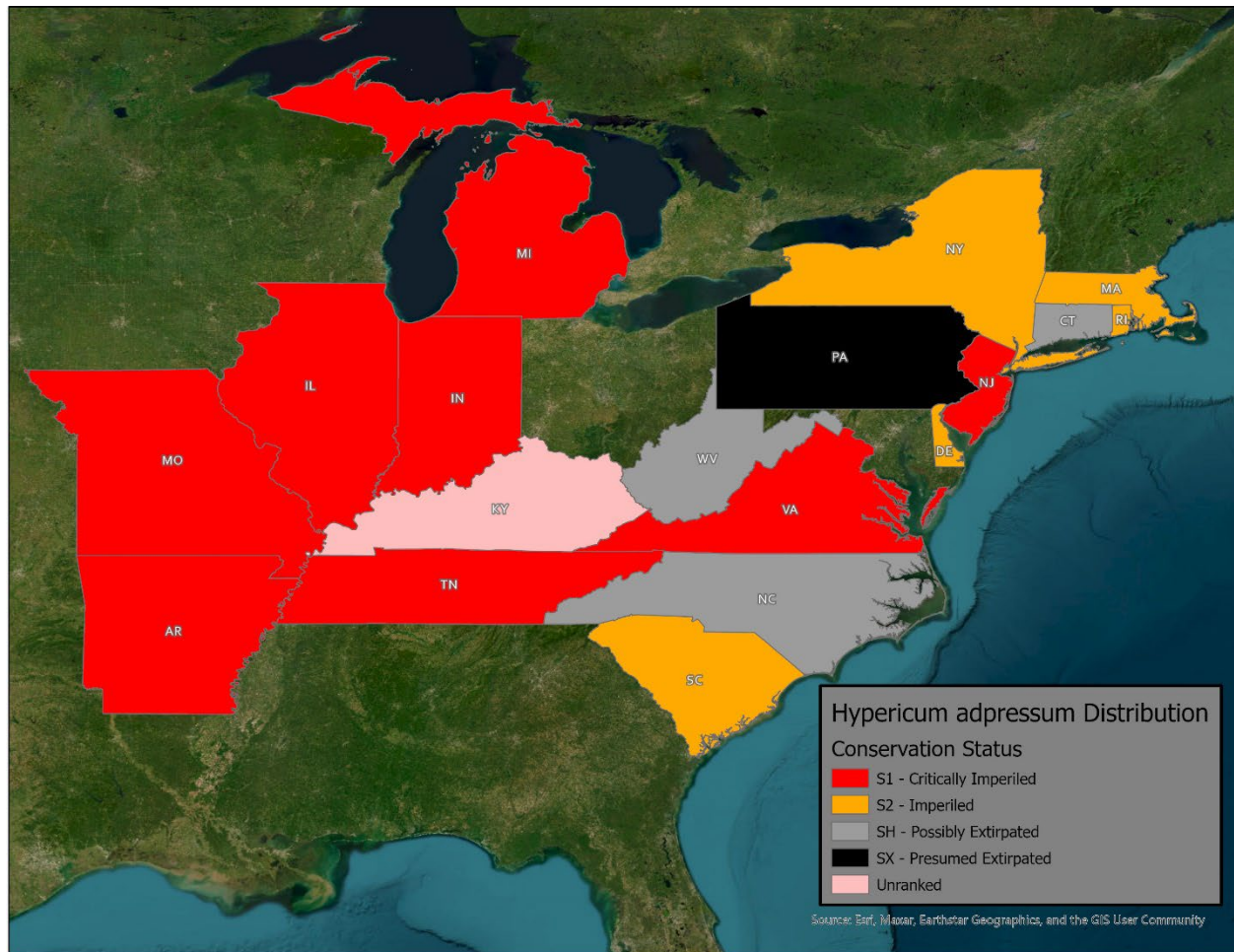


Figure 1: National distribution of *H. adpressum* and its subnational conservation status

## **Section 2: Range and Distribution**

### **Range**

Illinois is the most northwestern state that *H. adpressum* occurs in, although its range extends mostly through the Appalachian region of the United States. It is found as far south as Georgia, as far west as Missouri and Arkansas, as far north as Michigan and New York, and as far east as the Atlantic coastline of the United States, less than 10 miles from the coast in Rhode Island (Figure 1) (NatureServe Explorer, 2023; Enser & Caljouw, 1989). It is found in the southern counties of Rhode Island, Connecticut, and eastern Massachusetts, as well as the island of Nantucket (Enser, 2000). Interestingly, it has not been found at the Elizabeth Islands of Massachusetts, which are much closer to the mainland *H. adpressum* populations and has similar habitat to Nantucket (Fogg, 1930). There are also unverified records of the species in Vermont and New Hampshire (Crow and Storks, 1980), but without specimen evidence and given *H. adpressum*'s similarity with *H. ellipticum* (which is known to occur in similar habitats in those states), it is impossible to determine the validity of these reports (Enser, 2000).

## Illinois Distribution

Despite the limited number of Element Occurrences in Illinois, there is quite a large range for this species across the state, occurring in southern, central, west central, and northeast portions of Illinois (Figure 2). They are found in Cass, Iroquois, Kankakee, Will, Jackson, and Lawrence counties in Illinois, and occurs entirely on sites protected by dedication as either a Nature Preserve or a Land and Water Reserve. However, many of these populations were artificially introduced to those areas, and the only naturally occurring populations are in the ██████████ area (Paul Marcum, personal communication, Feb. 28, 2023). Its distribution could be limited by available dispersal mechanisms, thought to be waterfowl, rather than habitat limitation (Edgin and Mankowski, 2013).

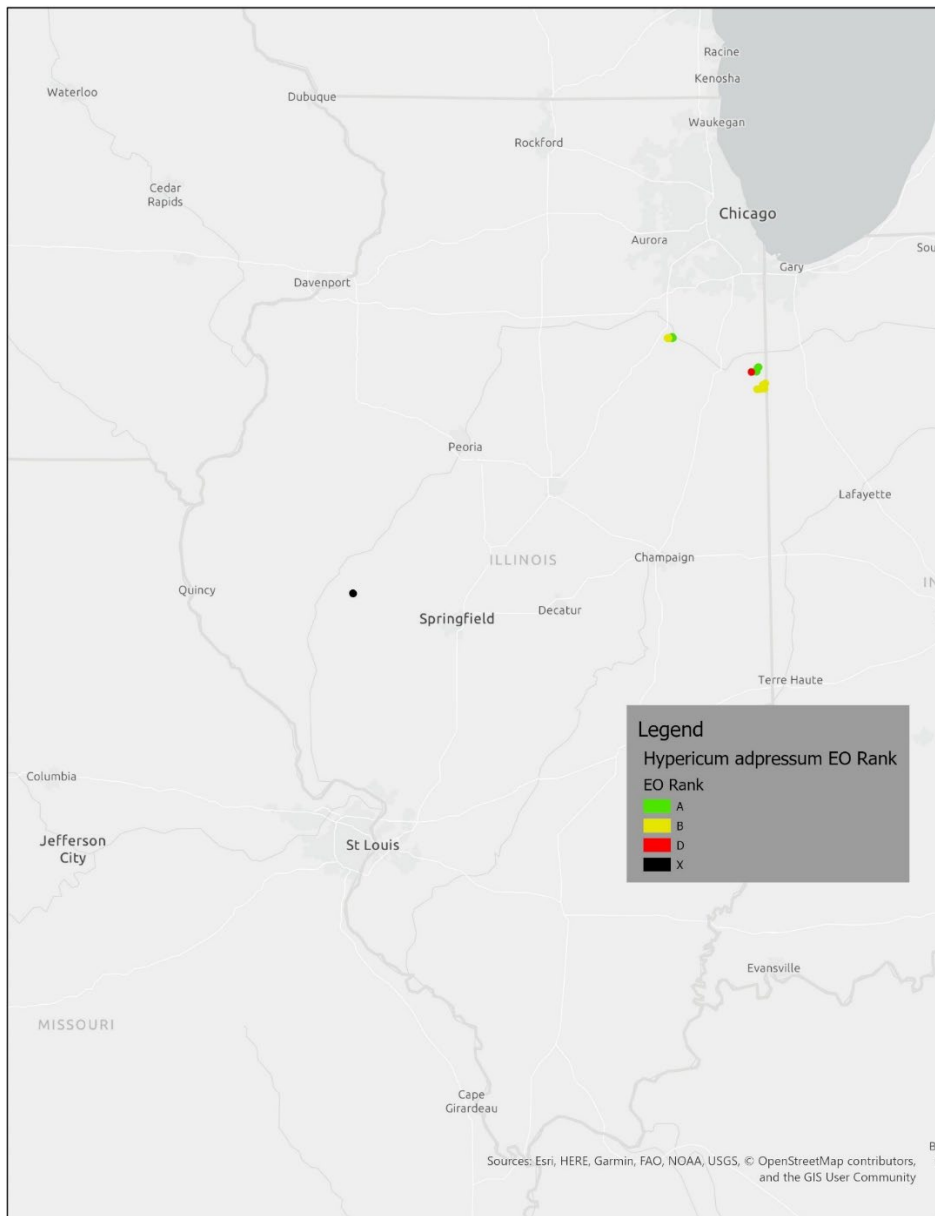


Figure 2: Location and EO Rank of Illinois populations

### **Section 3: Abundance**

Despite the low numbers of Element Occurrences across the state, and its state status as S1, there is often a high abundance of *H. adpressum* stems present in most years at half of the known populations, although the population numbers seem to wax and wane over time. This is also observed in New England, where the depth and presence of water can cause the population vigor to be extremely variable (Enser, 2000). Half of all current Element Occurrences have reported hundreds, even thousands of plants that have appeared in the last 10 years, usually in areas of about 20-40 acres. However, the other half of the Element Occurrences have very few, if any plants, at all at them, and are either very recent discoveries, transplants, or older populations that have not been resurveyed or likely no longer exist (Table 1).

<b>EO Number</b>	<b>Site Name</b>	<b>Last Observed Date</b>	<b>Plant Count at Last Observed Date</b>	<b>Acreage of EO</b>
1		1992-07-17	Unknown	13.8
2		2020-10-16	Many plants	27.4
3		2021-08-25	367 stems	23.3
4		2021-10-08	39 stems	47.8
9		2020-08-05	24 stems	16.5
10		2020-10-13	Small patches of plants	1.9
11		2022-06-27	Unknown	1.9
12		1995-06-15	Unknown	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 *H. adpressum* 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 *H. adpressum*. This means that any observation of *H. adpressum* in Illinois that was greater than 1 kilometer away from an existing Element Occurrence would be recorded as a new Element Occurrence.

Four of the existing Element Occurrences are ranked as either A or B, given their large population sizes and suitable habitat. Two populations are ranked as D, one of which is in an area with high amounts of human disturbance and another being a recent transplant from a different location. One location is ranked as H, given that it has not been surveyed since its initial discovery in the 90s, and a final location is ranked as X given the long period of time and numerous surveys that failed to detect the species, and a recent survey that found no plants present at this location (Table 2). Of these EOs, only 3 are found on state-owned sites (Illinois Natural Heritage Database, 2023)

EO Number	Site Name	EO ID Number	Last Observed Date	EO Ranking	Justification
1	[REDACTED]	1600	1992-07-17	X	Although site has only been successfully surveyed once since the last observed date, the perennial should be present if it exists at this site
2	[REDACTED]	5769	2020-10-16	B	Plant has been documented at this site and the surrounding areas for many decades now, and can produce many hundreds, possibly over 1000 plants although the population numbers can be low in certain years
3	[REDACTED]	3410	2021-08-25	A	Plant is documented in the hundreds or thousands of stems frequently, and is located almost entirely within a nature preserve
4	[REDACTED]	3174	2021-10-08	A	Plants is documented in the hundreds or thousands of stems frequently, and is found within an LWR
9	[REDACTED]	6746	2020-08-05	B	Plant has been documented here for a few decades and can produce a few hundred plants in the right years, although its population is less than some of the other EOs
10	[REDACTED]	12344	2020-10-13	D	Small population recently discovered in an area of high human disturbance
11	[REDACTED]	13187	2022-06-27	D	Plants recently transplanted here, although future success has yet to be determined



12		13239	1995-06-15	H	Site not surveyed since initial discovery
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Table 2: EO Rankings for the Illinois Populations of *Hypericum adpressum*

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