

**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014**

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Public Hearing Documents:

Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List - Plants.

Preliminary approval confirmed at the 161st meeting, 02/21/2014

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Presented in alphabetical order, by genus and species

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ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

One Natural Resources Way, Springfield, IL 62702 - 1271, (217) 785-8687; FAX (217) 785-2438; www.dnr.illinois.gov/esp/

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***Ammophila breviligulata* (Marram Grass)** - Proposed Action: change from endangered to threatened
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Marram Grass, *Ammophila breviligulata* (Illinois endangered)

Listed as IL E, 5/20/1980

Reason for listing: restricted habitats or low pops in IL;

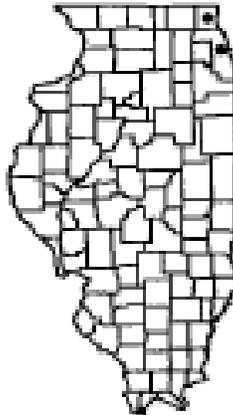
Ammophila breviligulata Fern.

MARRAM GRASS, BEACH GRASS POACEAE

Status: Endangered in Illinois.

Habit: Perennial rhizomatous grass, culms 0.5-1 m tall.

Range: Atlantic Coast, from Newfoundland to North Carolina, and the shores of the Great Lakes.



Ammophila breviligulata is a coastal species of open dunes. It is limited in Illinois to the beaches of Lake Michigan, where most of its habitat has been destroyed by urban growth. The species is now restricted to Lake and Cook counties, where it occurs in two state nature preserves, state and city parks and on private land. Some populations are threatened by accelerated shoreline erosion.

References: Guire and Voss (1963), Mohlenbrock (1972), Greenberg and Milde (1994).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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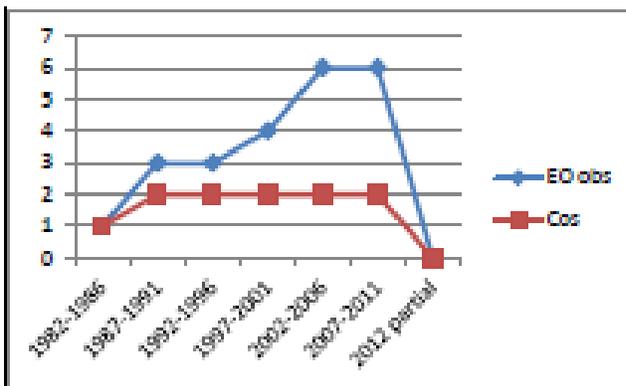
Illinois – Natural Heritage (Biotic 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
11/23/2009	9	9	2	6	2	2

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	3	3	4	6	6	0
Cos	1	2	2	2	2	2	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



ESPB TEC Chris Benda 03/29/13 comment: In comments for two other dune species (*Cakile edentula* and *Chamaesyce polygonifolia*) for which Board staff had made status upgrade recommendations, Mr. Benda questioned why no status upgrade had been considered for *Ammophila breviligulata*, which he described as the dominant plant in dune communities.

Mankowski 04/19/13 response: Comment noted and will be added to species review for Board information. No data or documentation supporting contrary recommendation was provided. Staff reviewed again the species review for *Ammophila breviligulata* and agreed with Mr. Benda's recommendation that, consistent with staff recommendations for the other two species, the species review should consider an upgrade in status. Staff acknowledge that they simply overlooked the species when developing the first draft of Part 1, Plan list 1st cut document.

This species' status has improved since it was listed as endangered in 1980. At the time of listing, only one occurrence was known. One EO was added in the 1980s, three EOs were added in the 1990s, and four EOs were added in the 2000s. All 9 current EOs (100% of total) have had observations in the last 10 years. All counties with known historic occurrences are captured in the current distribution. Two EOs (22% of total) are protected. Staff appreciates concerns about edge of range and restricted habitat species and has tried to consider those concerns in context when reviewing the number of observations relative to known EOs over time and to known historic range and distribution. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25%, and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers. The Board has generally not looked at individual population numbers in many past reviews and even when making decisions to add species to



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the List, since most often that level of detail is not available. Because of earlier staff oversight of this species, Ms. Mankowski elected to review the most recent reported population numbers for each EO. Across the 9 EOs there are 14 nested sites. Individual reported numbers in the most recent years of observation for each EO were: significant pops at 1 nested site; approx 140,007 clumps in 2 locations; 2 small clumps; 780 clumps; >800 clumps; approx 2,700 clumps across 3 nested sites; >800 plants; approx 2,000 clumps; and, approx 532,049 clumps.

Mankowski 04/19/13 final recommendation: change from endangered to threatened.

NatureServe Conservation Status in United States

California (SNA), Connecticut (SNR), Delaware (S3), Illinois (S1), Indiana (S3), Maine (SNR), Maryland (SNR), Massachusetts (SNR), Michigan (SNR), Minnesota (S2), New Hampshire (S2), New Jersey (S4), New York (S3), North Carolina (S3), Ohio (S2), Pennsylvania (S2), Rhode Island (SNR), South Carolina (SNR), Vermont (SNA), Virginia (S3), Wisconsin (SNR)

(Notes: SX = presumed extirpated; SH = possibly extirpated; S1 = critically imperiled; S2 = imperiled; S3 = vulnerable; S4 = apparently secure; S5 = secure; SU = unranked [due to lack of information or substantially conflicting information]; SNR = not ranked/under review)

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life (web application). Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed February 29, 2012).

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

The Board began with discussion about *Ammophila breviligulata* (Marram Grass). Ms. Masi questioned staff recommendation to change from endangered to threatened. Ms. Mankowski reminded the Board that her recommendations consider the status and distribution of a species when it originally listed versus its status and distribution now and the number of EOs for the species has increased. She referred the Board to the individual species review for the subject species. There was discussion about similar population and threat characteristics of two other beach species, *Chamaesyce polygonifolia* (Seaside Spurge) and *Cakile edentula* (Sea Rocket) and Ms. Masi noted that those two species are annuals and subject to a great deal of population fluctuation. Ms. Masi stated that they all occupy the same very specific habitat that is subject to ongoing threats of beach grooming and other beach activities. Mr. Benda stated that in surveys he has conducted of these communities, the *Ammophila* is the dominant and very abundant. He also asked for clarification about how much area or how many plants might be captured in an individual mapped EO, noting that sometimes they are small polygons and other times quite large. There was discussion that it varies by EO and they are determined by separation distances between EOs that are set by NatureServe, in this case it would be a separation distance of about 10 kilometers, so that the distribution of this species may occur over as many as 90 kilometers of lakefront. There was discussion that the three species occur all along the lakefront at several sites in Cook and Lake Counties and that the currently lower lake levels are exposing a greater amount of suitable habitat, but it may be a temporary condition. Ms. Mankowski asked if since there are eight new EOs for the species since the time it was originally listed, does the Board think that all EOs are still subject to the same degree of threat so that its status should not be considered improved from endangered. Vice-chair Kruse acknowledged that listing decisions should be based on what we know at the time and based on the data on hand, it appears the species' status and distribution has improved. Ms. Mankowski reviewed the population numbers reported in her species review. Ms. Masi moved that *Ammophila breviligulata* (Marram Grass) be changed from endangered to threatened. Dr. Taft seconded the motion and it was approved unanimously.



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Andromeda glaucophylla (Bog Rosemary) - Proposed Action: add as endangered

Reviewed at: 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

**Illinois Endangered Species Protection Board (ESPB) required 5-year review of the
Illinois List of Endangered and Threatened Species (Illinois List) ending in 2014:**

**Nomination Form for recommending addition of a species to the Illinois List of Endangered and
Threatened Species**

Form prepared by:

Anne Mankowski, Director

Illinois Endangered Species Protection Board

One Natural Resources Way

Springfield, IL 62702-1271

Office phone: 217-785-8687

Email: anne.mankowski@illinois.gov

March 2012

Complete one form for each species nomination. Fill-in all sections to the best of your ability with available information. Return the form and copies of attachments to Anne Mankowski.

Andromeda glaucophylla [Link](#)

Date: January 9, 2014

A. Proposer Information

Name: Ken Klick and Matt Ueltzen

Address: 1899 West Winchester Road, Libertyville, Illinois

Phone number: (847) 968-3284

Email address: kklick@lcfpd.org

Title: Restoration Ecologist II

Institution/Organization affiliation: Lake County Forest Preserve District

**B. The scientific and common name, including nomenclature citation, of any species involved
(the ESPB may elect to use the common name identified by NatureServe).**

Scientific Name: *Andromeda glaucophylla* [Link](#)

Common Name: Bog Rosemary

Nomenclature Citation: Gray's Manual of Botany 8th edition,
New York; American Book Company. M.L. Fernald 1950



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C. Identification of the specific listing status recommended – endangered or threatened – and reference to specific ESPB listing criteria that are affecting the species, including where these factors are acting upon the species, the magnitude and imminence of these factors, and whether, either singly or acting in combination, these factors may cause the species to be an endangered or threatened species (endangered = at risk of extinction in the wild in Illinois; threatened = likely to become endangered in the wild in Illinois within the foreseeable future).

Recommend listing as endangered X

Recommend listing as threatened —

Identify which ESPB listing criteria are affecting the species and for which your proposal provides supporting evidence:

Bog rosemary is a plant of far northern latitudes, reaching its southern-most limits in Illinois and Indiana, but extending north into the Arctic Circle. Throughout its northern range, bog rosemary is a denizen of bogs, fens, and tundra communities associating with tamarack and spruce, pitcher plants and sundews among others.

In northern Illinois as the last glacier melted around 11,000 year ago, numerous depressional wetlands developed into bog and calcareous floating mat communities. As the climate warmed and successional processes advanced, most bog and calcareous floating mat communities shifted into new habitats eliminating most of *Andromeda's* Illinois niche. Today, Illinois likely has less than 300 acres (Lake and McHenry Counties only) that contain suitable habitat for *Andromeda's*. These habitat locations are well known and represent some of the most thoroughly botanized locales in the region; places like Volo, Pistakee, Gavin, and Bradenburg Bog State Natural Areas and Elizabeth Lake State Nature Preserves.

Botanical surveys of these sites started early in the 19th century, with botany and ecology luminaries as Professor Henry Chandler Cowles, Reverend E. J. Hill, and Dr. George Vasey. These great botanists provided the State's only herbarium exsiccate, housed at the University of Illinois (ILL) and Illinois State Museum (ISM) herbaria. Illinois' last documented occurrence of *Andromeda* is a vouchered herbarium specimen collected on August 27, 1908 by Reverend E. J. Hill in Lake County's Grant Township (T43N, R9E; section 13 & 24). This specimen is housed at the University of Illinois' herbarium. Its herbarium label states collected from "Cranberry marsh, open place with Tamarack; Grant Township." Two additional *Andromeda* herbarium specimens collected from Lake County were made by Henry Cowles, collected on 6/24/1906 and July 10, 1906 and housed at ILL and Illinois State Museum, respectively. No location information is given. A McHenry County specimen collected by Dr. George Vasey is at ILL with no date or location information though likely collected around 1860.

More recently, since the Illinois Natural Area Inventory began in 1976, many of the region's preeminent botanists have made on-going plant inventories of these unique habitats and have not reported *Andromeda*. These botanist include: the late Floyd Swink and Ray Schulenberg of the Morton Arboretum, the late Julian Steyermark—Field Museum of Natural History, and contemporary botanists such as Laurie Ryan of McHenry County Conservation District, Wayne



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Schennum of the Illinois Natural Area Inventory, Marlin Bowles, Morton Arboretum, Gerould Wilhelm—Conservation Design Forum, Ken Dritz—freelance botanist, Margo Milde—freelance botanist, John Taft -Illinois Natural History Survey, Mary Kay Solecki of Illinois Nature Preserve, Susanne Masi—Chicago Botanic Garden, and Laura Riecha—Cook County Forest Preserve. In 1990, Taft and Solecki calculated similarity indices for 6 Illinois bogs with species lists and *Andromeda* was not on any of the lists.

Based on the long history of botanical searches in *Andromeda*'s suitable habitat, it is likely that the discovered population at Fourth Lake Fen Nature Preserve represents Illinois' largest and perhaps last population of this species. A specimen was collected from the Fourth Lake Fen population and is housed at the Morton Arboretum herbarium.

D. Biological information on the species (including habitat and life-history traits) that is relevant to determining whether a species may be endangered or threatened.

Bog Rosemary is a plant requiring very specific habitat containing unique soil and water chemistry attributes. Bogs with their low pH and calcareous floating mats with high pH support a specialized list of plant species able to tolerate the extremes of pH. This habitat supports a unique plant assemblage and is extremely rare in Illinois; less than 300 acres.

Andromeda is likely vulnerable to increased water temperature changes brought upon by greater frequency and duration of surface run off coupled with high siltation and chloride levels from adjacent urban development. Conversely, the drop in the groundwater table due to human-use extraction is altering this plant's vital groundwater connection. Furthermore, the presence of invasive species such as Phragmites, reed canary grass, and hybrid cattails pose a threat to the species. Climate change is especially menacing to this boreal relict.

E. A detailed narrative justification for the recommended measure, describing, based on available information, past and present numbers and distribution of the species involved (location information should include lat/long coordinates and other information necessary to add a record to the Natural Heritage (Biotics 4) Database) and any threats faced by the species; it is most helpful if this narrative contains an analysis of the information presented.

The *Andromeda* population, consisting of approximately 73 individual plants, found at Fourth Lake Fen Nature Preserve occurs within the one-acre area in the southwestern corner of the Nature Preserve. GPS coordinates for the population polygon's cardinal edge limits are: North border=42.398616; -88.033147, South border= 42.398143, -88.033267, east border= 42.398518, -88.32993, West border= 42.398398 - 88.034118. (NAD83 State Plan East FIPS 1201 Feet decimal degree). Attachment 1 contains an aerial exhibit depicting the population's location.

F. Information on regulatory protections and conservation activities initiated or currently in place that may or may not protect the species or its habitat.

Fourth Lake Fen was first recognized as a high quality natural area during the initial Illinois Natural Area Inventory (site #62 INAI) as containing a high quality calcareous floating mat containing several state-listed and rare plant species. *Andromeda* was not found during this 1976 inventory, though the habitat area was labeled as Grade A calcareous floating mat. Lake County Forest Preserve began land acquisition of the site in 1983. The Preserve was dedicated as a state nature preserve in 2002. To date, the District has partially controlled purple loosestrife



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through the release of the biocontrol beetles. No other management prescriptions have been initiated in the wetland. A single wildfire in 18 years has burnt a portion of the marsh, though it is uncertain if it affected the *Andromeda* habitat. Extensive invasive plant species such as reed canary grass, glossy buckthorn, hybrid cattails, and *Phragmites* pose serious threat to the site.

- G. Information regarding the status of the species over all or a significant portion of its range.**
Bog rosemary is a plant of northern latitudes beyond Illinois, reaching its southern-most limits in Illinois and Indiana, but extending north into the Arctic Circle. Throughout its northern range, bog rosemary is a member of bog, fen, and tundra communities associating with tamarack and spruce, pitcher plants and sundews among others. In the Midwest, *Andromeda* is listed as extirpated in Ohio and considered state rare in Indiana. It is found Wisconsin, Minnesota and Michigan but not listed. *Andromeda* is not known from Iowa.

- H. Supporting documentation in the form of copies of reprints of pertinent publications, data, reports or letters from authorities, and maps.**

The ESPB may consult information already in our files for a subject species, but will only conduct additional research as time and resources allow when evaluating whether a listing recommendation presents substantial information indicating listing may be warranted. Therefore, to ensure that we will consider any supporting documentation you reference, you should provide either electronic or hard copies of any supporting materials cited in the recommendation, or valid links to public websites where the cited materials can be accessed; these materials should be in English. If you do not, we may at our option contact you to obtain supporting documentation. However, if you do not provide the supporting documentation, and it is not otherwise readily available in our files, we will be unable to consider this information in making our finding. In addition, we request that you provide literature citations that are specific enough to allow us to easily locate within the documentation the particular information cited in the petition, including page numbers or chapters, as applicable.

Provide specific citations here:

1. Taft, J. B., and M. K. Solecki. 1990. Vascular flora of the wetland and prairie communities at Gavin Bog and Prairie Nature Preserve, Lake County, Illinois. *Rhodora* 92: 142-165.

Provide a list of attachments here:

1. *Andromeda glaucophylla*: Rediscovered in Illinois. In-house report by Lake County Forest Preserve District. June 2013.
2. Plants of Concern Monitoring Report for *Andromeda glaucophylla* submitted to Chicago Botanic Garden on July 17, 2013.
3. PowerPoint presentation images prepared by Lake County Forest Preserve District staff. Dec. 2014



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Mankowski comments and recommendation on the nomination to add *Andromeda glaucophylla* (Bog Rosemary) as an Illinois endangered species. (02/03/2014)

General comments

It appears the species was likely never common in Illinois and may have never been more than a minor or occasional representative where it did/does occur; the bogs of northeastern Illinois represent the edge of range for the species (Mohlenbrock 2002; NatureServe 2014).

Despite the apparent rarity, the species has never been listed as endangered or threatened in Illinois. Although specific reasons for not listing the species are not known at this time, the "Literature Cited" list from the first Illinois List of Endangered and Threatened Plants includes many statewide and local floras and survey reports, suggesting the species was considered. A list of references from the first IL List of Endangered and Threatened Plants included, but was not limited to: Cowles. 1901. *The physiographic ecology of Chicago and vicinity: a study of the origin, development, and classification of plant societies*. Bot.Gaz. 31(2):73-108, (3):145-182.; Doebere, B., and J. Ebinger. 1974. *Distribution of the common vascular hydrophytes in Illinois*. Trans. Illinois Acad. Sci. 67:402-417.; Evers and Evers et. al. – multiple citations; Jones and Jones et. al. – multiple citations; Mohlenbrock and Mohlenbrock et. al. – multiple citations; Peppoon – multiple citations; Steyermark and Steyermark et. al. – multiple citations; Swink, F., and G. Wilhelm. 1979. *Plants of the Chicago Region*. Rev. ed. The Morton Arboretum.; and, Vasey, G. 1870. *New plants*, Am. Entomol. Andn Bot. 2:228 (Bowles et. al. 1981)

Scientific Name

Mohlenbrock (2002) lists *Andromeda glaucophylla* as the only representative of the species in Illinois and identifies a synonym of *Andromeda polifolia* L. var. *glaucophylla* (Link). The synonym (*Andromeda polifolia* var. *glaucophylla*) is the nomenclature recognized by NatureServe (2013). Flora of North America (2013) currently lists the species as currently under review and an account is not available.

Nomination form modification

The nominator altered the ESPB nomination form, so Sections are off by one letter heading in the submitted nomination.

Incomplete information/form

Several areas of the nomination are incomplete or lack sufficient evidence.

- 1) The nomination does not identify which ESPB listing criteria are affecting the species and for which the proposal provides supporting evidence (ESPB nomination form Section D, current nomination Section C).
 1. Species or subspecies designated as federally endangered or threatened.
 2. Species proposed for Federal Endangered or Threatened status that occurs in Illinois.
 3. Species which formerly were more widespread in Illinois but have shown significant declines which may lead to extirpation from the State due to habitat destruction, collecting, or other pressures resulting from the development of Illinois. This includes species which:
 - a. are experiencing reproductive impairment;
 - b. have experienced a range reduction;
 - c. occur in reduced numbers even though range or number of populations remains steady.



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4. *Species which are low in numbers and for which known or potential threats are likely to cause significant declines, including:*

- a. *species which exhibit very restricted geographic ranges, of which Illinois is a part;*
- b. *species which exhibit restricted habitats or low populations in Illinois;*
- c. *species which are significant disjuncts in Illinois, i.e., the Illinois population is far removed from the rest of the species' range.*

2) Under the item for identifying ESPB listing criteria, the nomination reviews some historic records and notes herbarium specimen locations. There is one reference to a publication that is listed in the references section (Teft and Solecki 1990), but no copy of the document was provided. No other citations are included in the text for any descriptions of biological information on the species, including threats (current nomination Section D), past and present numbers and distribution (current nomination Section E), or information regarding the status of the species over all or a significant portion of its range (current nomination Section G). Without citations and copies of references, ESPB staff is not able to verify information presented.

3) The review of present numbers and distribution includes presence survey information from only the subject site, Fourth Lake Fen Bog. There is no indication of how many surveys at the subject site over what number of years failed to find the species there, nor whether surveys have recently been conducted at any other site to determine if it currently occurs elsewhere.

The species is capable of self-pollination and may reproduce from seeds. It primarily reproduces vegetatively by rhizomes. While considered a calcareous wetland obligate, from 75-98% of the plant's biomass is below ground and it is able to grow in dry soils and can persist in drained bogs long after the sphagnum mosses have disappeared (several citations in Taylor 2007). This seems to indicate that the species could escape detection for a number of years at any location and while the current proposal presents very good presence survey data for the subject site, it seems to lack sufficient evidence to support the statement that the species is likely found nowhere else in Illinois and for the Board to accurately evaluate its Illinois status and distribution.

Protection gained from listing the species as Illinois endangered or threatened

There are 11 Illinois Natural Areas Inventory (INAI) sites identified for at least high-quality calcareous floating mat communities and 7 INAI sites identified for at least high-quality calcareous seep; many of the sites have additional INAI qualifying features. Seven of the 11 INAI calcareous floating mat sites and 6 of the 7 INAI calcareous seep sites are protected as Illinois Nature Preserves (Illinois Natural Heritage (Biotics 4) Database 2014).

The nomination states that the species is known from the subject site and may not occur elsewhere in Illinois, although as noted above, the nomination does not review recent survey efforts at other sites. The subject site is an Illinois Nature Preserve. Dedication as an Illinois Nature Preserve provides the highest level of protection to all features of the site; as a feature of a Nature Preserve, individuals of any species receive greater protection under the Illinois Nature Preserves Act than they would as endangered or threatened species under the Illinois Endangered Species Protection Act.

Given the information presented and if this is the only location in Illinois, as a proposed initial listing, Board staff questions what additional protection would be afforded the species by listing? While the species may qualify for listing according to ESPB criteria, listing it would not functionally protect it



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**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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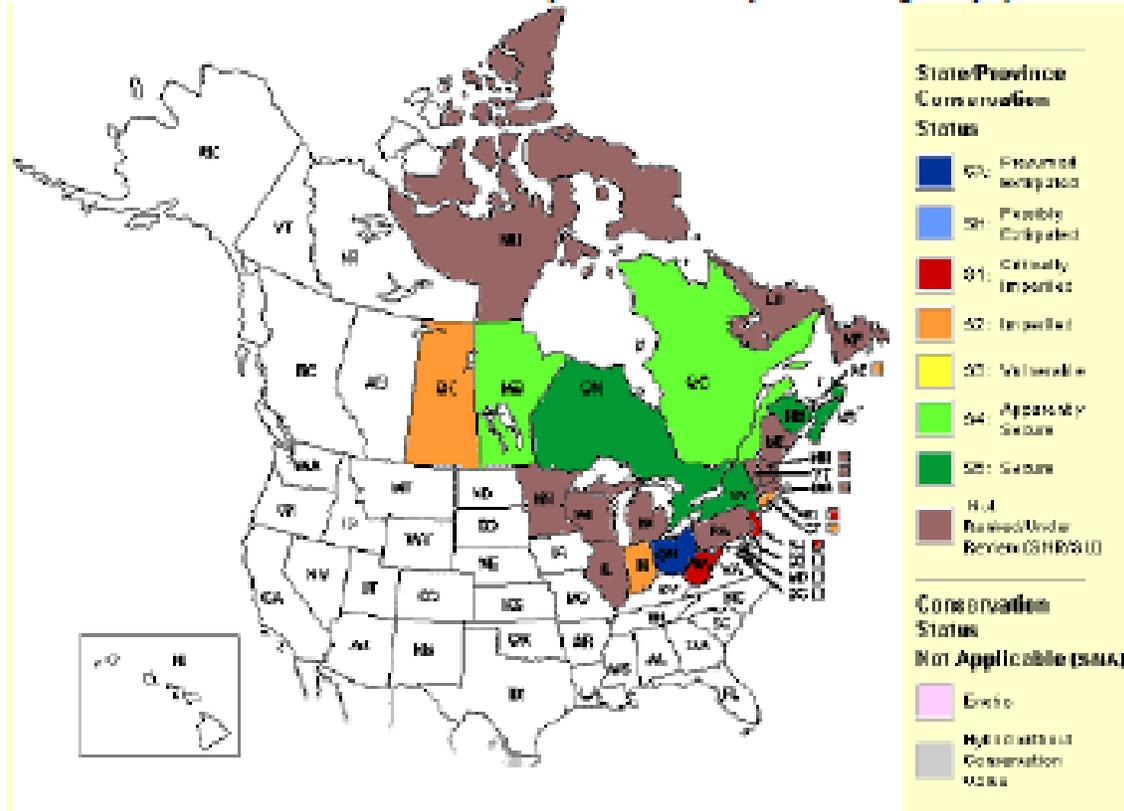
Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

beyond the current protections it receives as a plant (listed or non-listed) occurring in an IL Nature Preserve.

Staff recommendation

As has been discussed over the course of the current List review, staff struggles with how best to address edge of range species. Board staff recommendation is that the evidence provided may warrant listing the species as Illinois endangered or threatened – however, while the species is seemingly rare and its habitat is rare, the proposal lacks sufficient information for the Board to accurately evaluate current Illinois status and distribution.

NatureServe Conservation Status Map for *Andromeda polifolium* var. *glaucophylla*



NatureServe. 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: February 3, 2014).

References:

Bowles, M.L., V.E. Diersing, J.E. Ebinger, and H.C. Schultz, editors. 1981. *Endangered and Threatened Vertebrate Animals and Vascular Plants of Illinois*. Natural Land Institute, Illinois Natural History Survey, Illinois Department of Conservation, Illinois State Museum, Illinois Endangered Species Protection Board, Illinois Nature Preserves Commission, U.S. Fish and Wildlife Service. Illinois Department of Conservation. Springfield, Illinois. vii + 189 pp and Appendices.

Flora of North America Editorial Committee, eds. 1993+. *Flora of North America North of Mexico*. 16+ vols. New York and Oxford. (Accessed online 02/03/2014).



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Illinois Natural Heritage Biotics 4 Database. 2014. Illinois Natural Heritage Biotics 4 Database, Illinois Department of Natural Resources, Springfield, Illinois. (Accessed February, 2014).

Mohlenbrock, R.H. 2002. Vascular Flora of Illinois. Southern Illinois University Press, Carbondale. 490 pp.

NatureServe. 2013. NatureServe Explorer. An online encyclopedia of life (web application). Version 7.1. NatureServe, Arlington, VA. Available at <http://www.natureserve.org/explorer>. (Accessed: February 3, 2014).

Taylor, Jane E. 2007. *Andromeda polifolia*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2014, February 3].

Preliminary listing decision excerpts from agenda item 8 of the 161st meeting, 02/21/2014

The Board engaged in discussion about the rarity of bog habitat in Illinois and its likely increasingly threatened status due to habitat destruction and alteration and effects of climate change. It was noted that the species occurs in other wetland habitats, but is strongly associated with bogs in Illinois.

Ms. Masi **moved** to approve adding *Andromeda glaucophylla* (Bog Rosemary) as an Illinois endangered species, Ms. Ross seconded the motion, and it was **approved** unanimously. Chair Gooch thanked Messrs. Klick and Ueltzen for their submittal and presentation.



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Berberis canadensis (Allegheny Barberry) - Proposed Action: remove from endangered

Reviewed at: 158th meeting, 05/17/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Allegheny Barberry, *Berberis canadensis* (Illinois endangered)

Listed as IL E, 03/20/1980

Reason for listing: proposed Fed E or T; restricted habitats or low pops in IL;

Berberis canadensis P. Mill.

ALLEGHENY BARBERRY

BERBERIDACEAE

Status: Endangered in Illinois.

Habit: Shrub 1-2 m tall, with trifid spines.

Range: Southeastern United States, northwest to Illinois and Missouri.



Berberis canadensis is extremely rare in the western part of its range with scattered, disjunct populations. As late as 1987 this taxon was in the Shawnee National Forest on a sandstone bluff of the Mississippi River. It probably still persists at that site.

References: Mohlenbrock (1981), Mohlenbrock and Wilson (1985), Whittemore (1997a).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013

(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
1987	2	0	0	3	2	0

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	0	1	0	0	0	0	0
Cos	0	1	0	0	0	0	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals

No graph produced

Mankowski notes and recommendation:

The species is known from two locations and has not been observed since 1977 at the Tazewell County location and 1987 at the Jackson County location. Surveys with no observation were reported in 1988 and twice in 2012 in Jackson County and twice in 2012 in Tazewell County.

Mankowski recommendation – Mankowski will conduct surveys at each location during the spring of 2013. If the species is not observed this year, recommend to remove from endangered as extirpated.

NatureServe Conservation Status in United States

Alabama (SH), Georgia (S1), Illinois (S1), Indiana (S1), Kentucky (S1), Maryland (SH), Missouri (S2), North Carolina (S2), Ohio (SNR), Pennsylvania (SX), South Carolina (SNR), Tennessee (S2), Virginia (S3S4), West Virginia (S1)

(Notes: SX = presumed extirpated; SH = possibly extirpated; S1 = critically imperiled; S2 = imperiled; S3 = vulnerable; S4 = apparently secure; S5 = secure; SU = unranked [due to lack of information or substantially conflicting information]; SNR = not ranked/under review)

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life (web application). Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed February 29, 2012).

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Ms. Mankowski reviewed her recommendation for delisting *Berberis canadensis* (Allegheny Barberry) due to extirpation. She explained that the species has not been observed at either of the two known locations in decades, the locations had been searched several times over those years, and she had searched the one site in Jackson County again this year and was planning to search the other in Tazewell County site during the week following the Board meeting. She suggested that if the Board was going to be satisfied with the “surveyed with no observation” if she did not find it the next week and would move to delist the species as extirpated, then she would conduct the planned survey. However, if the Board would like additional years of search effort before making a decision to delist, she would not dedicate the time to conduct the planned survey this year. Vice-chair Kruse moved to delist the species if the planned survey by staff did not find it at the Tazewell County location and Dr. Taft seconded the motion. The Board voted and approved unanimously to delist *Berberis canadensis* (Allegheny Barberry) if the planned survey by staff did not locate the species at the Tazewell County site. Ms. Mankowski noted that she would include the species in the list of “outstanding issues” that she will revisit with the Board prior to the Board reconfirming all of its preliminary approvals for the current List revision.



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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Berchemia scandens (Supple-Jack) - Proposed Action: change from threatened to endangered

Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Supple-jack, *Berchemia scandens* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 10/30/2009

Reason for listing: restricted habitats or low pops in IL;

***Berchemia scandens* (Hill) K. Koch**

SUPPLE-JACK

RHAMNACEAE

Status: Endangered in Illinois.

Habit: High-climbing woody vine.

Range: Southeastern United States.



Berchemia scandens reaches its northern range limit in the Shawnee Hills Natural Division of Illinois. A single state population, last seen in 1992, occurs in an upland forest and adjacent pine plantation along a fire lane in the Shawnee National Forest.

References: Schwegman (1970), Mohlenbrock (1982).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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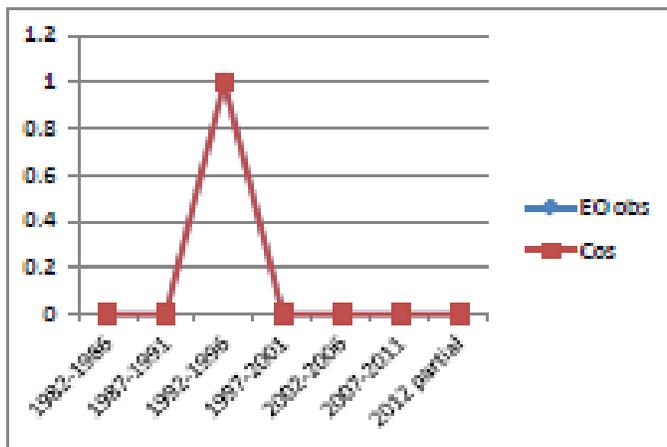
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
11/13/1992	1	0	0	1	1	0

Observed EOs and counties with observations, for 3-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	0	0	1	0	0	0	0
Cos	0	0	1	0	0	0	0

Trends for numbers of observed EOs and counties with observations, for 3-year intervals



ESPB TEC John Taft 03/28/13 comment: *Berchemia scandens* – T to E; only 1 EOR. Listed as E in 2002.

Mankowski 04/19/13 response: No data, evidence, or documentation was provided. This species' status was changed from endangered to threatened in 2009 for the following reasons presented by the ESTAC for plants – "This species is becoming more abundant in the area where it was first discovered in Illinois. Also, present information suggests that this taxon may be adventive in Illinois, sometimes being planted in the southeastern United States." Apparently, no data supporting the recommendation was brought forth.

Mankowski 04/19/13 final recommendation: Staff overlooked this species review. Agree with the recommendation for a change back to endangered because the previous listing decision was made without sufficient evidence.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Secretary Clemetsen moved to change the status of *Berchemia scandens* (Supple-Jack) from threatened to endangered and Dr. Hofmann seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Berchemia scandens* (Supple-Jack) from threatened to endangered.



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Botrychium biternatum (Southern Grape Fern) - Proposed Action: change from threatened to endangered
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Southern Grape Fern, *Botrychium biternatum* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 12/03/1998

Reason for listing: restricted habitats or low pops in IL;

Botrychium biternatum (Sav.) Underw.
SOUTHERN GRAPE FERN OPHIOGLOSSACEAE

Status: Threatened in Illinois.
Habit: Perennial evergreen fern with fleshy to nearly fibrous roots, to 35 cm tall.
Range: Southeastern United States.



Botrychium biternatum reaches its northern range limit in southern Illinois. Presently it is known from only three localities in the state. One population occurs near the base of an open hillside in Jackson County, another at the edge of old fields in Pope County, and one in an ecological area in Pope County.

References: Mohlenbrock (1966a, 1967b, 1985a), Wagner and Wagner (1993).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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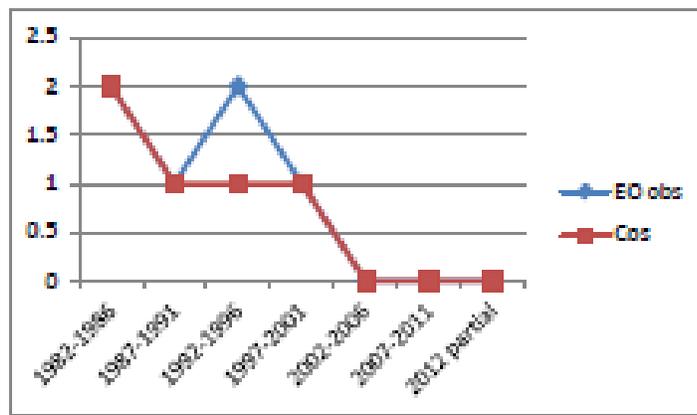
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
6/26/1997	7	0	0	7	3	0

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	2	1	2	1	0	0	0
Cos	2	1	1	1	0	0	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

It appears that the addition of four new EOs in the 1990s may have triggered the Board's decision to change this species' status from endangered to threatened. The lack of observations in recent 5-year intervals mostly reflects search effort, with only one "surveyed w/ no observation" report in the last 10 years. Search effort aside, since no EOs are protected and there have been no observations since 1997, it seems the species' status may no longer meet the definition of state threatened.

Mankowski 03/15/13 recommendation – change from threatened to endangered.

ESPB TEC Rick Phillippe 03/29/13 comment: [Maintain as Threatened]. This proposal of changing from Threatened to Endangered may be more an artifact of the difficulty of recognizing the species than its scarcity. I would feel uncomfortable supporting this change without a pteridologist making an effort at looking for this species in southern Illinois.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided. The Board recognizes that search effort and reporting across species and across EOs is not systematic nor standardized and that the number of observations mostly reflects search effort and that is mentioned in this species' review. The Board needs to make listing decisions based on the best information available and does not have resources to fund systematic and programmatic surveys for all species.



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Mankowski 04/19/13 final recommendation: maintains recommendation for change from threatened to endangered for the reasons explained in her species review. If the Board wants staff to contract surveys for the species at known EOs and/or across southern Illinois, then staff recommends this species be included with other "outstanding species issues" that she will try to revisit prior to the Board confirming preliminary approval of the entire List revision

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Dr. Hofmann moved to change the status of *Botrychium biternatum* (Southern Grape Fern) from threatened to endangered and Dr. Taft seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Botrychium biternatum* (Southern Grape Fern) from threatened to endangered.



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Carex cryptolepis (Yellow Sedge) - Proposed Action: change from endangered to threatened

Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Yellow Sedge, *Carex cryptolepis* (Illinois endangered)

Listed as IL E, 01/18/1994

Reason for listing: restricted habitats or low pops in IL;

Carex cryptolepis Mack.

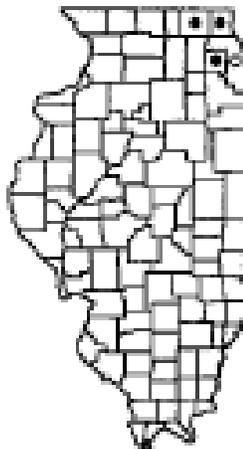
YELLOW SEDGE

CYPERACEAE

Status: Endangered in Illinois.

Habit: Perennial caespitose sedge with short rhizomes, culms to 50 cm tall.

Range: Northeastern United States and adjacent Canada.



In Illinois, *Carex cryptolepis* is restricted to the extreme northeastern counties of the Northeastern Morainal Natural Division. It is presently known from fen communities on forest preserves in DuPage and Lake counties, and was recently found on private land in McHenry County.

References: Gleason and Cronquist (1991), Mohlenbrock (1999).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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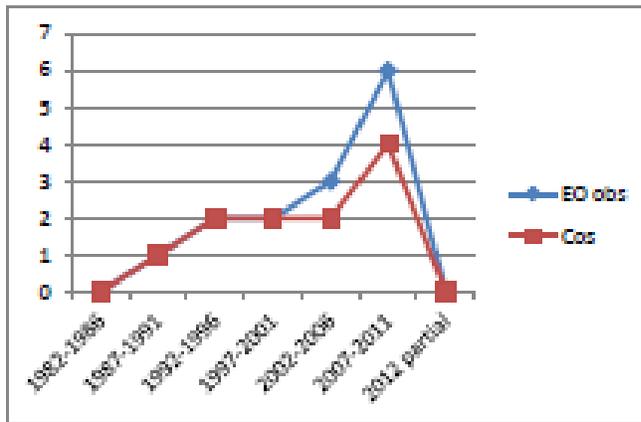
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
07/01/2011	8	6	0	9	3	4

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	0	1	2	2	3	6	0
Cos	0	1	2	2	2	4	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

It appears this species' status and distribution have improved since it was listed as endangered in 1994. At the time of listing, there were three known occurrences that became established as EOs. Since that time, five additional EOs have been added, more than doubling known occurrences. Those additional EOs also added two counties, bringing to six the number of counties with EOs. Six EOs (75% of total) in four counties (80% of counties with EOs) have had observations in the last 10 years. There have been no "surveyed w/ no observation" reports without subsequent observation. While no EOs are protected, some degree of security may be reflected by the fact that three EOs (43% of total) have had observations in repeated years across at least two of the three most recent 5-year intervals.

Mankowski 03/15/13 recommendation – change from endangered to threatened.

ESPB Paul Marcum 03/29/13 comments: Recent increase in the number of EO's, however, there are still only 6. Also, the review lacks the same information as above for *A. stanophylla*. How many plants at known sites? I would recommend keeping this species as Endangered.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 23%, and consistent with the level of review for other species during this current List



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review, the Board is not generally looking at individual population numbers. The Board has generally not looked at individual population numbers in many past reviews and even when making decisions to add species to the List, since most often that level of detail is not available. There were two errors in the Part 1, Plant list 1st cut draft document where the number of observed EOs in the 2007-2011 window and trend graph only showed 5 EOs, when it should have been 6. The same error was reflected in "Mankowski notes and recommendations", where the number of EOs added since listing was noted as 5 instead of 6. Respective corrections have been made to the final draft of the Part 1, Plant list 1st cut document. Across the 6 EOs with recent observations individual most recent reports were: 101-200 clumps; 20 clumps, 40% reproductive; >800 reproductive clumps; healthy, scattered pop. w/ fruiting/flowering; 340 individuals; and, observed.

Mankowski 04/19/13 final recommendation: Mankowski maintains recommendation for change from endangered to threatened for the reasons explained here and in her species review.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Ms. Mankowski reviewed the species review for *Carex cryptolepis* (Yellow Sedge). Vice-chair Kruse moved to change the status of *Carex cryptolepis* (Yellow Sedge) from endangered to threatened and Dr. Walk seconded the motion. There was discussion that the EOs occur across a fairly big geographic area, but no sites are protected. The Board voted and approved unanimously the motion to change the status of *Carex cryptolepis* (Yellow Sedge) from endangered to threatened.



ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Carex intumescens (Swollen Sedge) - Proposed Action: change from threatened to endangered

Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Swollen Sedge, *Carex intumescens* (Illinois threatened)

Listed as ILE, 5/20/1980; Listed as IL T 12/03/1988

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

Carex intumescens Rudge

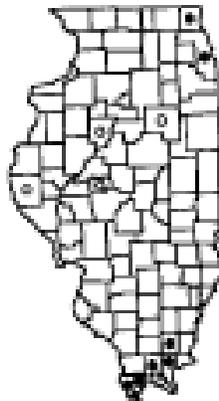
SWOLLEN SEDGE

CYPERACEAE

Status: Threatened in Illinois.

Habit: Perennial caespitose sedge, culms to 80 cm tall.

Range: Eastern United States and adjacent Canada.



Carex intumescens occurs in forested wetlands and is rarely encountered in Illinois. It has recently been observed in state nature preserves in Cook and Johnson counties, a forest preserve in Lake County, and a few areas in the Shawnee National Forest.

References: Fernald (1942a), Menapace *et al.* (1986), Bowles *et al.* (1991), Mohlenbrock (1999).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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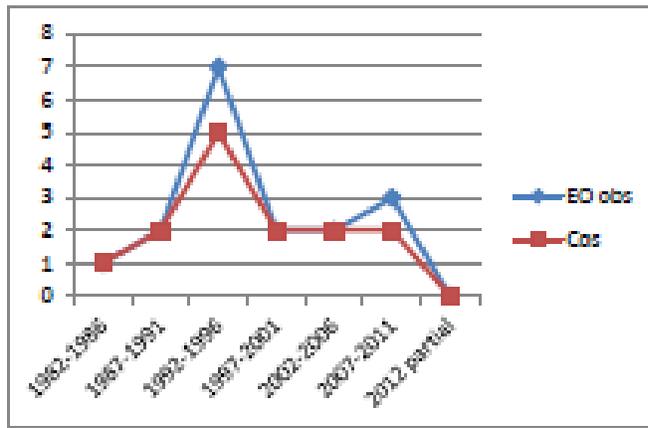
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
09/26/2011	13	5	3	12	7	3

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	2	7	2	2	3	0
Cos	1	2	5	2	2	2	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

The species was upgraded to threatened in 1998 and since then the number of occurrences with observation has declined back to near the level when the species was listed as endangered. However, this may reflect reduced search effort - for the 5-year intervals from 1992 through 2011, the number of EOs surveyed was 7, 3, 2, and 3, respectively. Since 1997, six EOs (86% of EOs surveyed and 46% of total) had observations. Since 2002, five EOs (100% of EOs surveyed and 38% of total) had observations. One new EO was added in 1999 and two new EOs were added in 2011. Only 3 EOs (23% of total) are protected. While it would be good to see additional years of survey data, the reduced number of observations has been sustained for three 5-year intervals.

Mankowski 03/15/13 recommendation – change from threatened to endangered.

ESPB TEC Paul Marcum 03/29/13 comments: Probably still occurs at most of the known sites as indicated by the high percentage when resurveying past EO's (Since 1997 – 86% of EO's surveyed; Since 2002 – 100% of EO's surveyed). I would recommend keeping this species as threatened until more and better data is obtained.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25%, and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers. The Board has generally not



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looked at individual population numbers in many past reviews and even when making decisions to add species to the List, since most often that level of detail is not available. All EOs for the species are single sites, except for one EO that has two nested sites. Across the 3 EOs with recent observations individual most recent reports were: observed; observed; 70 clumps, 15% reproductive; 1 fruiting clump; and, several fruiting clumps. The inclusion in the original species review by Mankowski of the % of EOs with observations as compared to the number surveyed needs to be taken in the context that very few "surveyed with no obs" reports are actually made to the Database, so most likely these %s would be similar for any species. Mankowski maintains recommendation for change from threatened to endangered for the reasons explained here and in her species review.

ESPB TEC Rick Philippe 03/29/13 comments: (Maintain as Threatened). Known from 7 counties and has 3 protected occurrences in Illinois. While looking for a rarely seen Illinois taxon, *Tragia cordata*, observed a large healthy protected population of this species in 2010 at Heron Pond, Johnson County, Illinois. Habitat for this species is still common and through search I feel more populations would likely be found in Illinois. However, probably not enough localities to ever have it removed from the Illinois Threatened status.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data or documentation supporting contrary recommendation was provided. The Database shows no records from 2010 for this species. As has been explained to TECs and also discussed by the Board during each meeting that reviewed other taxonomic groups to date, the Board is considering data that is in the Database – if it isn't in the Database, TECs can submit it to the Database and Board staff will conduct a new review of the species with the new data as time and resources allow. The Board recognizes that search effort and reporting across species and across EOs is not systematic nor standardized and that the number of observations mostly reflects search effort and that is mentioned in this species' review. The Board needs to make listing decisions based on the best information available and does not have resources to fund systematic and programmatic surveys for all species. Mankowski maintains recommendation for change from threatened to endangered for the reasons explained in her species review. If the Board wants staff to contract surveys for the species at known EOs and/or statewide, then staff recommends this species be included with other "outstanding species issues" that she will try to revisit prior to the Board confirming preliminary approval of the entire List revision.

Mankowski 04/19/13 final recommendation: change from threatened to endangered for the reasons explained in her species review. If the Board wants staff to contract surveys for the species at known EOs and/or statewide, then staff recommends this species be included with other "outstanding species issues" that she will try to revisit prior to the Board confirming preliminary approval of the entire List revision

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Dr. Hofmann moved to change the status of *Carex intumescens* (Swollen Sedge) from threatened to endangered and Secretary Clemetsen seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Carex intumescens* (Swollen Sedge) from threatened to endangered.



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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Carex woodii (Pretty Sedge) - Proposed Action: remove from threatened

Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Pretty Sedge, *Carex woodii* (Illinois threatened)

Listed as IL T, 5/20/1980

Reason for listing: restricted habitats or low pops in IL;

Carex woodii Dewey

PRETTY SEDGE

CYPERACEAE

Status: Threatened in Illinois.

Habit: Perennial rhizomatous sedge, culms to 50 cm tall.

Range: Northeastern United States and adjacent Canada.



Carex woodii reaches the southern edge of its range in mesic calcareous forests in northern Illinois. It has been observed recently in two state nature preserves, eight forest preserves, and a few sites under private ownership. Populations of this species may be threatened by overgrazing from deer.

References: Evert (1988), Bowles (1991b), Mohlenbrock (1999).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume I - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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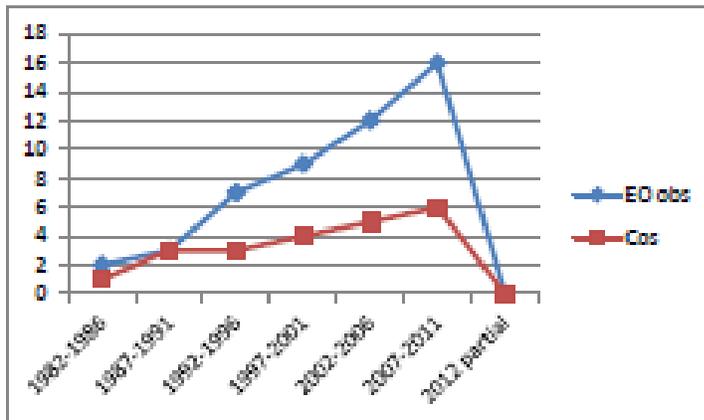
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
2010	22	17	10	15	8	7

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	2	3	7	9	12	16	0
Cos	1	3	3	4	5	6	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

This species' status and distribution appears to have improved greatly since it was listed as threatened in 1980, with the addition of two new EOs in the 1980s, nine new EOs in the 1990s, and eight new EOs in the 2000s. One of the EOs added in 2001 also added a new county. Fully 77% of EOs have had observations in the last 10 years and the number increases to 86% with observations in the last 15 years. Eleven EOs (50% of total) have had repeated observations in at least two of the three most recent 5-year intervals. There are EOs in eight of the nine counties (89%) with known historic occurrences and there have been observations in the last ten years at EOs in seven counties (89% of counties with EOs and 78% of counties with known historic occurrences). With 10 EOs protected, certainly recovery efforts in the form of management and protection have helped the species, but all the EO additions may also indicate the species was more common than thought at the time of its initial listing.

Mankowski 03/15/13 recommendation – delist as recovered/more common than thought.

ESPB TEC Rick Phillippe 03/29/13 comments: (Maintain as Threatened). I think this is a candidate but is on the border and I would rather error on the safe side. This species is under threat from overgrazing by deer, a serious threat in northeastern Illinois. Also, in Illinois this is a species on the southern edge of its range.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data or documentation supporting contrary recommendation was provided. Staff appreciates concerns about edge of range and restricted habitat species and threats and has tried to consider those concerns in context when reviewing the number of observations relative to known EOs



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over time and to known historic range and distribution and making recommendations in the species review. With regard to threats, fully 10 EOs (45% of total) are protected and specific to deer browse, staff considers the persistence of repeated observations over many years at multiple EOs suggests the impacts may not be too severe - 7 EOs (32% of total) have had repeated obs in at least 3 of the 4 most recent 3-year intervals and 11 EOs (30% of total) have had repeated obs in both of the 2 most recent 3-year intervals.

Mankowski 04/19/13 final recommendation: maintains recommendation for removal from threatened as recovered/more common than thought for reasons explained here and in her species review.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Vice-chair Kruse moved to delist *Carex woodii* (Pretty Sedge) and Dr. Taft seconded the motion. There was no discussion. The Board voted and approved unanimously to delist *Carex woodii* (Pretty Sedge).



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Cimicifuga rubifolia (Black Cohosh) - Proposed Action: change from threatened to endangered
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Black Cohosh, *Cimicifuga rubifolia* (Illinois threatened)

Listed as IL T, 01/18/1994

Reason for listing: restricted habitats or low pops in IL;

Cimicifuga rubifolia Kearney

APPALACHIAN BUGBANE, BLACK COBOSH

RANUNCULACEAE

Status: Threatened in Illinois.
Habit: Perennial rhizomatous herb, stems to 1.5 m tall.
Range: Appalachians, disjunct in western Kentucky and southern Illinois.



Cimicifuga rubifolia, a species of cool mesic woods, is restricted to the extreme southern part of Illinois. It is presently known from twelve sites in the state, mostly in the Shawnee National Forest. Populations of this species may be threatened by herb collectors.

References: Mohlenbrock (1981), Gleason and Cronquist (1991), Ramsey (1997).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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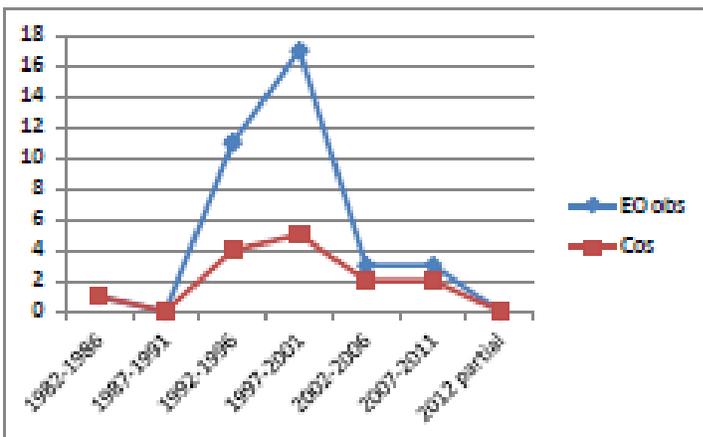
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
9/17/2010	18	3	1	14	7	3

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	0	11	17	3	3	0
Cos	1	0	4	5	2	2	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

The number of EOs with observation peaked during the 1997-2001 5-year interval, shortly following the species' listing in 1994. Since that time, there has been a significant reduction in the number of EOs with observation, with only 3 (17% of total) in each the 2002-2006 and 2007-2011 windows and totaling only 3 EOs (28% of total) with observation in 3 of 7 counties with occurrences. There are no "surveyed with no observation" reports for any EOs for this species.

Mankowski 03/15/13 recommendation – change from threatened to endangered.

ESPB TEC Paul Marcum 03/19/13 comments: Most old records are from the Shawnee. This species is probably still present at known sites. It's decline in EO's probably just represents a lack of effort rather than reduced numbers. The review for this species mentions that there are no surveyed with no observation reports for any EO for this species. I recommend keeping this species as Threatened.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided. The Board recognizes that search effort and reporting across species and across EOs is not systematic nor standardized and that the number of observations reflects search effort. The lack of observations has been sustained over the last two five-year intervals. While the species may be present at sites without reported observations, staff recommendation is based on the best available current information. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to



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only being staffed at 25%, and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers. The Board has generally not looked at individual population numbers in many past reviews and even when making decisions to add species to the List, since most often that level of detail is not available. All EOs are single sites, except for one EO that has two nested sites. Across the 3 EOs with recent observations individual most recent reports were: 100-150 plants; 29 plants; 20-25 fruiting plants; 9 flowering plants; and, observed.

Mankowski 04/19/13 final recommendation: maintains recommendation for change from threatened to endangered for the reasons explained here and in her species review.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Secretary Clemetsen moved to change the status of *Cimicifuga rubifolia* (Black Cohosh) from threatened to endangered and Dr. Taft seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Cimicifuga rubifolia* (Black Cohosh) from threatened to endangered.



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Corallorhiza maculata (Spotted Coral-root Orchid) - Proposed Action: change from threatened to endangered
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Spotted Coral-root Orchid, *Corallorhiza maculata* (Illinois threatened)

Listed as IL T, 5/20/1980

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

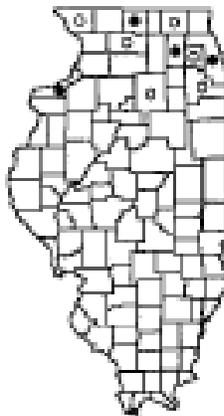
Corallorhiza maculata Raf.

SPOTTED CORAL-ROOT ORCHID ORCHIDACEAE

Status: Threatened in Illinois.

Habit: Saprophytic rhizomatous herb, stems to 60 cm tall.

Range: Southern Canada, south into northeastern United States and the Appalachians.



Corallorhiza maculata is restricted in Illinois to mesic forests in the northern part of the state. Presently it is known from four sites, one in a county forest preserve, the rest on private land. It also may persist at state nature preserves in McHenry and Will counties where it was observed in the 1980s.

References: Peppoon (1916), Fell and Fell (1957), Mohlenbrock (1970c), Sheviak (1974a).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2003. Endangered and Threatened Species of Illinois: Status and Distribution, Volume I - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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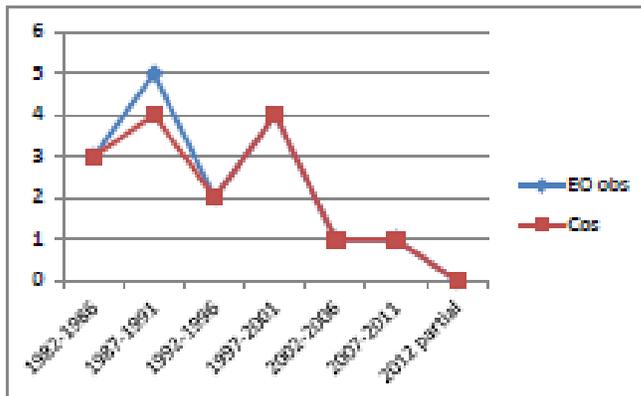
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
03/13/2009	13	2	5	12	9	2

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	3	5	2	4	1	1	0
Cos	3	4	2	4	1	1	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

Only two EOs (15% of total) have had observations in the last ten years, capturing only 22% of counties with EOs and 20% of counties with known historic occurrences. In each the 2002-2006 and 2007-2011 five-year intervals, only one EO (8% of total) had observations. During the same time period, there were "surveyed w/ no observation" reports and no subsequent observations at three EOs (23% of total). Including the 1997-2001 five-year interval, the number of EOs with observations increases to five (38% of total) and the number of EOs with "surveyed w/ no observation" increases to four (31% of total).

Mankowski 03/15/13 recommendation – change from threatened to endangered.

ESPB TEC John Taft 03/28/13 comment: not sure this change to E is justified based on the numbers.

Mankowski 04/19/13 response: Comment noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided.

Mankowski 04/19/13 final recommendation: maintains recommendation for change from threatened to endangered for the reasons explained in her species review.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Ms. Masi moved to change the status of *Corallorhiza maculata* (Spotted Coral-root Orchid) from threatened to endangered and Dr. Taft seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Corallorhiza maculata* (Spotted Coral-root Orchid) from threatened to endangered.



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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Cypripedium candidum (White Lady's Slipper) - Proposed Action: remove from threatened
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

White Lady's Slipper, *Cypripedium candidum* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 12/03/1998

Reason for listing: proposed Fed E or T; formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

Cypripedium candidum Willd.

WHITE LADY'S SLIPPER

ORCHIDACEAE

Status: Threatened in Illinois.

Habit: Perennial orchid, to 40 cm tall.

Range: North-central and northeastern United States.



Cypripedium candidum formerly was abundant across much of northern Illinois, primarily in wet-mesic prairies and fens. Agriculture and urban growth have greatly reduced its frequency and have restricted it primarily to northeastern Illinois. It is known from several state nature preserves, county forest preserves, and private tracts, but many populations are small and their habitat is usually threatened with woody invasion due to fire protection, drainage, and other ecological changes. This attractive plant is also threatened by collecting, even in protected sites.

References: Mohlenbrock (1970c), Sheviak (1974a), Myers and Henry (1976), Bowles (1983), Carroll et al. (1984), Hess and Steynoff (1989), Taft and Soloeki (1990), Cribb (1997).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume I - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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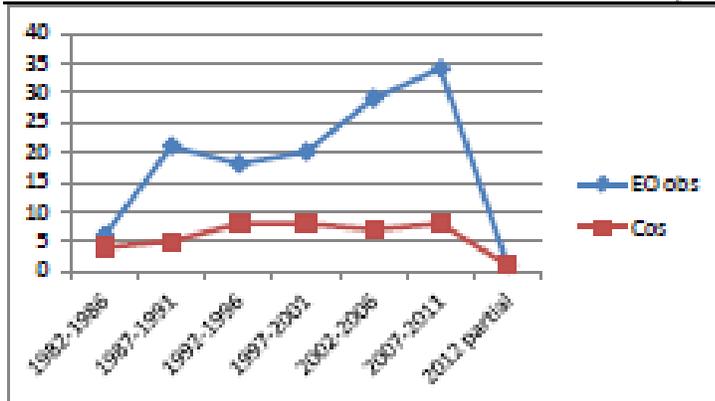
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
04/19/2012	49	37	30	36	9	8

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	6	21	18	20	29	34	1
Cos	4	5	8	8	7	8	1

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

This species' status and distribution has improved since its initial listing as endangered in 1980 and has continued to improve since its upgrade to threatened in 1998. There are 9 EOs dated for the 1970s, 12 EOs and 1 county were added in the 1980s, 15 EOs and 1 county were added in the 1990s, and 13 EOs were added in the 2000s. This species has more EOs (49) and more protected EOs (30; 61% of total) than any other species. Fully 71% of EOs (35/49) have had observations in the past ten years, with only four EOs reported as surveyed w/ no observation in more than one year and without subsequent observation during the same period. An additional 4 EOs had observations in the 1997-2001 window, bringing to 80% of EOs (39/49) having had observation in the past 15 years, and only 1 additional EO was reported as surveyed w/ no observation in more than one year and without subsequent observation during the same period (bringing that total to 5 EOs or 8% of total). Three EOs were established from plantings without report of additional population augmentation or other manipulation. Two of those planted EOs have had subsequent observations and one has not. The number and distribution of counties with occurrences in the last 15 years is restricted to the northern ¼ of the state except for Cass and Mason Counties. While this falls short of known historic distribution, all other information suggests that species could be considered secure. With 30 EOs protected, certainly recovery efforts in the form of management and protection have helped the species, but all the EO additions may also indicate the species was more common than thought at the time of its initial listing.

Mankowski 03/15/13 recommendation – delist as recovered/more common than thought.

ESPB TEC Paul Marcum 03/29/13 comments: This species is known from several populations, however, I would like to see numbers on population size at known EOR's since listing. I recommend keeping this species as Threatened until further information is obtained.



**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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Mankowski 04//19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided.

As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25%, and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers. The Board has generally not looked at individual population numbers in many past reviews and even when making decisions to add species to the List, since most often that level of detail is not available. Individual EO most recent reports during each of the three most recent 3-year intervals (except 2012 data was added when available to the most recent interval) are provided below. Mankowski maintains recommendation for delisting as recovered/more common than thought for reasons explained here and in her species review.

first obs	#nested sites	most recent reported #s 1997-2001	most recent reported #s 2002-2006	most recent reported #s 2007-2012
1988	1		several dozen observed	3,070 clumps across 4 locations
1977	8		26 clumps at one nested site	200+ clumps across 6 nested sites
1993	1	several colonies		
1980	1		22 clumps, 90% flowering	
1977	1	49 clumps, 45% reproductive	63 clumps, 35% flowering	61 clumps, 67% flowering
1990	2	20 plants at one nested site		16 stems across 2 nested sites
1976	1		no	
1988	1	100-300 clumps, 30% reproduction	130 clumps, 56% flowering	75 clumps, 70% flowering
1993	1		163 stems, 10% flowering	72 clumps, 40% flowering
1977	1	several hundred flowering stems		705 total plants, 325 flowering
1988	1		54 clumps in 4 pops	357 clumps across 4 pops
1991	1	100-300 plants, 14% reproductive	201-400 plants, 53% flowering	401-800 clumps, 82% reproductive
1977	1	>400 plants	>400 plants in 1 pop	295 clumps across 5 pops
1977	2		66 clumps at 1 location, 54% reprod.	152 clumps across 2 nested sites
1977	1	38 plants in 1 pop	100 clumps in 2 pops	757 plants across 4 subpops
1977	1	400-800 clumps, 88% reproductive	800-1,600 clumps in 2 pops	100 stems, 25% reproductive
1989	1			3,910 plants across 2 pops
1970	1	18 clusters, 2 with flowering stems		
1990	1	no	no	no
1983	1		201-400 flowering clumps	707 clumps, 95% flowering
1986	1			
1988	1	observed	observed	3 clumps
1985	1	2 clumps	49 stems in approx 8 clumps	7 genets
1989	1	many plants	6 clumps, 42% flowering	30 plants, 50% flowering
1985	1			no
1991	1	16 clumps	no	16 clumps
1991	1		no	
1992	1	150 clumps, 25% reproductive	165 clumps, 15.2% flowering	117 clumps, 67% flowering
1992	1	6 clumps, 4% reproductive	14 fruiting clumps	19 clumps, 89% flowering
1993	1		23 clumps at 3 locations	19 clumps across 2 locations
1993	1	5 flowering stalks		
1997	7	observed at one nested site	220 clumps across 6 nested sites	223-421 clumps across 5 nest. sites
1993	1			no
1999	1	1 clump	2 clumps at 2 locations	4 clumps across 2 locations
2001	1	2 plants		
2002	1		27 clumps at 3 locations	66 clumps, 90% flowering
2002	1		5 plants in 2 pops	5 clumps in 2 pops



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2005	1		1 clump	no
2001	1	8 clumps, 100% reproductive	no	89 stems, 52% flowering
2005	1		24 inflorescences	
1988	1			
2001	1	1 clump with 5 flowering stems		
2007	1			no
2009	1			1 clump
2009	1			2 clumps with 18 flowering stems
2008	1			2 stems, 50% flowering
2006	1		observed	5 stems, 60% flowering
2008	1			no
2009	1	18 clumps, 132 blooms	16 stems	66 clumps, 60% flowering

note: yellow cell = established from planting; blank cell = no report; no = surveyed w/ no obs.

ESPB TEC Rick Phillippe 03/29/13 comments: (Maintain as Threatened). This species has had a great reduction from its original range in Illinois (extant in only 9 of its historical known range of 25 counties) and its threat from being collected in the wild for horticultural purposes.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data or documentation supporting contrary recommendation was provided. Staff appreciates concerns about threats and comparison to historic range and has tried to consider those concerns in context when reviewing the number of observations relative to known EOs over time and to known historic range and distribution and making recommendations in the species review. With regard to threats, fully 30 EOs (61% of total) are protected and specific to collecting, staff considers the persistence of repeated observations over many years at multiple EOs suggests the impacts may not be too severe - 27 EOs (55% of total) have had repeated obs in at least 2 of the 3 most recent 3-year intervals and 13 EOs (27% of total) have had repeated obs in all of the 3 of the most recent 3-year intervals. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25% and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers. Individual EO most recent reports during each of the three most recent 3-year intervals (except 2012 data was added when available to the most recent interval) are provided below (TABLE NOT REPEATED BELOW IN SP. REVIEW, SEE ABOVE FOR TABLE). Mankowski maintains recommendation for delisting as recovered/more common than thought for reasons explained here and in her species review.

ESPB TEC John Taft 04/19/13 comments: This species will continue to be vulnerable to collection, woody encroachment and other factors. I monitored a population at Black Partridge (Goose Lake fen) for several years and observed it to go from just over 200 plants to 1 in about 25 years. After management of the fen habitat, a few additional plants were observed. While this still counts as an EOR, it is a greatly diminished population, making me wonder about trends elsewhere (I have heard similar trends occurred at Gavin Bog Prairie). Perhaps Susanne Masi can suggest whether trends data from her census work supports this change. RECOMMENDATION – CONSULT WITH PLANTS OF CONCERN PROJECT MANAGER PRIOR TO FINAL DECISION.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data or documentation supporting contrary recommendation was provided. Staff appreciates concerns about threats and has tried to consider those concerns in context when reviewing the number of observations relative to known EOs over time and to known historic range and distribution and making recommendations in the species review. With regard to threats, fully 30 EOs (61% of total) are protected and specific to collecting, staff considers the persistence of repeated observations over many years at multiple EOs suggests the impacts may not be too severe - 27 EOs (55% of total) have had



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repeated obs in at least 2 of the 3 most recent 3-year intervals and 13 EO's (27% of total) have had repeated obs in all of the 3 of the most recent 3-year intervals. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25%, and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers. Individual EO most recent reports during each of the three most recent 3-year intervals (except 2012 data was added when available to the most recent interval) are provided below (TABLE NOT REPEATED BELOW IN SP. REVIEW, SEE ABOVE FOR TABLE). Susanne Masi is an ESPB TEC and did not provide any comments for this species. Mankowski maintains recommendation for delisting as recovered/more common than thought for reasons explained here and in her species review.

Mankowski 04/19/13 final recommendation: delist as recovered/more common than thought.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Chair Gooch asked Ms. Mankowski to review her recommendation to delist *Cypripedium candidum* (White Lady's Slipper). Ms. Masi moved to delist *Cypripedium candidum* and Vice-chair Kruse seconded the motion. There was no further discussion. The Board voted and approved unanimously to delist *Cypripedium candidum* (White Lady's Slipper).



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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Elymus trachycaulus (Bearded Wheat Grass) - Proposed Action: change from threatened to endangered
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Bearded Wheat Grass, *Elymus trachycaulus* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 09/01/2004

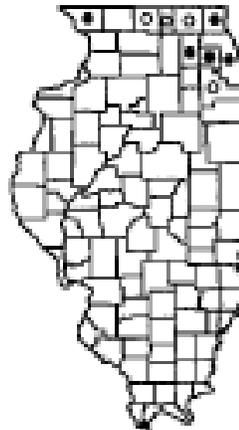
Reason for listing: restricted habitats or low pops in IL;

***Elymus trachycaulus* (Link) Gould**

BEARDED WHEAT GRASS

POACEAE

Status: Endangered in Illinois.
Synonym: *Agropyron subsecundum* (Link) A.S. Hitchc.;
Agropyron trachycaulum (Link) Malte.
Habit: Perennial caespitose grass, culms 0.4-1 m tall.
Range: Southern Canada and adjacent northern United States.



Elymus trachycaulus ranges south into northern Illinois, where it occurs in mesic prairies and on wet dolomite outcrops. Most populations apparently are small, with few flowering culms. Eight populations are known in Illinois; two occur in state nature preserves, two in county forest preserves, one in a state park, one on a military installation and some on private property.

References: Mohlenbrock (1972), Taft and Solecki (1990).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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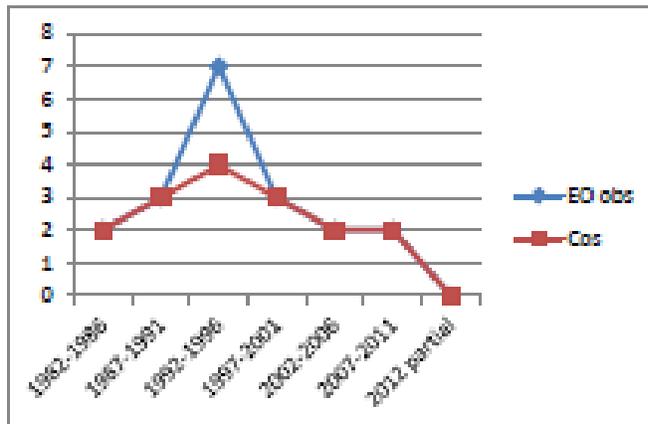
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
08/12/2009	11	3	6	9	6	2

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	2	3	7	3	2	2	0
Cos	2	3	4	3	2	2	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

It appears that an increase in observations in the mid 1990s triggered a change in status from endangered to threatened by the Board in 2004. Since that time, the number of observations has declined to three (27% of total) in the 1997-2001 window and to two (18% of total) in each the 2002-2006 and 2007-2011 windows. Only 3 EOs (27% of total) in 2 counties (33% of counties with EOs and 22% of those with known historic occurrences) have had observations in the last 10 years and while 1 new EO was added (in 2011), 2 EOs had "surveyed w/ no observation" reports and no subsequent observations, during the period. Within the last 15 years, only 3 EOs (45% of total) in 4 counties (66% of counties with EOs and 44% of those with known historic occurrences) have had observations. It appears the species' status may now warrant a change back to endangered.

Mankowski 03/15/13 recommendation – change from threatened to endangered.

ESPB TEC Paul Marcum 03/29/13 comment: Note, the specific epithet is spelled incorrectly in the List Review. Most populations of this species are in protected places (state nature preserves, county forest preserves, state park). I recommend maintaining this species as Threatened.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. Spelling error is not noted – commenter is asked to please provide specific direction as to where in the document the spelling error occurs. No data, evidence, or documentation supporting contrary recommendation was provided. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25%, and consistent with the level of



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review for other species during this current List review, the Board is not generally looking at individual population numbers. The Board has generally not looked at individual population numbers in many past reviews and even when making decisions to add species to the List, since most often that level of detail is not available. All EO's are single sites. Across the 3 EO's with recent observations individual reports were: 2 stems, followed by "surveyed with no obs" in the subsequent year; 20 plants across 8 colonies; and, 2 fruiting stems. Mankowski maintains recommendation for change from threatened to endangered for the reasons explained here and in her species review.

ESPB TEC Rick Philippe 03/29/13 comments: (Maintain as Threatened). This species has a number of recent collections and 6 EO's are from protected areas.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided. The Database shows only three observations in the last 10 years. As has been explained to TECs and also discussed by the Board during each meeting that reviewed other taxonomic groups to date, the Board is considering data that is in the Database – if it isn't in the Database, TECs can submit it to the Database and Board staff will conduct a new review of the species with the new data as time and resources allow. Mankowski maintains recommendation for change from threatened to endangered for the reasons explained in her species review.

ESPB TEC John Taft 03/28/13 comments: this grass is actually fairly common at a long-term research site of mine in Lake County. While the EORs were reported once from this site, I have not been continually reporting the occurrences with each year of observation (from 2006 to 2012). It is unclear how these reports are interpreted when the number of occurrence are tabulated or whether lack of reports is taken to represent absence. This leads to the concern that the Heritage records can be over interpreted if based on trends of reported populations. It is interesting to consider this circumstance where absence of reports suggests a change from T to E. The best decisions might not always in the numbers. RECOMMENDATION – NO CHANGE (KEEP AS THREATENED); HOWEVER, REVIEW POC DATA.

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data, evidence, or documentation supporting contrary recommendation was provided. As has been explained to TECs and discussed by the Board during each meeting that reviewed other taxonomic groups to date, the Board is considering data that is in the Database – if it isn't in the Database, TECs can submit it to the Database and Board staff will conduct a new review of the species with the new data as time and resources allow. As has also been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25%, and consistent with the level of review for other species during this current List review, the Board is not generally looking at individual population numbers, has only rarely looked at "surveyed with no observation" reports – which is mentioned in this species review – and has been looking at number of reported observations for each species. Mankowski maintains recommendation for change from threatened to endangered for the reasons explained here and in her species review.

Mankowski 04/19/13 final recommendation: change from threatened to endangered.

NatureServe Conservation Status in United States

None queried.



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Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Secretary Clemetsen moved to change the status of *Elymus trachycaulus* (Bearded Wheat Grass) from threatened to endangered and Ms. Ross seconded the motion. There was some discussion about Board members' knowledge of individual sites that may indicate stable population numbers at a couple of locations, but there was agreement when taken in whole the overall status and distribution appears to have declined. The Board voted and approved unanimously to change the status of *Elymus trachycaulus* (Bearded Wheat Grass) from threatened to endangered.



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Euonymus americanus (American Strawberry Bush) - Proposed Action: change from endangered to threatened
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

American Strawberry Bush, *Euonymus americanus* (Illinois endangered)

Listed as IL T, 5/20/1980; Listed as IL E, 01/18/1994

Reason for listing: restricted habitats or low pops in IL;

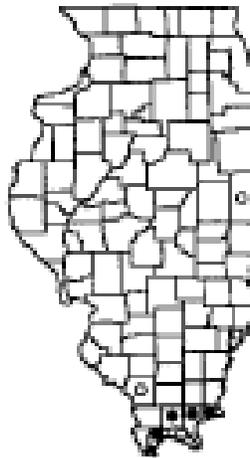
Euonymus americanus L.

AMERICAN STRAWBERRY BUSH CELASTRACEAE

Status: Endangered in Illinois.

Habit: Shrub to 2.5 m tall.

Range: Eastern United States.



Euonymus americanus reaches its northern range limit in floodplain forests of southern Illinois. Presently six populations are known from Hardin, Johnson, Pope and Pulaski counties, where they occur in two state nature preserves, two state natural areas, and two other protected sites.

References: Schweigman (1968a), Mohlenbrock (1990).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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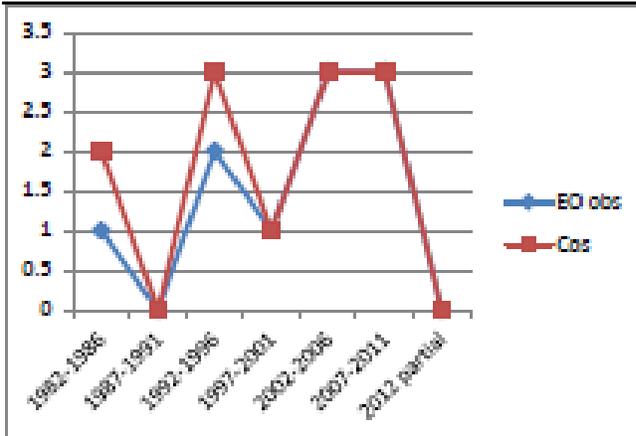
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
6/16/2011	5	4	2	7	4	3

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	0	2	1	3	3	0
Cos	2	0	3	1	3	3	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 03/15/13 notes and recommendation:

While the species account above (Herkert et al, 2002) describes that this species was known from six populations at that time, there were only three EOs for it from the time of initial listing in 1980 until 1994 when a fourth was added, and then in 2009 a fifth EO was added. The number of observations has increased since the Board changed this species' status from threatened to endangered in 1994. In the last ten years, four EOs (80% of total) have had observations representing 80% of counties with EOs and 50% of counties with known historic occurrences. During each the 2002-2006 and 2007-2011 windows, three EOs (60% of total) had observations, and in 2009 a new EO was added. Relative to the number of EOs known for the species when it was originally listed, the number of observations reported since 2002 suggest that the status and distribution has improved sufficiently to warrant a change from endangered to threatened.

Mankowski 03/15/13 recommendation – change from endangered to threatened.

ESPB TEC John Taft 03/28/13 comments: 3 EORs in 3 counties (1 per county) seems to fall short of suggesting a recovering or secure species. I know of three of these populations and two are very small (<3 plants); it seems to be locally occasional at Little Black Slough. **RECOMMENDATION – NO CHANGE** (unless it can be determined there are more populations than the three I know from Johnson and Pulaski counties).

Mankowski 04/19/13 response: Comments noted and will be added to species review for Board information. No data or documentation supporting contrary recommendation was provided. As has been discussed during the reviews of other taxonomic groups to date, data in the Database is very inconsistent with regard to reports of population sizes and absence of presence. For this reason, due to only being staffed at 25% and consistent with the level of review for other species during this current list review.



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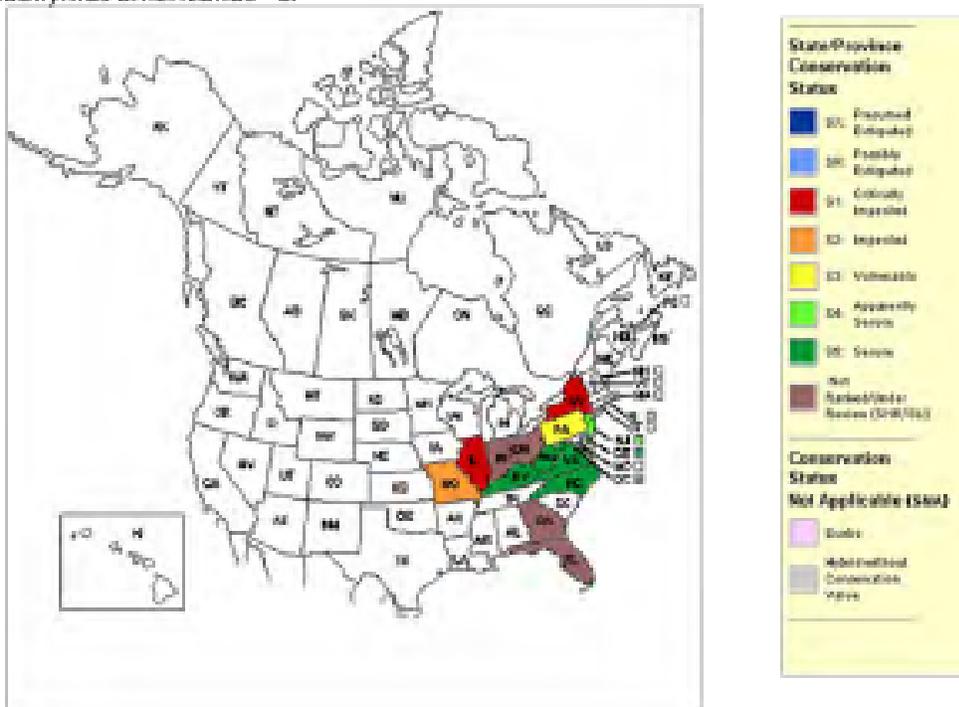
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the Board is not generally looking at individual population numbers. The Board has generally not looked at individual population numbers in many past reviews and even when making decisions to add species to the list, since most often that level of detail is not available. Additionally, specific location information is not being included in these reviews – the commenter can make request to the Database for the specific location information. There are five EO's for this species and four have had observations in the last ten years. Across the five EO's there are seven nested sites; two persisting since the 1970's, two since the 1980's, two since the 1990's, and one since the 2000's. Individual reports for the four EO's with recent observations noted several hundred plants at two EO's, twenty-three plants at one EO, and several plants at one EO.

Mankowski 04/19/13 final recommendation: maintains recommendation for change from endangered to threatened for the reasons explained here and in her species review.

Euonymus americanus - L.



NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life (web application). Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed January 10, 2013).

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Chair Gooch asked for a motion for *Euonymus americanus* (American Strawberry Bush), Dr. Taft moved to change the status from endangered to threatened, and Vice-chair Kruse seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Euonymus americanus* (American Strawberry Bush) from endangered to threatened.



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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Filipendula rubra (Queen-of-the-Prairie) - Proposed Action: change from endangered to threatened
Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Queen-of-the-Prairie, *Filipendula rubra* (Illinois endangered)

Listed as IL T, 5/20/1980; Listed as IL E 12/03/1998

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

Filipendula rubra (Hill) Robins.

QUEEN-OF-THE-PRAIRIE

ROSACEAE

Status: Endangered in Illinois.
Habit: Perennial herb, stems 1-2 m tall.
Range: Eastern United States.



Filipendula rubra is found occasionally in fens, mesic sand prairies, and seeps in northern and central Illinois. Presently thirteen Illinois populations are known to persist. These occur in six state nature preserves, a natural heritage landmark, a county forest preserve, and on private land. A few other populations likely persist, but two in the Peoria area are known to have been destroyed.

References: Steyermark and Swink (1955), Monson and Schertz (1985), Evert (1988).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

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**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014**

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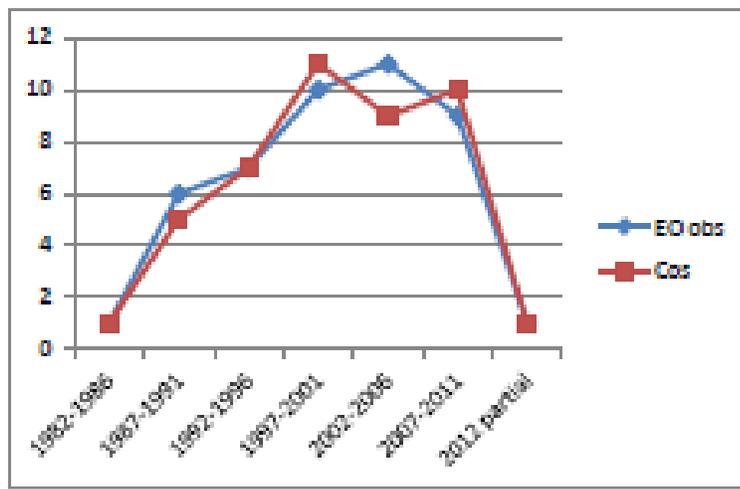
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
07/20/2012	23	15	11	22	13	13

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	6	7	10	11	9	1
Cos	1	5	7	11	9	10	1

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

The 1998 listing status change from threatened to endangered seems inconsistent with the EO data, although some of the data may not have been known at the time when the Board made that listing status decision. Fifteen EOs (65% of total) have had observation in the last 10 years and 18 EOs (78% of total) have had observation in the last 15 years, with both time periods representing all counties with EOs and 81% of counties with known historic distribution. Since 1997, there is only one EO that was surveyed with no observation where there has not been subsequent observation. Eleven EOs (48% of total) are protected. It appears the status and distribution of the species has improved sufficiently to warrant a change in listing status from endangered to threatened.

Mankowski recommendation – change from endangered to threatened.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Vice-chair Kruse moved to change the status of *Filipendula rubra* (Queen-of-the-Prairie) from endangered to threatened and Dr. Hofmann seconded the motion. There was no discussion. The Board voted and approved unanimously to change the status of *Filipendula rubra* (Queen-of-the-Prairie) from endangered to threatened.



ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Galium lanceolatum (Wild Licorice) - Proposed Action: remove from endangered

Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Wild Licorice, *Galium lanceolatum* (Illinois endangered)

Listed as IL E, 12/03/1998

Reason for listing: proposed Fed E or T; restricted habitats or low pops in IL;

Galium lanceolatum Torr.

WILD LICORICE

RUBIACEAE

Status: Endangered in Illinois.

Habit: Perennial herb, stems to 70 cm tall.

Range: Eastern United States, adjacent Canada.



A species of dry woods and thickets, *Galium lanceolatum* is extremely rare in Illinois, being restricted to a few northern counties. Historically this species has been collected in both Cook and Kane counties. Neither of these historic localities are thought to have extant populations. The only extant population occurs in a state nature preserve in McHenry County.

References: Gleason and Cronquist (1991), Swink and Wilhelm (1994).

KEY

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Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
none	0	0	0	0	0	0

Mankowski 03/13/15 notes and recommendation:

Data sufficient to establish any EO records for this species has not been brought forth since its listing in 1998.

Mankowski 03/15/13 recommendation – remove from endangered. Data/evidence was insufficient for initial listing and is insufficient to keep the species on the list.

ESPB TEC Paul Marcum 03/29/13 comment: It has only been since 1998 since EOR for this species. In my opinion, this is not long enough to remove from the List.

Mankowski 04/19/13 response: No species is recommended for delisting due to extirpation after only 15 years. The Board's listing decision are by law, required to be based on scientific evidence – the staff recommendation for delisting the two species after being on the List 15 years with no EO data ever submitted is FIRST because the Board did not have sufficient evidence to support the initial listing decision and then because no data has been brought forth since sufficient to establish an EO. The Board staff recommendation in these species' reviews has been modified to better reflect that. As has been explained to TECs and also discussed by the Board during each meeting that reviewed other taxonomic groups to date, the Board is considering data that is in the Database – if it isn't in the Database, TECs can submit it to the Database and Board staff will conduct a new review of the species with the new data as time and resources allow. Mankowski maintains recommendation for removal from endangered as extirpated for reasons explained in her species review.

ESPB TEC Rick Philippe 03/29/13 comment: (Maintain as Endangered). This taxon was last seen in ????. Has a botanist made a concerted effort to relocate?

Mankowski 04/19/13 response: The Board's listing decision are by law, required to be based on scientific evidence – the staff recommendation for delisting the two species after being on the List 15 years with no EO data ever submitted is FIRST because the Board did not have sufficient evidence to support the initial listing decision and then because no data has been brought forth since sufficient to establish an EO. The Board staff recommendation in these species' reviews has been modified to better reflect that. As has been explained to TECs and also discussed by the Board during each meeting that reviewed other taxonomic groups to date, the Board is considering data that is in the Database – if it isn't in the Database, TECs can submit it to the Database and Board staff will conduct a new review of the species with the new data as time and resources allow. Mankowski maintains recommendation for removal from endangered for reasons explained in her species review.

Mankowski 04/19/13 final recommendation: maintains recommendation for removal from endangered because data/evidence was insufficient for initial listing and is insufficient to keep the species on the list.

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Dr. Taft moved to delist *Galium lanceolatum* (Wild Licorice) and Ms. Ross seconded the motion. There was no discussion. The Board voted and approved unanimously to delist *Galium lanceolatum* (Wild Licorice).



**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014**

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Isotria medeoloides (Small Whorled Pogonia (Fed T)) - Proposed Action: add as endangered

Reviewed at: 158th meeting, 05/17/2013 and 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

This action does not require a public hearing by the Board, but can be done during the same cycle and process as the 2014 List revision

This species was delisted in error by Board during 2009 List revision (10/30/2009) as extirpated from Illinois based on Database information; the USFWS still lists Illinois in the range for the species and includes Randolph County in its currently extant distribution (website checked 03/01/2013). Add the species back to the IL List as Illinois endangered.



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ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Lechea intermedia (Pinweed) - Proposed Action: change from threatened to endangered

Reviewed at: 159th meeting, 08/16/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Pinweed, *Lechea intermedia* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 12/31/1998

Reason for listing: restricted habitats or low pops in IL;

***Lechea intermedia* Leggett**

PINWEED

CISTACEAE

Status: Threatened in Illinois.

Habit: Perennial herb, stems 20-60 cm tall.

Range: Northeastern United States and adjacent Canada, south in the Appalachians.



Lechea intermedia occurs in northern Illinois along the southern part of its range, where it occupies dry, sterile, usually sandy soils. It has been found in Illinois at only nine sites. It is presently known from three state localities, two in state nature preserves, the other from a wildlife and fish refuge.

References: Hodgdon (1938), Mohlenbrock (1978), Bowles et al. (1995).

KEY

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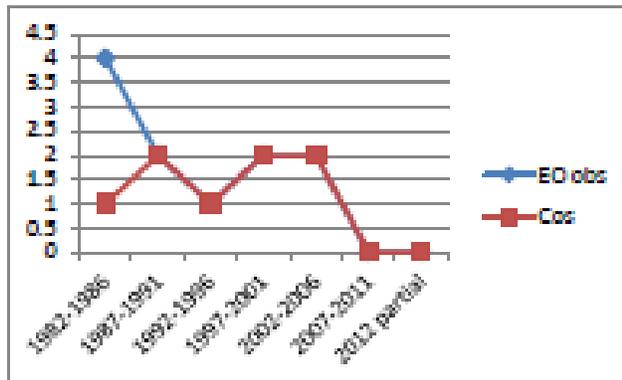
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
09/18/2005	9	2	5	8	6	2

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	4	2	1	2	2	0	0
Cos	1	2	1	2	2	0	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1980, there was occurrence information brought forth to establish four EOs in four counties. Since then, five EOs and two counties have been added: four EOs were added in the 1980s and one EO was added in the 1990s. It appears the increase in EOs led to a listing status upgrade to threatened in 1998, when four EOs had observations in the most recent 10 years. Five EOs (56% of total) are protected. Trying to evaluate the species' security based on reported population numbers is difficult because reporting is inconsistent, with only "present" or "observed" reports for most recent observations at 6 EOs (66% of total). While the lack of recent observations is likely related to search effort, only two EOs have had observations in the last 10 years and one EO has had repeated "surveyed w/ no observation" reports and no subsequent observation.

Mankowski recommendation – change to from threatened to endangered.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 11 of the 159th meeting, 08/16/2013

Dr. Hofmann moved to change the status of *Lechea intermedia* (Pinweed) from threatened to endangered, Ms. Masi seconded the motion, and it was approved unanimously.



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ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

***Liatris scariosa* var. *nieuwlandii* (Blazing Star)** - Proposed Action: remove from threatened

Reviewed at: 159th meeting, 08/16/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Blazing Star, *Liatris scariosa* var. *nieuwlandii* (Illinois threatened)

Listed as IL T, 03/13/1989

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

***Liatris scariosa* (L.) Willd. var.
nieuwlandii Lunell**

BLAZING STAR

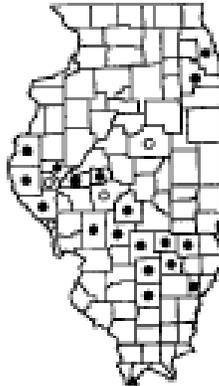
ASTERACEAE

Status: Threatened in Illinois.

Synonym: *Liatris x nieuwlandii* (Lunell) Gaiser.

Habit: Perennial herb from a corm, stem to 1.5 m tall.

Range: Northeastern and north-central United States.



Formerly misidentified or treated as a hybrid in Illinois, this blazing star is now recognized at the varietal level. It is restricted to areas of silt-loam savanna, primarily on Illinoisan aged glacial till or loess soils in the Southern Till Plain and Western Forest-Prairie Natural Divisions. Presently more than thirty populations are known from eighteen counties. Four populations are in state nature preserves, three in state parks, and two in forest preserves.

References: Wunderlin (1966), Schwegman (1972), Bowles (1988).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

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ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES 5-YEAR REVIEW AND REVISION ENDING IN 2014

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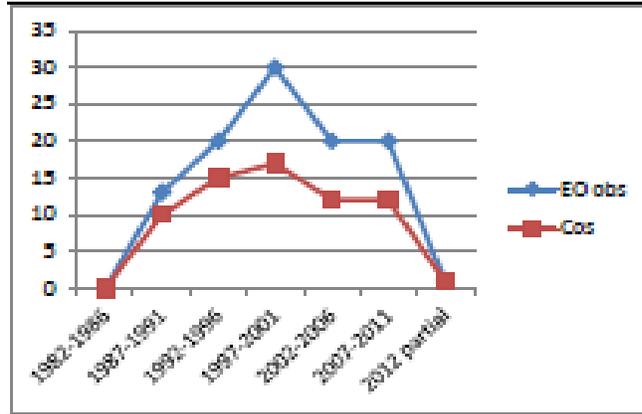
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
08/22/2012	43	33	6	44	21	17

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	0	13	20	30	20	20	1
Cos	0	10	15	17	12	12	1

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as threatened in 1989, there was occurrence information brought forth to establish six EOs in five counties. Since then, 39 EOs and 16 counties have been added to the species' distribution: 3 EOs were added in 1989; 25 EOs were added in the 1990s; and 11 EOs were added in the 2000s. Fully 33 EOs (73 of total) have had observations in the last 10 years and 38 EOs (84% of total) have had observations in the last 15 years. While only 6 EOs (13% of total) are protected, that 25 EOs (56% of total) have had repeated observations in at least 2 of the 3 most recent 5-year intervals can be considered some indication of security and persistence. Only three EOs have had "surveyed w/ no observation" reports without subsequent observation. Most recent reported population numbers for EOs with observations in the last 10 years are (single EO numbers are given unless otherwise noted): "observed" at 4 EOs; 1 plant; 2 plants at 2 EOs; 3 plants; 6 plants at 2 EOs; 9 plants; 12 plants; 16 plants; 20 plants; 22 plants; 26 plants; 40+ plants; 43 plants; 50+ plants at 2 EOs; 55 plants; 70 plants; 76 plants; 87 plants; 120 plants; 154 plants; 200 plants; 200-300 plants; 287 plants; >300 plants; 402 plants; 501 plants; >850 plants. The species appears to be more common than previously thought and/or has recovered sufficiently to exceed the definition of threatened.

Mankowski recommendation – remove from threatened.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 11 of the 159th meeting, 08/16/2013

Secretary Clemetsen moved to remove from threatened status *Liatrix scariosa* var. *nieuwlandii* (Blazing Star) as recovered and/or more common than previously thought, Ms. Masi seconded the motion, and it was approved unanimously.



ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Matelea obliqua (Climbing Milkweed) - Proposed Action: remove from threatened

Reviewed at: 159th meeting, 08/16/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Climbing Milkweed, *Matelea obliqua* (Illinois threatened)

Listed as IL T, 5/20/1980

Reason for listing: restricted habitats or low pops in IL;

***Matelea obliqua* (Jacq.) Woodson**

CLIMBING MILKWEED

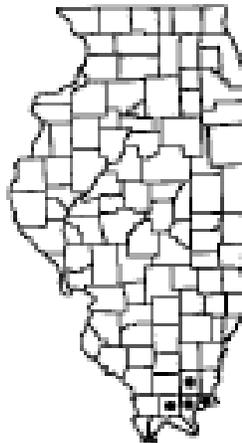
ASCLEPIADACEAE

Status: Threatened in Illinois.

Synonym: *Gonolobus obliquus*
(Jacq.) Schult.

Habit: Perennial twining herb.

Range: Southeastern United States.



Matelea obliqua occurs in rocky forests and limestone glades and reaches its northwestern range limit in extreme southern Illinois. It is presently known from several collections, all in the Shawnee National Forest. One population occurs in a state nature preserve and two in research natural areas.

Reference: Mohlenbrock and Evans (1974).

KEY

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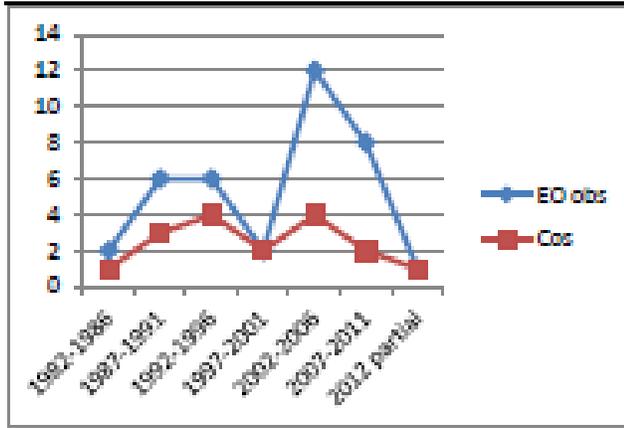
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
05/30/2012	20	15	1	10	4	4

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	2	6	6	2	12	8	1
Cos	1	3	4	2	4	2	1

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as threatened in 1980, there were no occurrences brought forth to establish any EOs. Since then, 20 EOs across all 4 counties with known historic occurrences have been added: 4 EOs in 3 counties were added in the 1980s; 8 EOs were added in the 1990s (adding 1 new county); 7 EOs were added in the 2000s; and, 1 EO has been added since 2010. There have been no "surveyed w/ no observation" reports at any EO. Fifteen EOs (75% of total) have had observations in the last ten years. Most recent reported population numbers are: 1 plant/vine at 4 EOs; from 3-10 plants/vines at 12 EOs; 23 plants/vines at 2 EOs; 35 plants/vines at 1 EO; and, >100 plants/vines at 1 EO. Although individual population numbers are not large, it appears the species may be more common than previously thought.

Mankowski recommendation – remove from threatened.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 11 of the 159th meeting, 08/16/2013

Vice-chair Kruse moved to remove from threatened status *Matelea obliqua* (Climbing Milkweed) as more common than previously thought, Mr. Robinett seconded the motion, and it was approved unanimously.



**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014**

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Mentzelia oligosperma (Stickleaf) - Proposed Action: add as endangered

Reviewed at: 141st meeting, 02/20/2009; data confirmation at the 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Preliminary listing decision excerpts from the 141st meeting (02/20/2009)

Stickleaf is a xerophyte found in open habitats associated with limestone cliffs, escarpments, and hill prairies. The species has relatively low-volume seed production, with 1-4 seeds per fruit. This species' status and distribution was surveyed in a project funded by the Board, Status Survey of *Mentzelia oligosperma* (Stickleaf), (2008) by Mike Jones. The study and subsequent surveys found that the number of populations had declined from 15 known historic locations to 9 populations, with sizes ranging from 6-80 individuals, and only two populations were protected as Nature Preserves or Land and Water Reserves. Ms. Masi **moved** that *Mentzelia oligosperma* (stickleaf) be added as an endangered species, Dr. Taft seconded the motion, and it was **approved** unanimously.



ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

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5-YEAR REVIEW AND REVISION ENDING IN 2014**

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Oenothera perennis (Small Sundrops) - Proposed Action: remove from threatened

Reviewed at: 159th meeting, 08/16/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Small Sundrops, *Oenothera perennis* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 12/03/1998

Reason for listing: restricted habitats or low pops in IL;

***Oenothera perennis* L.**

SMALL SUNDROPS

ONAGRACEAE

Status: Threatened in Illinois.

Habit: Perennial herb, stems 20-60 cm tall.

Range: Eastern United States and adjacent Canada.



Oenothera perennis occurs in sand and gravel prairies and on dry rocky prairie slopes and knobs in northern Illinois. Eleven populations are presently known from Cook, Lake, and Winnebago counties. Two populations occur in a state nature preserve, and five occur in county forest preserves. This species has been successfully introduced into several prairie restorations in Cook County.

References: Straley (1977), Taft and Szelocki (1990).

KEY

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5-YEAR REVIEW AND REVISION ENDING IN 2014**

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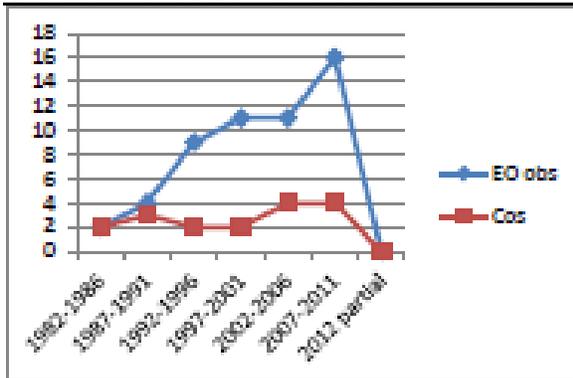
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
2010	20	17	9	16	5	4

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	2	4	9	11	11	16	0
Cos	2	3	2	2	4	4	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1980, there was occurrence information brought forth to establish only one EO in one county. Since then, 19 EOs and 4 counties have been added to the species' distribution: 3 EOs were added in the 1980s; 6 EOs were added in the 1990s; and, 8 EOs were added in the 2000s. The addition of 11 EOs in the 1980s and 1990s led to a status upgrade to threatened in 1998. Since then 8 additional EOs have been added. Fully 17 EOs (85% of total) have had observations in the last 10 years and 19 EOs (95% of total) have had observations in the last 15 years. Seven EOs (35% of total) have had repeated observations in at least 3 of the 4 most recent 5-year intervals. Only one EO has had "surveyed w/ no observation" reports without subsequent observation. Nine EOs (45% of total) are protected. Most recent reported population numbers are: 147 stems, 63% reproductive; 41 flowering stems; present; 4 flowering stems; 30,000 stems, 93% flowering; 8 flowering stems; 35 flowering clumps; 2,813 stems; 334+ plants; 329 flowering plants; 152 plants; 10 stems; 1,317 stems; 373 stems; 20 individuals; 992 stems; 401-801 flowering stems; 300 flowering stems; and, 14 reproductive stems. The species appears to be more common than previously thought and/or has recovered sufficiently to exceed the definition of threatened.

Mankowski recommendation – remove from threatened.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 11 of the 159th meeting, 08/16/2013

Dr. Hofmann moved to remove from threatened status *Oenothera perennis* (Small Sundrops) as recovered and/or more common than previously thought, Mr. Robinett seconded the motion, and it was approved unanimously.



ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Oxalis illinoensis (Illinois Wood Sorrel) - Proposed Action: change from endangered to threatened
Reviewed at: 159th meeting, 08/16/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Illinois Wood Sorrel, *Oxalis illinoensis* (Illinois endangered)

Listed as IL E, 03/13/1989

Reason for listing: restricted habitats or low pops in IL;

***Oxalis illinoensis* Schwegman**

ILLINOIS WOOD SORREL

OXALIDACEAE

Status: Endangered in Illinois.

Habit: Perennial herb from a fusiform tuber, stems to 20 cm tall.

Range: Interior lowland plateau province of southeastern United States.



Oxalis illinoensis was described as a new species in 1982. Formerly, its populations were treated as state endangered under the name *Oxalis grandis*, which now is known not to occur in Illinois. *Oxalis illinoensis* occupies mesic forests over limestone or other calcareous substrates in the Shawnee Hills Natural Division of Illinois. Populations are known from two Hardin County stations, both in the Shawnee National Forest. Though not found recently, some populations probably persist in Pope County.

Reference: Schwegman (1982b).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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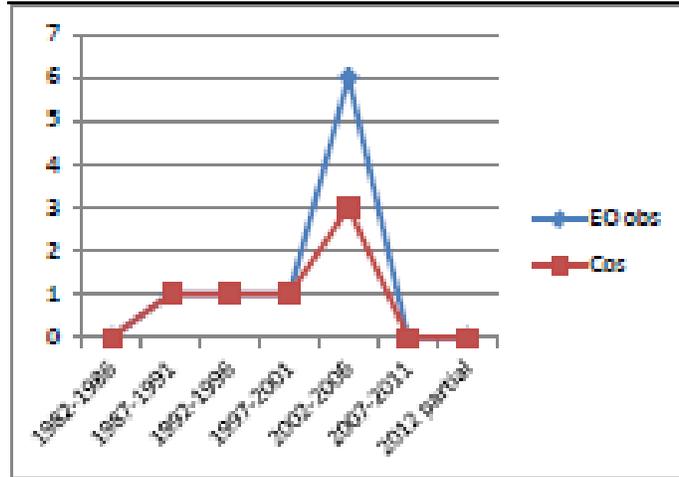
Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
5/16/2003	6	6	0	7	3	3

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	0	1	1	1	6	0	0
Cos	0	1	1	1	3	0	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1989, there were four known occurrences in two counties that were established as EOs. Since then, two EOs and one county have been added. There have been no “surveyed w/ no observation” reports at any EO. Fully 100% of EOs have had observations in the last ten years. Older reported observations from the four original EOs range from “observed” to “several hundred individuals”. Recent reporting suggests increases in numbers at the four original EOs and indicates significant population numbers at every EO and. Most recent reported population numbers are: >1,500 plants across 2 nested sites; from 500 to 1,000s of plants across 4 locations; 1,000+ plants; 2 clusters, each with >100 plants; >1,000 plants; and, several hundred plants. It appears the species’ status exceeds the definition of endangered.

Mankowski recommendation – change from endangered to threatened.

Preliminary listing decision excerpts from agenda item 11 of the 159th meeting, 08/16/2013

Secretary Clemetsen moved to change the status of *Oxalis illinoensis* (Illinois Wood Sorrel) from endangered to threatened, Dr. Hofmann seconded the motion, and it was approved unanimously.



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Paspalum dissectum (Bead Grass) - Proposed Action: remove from endangered

Reviewed at: 159th meeting, 08/16/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Bead Grass, *Paspalum dissectum* (Illinois endangered)

Listed as ILE, 03/20/1980

Reason for listing: proposed Fed E or T; restricted habitats or low pops in IL;

***Paspalum dissectum* (L.) L.**

BEAD GRASS

POACEAE

Status: Endangered in Illinois.
Habit: Perennial subaquatic grass, culms creeping, 20-60 cm long.
Range: Southeastern United States.



A species of disturbed sites and shallow water, *Paspalum dissectum* occurs in Illinois along the northern margin of its range. It was originally known from three early collections in the state, none more recent than 1893. An adventive population was discovered in Williamson County in 1987; however, this could be derived from a local native population.

References: Verts and Möhlenbrock (1966), Möhlenbrock (1972), Bowles *et al.* (1991).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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Penstemon brevisepalus (Short-sepaled Beard Tongue) - Proposed Action: remove from endangered
Reviewed at: 140th meeting, 11/14/2008; 147th meeting, 08/13/2010; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Preliminary listing decision excerpts from the 140th meeting (11/14/2008)

This species received preliminary approval for de-listing from Board (at the 140th meeting Nov 2008), but it was excluded from final action during the IL List review and revision ending in 2009 pending verification of voucher specimens. This species is only recorded from a single location in Pope County. The Natural Heritage Database indicates last observed in 1981 and last surveyed in 2005. Board staff confirmed at the 147th meeting on 08/13/10 that voucher specimens for the species had been misidentified and recommended the species be delisted accordingly and the Board agreed to wait and did not take action during the current meeting.



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**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

***Platanthera flava* var. *flava* (Tubercled Orchid)** - Proposed Action: remove from endangered

Reviewed at: 158th meeting, 05/17/2013; confirming preliminary decision at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Preliminary listing decision excerpts from agenda item 9 of the 158th meeting, 05/17/2013

Chair Gooch explained that the discussion would now move to taxa recommended for delisting by staff and noted that some of the recommendations were related to the authority of the Board to list sub-specific taxa versus a biological determination regarding status and distribution of any individual taxa (further explanation is provided in Table 5 of Attachment F). He suggested that a discussion of the topic first might expedite the reviews for individual taxa. Dr. Taft led the discussion by reviewing that not all specialists recognize the same designations for varieties and subspecies nor whether a taxon may or may not be considered a part of Illinois' native flora. He added that he had recommendations for allowing exceptions for these reasons and also for when a taxon is endemic, for example. Chair Gooch noted that the Board has traditionally used Mohlenbrock as its reference for Illinois flora and asked if anyone recalled why. Mr. Nyboer replied that it was the first and only Flora of Illinois and was used as such by the Board, the IDNR, and the INPC. Vice-chair Kruse noted that the question seems to be whether the Board has the authority to list sub-specific taxa and reviewed the explanation for past Board actions that Ms. Mankowski had summarized in her staff recommendations document. Chair Gooch noted that the Illinois Endangered Species Protection Act specifically mentions subspecies with regard to Federal listings, but specifically does not mention subspecies with regard to State listings. There was discussion that since JCAR had approved past listings of sub-specific taxa, the Board should consider it acceptable to continuing doing so. Chair Gooch asked that the Board return to discussion and voting for individual species listing status recommendations and review the sub-specific taxa issue as it occurs in each recommendation.

Dr. Taft reviewed that both *Platanthera flava* var. *flava* (Tubercled Orchid) and *Platanthera flava* var. *herbiola* (Tubercled Orchid) are listed (*P. flava* var. *flava* is endangered and *P. flava* var. *herbiola* is threatened) and suggested that the Board could either maintain varieties as varieties and under respective current listing statuses or could lump them together under the species *P. flava*. Ms. Mankowski noted that the varieties occur in different habitats and largely in different parts of the state. Dr. Walk moved to delist *P. flava* var. *flava* and change the nomenclature of *P. flava* var. *herbiola* to *P. flava* and Secretary Clemetsen seconded the motion. The Board voted and approved unanimously to delist *P. flava* var. *flava* and change the nomenclature of *P. flava* var. *herbiola* to *Platanthera flava*.



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Polygonatum pubescens (Downy Solomon's Seal) - Proposed Action: change from endangered to threatened
Reviewed at: 159th meeting, 08/16/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Downy Solomon's Seal, *Polygonatum pubescens* (Illinois endangered)

Listed as IL E, 5/20/1980; Listed as IL T 03/13/1989; Listed as IL E, 12/03/1998

Reason for listing: restricted habitats or low pops in IL;

Polygonatum pubescens (Willd.) Pursh

DOWNY SOLOMON'S SEAL

LILIACEAE

Status: Endangered in Illinois.

Habit: Perennial rhizomatous herb, stems 50-90 cm tall.

Range: Northeastern United States and adjacent Canada, south in the Appalachian Mountains.



Polygonatum pubescens reaches its southwestern range limit in rich mesic forests of northern Illinois. It has been collected primarily in the Chicago area, and many of these stations have been destroyed by urban growth. Presently it is known from Lake Michigan bluff ravines and mesic forests in Lake County, and a state nature preserve, and four forest preserves in Cook County.

References: Moran (1978), Evert (1988).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume I - Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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Illinois – Natural Heritage (Biotics 4) Database – last updated, February 2013

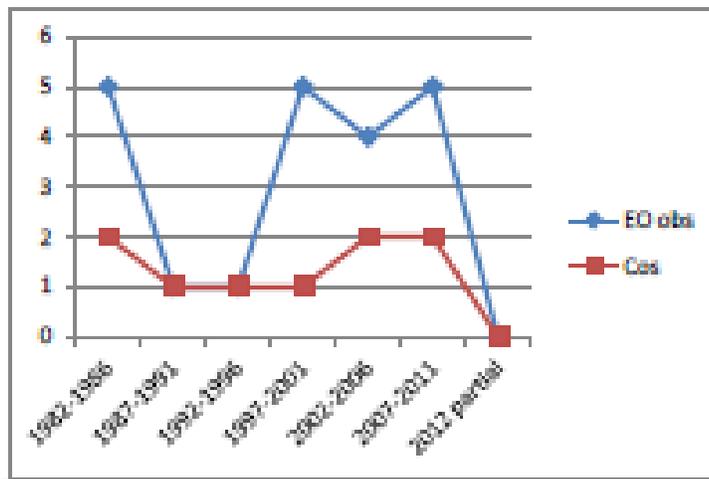
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
06/06/2009	9	6	1	5	2	2

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	5	1	1	5	4	5	0
Cos	2	1	1	1	2	2	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski 07/15/13 notes and recommendation:

When the species was originally listed as endangered in 1980, there was only one occurrence in one county that was established as an EOs. Since then, eight EOs have been added, expanding the known distribution to two counties. It appears that the addition of five EOs during the 1980s led to a listing status upgrade to threatened in 1989. Despite the addition of another EO in the early 1990s, the listing status was downgraded to endangered in 1998. Following that change, two additional EOs have been added for the species. One EO is protected. One EO has had "surveyed w/ no observation" reports for several years. Reported population numbers from most recent observations across EOs are: 130 stems in 5 pops; 14 vegetative plants; 21 vegetative stems; 19 fruiting plants; 218 stems; 30 plants; <100 vegetative stems; and, "observed". It appears that the current status and distribution is similar to that when the species' listing status was previously upgraded to threatened.

Mankowski 07/15/13 recommendation – change from endangered to threatened.

ESPB TEC Susanne Masi email of 07/23/13

In deliberating the recommendation to upgrade *Polygonatum pubescens* to Threatened status, please consider the following information provided by the Plants of Concern program for the 2012 and 2013 data season and by the Chicago Botanic Garden surveys of 1999. The data is included in the spreadsheet below, based on records in the Plants of Concern database. These records are reported each year to the Illinois Natural Heritage Database.



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Plants of Concern monitors 8 EDRs of *Polygonatum pubescens* and has informal 2013 reports on 2 additional, new populations. A 1998-2000 survey by the Chicago Botanic Garden monitored an additional three populations. Of these combined populations:

- 2 populations were searched and not found, and are considered extirpated.
- 4 populations had fewer than 20 plants.
- 6 populations had fewer than 60 plants.
- Most populations had low reproductive rates.
- 4 populations were impacted by moderate to severe erosion.

Polygonatum pubescens in NE Illinois as reported by Plants of Concern: 2012-2013										
5 of 10 populations < 60 plants; 3 populations < 20 plants; 1 population extirpated; low reproductive rates; 4 populations threatened by erosion/severe erosion										
Site (County)	EDR	Nature Preserve?	Subpop #	2012 Monitoring			2013 Monitoring			
				Total #	% Reproductive	Biggest Threat to Subpop	Total #	% Reproductive	Biggest Threat to Subpop	
Edgebrook Woods (Cook)	487*5	No	1	N/A	N/A	N/A	Present		10 plants reported in 2010; Severe Erosion	
Fort Sheridan Forest Preserve (Lake)	3381*1	No	1	1515	14%	Erosion (26-50%)	N/A			
				4	50%	Erosion (26-50%)	N/A			
				8	25%	Erosion (26-50%)	N/A			
				9	0%	Erosion (26-50%)	N/A			
Hanna Woods (Cook)	3809*6	No	1	N/A	N/A	N/A	present			
				2	85	27%	Authorized Trail Impact (76-100%)	N/A		
				3	69	17%	Authorized Trail Impact (26-50%)	N/A		
Lake Ave. Woods East (Cook)	850*8	No	1	212	4%	Invasive Woody Brush Encroachment < 1m tall (76-100%)	298	0%	Invasive Woody Brush Encroachment < 1m tall (76-100%)	
MacArthur Woods (Lake)	POC-POPLH*31	Yes	1	7	0%	None	Present			
				2	16	0%	None	Present		
				3	33	0%	None	Present		
Openlands Lakeshore Preserve (Lake)	POC-POPLH*38	Yes	1	10	0%	Invasive Woody Brush Encroachment > 1m tall (26-50%)	11	10%	Invasive Woody Brush Encroachment > 1m tall (1-25%), Deer Browse (1-25%), Erosion (1-25%)	



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Queen Anne Cemetery (McHenry)	POC- POPULATED S	No	1	N/A	N/A	N/A	0	0%	Historic (CR); searched not rebound
St. Paul Woods	2011*3	No	1	N/A	N/A	N/A	~10		14 reported in 2000; Severe Erosion
New 2013; reports pending									
Ryerson Conservation Area							100		email correspondence K. Klick
Wright Woods							50		email correspondence K. Klick
1999 searches by Chicago Botanic Garden Project (last time reported to NH Database)									
1 population 10 plants; 1 population < 15 plants; 1 population extirpated									
Buze Woods (Cook)			20				1999		
Carle Woods (Bloomington; Cook)			0				1999		
Clayton Smith Woods (Cook)			14				1999		

At this point I am not making a specific recommendation to maintain *Polygonatum pubescens* as Endangered, but suggest that Board and TEC members to consider these factors in their decision/response.

Mankowski response: In approving the process and schedule for this current List review, the Board agreed that data from the Database would be its primary data source and any other data needs to be submitted to and entered into the Database in order for the Board to consider it. The Board agreed that Database data into the 2012 season would be considered. The schedule for ESPB staff coordination with the Database called for a ESPB staff to get a Database update in February 2013 to use in developing the majority of, if not all, plant species reviews. According to the Database, the Plants of Concern (POC) program submitted its 2012 data to the Database in March 2013, so it was not included in Part 1 or Part 2 of the Plant list 1st cut reviews. The Database is understaffed and often operates with a backlog of data to be entered. The POC 2012 data had still not been entered into the Database when ESPB staff received in July 2013 another update from the Database that will be used to complete the Plant list review. So, the POC 2012 data is not reflected in the Database information included in the ESPB staff species reviews or recommendations – this was the same case for INHS/IDNR 2012 fish data. While the Board has agreed to consider 2013 survey data that has been submitted for a few species that were recommended for delisting, the subject species is not recommended for delisting. ESPB staff recommends:



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that the 2013 data should not be considered in the current review since this is the same standard applied to all other plant species reviewed, with the exception of a few that were proposed for delisting.

The commenter does not explain how the data presented relates to EOs in the Database. There are 9 EOs in the Database, but the commenter's data mentions monitoring 8 EOs, finding 2 new EOs, and then monitoring 3 additional locations – so it is unclear if/how these correlate to EOs. Further, while it is appreciated that the commenter states that two EOs (?) are now considered extirpated, that determination needs to be made/confirmed by the Database. Board staff elected to not dedicate very much time to trying to cross-reference data between the commenter's submittal and the Database, but upon review of the commenter's data ESPB staff is not persuaded to change the ESPB staff notes and recommendation and maintains the recommendation for changing the status from endangered to threatened.

Mankowski 08/02/13 recommendation – change from endangered to threatened

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 11 of the 159th meeting, 08/16/2013

Secretary Clemetsen moved to change the status of *Polygonatum pubescens* (Downy Solomon's Seal) from endangered to threatened and Vice-chair Kruse seconded the motion. Ms. Masi reviewed her TEC comments on staff recommendation and staff response to comments. Dr. Hofmann noted that the species' status has been changed several times and Ms. Mankowski reviewed the previous changes and relative number of EOs at each change, explaining that her current recommendation was partly based on similar evidence when the species was previously changed from endangered to threatened. Chair Gooch asked for a review of the protection status of the EOs. Following discussion, the Board voted and the motion to change the status of *Polygonatum pubescens* from endangered to threatened was approved, with members Clemetsen, Gooch, Hofmann, Kruse, Robinett, Ross, and Walk voting for and member Masi voting against.



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Rhynchospora alba (Beaked Rush) - Proposed Action: change from threatened to endangered

Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Beaked Rush, *Rhynchospora alba* (Illinois threatened)

Listed as IL T, 5/20/1980

Reason for listing: restricted habitats or low pops in IL;

***Rhynchospora alba* (L.) Vahl**

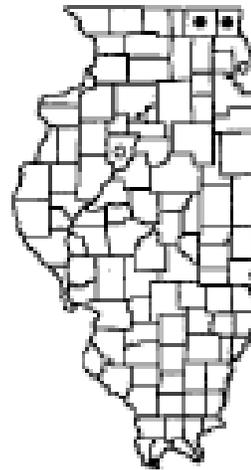
BEAKED RUSH

CYPERACEAE

Status: Threatened in Illinois.

Habit: Perennial caespitose beaked rush, culms to 70 cm tall.

Range: Circumboreal, south into northeastern United States.



Rhynchospora alba occurs locally in northeastern Illinois in fens, bogs, and interdunal swales along Lake Michigan. Within Illinois it is presently known from two state nature preserves and probably persists at others. Another population is known from private land.

References: Gale (1944), Bowles (1991b).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

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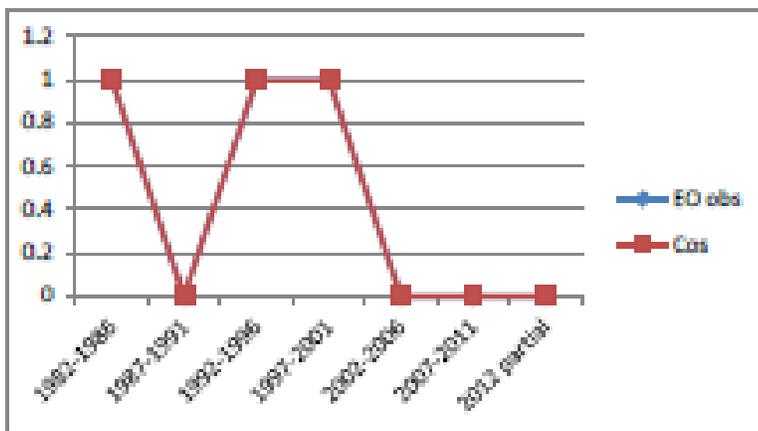
Illinois – Natural Heritage (BioRCS 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# top quads	# Counties	# Counties since 2002
1999	7	0	6	7	3	0

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	0	1	1	0	0	0
Cos	1	0	1	1	0	0	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as threatened in 1980, there were five known occurrence in three counties that were established as EOs. Since then, two EOs have been added; one EO was added in the 1980s and one EO was added in the 1990s. Six EOs (86% of total) are protected in Nature Preserves. No EOs have had reported observations since 2002. Three EOs (43% of total) have had "surveyed w/ no observation" reports for which there were not subsequent observations; all three protected EOs, located within Nature Preserves. Given that no EOs have had observations since 2002 and that the three EOs with "surveyed w/ no observation" reports and no subsequent observations are located in Nature Preserves, it appears the species' status may now be less secure than when listed.

Mankowski recommendation – change from threatened to endangered.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Dr. Taft moved to change the status of *Rhynchospora alba* (Beaked Rush) from threatened to endangered, Dr. Hofmann seconded the motion, and it was approved unanimously.



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**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Rubus odoratus (Purple-flowering Raspberry) - Proposed Action: change from endangered to threatened
Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Purple-flowering Raspberry, *Rubus odoratus* (Illinois endangered)

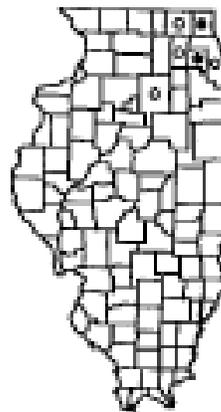
Listed as IL E, 9/30/1981

Reason for listing: restricted habitats or low pops in IL;

***Rubus odoratus* L.**

PURPLE-FLOWERING RASPBERRY ROSACEAE

Status: Endangered in Illinois.
Habit: Shrub, to 1.5 m tall.
Range: Eastern Canada, south into northeastern United States and the Appalachians.



Rubus odoratus occurs in forest clearings, roadsides, fencerows, and other disturbed sites and reaches its western range limit in northern Illinois. The species is a common ornamental, and many Illinois collections probably represent planted or escaped specimens. The species is known from seemingly indigenous populations in northeastern Illinois. These include a state nature preserve, a county forest preserve, and private land. There are unverified reports of this species from DeKalb and Ogle counties.

References: Tchon (1942), Wunderlin (1966).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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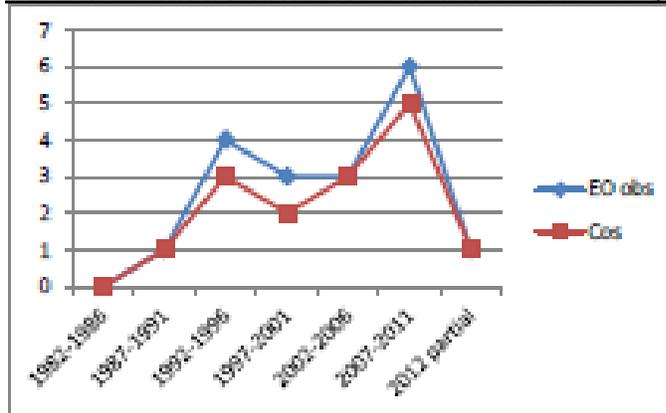
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
06/27/2012	10	6	3	7	5	5

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	0	1	4	3	3	6	1
Cos	0	1	3	2	3	5	1

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1981, there were two known occurrence in one county that were established as EOs. Since then, eight EOs have been added; three EOs and one county were added in the 1990s, four EOs and two counties were added in the 2000s, and one EO was added since 2010. Six EOs (60% of total) across five counties have had reported observations since 2002, with three of those EOs having repeated observations in both of the last two 5-year intervals. Three EOs (30% of total) are protected in Nature Preserves. No EOs have had "surveyed w/ no observation" reports for which there were not subsequent observations. Most recent reported observation/population numbers for the six EOs with observations since 2002 are: 13 vegetative stems; 344 stems; 1,352 clumps in 11 populations; 20 flowering clumps; 75 stems; and, 28 plants. While some of the recent reported population numbers are not very large, relative to the status and distribution at initial listing, that six EOs across five counties (representing 5 of the 6 counties known for historic distribution), it appears the species' status is now more secure and may exceed the definition of endangered.

Mankowski recommendation – change from endangered to threatened.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Dr. Hofmann moved to change the status of *Rubus odoratus* (Purple-flowering Raspberry) from endangered to threatened and Ms. Masi seconded the motion. There was discussion that the species is cultivated and sold in the nursery trade, so the origin of some populations may be questionable and the Board voted **unanimously** to change the status from endangered to threatened.



**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Sisyrinchium atlanticum (Eastern Blue-eyed Grass) - Proposed Action: change from threatened to endangered
Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Eastern Blue-eyed Grass, *Sisyrinchium atlanticum* (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 09/01/2004

Reason for listing: restricted habitats or low pops in IL;

***Sisyrinchium atlanticum* Bickn.**

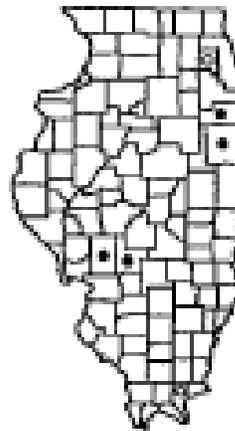
EASTERN BLUE-EYED GRASS

IRIDACEAE

Status: Endangered in Illinois.

Habit: Perennial herb, stems 20-70 cm tall.

Range: Eastern United States, northeast to Illinois.



Sisyrinchium atlanticum reaches its northwestern range limit in mosaic prairie habitat in Illinois. Until the 1970s this species was known only from a 1940 Kankakee County collection and a 1952 Pope County collection. It was found in a Macoupin County railroad prairie in 1971, is known to occur in a state conservation area and state nature preserve in Iroquois County, and on private land in Kankakee and Macoupin counties.

Reference: Schwegman (1972).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors, 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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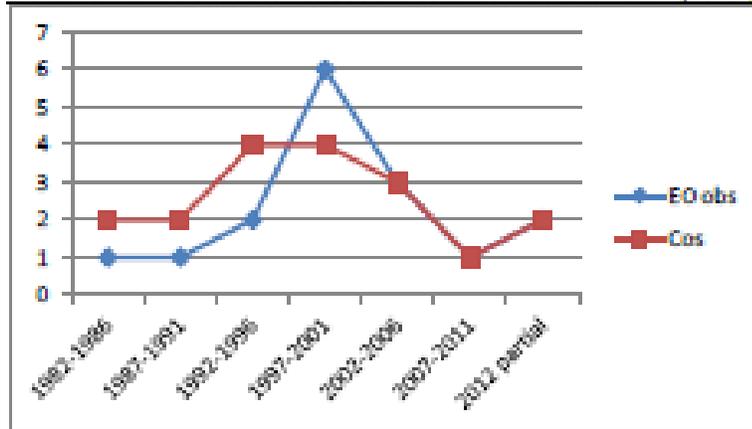
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
5/16/2012	6	3	1	6	4	3

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	1	2	6	3	1	2
Cos	2	2	4	4	3	1	2

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1980, there were records for two occurrences across four counties that were established as EOs. Since then, four EOs have been added; one EO was added in the 1990s and three EOs were added in the 2000s. It appears the addition of the four EOs led to the species' upgrade to threatened in 2004. One EO is protected in a Nature Preserve. Three EOs (50% of total) have had observations reported since 2002, with one EO having a report of 32 plants and the other two EOs having reports only of "observed". Relative to the number of EOs at the time of listing and without population reporting information to raise confidence in the security of those locations, staff recommends that the species' status be returned to endangered.

Mankowski recommendation – change from threatened to endangered.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Dr. Walk moved to change the status of *Sisyrinchium atlanticum* (Eastern Blue-eyed Grass) from threatened to endangered, Ms. Masi seconded the motion, and it was approved unanimously.



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Stenanthium gramineum (Grass-leaved Lily) - Proposed Action: change from endangered to threatened
Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Grass-leaved Lily, *Stenanthium gramineum* (Illinois endangered)

Listed as IL T, 5/20/1980; Listed as IL E 01/18/1994

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

***Stenanthium gramineum* (Ker) Morong**
GRASS-LEAVED LILY **LILIACEAE**

Status: Endangered in Illinois.
Habit: Perennial bulbous herb, stems to 1.7 m tall.
Range: Eastern United States.



A plant of rich mesic floodplains and forests, *Stenanthium gramineum* is scattered in southern Illinois along the northwestern margin of its range. Populations are known from three counties principally within the Shawnee National Forest, with one probably extending into a state park. A few populations also occur in central Illinois, one in a state nature preserve in Richland County, another on private land in Fayette County. There are unverified reports of this species from Wayne and Union counties.

References: Mohlenbrock (1970c), Schwegman (1982a).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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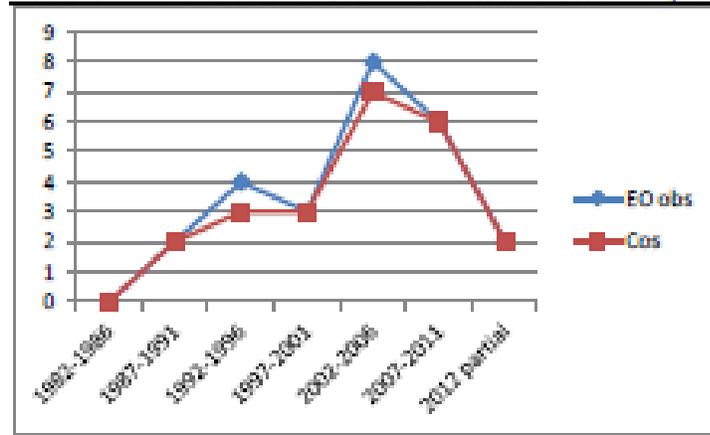
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
05/21/2012	12	10	2	11	9	9

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO	2	4	3	8	6	2	0
Counties	2	3	3	7	6	2	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as threatened in 1980, there was occurrence information to establish two EOs in two counties. Since then, 10 EOs across 7 counties have been added; 1 EO and 1 county were added in the 1980s, 3 EOs and 2 counties were added in the 1990s, 4 EOs and 3 counties were added in the 2000s, and 2 EOs and 2 counties have been added since 2010. Despite the increase in EOs into the 1990s, the species' status was changed to endangered in 1994. Two EOs are protected in Nature Preserves. Ten EOs (83% of total) have had reported observations since 2002. Most recent reported observation/populations numbers since 2002 for those 10 EOs were: 3 flowering plants; >100 plants in 4 colonies; 280 stems, 10 flowering; approx. 100 plants; 611 plants across 3 pops; 292 plants; 4 flowering and non-flowering too numerous to count; 3 non-flowering clumped stems; 53 plants in 2 locations. Staff recommends a change in listing status from endangered to threatened.

Mankowski recommendation – change from endangered to threatened.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Mr. Robinett moved to change the status of *Stematanthium graminum* (Grass-leaved Lily) from endangered to threatened, Dr. Hofmann seconded the motion, and it was approved unanimously.



**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Synandra hispidula (Hairy Synandra) - Proposed Action: change from endangered to threatened
Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Hairy Synandra, *Synandra hispidula* (Illinois endangered)

Listed as ILE, 3/20/1980

Reason for listing: proposed Fed E or T; restricted habitats or low pops in IL;

Synandra hispidula (Michx.) Britton
HAIRY SYNANDRA LAMIACEAE

Status: Endangered in Illinois.
Habit: Perennial herb, stems 20-60 cm tall.
Range: Southeastern United States.



A species of rich mesic forests, *Synandra hispidula* reaches its northwestern range limit in the Shawnee Hills Natural Division in southern Illinois. Presently three populations are known in the state, one in a state nature preserve, and all in the Shawnee National Forest.

References: Vasey (1870), Mohlenbrock (1959c).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

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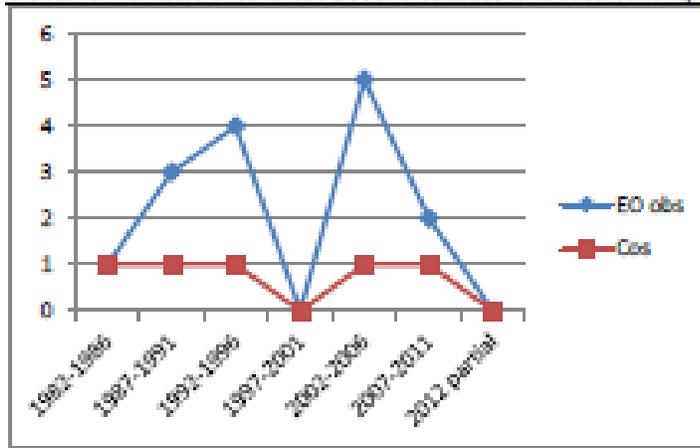
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
5/12/2011	5	5	1	3	1	1

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	3	4	0	5	2	0
Cos	1	1	1	0	1	1	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1980, there was occurrence information to establish one EO in one county. Since then, four EOs were added in the 1980s. One EO is protected in a Nature Preserve. Fully five (100% of total) of EOs have had reported observations since 2002. No EOs have had "surveyed w/ no observation" reports. Most recent reported observation/population numbers since 2002 were: several plants; >1,000 flowering and several 100 non-flowering plants; 9 flowering stems; 1,000 plants; and, several 1,000 plants. Relative to the number of EOs at listing and in consideration of relatively large reported population numbers at three of the five EOs, staff recommends a change in status from endangered to threatened.

Mankowski recommendation – change from endangered to threatened.

NatureServe Conservation Status in United States:

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Dr. Hofmann moved to change the status of *Synandhra hispidula* (Hairy Synandhra) from endangered to threatened, Ms. Masi seconded the motion, and it was approved unanimously.



ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

***Tomanthera auriculata* (Ear-leafed Foxglove)** - Proposed Action: remove from threatened

Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Ear-leafed Foxglove, *Tomanthera auriculata* (Illinois threatened)

Listed as IL T 04/17/1990

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

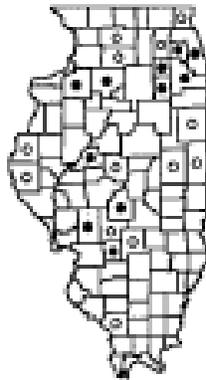
Tomanthera auriculata (Michx.) Raf.
EAR-LEAFED FOXGLOVE SCROPHULARIACEAE

Status: Threatened in Illinois.

Synonym: *Gerardia auriculata* Michx.

Habit: Annual herb, stems to 80 cm tall.

Range: Ohio to Minnesota, south to Kansas and Missouri.



Tomanthera auriculata occurs in disturbed prairies and savannas. In Illinois, populations of this species have greatly declined due to habitat loss. Presently more than twenty populations in eleven counties are known in the state, three in state nature preserves and two in state parks. This annual species is known to be semi-parasitic and is possibly disturbance-adapted. Populations often fluctuate widely over time, occasionally becoming locally extirpated.

Note: The scientific name of this species is presently considered to be *Agalinis auriculata* (Michx.) Blake.

References: Pennell (1935), Orzell and Summers (1983), Cunningham and Parr (1990).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle, county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Eblinger, editors. 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES 5-YEAR REVIEW AND REVISION ENDING IN 2014

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

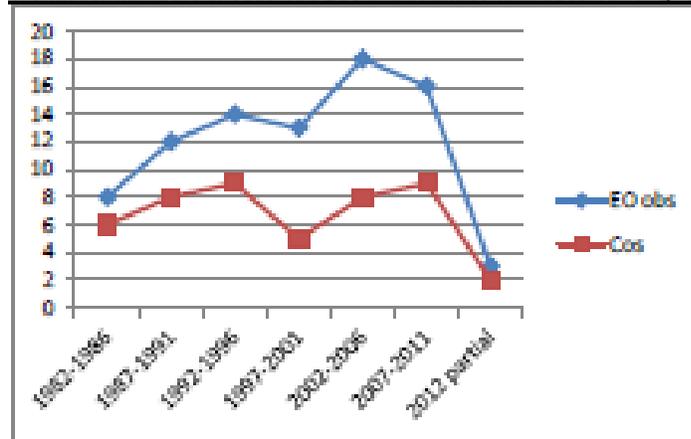
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
10/01/2012	47	23	12	37	23	13

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	8	12	14	13	18	16	3
Cos	6	8	9	5	8	9	2

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as threatened in 1990, there were 27 records in 18 counties that were established as EOs. Of the 27 EOs established at listing, it appears that 10 EOs (37%) were established from museum/collections records ranging from 1933-1981; 8 of the 10 EOs had "surveyed s/ no observation" reports within the 5-year period prior to listing and 2 of the 10 EOs appear to have never been visited. Since the time of listing, 20 EOs and 3 counties have been added; 12 EOs were added in the 1990s and 8 EOs were added in the 2000s. Twelve EOs (26% of total) are protected in Nature Preserves.

Twenty-three EOs (49% of total) have had reported observations since 2002 and 27 EOs (57% of total) have had observations since 1997. Fifteen EOs (32% of total) have had repeated observations during at least two of the three most recent 5-year intervals. Sixteen EOs (34% of total) have had "surveyed w/ no observation" reports and no subsequent observations, including four EOs are reported as "destroyed" or "habitat converted". However, 10 of the 16 (63%) did not have reported observations since at least 9 years prior to listing.

Most recent reported observation/population numbers for the 23 EOs with observations since 2002 are:

1 plant (2002)
636+ flowering plants (2006)
74 blooming plants (2003)
36 reproductive stems (2009)
10 reproductive stems (2009)
120 plants (2010)
50 post-flowering plants (2011)
observed, increasing (2011)



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9 flowering stems (2009)
521 flowering plants (2012)
100+ fruiting plants (2012)
14 flowering/fruiting stems (2012)
observed (2002)
2,250 reproductive stems in 3 pops. (2009)
527 stems in 3 pops (2009)
667 stems in 3 pops at 1 nested site (2009)
60+ plants (2003)
1 plant (2008)
3 plants beginning to set fruit (2007)
3 plants (2011)
hundreds of stems (2009)
63 flowering stems in 4 pops (2009)
56 stems (2008)

Relative to the 17 EOs with confirmed observation at the time of listing, that 20 EOs have been added and 23 EOs had reported observations since 2002 (and 8 EOs have relatively large reported population numbers), suggests the species is more common than previously thought and/or has experienced some recovery since listing.

Mankowski recommendation – remove from threatened.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Mr. Robinett moved to remove from threatened status *Tomanthana auriculata* (Ear-leafed Foxglove), Ms. Masi seconded the motion, and it was approved unanimously.



ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Tradescantia bracteata (Prairie Spiderwort) - Proposed Action: change from threatened to endangered
Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Prairie Spiderwort, *Tradescantia bracteata* (Illinois threatened)

Listed as ILE, 5/20/1980; Listed as IL T 12/03/1998

Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

Tradescantia bracteata Small

PRAIRIE SPIDERWORT

COMMELINACEAE

Status: Threatened in Illinois.

Habit: Perennial herb, stems 5-45 cm tall.

Range: North-central United States.



Tradescantia bracteata occurs in dry-mesic silt and sand prairies in western Illinois, often in disturbed habitats. Presently it is known from four localities in Illinois. None of the populations are protected, and several are along railroad and highway rights-of-way. The report of this species from Winnebago County is based on a cultivated plant.

References: Winterringer (1958), Henry (1986, 1992), Bowles (1991b), Bowles *et al.* (1991), Faden (2000).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

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**ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES
5-YEAR REVIEW AND REVISION ENDING IN 2014**

Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

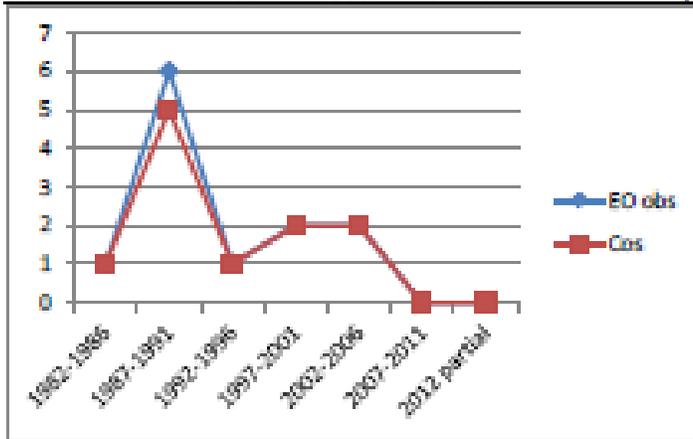
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
11/13/2002	5	2	0	6	3	2

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	1	6	1	2	2	0	0
Cos	1	5	1	2	2	0	0

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as endangered in 1980, there were no records established as EOs. Since listing, six EOs in five counties have been added; five EOs and four counties were added in the 1980s and one EO and one county were added in the 1990s. The addition of the five EOs apparently, although one was reported as destroyed in 1996, led to the species upgrade to threatened in 1998. Two EOs (50% of the total EOs known as extant at listing and 33% of total EOs) had reported observations since 2002. No EOs are protected in Nature Preserves.

Mankowski recommendation – change from threatened to endangered.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Dr. Walk moved to change the status of *Tradescantia bracteata* (Prairie Spiderwort) from threatened to endangered, Dr. Hofmann seconded the motion, and it was approved unanimously.



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Public Hearing Documents: Individual species reviews and select Board discussion and determinations for species with ESPB preliminary approval for changes in listing status, addition to, or removal from, the Illinois List.

Utricularia subulata (Hair Bladderwort) - Proposed Action: add as endangered

Reviewed at: 142nd meeting, 05/15/2009; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion

Preliminary listing decision excerpts from agenda item 11 of the 142nd meeting, 05/15/2009

Utricularia subulata (hair bladderwort) listing recommendation consideration – Susanne Masi.

Illinois population history

*In 1994, Ken Klick, ecologist with the Lake County FPD, discovered this species in an intradunal swale at Hosah Park, adjacent to Illinois Beach State Park, North Unit, in Lake County, IL. This was its first known occurrence in Illinois. He collected a specimen and submitted it to the Morton Arboretum Herbarium. Associate species included *Hypericum kalmianum*, *Cladium mariscoides*, *Solidago ohioensis*, *Eleocharis pauciflora* var. *fernaldii*, *Rhynchospora capillacea*.*

*After several years of continued searching, the species was again relocated by Klick in 2008 in the same area at Hosah Park. He found 75 plants and made a collection which is now housed at the Chicago Botanic Garden Herbarium. Associate plants are moderately to largely conservative: additional associates to the first collection include *Satureja arkansana*, *Aster dumosus*, *Agalinis purpurea*. The only threat recorded was the somewhat aggressive native there, *Rhynchospora capillacea*. Overall lowering water tables may be a long term threat to this habitat.*

In an email on April 10, 2009, Ken more fully described the Hosah Prairie habitat: “The habitat is VERY native and high quality. Honestly, I don’t know if the community type would be called a intra-dunal wetland, or a calcareous wet prairie. I think a panne is the community type most people would call it, however.”

Klick had previously, in the mid 1980s, discovered this species at locations in Indiana and Michigan; he was familiar with the taxon.

Presence in the Great Lakes Region: Indiana population history (U. subulata listed as Threatened in Indiana)

*First collected in 1930 at Mineral Springs in Porter County, IN by P. E. Herbert, who misidentified it as *Utricularia minor*. This specimen is housed at the Notre Dame Herbarium.*

K. Klick observed this taxon at Hoosier Prairie in Lake County, IN and at West Beach, Indiana Dunes National Lakeshore, in 1983 (as reported in Swink and Wilhelm, 1994).

Subsequent Indiana collections: in 1984 this taxon was collected by Bill Hess (Morton Arboretum) at Hoosier Prairie in Lake County.

*In 1985, Ken Dritz discovered the plant in Jasper County, in low areas of wet sand in a fire lane. One of the associates was *Rhynchospora capillacea*, also found in Lake Co, IL*

In 1989, Tom Post (IN DNR) collected this plant at the lakeshore Marquette Park, Lake County, IN, in a panne.

In 2000, G. Tonkovich of the Field Museum collected two specimens of this taxon from Porter County, IN. It is unknown whether these are two separate sites.



ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

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ILLINOIS LIST OF ENDANGERED AND THREATENED PLANT SPECIES 5-YEAR REVIEW AND REVISION ENDING IN 2014

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Mike Homoya, Botanist/ Plant Ecologist, Indiana DNR (email correspondence March 19, 2009): "I think *Utricularia subulata* is one of the suite of coastal plain disjunct species found in the Midwest. I consider it native, just as I do the other disjuncts. I cannot account for its occurrence here based on any unnatural event or transport. I suspect it was previously overlooked or misidentified. Considering it native, we placed it on the ETR list over 20 years ago based on number of state occurrences."

Michigan population history (*U. subulata* listed as Threatened in Michigan)

In 1993, Marlin Bowles collected this taxon at Warren Dunes State Park, Berrien County, MI, at the bottom of a blowout. Klick had initially located this species at this site. One of the associates here is *Cladium mariscoides*, as occurred at the Lake County, IL site.

E. Voss, Michigan Flora, Volume 3: "Although this tiny plant is considered to be the most widespread species of *Utricularia* in the world, it was thought to be restricted to the Coastal Plain from Massachusetts to Texas until it was discovered around the head of Lake Michigan in the 1980s. The first Michigan collection was made by K. Klick in an interdunal flat at Warren Dunes SP, Berrien County, in 1987....Penskar found it in similar habitats in Muskegon and Allegan counties in 1992."

Mike Penskar, Senior Conservation Scientist, Michigan Natural Features Inventory (email correspondence, March 26, 2009). "*Utricularia subulata*, insofar as I know, is a good Atlantic Coastal Plain disjunct, and I believe we've always considered it one. Tony (Anton) Reznicek's landmark Biological Conservation article in 1991 (based on the coastal plain conference in Nova Scotia where several of us gave papers on this) includes this taxon, and I would still refer you to that as the definitive list for the Midwest....In terms of criteria for listing, it easily qualifies for state endangered based on only three populations....Part of the story on this species...is that Ken Klick identified our three sites in three different counties, but only had documented one via specimen, and that is why I continued to revisit the other two sites until I found the plants during an emergence year, and this allowed Voss to adequately map it for the Michigan Flora 3."

The Illinois station shares a habitat similar to almost all of these Michigan and Indiana locations.

Related documentation

Gleason and Cronquist, *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, 2nd Ed., 1991: Lists the plant's range as Nova Scotia to Florida, along the coastal plain, thence west to Arkansas and Texas. However, they do comment that the plant is "rarely collected," presumably because of its size, which suggests it might easily be overlooked.

USDA Plant List (website). In addition to Atlantic and Gulf Coastal states, and California, *U. subulata* is shown to occur in Tennessee, Arkansas, Missouri, Oklahoma and Pennsylvania.

Susanne Masi

I would submit that *Utricularia subulata* L. is a legitimate part of the Great Lakes flora, as discussed above. There are very few habitats in Illinois that could support this taxon, but it is possible that it occurs in other pannes or interdunal swales at Illinois Beach State Park. Because of its very diminutive size and its apparent unpredictable emergence under appropriate conditions, it may easily have been overlooked in the past. Its continued presence at Hosah Prairie over a 14-year period in a native habitat suggests it is a suitable species for consideration as Endangered in Illinois.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

142nd meeting - Following brief discussion, Ms. Masi **moved** that the Board preliminarily approve listing of *Utricularia subulata* (hair bladderwort) as endangered. Dr. Taft seconded the motion and it was **approved** unanimously.



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Viola conspersa (Dog Violet) - Proposed Action: remove from threatened

Reviewed at: 160th meeting, 11/15/2013; data confirmation at 161st meeting, 02/21/2014; meeting minutes may contain additional information and discussion



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Dog Violet, *Viola conspersa* (Illinois threatened)

Listed as IL T, 5/20/1980

Reason for listing: restricted habitats or low pops in IL;

Viola conspersa Reichenb.

DOG VIOLET

VIOLACEAE

Status: Threatened in Illinois.

Habit: Perennial rhizomatous herb, stems to 20 cm tall.

Range: Eastern Canada, south into northeastern United States, and the Appalachians.



Viola conspersa reaches its southwestern range limit in rich mesic forests and flatwoods in northeastern Illinois. It was formerly frequent in the Chicago region, but has declined significantly and continues to be threatened by urban growth. Fourteen stations are presently known in the state. These sites are in state nature preserves, county forest preserves, federal and municipal property, and private land.

References: Russell (1963), Moran (1978), Evert (1988), Ballard (1990).

KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species is known to occur are shown as a solid circle; county records which may no longer be extant are shown as an open circle. An example of a species treatment is as follows:

Citation: Herkert, J.R., and J.E. Ebinger, editors, 2002. *Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 - Plants*. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.



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Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013

(EO = element occurrence and is roughly equivalent to one or more local individuals)

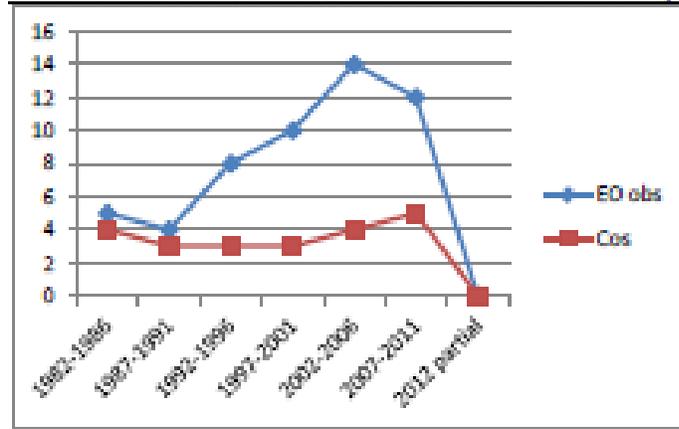
Last Observation	Total # Eos	Total seen since Jan 2002	# protected occurrences	# topo quads	# Counties	# Counties since 2002
05/05/2010	19	16	6	10	6	5

Observed EOs and counties with observations, for 5-year intervals, and any for 2012

	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2011	2012 partial
EO obs	5 (1)	4	8	10	14	12	0
Cos	4	3	3	3	4	5	0

(#) = unsuccessful planting

Trends for numbers of observed EOs and counties with observations, for 5-year intervals



Mankowski notes and recommendation:

When the species was originally listed as threatened in 1980, there were four records in three counties established as EOs. Since the time of listing, 15 EOs and 3 counties were added; 7 EOs (6 wild and 1 planted that was not successful) were added in the 1980s; 4 EOs were added in the 1990s; 3 EOs were added in the 2000s; and, 1 EO was added since 2010 (although this EO is questionable as it is quite disjunct (Putnam County) from the known historic distribution in the state). Six EOs (32% of total) are protected in Nature Preserves. Sixteen EOs (84% of total) have had reported recent observations. No wild EOs have had "surveyed w/ no observation" reports without subsequent observations. Thirteen EOs (68% of total) have had repeated observations in at least two of the three most recent 5-year intervals.

Most recent reported observation/population numbers for the 16 EOs with observations since 2002 are:

>460 rosettes, >90% flowering across 4 nested sites (2009)
975 rosettes in 7 pops (2004)
18 stems (2005)
5 plants (2010)
132-231 rosettes in 3 pops (2008)
1,983 rosettes in 2 pops (2009)
894 rosettes in 3 pops (2009)
14 ramets at one nested site(2003)
397 rosettes in 3 pops (2009)
1,936 stems and 462 rosettes in 8 pops across 2 nested sites (2009)
1 multi-stemmed cluster (2002)



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50 rosettes (2008)
>3,485 rosettes and 92 flowering clumps across 2 nested sites (2009)
35 flowering clumps across 2 nested sites (2009)
13-15 bunches (2010 – Putnam county)
402-801 stems in 2 pops (2009)

Relative to the number of EOs at time of listing (4 EOs), that 15 EOs have been added, 16 EOs had reported observations since 2002 (and 9 of the 16 EOs have relatively large reported population numbers), and 13 EOs had repeated observations over at least 2 of the last 3 5-year intervals, suggests the species is more common than previously thought and/or has experienced some recovery since listing.

Mankowski recommendation – remove from threatened.

NatureServe Conservation Status in United States

None queried.

Preliminary listing decision excerpts from agenda item 10 of the 160th meeting, 11/15/2013

Dr. Hofmann moved to remove from threatened status *Viola conspersa* (Dog Violet), Dr. Walk seconded the motion, and it was approved unanimously.



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References for proposed changes in listing status, addition to, or removal from the Illinois List - plants

520 ILCS 10/ Illinois Endangered Species Protection Act (1972 et seq.).

Barnes, Jeannie. Illinois Natural Heritage (Biotics 4) Database, Illinois Department of Natural Resources. Personal communication, multiple dates.

Bowles, M.L., V.E. Diersing, J.E. Ebinger, and H.C. Schultz, editors. 1981. Endangered and Threatened Vertebrate Animals and Vascular Plants of Illinois. Natural Land Institute, Illinois Natural History Survey, Illinois Department of Conservation, Illinois State Museum, Illinois Endangered Species Protection Board, Illinois Nature Preserves Commission, U.S. Fish and Wildlife Service. Illinois Department of Conservation. Springfield, Illinois. vii + 189 pp and Appendices.

Flora of North America Editorial Committee, eds. 1993+. Account for *Andromeda glaucophylla*. Flora of North America North of Mexico. 16+ vols. New York and Oxford. (Accessed online 02/03/2014).

Herkert, J.R. and J.E. Ebinger, editors. 2002. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 1 – Plants. Illinois Endangered Species Protection Board, Springfield, Illinois. 161 pp.

ILL. ADM. CODE. Title 17: Conservation § 1050: Illinois List of Endangered and Threatened Flora (1980 et seq.).

Illinois Department of Natural Resources (IDNR). 2007. Natural resource reviews data summary 2000-2006. Impact Assessment Section, Division of Ecosystems and Environment, Office of Realty and Environmental Planning. Illinois Department of Natural Resources. Springfield, Illinois. 16 pp.

IDNR. 2008. Incidental take authorization seven year summary. Impact Assessment Section, Division of Ecosystems and Environment, Office of Realty and Environmental Planning. Illinois Department of Natural Resources. Springfield, Illinois. 13 pp

Illinois Endangered Species Protection Board (IESPB). Meeting minutes from the 158th, 159th, 160th, and 161st meetings. Accessible online at <http://www.dnr.illinois.gov/ESPB/Pages/default.aspx>.

IESPB. Illinois Endangered Species Protection Board Technical Expert Consultants. Multiple individuals (see table at end of References section), personal communication regarding IESPB List review and reflected in IESPB meeting minutes from the 158th, 159th, and 160th meetings, multiple dates from February 2012 – November 2013.

IESPB. 2012. Illinois Endangered Species Protection Board Technical Expert Consultant Manual. Illinois Endangered Species Protection Board, Springfield, Illinois.

Illinois Natural Heritage (Biotics 4) Database. Illinois Department of Natural Resources, Springfield, Illinois (Accessed, February, 2013; September, 2013; January, 2014; February, 2014).

Jones, M. 2008. Status in Illinois of *Mentzelia oligosperma* (Stickleaf). Report to the Illinois Endangered Species Protection Board, Springfield, Illinois.



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Kieninger, Tara. Illinois Natural Heritage (Biotics 4) Database, Illinois Department of Natural Resources. Personal communication, multiple dates.

Lake County Forest Preserve District. 2013a. *Andromeda glaucophylla*: Rediscovered in Illinois. In-house report by Lake County Forest Preserve District. June 2013.

Lake County Forest Preserve District. 2013b. Plants of Concern Monitoring Report for *Andromeda glaucophylla* submitted to Chicago Botanic Garden on July 17, 2013.

Mankowski, A., editor. 2010. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 4 – 2009 and 2010 Changes to the Illinois List of Endangered and Threatened Species. Illinois Endangered Species Protection Board, Springfield, Illinois. iii + 38 pp.

Mankowski, A. 2012. The Illinois Endangered Species Protection Act at Forty: a Review of the Act's Provisions and the Illinois List of Endangered and Threatened Species. Illinois Endangered Species Protection Board, Springfield, Illinois. 152 pp. Published online at <http://www.dnr.illinois.gov/ESPB/Pages/default.aspx>.

Mohlenbrock, R.H. 1986. Vascular Flora of Illinois. Southern Illinois University Press, Carbondale. 508 pp.

Mohlenbrock, R.H. 2002. Vascular Flora of Illinois. Southern Illinois University Press, Carbondale. 490 pp.

NatureServe. NatureServe Explorer: An online encyclopedia of life (web application). Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed February 29, 2012; March 6, 2012; January 10, 2013; and, February 3, 2014.)

Pollack, Cathy. United States Fish and Wildlife Service, Barrington, Illinois. Personal communication, 07/01/2013.

Taft, J. B., and M. K. Solecki. 1990. Vascular flora of the wetland and prairie communities at Gavin Bog and Prairie Nature Preserve, Lake County, Illinois. *Rhodora* 92: 142-165.

Taylor, Jane E. 2007. *Andromeda polifolia*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2014, February 3].



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**List of Endangered Species Protection Board Members and Staff
for the List Review and Revision ending in 2014**

Name	Position Title	Current Position Status
Lenore Beyer-Clow	Voting Member	Current Member
John Clemetsen	Voting Member, Secretary	Current Member
Dan Gooch	Voting Member, Chair	Current Member
Jim Herkert	Non-voting Member	Current Member
Joyce Hofmann	Voting Member	Current Member
Glen Kruse	Voting Member, Vice-Chair	No longer a Member
Susanne Masi	Voting Member	Current Member
James Robinett	Voting Member	Current Member
John Rogner	Non-voting Member	No longer a Member
Laurel Ross	Voting Member	Current Member
John Taft	Voting Member	Current Member
Jeffery Walk	Voting Member	Current Member
Anne Mankowski	Executive Director	Current Staff

**List of Illinois Endangered Species Protection Board Technical Expert Consultants
for the List Review and Revision ending in 2014**

Name	Taxonomic Group Expertise	Geographic and/or Specialization	Affiliation
Chris Benda	Plants	Southern 1/3 of IL	IL Natural Areas Inventory Update
Jason Koontz	Plants	Western IL	Augustana College
Paul Marcum	Plants	Statewide	IL Natural History Survey
Susanne Masi	Plants	Northeastern IL	Chicago Botanic Garden
Bill McClain	Plants	Statewide	Retired, IL Dept. of Natural Resources
Randy Nyboer	Plants	Statewide	IL Natural History Survey, INAI Update
Rick Phillippe	Plants	Statewide	IL Natural History Survey
Beth Shimp	Plants	Southern IL	U.S. Forest Service
John Taft	Plants	Statewide	IL Natural History Survey



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