ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

MINUTES OF THE 160th MEETING

MIDEWIN NATIONAL TALLGRASS PRAIRIE, WILMINGTON, IL

15 NOVEMBER, 2013
(Approved at the February 20, 2014 Special Meeting)

BOARD MEMBERS PRESENT: Vice-chair Glen Kruse, Dr. Joyce Hofmann, Mr. Jim Robinett, Ms. Susanne Masi, Dr. John Taft, Dr. Jeff Walk.

BOARD MEMBERS ABSENT: Chair Dan Gooch, Secretary John Clemetsen, Ms. Laurel Ross, and Dr. Jim Herkert

BOARD MEMBER VACANCIES: One

OTHERS PRESENT: Ms. Jeannie Barnes (Illinois Natural History Survey), Mr. Randy Heidorn (Illinois Nature Preserves Commission), Mr. Joe Kath (Illinois Department of Natural Resources), and Ms. Anne Mankowski (Endangered Species Protection Board).

160-1 Call to Order Welcome and Introduction of Guests
Vice-chair Kruse called the meeting to order at 9:30 A.M., asked Board members to introduce themselves, and noted that there was a quorum. He then asked audience members to introduce themselves.

160-2 Adoption of Agenda
Vice-chair Kruse asked for a motion to approve the agenda. Dr. Walk so **moved**, Dr. Hofmann seconded the motion, and it was **approved** unanimously.

160-3 Approval of Minutes of the 159th (08/16/13) Meeting
Vice-chair Kruse asked for a motion to approve the 159th meeting minutes. Ms. Masi so **moved**, Dr. Walk seconded the motion, and it was **approved** unanimously.

160-4 ESPB Staff Report
Ms. Mankowski, Director of the Illinois Endangered Species Protection Board, gave her report (Attachment A).

Mr. Robinett noted Ms. Mankowski's overtime and asked about the status of additional Board staff hiring efforts. Ms. Mankowski explained that she had been working with IDNR Procurement and Personnel staff since just before the beginning of the fiscal year to work on contractually hiring an executive assistant, a listing and recovery coordinator for plants, and a listing and recovery coordinator for animals. Ms. Mankowski reviewed that as has been explained to her, although the Board is exempt from Personnel Code, under current authorities the Board needs to hire staff via the IDNR's procurement and personnel systems and there are many restrictions of Procurement Code that make it very difficult to contractually hire staff. It was noted that the Board needs head count.

160-5 IDNR Staff Report
Mr. Kath, IDNR Endangered Species Manager, gave his report (Attachment B).

160-6 INPC Staff Report
Mr. Heidorn, Director of the Illinois Nature Preserves Commission, gave his report (Attachment C).

160-7 Board Appointments

Ms. Mankowski reported that since the August 2013 meeting, the Board had not received information regarding any action on the Board recommended appointment of Jill Riddell.

160-8 2013 Ethics Training for Appointees to State Boards and Commission

Ms. Mankowski reported that all Board members and staff had completed the required annual ethics training for Boards and Commissions.

160-9 2014 Illinois List Review: A Review of the Process, Board Preliminary Approvals to Date, and Outstanding Species Issues

The Board agreed to not review again the powerpoint presentation of the Illinois List 5-year review process and schedule that has been presented at each meeting during the process, but noted that the presentation would still be included in meeting minutes (see Attachment D).

Ms. Mankowski reviewed the multiple outstanding issues to date and noted that resolving them will require a good deal of work by both IDNR Database staff and ESPB staff. The intention is that all outstanding issues should be resolved by the time the Board moves to confirming preliminary decisions – currently planned for the February 2014 meeting and she indicated that she will review the status of, and recommendation for, each at that meeting.

160-10 2014 Illinois List Review: Recommendation for Changes to Part 3 of the List of Illinois Endangered and Threatened Plants

Ms. Mankowski presented her recommendations for listing status changes for Part 3 of the plants (see Attachment E) and engaged Board members in reviewing the species data and information compiled and answered Board member questions.

Mr. Robinett **moved** to approve no changes in the status of all species included in Part 3 of the plant review for which Board staff recommended no change. Dr. Hofmann seconded the motion and it was **approved** unanimously.

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.

Dr. Walk **moved** to change the status of *Sarracenia purpurea* (Pitcher Plant) from endangered to threatened and Dr. Hofmann seconded the motion. There was discussion of staff recommendation, TEC comments, and staff response that is included in the species review. Ms. Masi reviewed her comments about the number of EOs and sizes of reported populations and threats of brush and invasive species encroachment and water quality issues at nearly every site. She noted three populations that she reported as extirpated and Ms. Mankowski reviewed that one is not reported in the Database as extirpated and one that has not been seen since 1905 and was never established as an element occurrence in the Database. Vice-chair Kruse asked if the species is known to go dormant and reappear after a number of years, Dr. Taft and Ms. Masi responded that they did not believe so. There was some additional discussion that reviewed the information presented in the species review. Dr. Taft noted that bog habitats are restricted and especially vulnerable to multiple threats and stated that he did not feel that apparent improvements to status and distribution were clear and consistent enough to warrant a change from endangered to threatened. Dr. Hofmann indicated that she felt this was a very difficult evaluation due to the varied reported population sizes and habitat vulnerability. There was discussion that several populations have persisted for many years and three are quite large. Following discussion the Board voted and the motion **failed**, with members Kruse and Walk voting for, members Masi, Robinett, and Taft voting against, and

member Hofmann abstaining.

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

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

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.

Dr. Hofmann **moved** to change the status of *Rubus schneideri* (Bristly Blackberry) from threatened to endangered and Dr. Walk seconded the motion. There was discussion reviewing information in the species review explaining apparent confusion about the taxonomy of this and related taxa at this time. Dr. Taft reviewed that the identification of some specimens at the Illinois Natural History Survey had recently been questioned. It was discussed that other members of the *setosus* complex are present in Illinois, but none are listed as endangered or threatened, and if they were all considered under the species-level, it would increase the numbers of element occurrences and distribution across the state. Dr. Taft noted that it seemed some clarity about this species and others in the complex should be resolved before further evaluating the status. Following discussion the Board voted and the motion **failed**, with members Hofmann, Kruse, and Masi voting for and members Robinett, Taft, and Walk voting against.

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.

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.

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

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

All Board preliminarily approved revisions to Part 3 of the Illinois lists of endangered and threatened plants during the meeting, included:

**Board preliminarily approved revisions to the Illinois List – Part 3 of plants**

| | | |
|---|---|---|
| Endangered to threatened: | Rubus odoratus | Purple-flowering Raspberry |
| | Stenanthium gramineum | Grass-leaved Lily |
| | Synandra hispidula | Hairy Synandra |
| Threatened to endangered: | Rhynchospora alba | Beaked Rush |
| | Sisyrinchium atlanticum | Eastern Blue-eyed Grass |
| | Tradescantia bracteata | Prairie Spiderwort |
| Remove from endangered: | None | |
| Remove from threatened: | Tomanthera auriculata | Ear-leafed Foxglove |
| | Viola conspersa | Dog Violet |

Add as endangered: None

Add as threatened: None

No listing status change recommended: (data do not warrant change)

| | |
|---|---|
| Ranunculus rhomboideus | Prairie Buttercup |
| Rhexia mariana | Dull Meadow Beauty |
| Ribes hirtellum | Northern Gooseberry |
| Rubus pubescens | Dwarf Raspberry |
| Rubus schneideri | Bristly Blackberry |
| Rudbeckia missouriensis | Missouri Orange Coneflower |
| Sabatia campestris | Prairie Rose Gentian |
| Salvia azurea subsp. pitcheri | Blue Sage |
| Sambucus racemosa subsp. pubens | Red-berried Elder |
| Sarracenia purpurea | Pitcher Plant |
| Schoenoplectus hallii | Hall's Bulrush |
| Scirpus hattorianus | Bulrush |
| Scirpus polyphyllus | Bulrush |
| Scleria pauciflora | Carolina Whipgrass |
| Sedum telephioides | American Orpine |
| Silene regia | Royal Catchfly |
| Sisyrinchium montanum | Mountain Blue-eyed Grass |
| Solidago sciaphila | Cliff Goldenrod |
| Sparganium emersum | Green-fruited Burreed |
| Spiranthes vernalis | Spring Ladies' Tresses |
| Styrax americana | Storax |
| Sullivantia sullivantii | Sullivantia |
| Talinum parviflorum | Small Flower-of-an-hour |
| Tetraneuris herbacea | Lakeside Daisy |
| Tofieldia glutinosa | False Asphodel |
| Trichomanes boschianum | Filmy fern |
| Trientalis borealis | Star-flower |
| Trifolium reflexum | Buffalo Clover |
| Triglochin maritima | Common Bog Arrowgrass |
| Triglochin palustris | Slender Bog Arrowgrass |
| Trillium viride | Green Trillium |
| Urtica chamaedryoides | Nettle |
| Utricularia intermedia | Flat-leaved Bladderwort |
| Utricularia minor | Small Bladderwort |
| Vaccinium macrocarpon | Large Cranberry |
| Veronica americana | American Brooklime |
| Veronica scutellata | Marsh Speedwell |
| Viburnum molle | Arrowwood |
| Viola blanda | White Hairy Violet |
| Viola canadensis | Canada Violet |
| Viola primulifolia | Primrose Violet |

160-11 Confirming Meeting Dates and Locations for 2014 Regular Meetings Schedule

Ms. Mankowski reviewed her proposed meeting dates, start times and locations for the 2014 regular meeting schedule. Dr. Walk **moved** to approve the list (below), Dr. Taft seconded the motion, and it was **approved** unanimously.

| | | | |
|---|---|---|---|
| 161 | Feb 21, 2014 | 9:30 AM | Midewin National Tallgrass Prairie<br>Main Meeting Room, Visitor Center<br>30239 South State Route 53<br>Wilmington, IL 60481 |
| 162 | May 16, 2014 | 9:00 AM | Helen Matthes Public Library<br>Main Meeting Room<br>100 E. Market Avenue<br>Effingham, IL 62401 |
| 163 | Aug 15, 2014 | 9:00 AM | Glacial Park, Lost Valley Visitor Center<br>Savanna Room<br>6316 Harts Road<br>Ringwood, IL 60072 |
| 164 | Nov 14, 2014 | 10:00 AM | Midewin National Tallgrass Prairie<br>Main Meeting Room, Visitor Center<br>30239 South State Route 53<br>Wilmington, IL 60481 |

Ms. Mankowski reviewed with the Board that there is already a very large list of possible agenda items for the February meeting and the Board agreed on the possibility for holding a special meeting the day before to address some agenda items. Ms. Mankowski indicated that she would work on arrangements and follow-up with Board members and if a special meeting is scheduled it will be posted according to requirements of the Open Meetings Act.

160-12 Next Regular Meeting Information

The Board's next regularly scheduled meeting will be February 21, 2014 at 9:30 A.M. at Midewin National Tallgrass Prairie.

160-13 Public Comment Period (3 minutes per person)

There were no public comments.

160-14 Other Business (Board members complete travel forms and time reporting sheets)

There was no other business.

160-15 Closed Session (personnel matters)

Vice-chair Kruse noted that the Board would move to closed session to discuss personnel matters under exception 2(c)(1) and asked for a motion to do so. Dr. Hofmann so **moved** and Dr. Taft seconded the motion. A vote of individual members was taken and all members, Kruse, Hofmann, Masi, Robinett, Taft, and Walk, **approved** going the motion go to closed session. The closed session was held from 11:45 AM until 1:45 PM.

160-16 Adjournment

Vice-chair Kruse called the open meeting back to session at 1:45 PM and asked for a motion to adjourn. Dr. Walk **moved** to adjourn, Mr. Robinett seconded the motion, and it was **approved** unanimously. The meeting was adjourned at 1:47 P.M.

**Illinois Endangered Species Protection Board staff report**
**for the 160th Meeting, November 15, 2013**
Submitted by Anne Mankowski, Director

The Board currently only has one staff, its Director; all activities were conducted by the ESPB Director unless otherwise noted. Ms. Mankowski has not been able to complete all required work in the course of a 37.5-hour work week. Since the last staff report, Ms Mankowski has worked the following overtime hours toward ESPB and IDNR duties: August: claimed = 46.0, donated = 25.0; September: claimed = 65.0, donated = 14.0; October: claimed = 54.0, donated = 7.5.

**1. Illinois List of Endangered and Threatened Species Review and Revision ending in 2014**
The Board continues work on the next five-review of the List; the process usually takes about two years. The Board is required by law to base its listing decisions on scientific evidence. Ms. Mankowski spent a great deal of time compiling species information, with some assistance from the IDNR Natural Heritage Database staff. She also spent a great deal of time communicating with the EPSB technical expert consultants for species status and distribution information/evidence and review of ESPB staff listing status recommendations in preparation for the Board's consideration. She responded to multiple inquiries from individuals asking for information about the List review and revision and how to make recommendations to the Board for changes to the List.

**2. ESPB-led project to contract surveys to update endangered and threatened animal occurrence records that are greater than 10 years old – and to engage programmatic and systematic EO survey updates**
Ms. Mankowski continues working on the subject project and is attempting to gain IDNR ORC and OREP partnership commitment for a programmatic rather than a stand-alone, ad hoc project approach. This work is needed to support and improve all regulatory and protection applications by both the ESPB and IDNR and will provide a more up to date and higher quality product for fee-based program services associated with IDNR consultation and the Natural Heritage Database.

As discussed previously, historic record plant element occurrence (EO) updates had been addressed a few years ago in a separate effort and the Board initially was focusing on addressing animal EOR updates. The proposed new approach will first address the historic animal EOs and then include both animals and plants.

**3. ESPB Member appointments**
Ms. Mankowski conducted some interview and vetting of a potential nominee for Board recommendation to the Governor's Office for member appointment. She also communicated with Board members Clemetsen and Masi about the Board's process for recommending, vetting, and interviewing another potential nominee. She met with the newest Board member, Jim Robinett, to review some materials in advance of the Board's October 11, 2013 special meeting.

**4. ESPB Website**
Ms. Mankowski spent time working with IDNR web support staff on updates to the ESPB website. The most recent update is the additions of a page dedicated to the review and revision of the Illinois List of Endangered and Threatened Species that includes links to documents explaining the review and revision process, how someone may participate in the process, and the 2012 List Review and Revision. The ESPB website serves as the web portal for ESPB and IDNR administered endangered and threatened species program information.

**5. ESPB Budget**
Ms. Mankowski continues working with IDNR on multiple budget assignments related to the FY2014 and FY2015 budgets. She also is working with IDNR to develop contracts for hiring staff beginning in FY2014.

**6. ESPB Research/Strategic Projects Program**
There was no ESPB research project administration during the last quarter.

**7. Meetings, Presentations, and Publications**
- Ms. Mankowski participates in IDNR ORC twice-monthly administrative meetings, when possible.
- Ms. Mankowski attended the September 10, 2013 meeting of the Illinois Nature Preserves Commission and presented a report of Board activities.

- Ms. Mankowski participated in the 67th Natural Areas Evaluation Committee (NAEC) meeting held at IDNR headquarters October 15, 2013. The ESPB is a voting member of the NAEC.
- Ms. Mankowski participated in the August 21, 2013 meeting of the Illinois Wildlife Action Team held at IDNR Headquarters in Springfield, Illinois. The Board is a voting member of the team.
- Ms. Mankowski participated in the October 16, 2013 meeting of the Chicago Wilderness Executive Council. The Board is voting member of the council.

**9. Coordination with IDNR and INPC:**

Ms. Mankowski coordinated with the Endangered Species Program ORC, Division of Wildlife ORC, Impact Assessment Section OREP, Office of Land Management, Office of Law Enforcement, Office of Legal Counsel, Office of Strategic Services, Media Relations, and Illinois Nature Preserves Commission, on multiple matters listed below, by topic:

<u>E&T vouchering and translocation</u>

- No follow-up to report about vouchering and translocation issues discussed at the ESPB 157th meeting, held February 8, 2013.

<u>E&T incidental take authorization</u>

- Provided Board comments and advice to ORC and OLC relative to the Department's Endangered and Threatened Species Incidental Take Authorization (ITA) regulatory process and the recent La Fox Road over Mill Creek in Kane County ITA.

<u>E&T translocation</u>

- Continued working with INPC and IDNR ORC staff on development of a joint animal translocation policy. The Board should expect a joint policy to be consistent with the Board's current E&T animal translocation policy and a draft joint policy will need to be approved by all three agencies before becoming official.
- Provided review and comment to INPC for proposed translocation of Northern Riffleshell (*Epioblasma rangiana*) and Clubshell (*Pleurobema clava*) mussels into a Land and Water Reserve.

<u>E&T recovery planning and implementation</u>

- Reviewed and provided comment to IDNR ORC on a draft of the document Status of the Smooth Softshell (*Apalone mutica*) in Illinois: Sampling Protocols for Assessment and Proposed Thresholds for Considering Changes in the Species' Status as Endangered, Threatened or Secure
- Continued work with Bob Edgin of the INPC on developing recovery outlines with status review triggers for *Carex alata* (Winged Sedge), *Penstemon tubaeflorus* (Tube Beard Tongue), *Polygonum arifolium* (Halberd-leaved Tearthumb), *Stryax americana* (Storax), *Heteranthera reniformis* (Mud Plantain), *Iresine rhizomatosa* (Bloodleaf), *Clematis viorna* (Leatherflower), *Hypericum adpressum* (Shore St. John's Wort), and *Silene regia* (Royal Catchfly). The final outlines will be presented to the Board at an upcoming meeting for consideration of approval.
- Worked with Terry Esker of the IDNR and Jeff Walk of TNC on developing a recovery outline with status review triggers for *Papaipema eryngii* (Eryngium Stem Borer). The final outline will be presented to the Board for consideration of approval.
- Worked with Terry Esker on preparation of a Year-3 Illinois Barn Owl (*Tyto alba*) Recovery Plan Implementation Report of Accomplishments. Also initiated a contract to write a revision of the 2010 plan that will route through the IDNR ORC recovery planning process and come to the Board for consideration of approval.
- Distributed copies of the ORC recovery planning process documents, INPC/ESPB/IDNR plant translocation policy, and the ESPB E&T animal translocation policy to INPC and ORC staff, fielded questions about the documents, and explained the process and some examples.

<u>ESPB/IDNR review and approval coordination</u>

- No activity.

<u>E&T monitoring/surveillance and reporting</u>

- Continued working on developing a programmatic approach to updating E&T element occurrence surveys and IDNR Natural Heritage (Biotics 4) Database records. Ms. Mankowski is attempting to gain partnership commitment from IDNR ORC and OREP.
- Continued working on draft revised endangered and threatened species element occurrence reporting forms for use by the IDNR Natural Heritage (Biotics 4) Database. The revisions address some information gaps and terminology discrepancies and are intended to improve the robustness of data reported to the Database. Ms. Mankowski will work with Database staff to finalize the forms, which will replace those currently available via the Board's website.

Other

- Prepared materials for Board use during the October 11, 2013 special meeting to review IDNR OREP proposed amendments to the Title 17 Ill. Admin. Code Part 1075 Consultation Procedures for Assessing Impacts of Agency Action on Endangered and Threatened Species and Natural Areas and to review its nexus and crosswalk to 520 ILCS 10/ Illinois Endangered Species Protection Act, Title 17 Ill. Admin. Code Part 1070 Possession of Specimens or Products of Endangered or Threatened Species, and Title 17 Ill. Admin. Code Part 1080 Incidental Taking of Endangered or Threatened Species.
- Provided documents and explanation to OLC staff regarding previous Board evaluation and decisions regarding possible listing of the Copperbelly Water Snake (*Nerodia erythrogaster neglecta*).
- Handled over 100 phone and email requests for ESPB and E&T information from the public and other state and federal agencies including referring those related to IDNR E&T consultation, incidental take, data, and permit programs, etc.

**10. Coordination with other Agencies**

- Ms. Mankowski was appointed by the Illinois Nature Preserves Commission as a consultant to the commission at the INPC meeting, September 10, 2013.
- Ms. Mankowski moderated three Conserving Rare Species sessions at the 40th annual Natural Areas Conference held in Chicago, October 1-4, 2013. At the conference, she also judged two student presentations. She also serves on the Awards Committee of the Natural Areas Association.
- Ms. Mankowski wrote and sent in September a letter of support for the Shedd Aquarium's proposal, "Assessing Illinois Endangered and Threatened Fish Species and the Ecology and Risk Assessment of the Nonindigenous Oriental Weatherfish to the Great Lakes Ecosystem" to the National Ocean and Atmospheric Administration. She also met with staff of the Shedd Aquarium to discuss the partnership project for updating E&T species occurrence information and advancing research towards recovery planning.
- Ms. Mankowski conducted USGS website data entry for the Breeding Bird Survey route that she completed this year.
- Ms. Mankowski assisted INHS staff with accessing 2014 List review information from the ESPB website.

**11. Field Work**

- None.

**12. Other General Administration and Clerical Work**

- Prepared and routed Board member and staff travel vouchers and timesheets.
- Conducted updates to ESPB budget tracking on ORC sharepoint.
- Regularly distributed information to Board members via email and hardcopy mailings.
- Following response to a vendor's inquiry about ESPB research or other project funding opportunities, Ms. Mankowski conducted required procurement communication reporting to the State of Illinois Procurement Communication Reporting website.
- Worked on equipment scoping and purchase request administration for purchasing new ESPB meeting recording equipment.
- Worked on development of contracts for hiring staff during FY2014.
- Worked on preparation for moving the Board's cube.
- All aspects of preparation for the October 11, 2013, ESPB special meeting.
- All aspects of preparation for the November 15, 2013, 160th ESPB meeting.
- Made meeting location arrangements for ESPB 2014 regularly scheduled meetings.

# Illinois Department of Natural Resources report to the Illinois Endangered Species Protection Board at the 160th meeting, November 15, 2013

**Personnel**
Jenny Skufca was offered, and accepted, the position of Endangered Species Project Manager with DNRs Division of Natural Heritage (DNH) effective September 1. Jenny has many years of experience with the Illinois Nature Preserves Commission as their official Threats Coordinator, thereby bringing a wealth of regulatory knowledge to the Endangered Species Program. In her short time with the Program, she is working with Joe Kath on several aspects of endangered species Incidental Take Authorizations including: development of a mitigation matrix for different taxa, fine tuning an electronic tracking system for post ITA monitoring activities, and electronic filing of all past and current ITAs for easy access by staff. She has taken the lead on the ComEd Hines's Emerald Dragonfly HCP as well as the Midwest Wind HCP. Jenny is also helping to draft protocols for endangered species recovery and translocation as well as issuing endangered species possession permits. She has spear-headed an effort to have all Endangered Species Permit for the last 5 years filed electronically so that they can be accessed by staff, especially in situations involving Law Enforcement.

Bridget Henning started work with DNH as a Natural Heritage Resident Intern September 23. The Resident Intern program is 12 month full time employment with DNR under the mentoring of Natural Heritage or Nature Preserves Commission staff. Bridget is working with the Endangered Species program and the Heritage Database program with both field and office duties.

Tim Kelley, a District Heritage Biologist in west central Illinois, resigned from the Natural Heritage Division September 15 to take a position in the Wildlife Resources Division. Tim worked as a heritage biologist for 14 years. He was instrumental in many Heritage related activities in central and west-central Illinois including: the gating of Burton Cave Nature Preserve to protect native bat populations; the gating of Twin Culvert Land & Water Reserve to reduce trespass and protect hibernating bats; and helped capture both prairie chickens and alligator snapping turtles for Illinois' recovery efforts. As part of the official IDNR dive team, Tim helped discover and catalog several new mussel INAI sites on both the Illinois and Mississippi Rivers. In addition, he managed outstanding natural areas including Revis Hill Prairie and Sand Prairie - Scrub Oak nature preserves and worked on Franklin's ground squirrel status surveys and management as well as osprey recovery efforts along the Illinois River.

**Natural Heritage Biologist job postings**
DNR posted job openings for three district Natural Heritage Biologists. The new hires will be located in Carroll County in northwestern Illinois, LaSalle County in north central Illinois and Pike County in west central Illinois. These postings are to fill vacancies created when district biologists retired or resigned to take another job with DNR. The application period for Carroll County has closed. Applications for LaSalle County are being accepted until November 18 and Pike County until November 20.

**Natural Heritage Database**
In October, Natural Heritage database staff mapped and/or did data entry of 209 E and T occurrences, both new and updates and received 50 records of E and species. They did quality control of 237 E and T occurrence records.

**Endangered Species Possession Permits**
For the third quarter of 2013 (July 1 – October 31), 28 E&T permits were issued by the Endangered Species Program. An additional 7 applications are being processed as of 11 November. A summary of permits issued for the period July 1 – October 31, 2013 is available.

**Incidental Take Authorization**
Endangered Species Program staff are working with DNR's Office of Realty and Environmental Planning to develop a layer in Geographic Information System (GIS) representing the extent of lands covered under any Incidental Take Authorization since the inception (2001) of 17 Ill. Adm. Code 1080 (Incidental Taking of Endangered or Threatened Species). Viewed with the threatened and endangered species layer mapped by the Natural Heritage Database staff, this GIS layer will inform natural resource professionals in determining potential

cumulative impacts to a listed species, in developing species recovery plans, in considering translocations, in issuing permits, in identifying research priorities, in reviewing Conservation Plans for future Incidental Take Authorizations, and in the Endangered Species Protection Board's listing/delisting process.

Program staff is working with the IDNR's Office of Strategic Services in the creation of a database to track Incidental Take Authorization project information, species information, reporting requirements, and project status. The database will assist with tracking to ensure that all project-related data is submitted to the IDNR's Natural Heritage Database and that all pre- and post-project monitoring is occurring per the agreements.

As of November 12, 2013 the status of the following ITAs is as follows:

1. Green River Wind Farm – ITA approved on 8 August 2013
2. Enbridge Pipeline/Flanagan South - ITA approved on 31 July 2013
3. Orth Road over Beaver Creek – ITA approved on 13 August 2013
4. Sherrill Road Bridge – ITA approved on 13 August 2013
5. Mason County Wind Farm – ITA approved on 20 October 2013
6. LaFox Road over Mill Creek – still in progress – no formal IDNR approval as of 11 November 2013
7. Pittsfield Wind Turbine – still in progress – Draft ITA in preparation
8. Peabody Arclar Mining Site – public comment period being established
9. FutureGen Alliance – conservation plan (CP) under review – response due 11/28/13
10. Dresden Hydropower – letter requesting new CP sent on 5 November 2013 (original CP in 2011)

Program staff is working with the IDNR's Office of Legal Counsel in the creation of a Mitigation Guideline with the goal of eventually formulating a Department Policy. Research on the practices of other states and other natural resource impact assessment evaluations are being compiled in an effort to create a consistent, transparent, and less complex method to determine an appropriate mitigation strategy for Incidental Take Authorizations.

Program staff is scanning all past annual E/T permits and Incidental Take Authorizations for electronic filing to streamline our ability to respond to other agency staff needs to verify permit coverage, specifically the IDNR's Office of Law Enforcement.

**Species Report**

1. Late fall/early winter White Nose Syndrome sampling/monitoring with researchers from the University of California-Santa Cruz scheduled for late November, 2013 at the Blackball Mine Hibernaculum in LaSalle County.

2. U.S. Fish and Wildlife Service Lists **Rabbitsfoot** as Threatened**:** The U.S. Fish and Wildlife Service are listing the Neosho mucket as endangered and the Rabbitsfoot as threatened under the Endangered Species Act (ESA). Both species are freshwater mussels found in river systems in the eastern half of the United States. The Rabbitsfoot has disappeared from about 64 percent of its historic range. While 51 of the 140 historic populations remain, only 11 populations (22 percent of its existing populations or eight percent of the historic populations) are viable; 23 populations (45 percent of the existing populations) are at risk of elimination; and 17 populations (33 percent of the current populations) show limited reproduction with little evidence of sustainability. The Rabbitsfoot is currently found in Alabama, Arkansas, Kansas, Kentucky, Illinois, Indiana, Louisiana, Mississippi, Missouri, Oklahoma, Ohio, Pennsylvania, and Tennessee. The Rabbitsfoot is no longer found in Georgia and West Virginia. The Service's final rule listing the Neosho mucket and the Rabbitsfoot appears in the September 17, 2013 *Federal Register*. The protection for these mussel species under the ESA becomes effective 30 days after the rule is published in the *Federal Register*. The ultimate goal of the ESA is the recovery of these listed species, so that they no longer need the protective measures of the ESA. The next step is development of a recovery plan that provides a guidebook for the Service and its conservation partners to address threats to the species survival and recovery. When completed, the recovery plan will be available on the Service's website (*http://www.fws.gov/endangered*).

3. On August 14, 2013, the U.S. Fish and Wildlife Service published a 90-day finding in the Federal Register on a petition to list the **rattlesnake-master borer moth *(Papaipema eryngii)*** as endangered or threatened under the Endangered Species Act. The Service has determined that the rattlesnake-master borer moth, a species associated with prairie habitats, warrants listing under the Endangered Species Act. However, the Service will not immediately propose the species as endangered or threatened because other species with a higher priority for listing take precedent. The rattlesnake-master borer moth occurs in 16 populations in five states, including Arkansas, Illinois, Kentucky, North Carolina and Oklahoma. The moth is named for its reliance on the rattlesnake-master, a prairie plant that is its only food source. Rattlesnake-master borer moths depend on

undisturbed prairie that contains their food source, and loss of prairie habitat to other land uses is likely causing rangewide populations to decline. The Service will add the rattlesnake-master borer moth to its candidate list, and the species' status will be reviewed with the annual Candidate Notice of Review. When resources are available and higher priority species have been addressed, the Service will propose the moth as endangered or threatened.

During the time the moth is a candidate, the Service will work with our partners on conservation actions and collaborative approaches, such as candidate conservation agreements, that may benefit the species, and may preclude the need to list the moth.

4. The U.S. Fish and Wildlife Service proposes to list the **northern long-eared bat** as endangered under the Endangered Species Act. The Service also determined that the eastern small-footed bat does not warrant listing. The northern long-eared bat is found across much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia. The Service's proposal opens a 60-day public comment period on the proposal to protect the northern long-eared bat as endangered. Over the next 12 months, the Service will evaluate information provided during the comment period to make a final decision on listing the species. The proposal appears in the October 2, 2013, Federal Register. The primary threat to the northern long-eared bat is a disease, white-nose syndrome, which has killed an estimated 5.5 million cave-hibernating bats in the Northeast, Southeast, Midwest and Canada. Populations of the northern long-eared bat in the Northeast have declined by 99 percent since symptoms of white-nose syndrome were first observed in 2006. The Service found that critical habitat– an identification of areas that are important to the conservation of the northern long-eared bat - is not determinable at this time. The Service will work to identify areas of critical habitat and develop a proposal within 12 months. Before the emergence of white-nose syndrome, the northern long-eared bat was found in 39 states, including the District of Columbia, with higher abundance in the East and becoming increasingly rare moving west. Other threats to the species include wind energy development, habitat destruction or disturbance to hibernating and summer habitat, climate change, and contaminants. The Service is working with the wind energy industry to address impacts to imperiled bats.

5. New Federally proposed rules for Poweshiek Skipperling and Dakota Skipper (October, 2013):
**Poweshiek skipperling:** A proposed rule was published Oct 24, 2013 to list the skipperling as endangered in IL, IA, IN, MI, MN, WI. A proposed rule was published Oct 24, 2013 to list tracts of land as critical habitat in Cerro Gordo, Dickinson, Emmet, Howard, Kossuth, and Osceola Counties in Iowa; Hilsdale, Jackson, Lenawee, Livingston, Oakland, and Washtenaw Counties in Michigan; Chippewa, Clay, Cottonwood, Douglas, La Qui Parle, Lincoln, Lyon, Mahnomen, Murray, Norman, Pipestone, Pope, Swift, and Wilkin Counties in Minnesota; and Green Lake and Waukesha Counties in Wisconsin.

**Dakota skipper:** A proposed rule was published Oct 24, 2013 to list the skipper as threatened in IL, IA, MN. A proposed rule was published Oct 24, 2013 to list tracts of land as critical habitat in Chippewa, Clay, Kittison, Lincoln, Murray, Norman, Pipestone, Polk, Pope, and Swift Counties in Minnesota.

6. Osprey Recovery in Illinois via Translocation by "Hacking": 1 July 2013 – 30 September 2013. Below is the timeline regarding the completion of major tasks or occurrences of milestone during this quarter:
*July 9 – osprey chicks arrived at Illinois Raptor Center (IRC) for physical examination and banding, with the assistance of the personnel from IRC and Illinois Natural History Survey; afterwards the osprey chicks were immediately transported to the hacking site at Anderson Lake. Each bird had a federal band on its left leg and a color band on its right leg. The color bands included 00/D, 01/D, 02/D, 03/D, and 04/D. The birds were identified by their color bands throughout the hacking season.

*July 19 – Three 30-foot nesting platforms were completed, with the assistance of the personnel from the Spoon River Electric Coop (i.e., Association of Illinois Electric Cooperatives) and Exelon Cooperation. One platform was by the hacking huntmaster and the other two along the east side of the Anderson Lake.
*July 27 – all osprey chicks were fitted with the VHF radio transmitters, with the assistance of the master bander from Illinois Natural History Survey.
*July 29 – the door of the hacking huntmaster was open and stayed open to allow for osprey fledging.
*August 1 – 00/D, 03/D, and 04/D fledged on this day.
*August 2 – mortalities were confirmed for 03/D and 04/D due to predation.
*August 8 – transmitter signals were lost for 00/D; 01/D fledged on this day too.
*August 12 – 02/D was the last bird to fledge.

*August 20 – a 10-foot nesting platform was constructed and established on the north end of the sand bar across the slough from the huntmaster.
*August 26 – an aerial tracking was conducted for 00/D but no trace of the bird found.
*September 11 – restored the huntmaster to its original condition for its return.
*September 19 – Pat McDonald and Joe Kath met with the personnel from USACE to finalize the hacking location at Lake Shelbyville.
*September 24 – 02/D left Anderson Lake, starting its migration.
*September 29 – 01/D left Anderson Lake, starting its migration.
*October 6 – the first hacking season at Anderson Lake officially ended

IDNR-OFFICE OF RESOURCE CONSERVATION/DIVISION OF NATURAL HERITAGE
ENDANGERED SPECIES PERMITS ISSUED FOR CALENDAR YEAR 2013 **(QUARTER 3 – July 1 through October 31)**

| SPECIES | SIMPLE POSSESSION PERMIT/HOBBYIST (ANIMALS HELD AS PETS) | RESEARCH PERMIT/CAPTURE-RELEASE (FIELD RESEARCH CONDUCTED BY QUALIFIED BIOLOGISTS) | EDUCATIONAL PERMIT (POSSESSION AND DISPLAY FOR EDUCATIONAL PURPOSES ONLY - i.e. TEACHERS/REHABBERS) | TOTAL |
|---|---|---|---|---|
| Western Hognose Snake | 7 | 4 | | 11 |
| All Listed Bat Species | | 4 | | 4 |
| Alligator Snapping Turtle | 5 | | 2 | 7 |
| Eastern Indigo Snake | | | | |
| Timber Wolf | | | | |
| Barn Owl | | | | |
| Blanding's Turtle | 2 | | | 2 |
| Copperbelly W. Snake | | | | |
| Starhead Topminnow | | | | |
| Marsh Rice Rat | | 1 | | 1 |
| Ornate Box Turtle | | | | |
| Spotted Turtle | | | | |
| All Listed Fish Species | | 1 | | 1 |
| All Listed Mussel Species | | 1 | | 1 |
| Short-eared Owl | | | | |
| All Listed Species | | | | |
| River Cooter | | | | |
| Red Spotted Sunfish | | | | |
| American Alligator | | | | |
| All Listed Herps | | | | |
| Osprey | | | | |
| Franklin's Ground Squirrel | | | | |
| Gopher Tortoise | 1 | | | 1 |
| | | | | |
| **TOTAL** | **15** | **11** | **2** | **28** |

Attachment C

# Illinois Nature Preserves Commission

# memorandum

**To:** Endangered Species Protection Board

**From:** Randy Heidorn, Kelly Neal

**Date:** November 14, 2013

**Subject:** Illinois Nature Preserves Commission Staff Report Compiled for the November 15 Meeting of the Endangered Species Protection Board

**KEY**

INPC = Illinois Nature Preserves Commission
IDNR = Illinois Department of Natural Resources
ESPB = Endangered Species Protection Board
IDOT = Illinois Department of Transportation
FPD = Forest Preserve District
NP = Nature Preserve
LWR = Land and Water Reserve
INAI = Illinois Natural Areas Inventory
ISGS = Illinois State Geological Service
IEPA = Illinois Environmental Protection Agency
NHL = Natural Heritage Landmark
COA = Conservation Opportunity Area
TNC = The Nature Conservancy

**AREAS**

Area 1 - John Nelson
Area 2 - Steven Byers
Area 3 - Kim Roman
Area 4 - Angella Moorehouse
Area 5 - Thomas Lerczak
Area 6 - Mary Kay Solecki
Area 7 - Debbie Newman
Area 8 - Bob Edgin

**Significant Commission Actions**

The following sites were given approval for legal protection at the 215th meeting of the INPC held at Giant City State Park, September 10, 2013.

- Approved as LWR:
  - **Faulkner Tract Addition to Cache River LWR, Johnson County**, 302.5 acres owned by IDNR, upland forest, floodplain forest, swamp forest, five listed state plants and one listed state amphibian.
  - **Additions to Sweet Fern Savanna LWR, Kankakee County**, 8.4 acres privately owned containing high-quality dry-mesic sand savanna.
  - **Gibbons Creek Barrens, Pope County**, 173.24 acres owned by IDNR containing high-quality dry barrens a State- endangered plant and State-threatened reptile.
  - **Johns Mound Group, Winnebago County**, 17.1 acres owned by the Smeja Homestead Foundation, Inc containing 22 effigy mounds including one shaped like a panther.

- Preliminary approval as NP:
    - **Buffer Addition to Matanzas Prairie NP, Mason County**, 54.155 acre owned by IDNR providing buffer for high quality sand prairie communities and several species listed as endangered or threatened.
    - **Buffer Addition to Oakwood Hills Fen NP, McHenry County,** 17.8 acres owned by the Village of Oakwood Hills that buffers high quality fen by protecting a portion of the recharge area of the wetland.
    - **Round Pond, Pope County,** 206 acres owned by TNC protecting high quality examples of swamp, wet bottomland forest, wet-mesic bottomland forest four state-endangered or threatened plants and a heron rookery.
    - **Bohbrink Woods, Washington County,** 10 acres owned by IDNR containing high quality southern flatwoods.

- Final approval as NP:
    - **Addition to Wolf Road Prairie NP, Cook County**, 17.1 acres owned by The Forest Preserve District of Cook County containing high quality mesic prairie.
    - **Hopkins Park Savanna, Kankakee County,** 77 acres, owned by The Nature Conservancy, protecting high quality dry and dry-mesic savanna providing habitat for 3 state-endangered plants and a state-threatened insect and plant.
    - **Fon du Lac Seep, Tazewell County,** 10.616 acres owned by the Fon du Lac Park District protecting high quality seep community.

The Commission also approved ESPB Director Anne Mankowski as an Advisor to the INPC. This unilateral move formalizes Director Mankowski's participation in INPC meetings as has been the long time practice of the INPC.

## BIOLOGICAL INVENTORIES

Unless otherwise specified, routine inventories were conducted at the following sites (target species if applicable):

**Area 2**

- Fox River Country Day School site
- Glenwood Park and a private fen in Cook County

**Area 3**

- Wilmington Shrub Prairie NP
- Nachusa Grasslands NP
- Des Plaines Dolomite Prairies LWR
- Sweet Fern Savanna LWR

**Area 4**

- Cedar Glen NP,
- Massasauga Prairie NP,
- Samuel Barnum Mead Savanna NP,
- Short Fork Seep NP,
- Nenawakwa LWR,
- Mississippi River - Andalusia Slough INAI site (24-hour Bio Blitz)

**Area 5**

- Riverside Park (bird, botanical)
- Fern Ridge INAI site (botanical)
- Black Partridge Park Woods LWR (bird)
- Post restoration assessments were conducted at Chandlerville Cemetery Prairie LWR, Witter's Bobtown Hill Prairie NP, Hopewell Hill Prairies NP, Oak Bluff Savanna NP, Crevecoeur NP and Wiegand Prairie NHL

**Area 6**

- Middle Fork of Vermilion River (bald eagle [*Haliaeetus leucocephalus*] nest)
- Edgewood Farm LWR (mussel translocation)
- Middle Fork Woods NP (fibrous-rooted sedge [*Carex communis*])
- Horseshoe Bottoms NP (turtle survey)
- Wolf Ridge NHL and Lake of the Woods Forest Preserve (Sangamon phlox [*Phlox pilosa sangamonensis*])

**Area 7**

- Mill Creek Natural Area/Swayne Hollow NP (Bio Blitz)
- Harry's Prairie NHL
- Twenty-seven separate prairies and glades for Hill Prairie SWG post-assessment
- Prairie of the Rock Overlook LWR
- Salt Lick Point LWR

**Area 8**

- Royal Catchfly(*Silene regia*) at Loy Prairie LWR, Karl Bartel Wildlife Sanctuary LWR, Richard R. and Jean W. Graber Grasslands LWR, Prairie Ridge LWR (Walter Tract), Robert Ridgway Grasslands NP, Beadles Barrens NP, Chauncey Marsh INAI site, Flag Pond INAI site, Allison Gravel Prairie NHL, Centerville Cemetery INAI site, and Allison Ditch INAI site
- Tube beardtongue (*Penstemon tubaeflorus*) at Prairie Ridge LWR (Galbreath Tract) and Horn Prairie Grove LWR
- CSX Railroad (Grass-leaved lily [*Stenanthium gramineum*])
- Beadles Barrens NP and private land near Prairie Ridge LWR (spring ladies tress orchid [*Spiranthes vernalis*])
- Old Stone Face – Dennison Hollow INAI site (Mead's milkweed [*Asclepias meadii*])
- Simpson Township Barrens INAI site (climbing milkweed [*Matalea oblique*] and heart-leaved plantain [*Plantago cordata*])
- Little Grand Canyon - Cedar Creek INAI site (buffalo clover [*Trifolium reflexum*])

**STEWARDSHIP**

- Kelly Neal continues to coordinate with the IDNR and the ESPB in the development of a joint INPC, ESPB, IDNR Animal Translocation Policy.
- Bob Edgin assisted the ESPB with development of recovery outlines for the state-endangered winged sedge (*Carex alata*), tube beardtongue (*Penstemon tubaeflorus*), halberd-leaved tearthumb (*Polygonum arifolium)* and state-threatened storax (*Styrax americanus*).

**Excerpts from the Threats to Sites Report for the 215th Meeting of the**

**Illinois Nature Preserves Commission**
**(reporting period: April 10, 2013 – August 26, 2013)**

**Bluff Spring Fen NP, Cook County – Steven Byers, John Nelson, Jenny Skufca**
**Issue:** The Bluff Spring Fen Protection Plan (approved June 30, 2003) between the INPC and Bluff City Materials, Inc. calls for conveyance of surface water from Gifford Lake to Poplar Creek through proposed stormwater piping.
**Threat:** Surface water represents a threat to this groundwater-dependent wetland.
**Status:** Ongoing. The stormwater piping project began in March 2013, and continues. Staff of the INPC supported an amendment of the work plan with FPD of Cook County Bluff City Materials, Mackie Consultants, and the U.S. Army Corps of Engineers that would permit filling a gravel pit lake with bank run aggregate in order to better protect groundwater resources at the NP. INPC staff also coordinated a site visit with the Soil and Water Conservation District personnel to ensure the necessary soil erosion/silt control measures were in place for the project to move forward.

**Bliss Woods NP, Kane County – Steven Byers, Jenny Skufca**
**Issue:** An unknown amount of lead shot has been deposited in the NP by years of trap/skeet shooting at adjacent former Aurora Sportsman's Club.
**Threat:** Lead shot poses a threat to humans and the environment.
**Status:** Ongoing. Recently, the Aurora Sportsman's Club was sent a Notice of Intent to Pursue Legal Action, which is the IEPA's last procedural hurdle before potentially referring the matter over to the Attorney General's Office. The IEPA will conduct groundwater sampling on the NP in September, 2013.

**Illinois Beach NP, Lake County – Steven Byers, Jenny Skufca**
**Issue:** The landowner (IDNR) is storing and applying road salt in close proximity and potentially within the NP.
**Threat:** Salt used for deicing roads is a primary source of chlorides, which have been documented to be a major cause of groundwater and surface water degradation resulting in direct impact to freshwater aquatic plants and animals. Studies show that non-native, invasive plant species favor higher chloride levels and will out-compete the native plants found in our relict high-quality wetlands. As a result of excessive chloride loadings, wetlands change from their natural high diversity condition to that of a monoculture that offers little habitat opportunity for native flora and fauna.
**Status:** Resolved. The salt was removed from Illinois Beach State Park. IDNR staff continue to work on a salt guidance document for Illinois state parks.

**Crevecoeur NP, Tazewell County – Thomas Lerczak**
**Issue:** At least three adjacent landowners are potentially encroaching on the NP boundary.
**Threat:** Unauthorized use of the NP.
**Status:** Ongoing. INPC staff inspected the INPC-funded boundary survey, posted signs, and met with the NP landowner (Village of Creve Coeur) and site custodian to develop strategies for confronting encroaching neighbors.

**Denby Prairie NP, Macoupin County – Thomas Lerczak**
**Issue:** The parking lot of the NP was being used as staging area for high-speed rail contractors.
**Threat:** Unauthorized use of a NP.
**Status:** Resolved. IDNR Consultation staff assisted the INPC with informing the consultants overseeing the statewide high-speed rail project that they should refrain from using INPC sites without prior authorization.

**Gillespie Prairie LWR, Macoupin and Montgomery counties – Thomas Lerczak, Jenny Skufca**
**Issue:** Ditch clearing has occurred on 0.9 acres of the IDNR-owned LWR, a portion of which lies on property leased to Aladdin Steel.
**Threat:** Unauthorized vegetation removal within the LWR.
**Status:** Ongoing. INPC staff continues to monitor site restoration in consultation with the IDNR, Aladdin Steel, and the restoration contractor.

**Sand Prairie-Scrub Oak NP, Mason County – Thomas Lerczak**
**Issue:** One or more of the neighbors of the NP gated and locked the entry and exit to a recently vacated road which is at least partially within the NP.
**Threat:** Unauthorized use of the NP for private purposes.

**Status:** Ongoing. INPC staff has recommended that the landowner (IDNR) conduct a boundary survey.

**Edgewood Farm LWR and Larimore's Salt Fork of the Vermilion River LWR, Vermilion County – Mary Kay Solecki**

**Issue:** Sunrise Coal is planning a new coal mine upstream of the LWRs.

**Threat**: Potential water withdrawal from Salt Fork of the Vermilion River for coal washing and processing estimated at ~325,000 gallons/day initially then increasing to 540,000 gallons/day; discharge of wastewater into Salt Fork. The Salt Fork of the Vermilion River is recognized as a high-quality stream in Vermilion County and the eastern part of Champaign County by the Illinois Natural Areas INAI. The Salt Fork in Vermilion County is also home to several state-threatened or endangered mussels and fish. Potential water withdrawal and wastewater discharge may impact state-listed species and the two LWRs on the Salt Fork.

**Status:** Resolved. INPC staff coordinated with the LWR and INAI site landowners and other citizens. The Homer Village Board voted unanimously to deny a request for up to 540,000 gallons/day of non-potable water. Sunrise Coal will seek alternate means of obtaining non-potable water for the mine. The INPC submitted correspondence on May 30, 2013, to the Champaign County Board Environment and Land Use Committee regarding potential impacts to protected sites and species of water withdrawal. Sunrise Coal entered into a contract with the City of Georgetown to purchase water.

Attachment D

Re: Item 160-9: the 2014 Illinois List Review: A Review of the Process, Outstanding Species Issues, and Board Preliminary Approvals to Date

# Illinois Endangered Species Protection Board

Required 5-year review and revision of the Illinois List of Endangered and Threatened Species, ending in 2014

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

*One Natural Resources Way, Springfield, Illinois 62702 - 1271, (217) 785-8687; FAX (217) 785-2438*

# ESPB 2014 Illinois List review and revision

## E&T Part 3 of plant list review

ESPB 160th meeting 11/15/13

Midewin National Tallgrass Prairie

Wilmington, IL

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

- Illinois Endangered Species Protection Act – 1972

- First Illinois List of Endangered and Threatened Species – 1981

- There have been 6 revisions of the Illinois List (1984, 1989, 1994, 1999, 2004, 2009), the 2014 revision is the 7th

- 132 technical experts have assisted the ESPB with revisions to date – 2014 revision will bring that total to 146

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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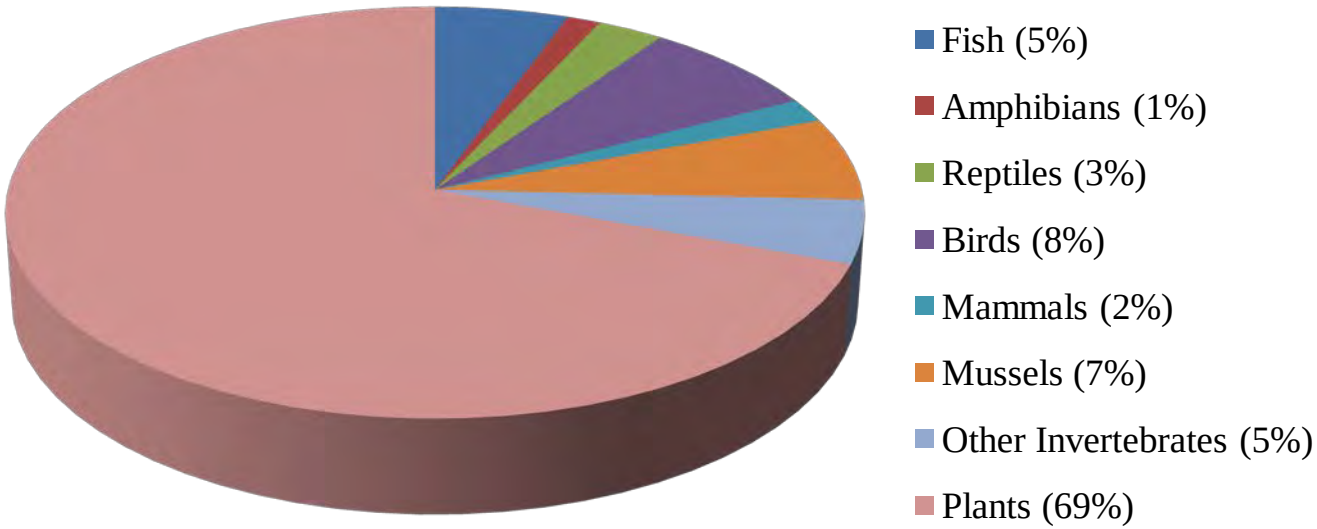
# ESPB 2014 Illinois List review and revision

The ESPB has listed a total 644 species since the first Illinois List.




**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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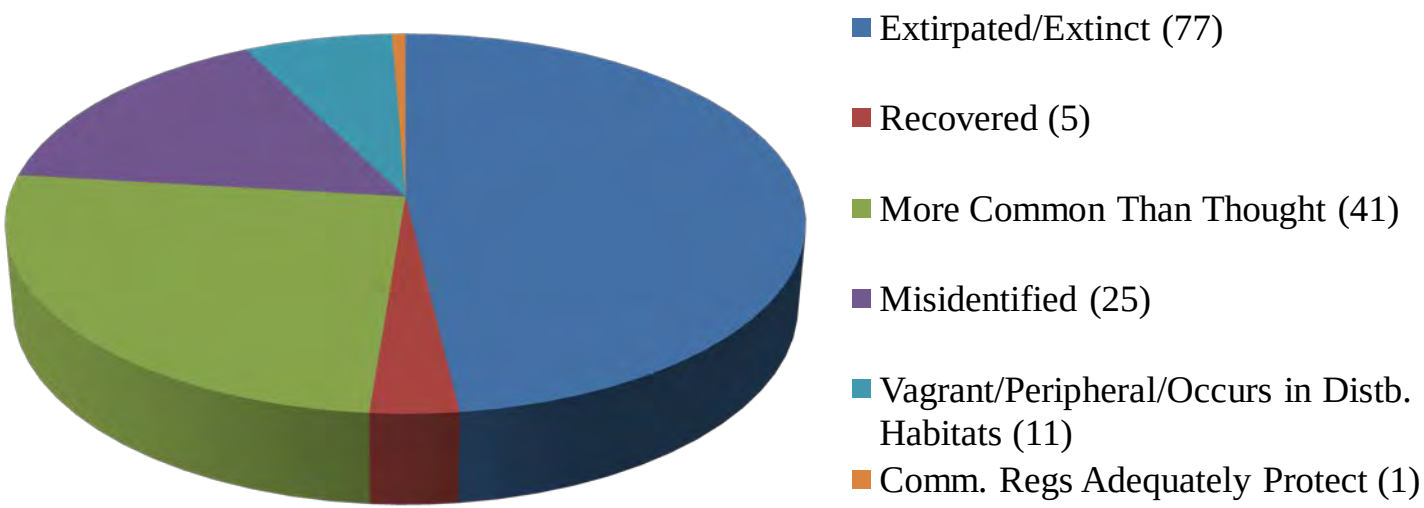
# ESPB 2014 Illinois List review and revision

The ESPB has delisted a total of 160 species since the first revision of the Illinois List.




**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

The current (2011) Illinois List includes 484 species.

| | Endangered | Threatened | Totals |
|---|---|---|---|
| Fish | 19 | 12 | 31 |
| Amphibians | 3 | 6 | 9 |
| Reptiles | 10 | 8 | 18 |
| Birds | 25 | 5 | 30 |
| Mammals | 5 | 4 | 9 |
| Invertebrates | 43 | 12 | 55 |
| **Total Animals** | **105** | **47** | **152** |
| Plants | 251 | 81 | 332 |
| **TOTALS** | **356** | **128** | **484** |

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

The ESPA (520 ILCS 10/2) definitions “endangered” and “threatened” species:

“Endangered Species" means any species of plant or animal classified as endangered under the Federal Endangered Species Act of 1973, P.L. 93-205, and amendments thereto, plus such other species which the Board may list as in danger of extinction in the wild in Illinois due to one or more causes including but not limited to, the destruction, diminution or disturbance of habitat, overexploitation, predation, pollution, disease, or other natural or manmade factors affecting its prospects of survival.

"Threatened Species" means any species of plant or animal classified as threatened under the Federal Endangered Species Act of 1973, P.L. 93-205, and amendments thereto, plus such other species which the Board may list as likely to become endangered in the wild in Illinois within the foreseeable future.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

The ESPA (520 ILCS 10/7) also stipulates :

The Board may list, as endangered or threatened, species of animals or plants which have reproduced in or otherwise significantly used, as in migration or overwintering, the area which is now the State of Illinois, if there is scientific evidence that the species qualify as endangered or threatened as these terms are defined in this Act.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

**ESPB criteria for listing species as endangered or threatened on the Illinois List**

- Species included in the Federal list of Endangered or Threatened species.
- Species proposed for Federal Endangered or Threatened status, which occur in Illinois.
- Species which formerly were widespread in Illinois, but have been nearly extirpated from the State due to habitat destruction, collecting, or other pressures resulting from the development of Illinois.
- Species which exhibit very restricted geographic ranges of which Illinois is a part.
- Species which exhibit restricted habitats or low populations in Illinois.
- Species which are significant disjuncts in Illinois, i.e., the Illinois population is far removed from the rest of the species' range.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

**ESPB criteria for delisting species from the Illinois List**

- A peripheral species that presently occurs only in disturbed/non-native habitats in Illinois.
- A species now considered to be only a vagrant breeding species in Illinois.
- All native populations are now considered to be extirpated in Illinois.
- Illinois records for this species are now believed to be based on mis-identified specimens.
- Now known to be more common in Illinois than previously thought.
- Commercial fishing regulations determined by the Illinois Department of Natural Resources provide adequate protection for this species in Illinois.
- The species is now considered extinct.
- A species now considered to be recovered from endangerment or the threat of endangerment in Illinois.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

The Illinois List review and revision process:

(in compliance with the ESPA (520 ILCS 10/1) and the Illinois Administrative Procedures Act (5 ILCS 100/1))

1. The Board and its staff review and evaluate available data collected since the original and current List were generated. The Board is required to base listing decision on scientific evidence. When conducting the 5-year review and revision, the Board consults with its technical expert consultants (ESPB TECs).

2. Board staff compile and present recommendations for changes to the List (additions, deletions, or change in status from one category to another) at one or more Board meetings and the Board preliminarily approves a list of proposed changes.

3. The Board holds a public hearing for comments on the proposed changes to the List. The hearing record remains open for two weeks.

4. After considering public comments received, the Board makes final approval of changes at a subsequent meeting and submits the List to the IDNR.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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# ESPB 2014 Illinois List review and revision

The Illinois List review and revision process, continued:
(in compliance with the ESPA (520 ILCS 10/1) and the Illinois Administrative Procedures Act (5 ILCS 100/1))

5. IDNR conducts an internal review of the List and submits Administrative Rule changes to the Secretary of State for publication in the Illinois Register and review by the Joint Committee on Administrative Rules (JCAR). This first notice for Administrative Rule changes to the List published in the Illinois Register includes a 45-day comment period.

6. If substantive comments are received during the 45-day comment period, the IDNR, with assistance from the Board, provides a response to comments to the JCAR.

7. JCAR approves the List at a regularly scheduled meeting of its committee.

8. Upon approval by JCAR, the IDNR submits the final Administrative Rule changes to the List to the Secretary of State for publication in the Illinois Register and the List becomes official.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**
*One Natural Resources Way, Springfield, Illinois 62702 - 1271, (217) 785-8687; FAX (217) 785-2438*

# ESPB 2014 Illinois List review and revision

**Reminder of the ways any party may address the Board about changes to the Illinois List or to participate in the List review process outside of the Board approved ESPB TEC process and in accordance with the respective laws and regulations:**

- Request to address the Board as an agenda item at any Board meeting open to the public. The request and all supporting documentation needs to be received by Board staff at least 30 days prior to the meeting. Board staff advise the Board's Chair of the request, and when the Chair approves an agenda for the meeting, Board staff will follow-up with the requester to let them know whether or not the requested item has been added to the agenda. If the requested item has not been added for the next meeting, the requester will be provided an explanation of why and direction for resubmitting their request for a subsequent meeting and for alternate means of addressing the Board. The Board may engage in discussion and may take action on presentations made as agenda items during the meeting.

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

*One Natural Resources Way, Springfield, Illinois 62702 - 1271, (217) 785-8687; FAX (217) 785-2438*

# ESPB 2014 Illinois List review and revision

**Reminder of the ways any party may address the Board about changes to the Illinois List or to participate in the List review process outside of the Board approved ESPB TEC process and in accordance with the respective laws and regulations, continued:**

- Address the Board as a public comment at any Board meeting open to the public. Anyone can address the Board during the 3-minute public comment period offered at every meeting open to the public. No advance notice of intent is necessary. The Board accepts comments, but does not engage in discussion and will not take action on comments during the public comment period. The Board may elect to further address the comment at a later time.
- Address the Board during the public hearing period held prior to the Board finalizing changes to the List. The public hearing period is held after the Board confirms preliminary approval and before it confirms final approval for any changes to the List. The public hearing period spans two weeks and consists of a physical meeting at the beginning of the period made open to the public and then a subsequent comment period to accept written comments. The Board accepts comments, but does not engage in discussion and will not take action on comments during the public hearing period. Following the public hearing period, the Board reviews comments received and explains its final decisions in a subsequent Board meeting open to the public.

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# ESPB 2014 Illinois List review and revision

**What are we considering in our review:**

- The IDNR Natural Heritage (Biotics 4) Database is used as a primary source of information. In this review, we are using either “last observed” data that only illustrates the most recent observation of each element occurrence for a species or “observed” data that illustrates all observations of each element occurrence.

- Information reviewed for each species includes range in Illinois (present and historic), abundance in Illinois (total numbers, if known), number of known populations or locations where it occurs, number of these locations which are known to be protected from disturbance, the types of threats the species faces, and how fragile or sensitive the species is (species biology/ecology).

- For currently listed species, we aren’t starting from scratch, but are reviewing whether there has been a change in status and distribution that warrants a change in listing status.

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# ESPB 2014 Illinois List review and revision

## Our process to date and planned:

**January 2012**

ESPB staff made request to IDNR ORC to submit to the Database any outstanding Element Occurrence (EO) status and distribution information and to submit to ESPB staff recommendations supported by evidence for status changes for currently listed species and for addition of new species.

ESPB staff made request to over 50 research and resource management institutions to submit to the Database any EO status and distribution information.

**February/March 2012**

The Board and staff vetted 42 ESPB TECs to advise the Board in the List review and ESPB staff made request to the ESPB TECs to submit to the Database any EO status and distribution information and to submit to ESPB staff recommendations supported by evidence for status changes for currently listed species and addition of new species.

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# ESPB 2014 Illinois List review and revision

## Our process to date and planned, continued:

**April 2012**

ESPB staff began reviewing by taxonomic group, currently listed species against Database information, ESPB TEC and IDNR recommendations and evidence, and preparing 1st cut lists of recommended changes to the list of endangered and threatened species.

**May 16, 2012 Board meeting**

The Board reviewed the bird list and made preliminary approval of proposed changes.

**August 10, 2012 Board meeting**

The Board reviewed the mammal list and made preliminary approval of proposed changes.

**November 9, 2012 Board meeting**

The Board reviewed the amphibian and reptile lists and made preliminary approval of proposed changes.

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# ESPB 2014 Illinois List review and revision

## Our process to date and planned, continued:

**February 8, 2013 Board meeting**

The Board reviewed the fish and mussel lists and made preliminary approval of proposed changes.

**May 17, 2013 Board meeting**

The Board reviewed other invertebrates and Part 1 of the plant lists and made preliminary approval of proposed changes.

**August 16, 2013 Board meeting**

The Board reviewed Part 2 of the plant list and made preliminary approval of proposed changes.

**November 15, 2013 Board meeting**

Planned – Part 3 of the plant list review.

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# ESPB 2014 Illinois List review and revision

## Our process to date and planned, continued:

**February 2014, Board meeting**

Planned - The Board will review outstanding taxonomic group list issues and confirm preliminary approval of proposed changes to the IL List of E&T Species (List).

**March/April 2014**

Planned - the Board holds a public hearing for proposed changes to the List.

**April 2014**

Planned – the Board and staff review and consider comments and evidence received during the two-week public hearing record period.

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# ESPB 2014 Illinois List review and revision

## Our process to date and planned, continued:

**Beginning with the May 2014 Board meeting**

Planned – at a Board meeting open to the public, the Board reviews its determinations regarding public hearing evidence and either makes final approval to proposed List changes or revises proposed changes and schedules another public hearing for the new changes.

– if another public hearing is held, the Board repeats the cycle for considering evidence and reviewing determinations until it approves as final its proposed changes to the List.

– once proposed changes to the List have been approved as final by the Board, staff will work with IDNR to propose amendments to respective Administrative Rules. The Ad Rule amendment process may take 6-9 months.

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# ESPB 2014 Illinois List review and revision

**Outstanding List review items that will be revisited before the Board confirms preliminary approval of respective proposed changes, to date:**

**Birds:**

Peregrine falcon – proposed for delisting - review 2011, 2012, and (if available) 2013 data.

Chuck-will's-widow – proposed for addition as T- confirm EOs are in the Database.

**Mammals:**

Woodrat – no Board action, IDNR recommends E to T – data from reports was not in/confirmed by Database; proposal for status change needs to be submitted to ESPB.

Golden Mouse – no Board action, IDNR recommends delisting - data from reports was not in/confirmed by Database; proposal for status change needs to be submitted to ESPB.

Rice Rat – no Board action, IDNR recommends delisting with data available by 2014 - data from reports was not in/confirmed by Database; proposal for status change needs to be submitted to ESPB.

Eastern Small-footed Bat – proposed for addition as T – ~~contract another year of surveys~~; confirm EOs are in the Database.

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# ESPB 2014 Illinois List review and revision

**Outstanding List review items that will be revisited before the Board confirms preliminary approval of respective proposed changes, to date, continued:**

**Invertebrates other than mussels:**

Onyx rocksnail (Leptoxis praerosa) – proposed for addition as E - confirm EOs are in the Database.

**Plants:**

Berberis canadensis (Allegheny Barberry) – proposed for delisting – pending confirmation that EO survey reports are in the Database.

Eupatorium hyssopifolium (Hyssop-leaved Thoroughwort) – initially recommended for delisting then changed to no change in status – pending confirmation that EO survey reports are in the Database.

Euphorbia spathulata (Spurge) – initially recommended for delisting then changed to no change in status – pending confirmation that EO survey reports are in the Database.

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# ESPB 2014 Illinois List review and revision

- Now we'll look at one currently listed species account as review of the information that has been considered.

- Then review currently listed species proposed for status change and any questions about those not proposed for status change.

- Then review species proposed for addition.

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# ESPB 2014 Illinois List review and revision

**Reminders:**

- Because of the Board's designated process for selecting and utilizing expert consultants and requirements of the Open Meetings Act, any "meeting" of such experts needs to be conducted in a meeting open to the public.

- The current meeting satisfies that requirement, but please note that this is a business meeting of the Board that is open to the public and not a "public hearing".

- Only those individuals identified as presenters on the agenda will be recognized to participate in discussion. In the interest of time and to facilitate development of meeting minutes and the administrative record for the List review process, please keep discussion brief and focused.

- If members of the audience wish to address the Board on this agenda item, they may do so during the public comment period at the end of the meeting, by requesting to present their own agenda item at a subsequent Board meeting, or during the required public hearing that is part of the List review process and will be held at a time after the Board has confirmed preliminary approval for any changes to the List (currently anticipated for early 2014).

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# ESPB 2014 Illinois List review and revision

So, before we move along…..

Any questions?

**ILLINOIS ENDANGERED SPECIES PROTECTION BOARD**

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Attachment E

Re: Agenda Items 160-10: Copy of the 2014 Illinois List Review: Staff recommendation for changes to Part 3 of the list of Illinois endangered and threatened plants

# ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

*One Natural Resources Way, Springfield, Illinois 62702 - 1271, (217) 785-8687; FAX (217) 785-2438*

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

**ESPB staff Part 3, 1st cut FINAL recommendations for Plants**

Prepared by Anne Mankowski

11/01/2013

1st cut draft dated 10/13/2013, updated as 1st cut final 11/01/2013

This is the 1st cut final recommendations that will be presented to the Board at the 11/15/2013 meeting.

**Contents:**

(This is a compilation of otherwise stand-alone documents; I didn't spend a lot of time crafting, so it isn't pretty)

1. List of any recommendations and evidence from ESPB TECs and IDNR for species listing status change or additions to the Illinois List and Mankowski response/notes (page 2).

   List of post-1st cut draft recommendations and evidence from ESPB TECs and IDNR for species listing status change or additions to the Illinois List and Mankowski response/notes (page 2).

2. ESPB staff list of recommended changes from endangered to threatened, threatened to endangered, remove from endangered, remove from threatened, add as endangered, add as threatened, and species for which no change is recommended (from partial list review) (page 13).

3. Table 1. Currently listed species – last observed, total occurrences, total seen since Jan 2002, # of protected occurrences, # of counties w/ occurrences, # of topographic quads w/ occurrences (page 15).

4. Table 2. Currently listed species -element occurrences and counties with occurrences for respective 5-year intervals ending in 2011 (page 24).

5. Currently listed species individual reviews (begins page 33) – each review includes:
   a. Date of listing, reason for listing;
   b. ESPB status and distribution publication species acct;
   c. species data from Tables 1 and 2;
   d. 1982-2011 5-year element occurrence trend graph;
   e. ESPB status review triggers (if any) and listing status change recommendation (if any); and
   f. NatureServe conservation status, lower 48 (for some spp).

6. Recommendations for species to be added as endangered or threatened (if any – there are none).

**1A. List of any recommendations and evidence received from ESPB TECs and IDNR for species listing status change or additions to the Illinois List prior to distribution of the draft on 11/13/2013 and Mankowski response/notes.**

For use in preparing ESPB staff recommendations of the plant list review, recommendations and evidence for any species listing status change or additions to the Illinois List from ESPB TECs and IDNR were accepted through 07/29/2013. No recommendations for species addressed in this Part 3 document were received.

**1B. List of any comments and evidence received from ESPB TECs by 11/25/2013 deadline for review of Part 2, Plant List 1st Cut draft proposed listing changes to Threatened and Endangered Plant Species (presented as received) and Mankowski response/notes.**

**1B(1). ESPB TEC John Taft sent email on 10/23/2013 with comments on Part 3, Plant list 1st cut draft recommendations and Mankowski 11/01/2013 responses to comments.**

> Mankowski introductory note: Thank you for the time you put into reviewing the document and preparing comments. Staff responses to comments are prepared and presented in the format of a regulatory comments/response to comments framework. In some cases the same response or portions of it have been repeated for more than one comment, as appropriate. The Board appreciates and considers expert comments and information as a level of evidence, but please note that mention of a document, reference, or species occurrence may not constitute evidence necessary for Board action, since Board listing decisions are required to be based on scientific evidence. All ESPB TEC comments that are germane to the current document and staff responses will be presented together in the front section of the Part 3, Plant List 1st Cut final document; and, germane ESPB TEC comments and staff responses will also be added to respective species reviews when ESPB TEC comments and recommendations were contrary to staff recommendations. For some species, ESPB TEC comments caused staff to be less convinced of staff recommendations, but they were maintained so that staff can gain feedback from the Board. While ESPB TEC comments may not have persuaded staff to change the staff recommendation for a species, Board members will have access to all germane ESPB TEC comments, staff responses, and species reviews when they review the information and discuss and vote on listing decisions during the November 15, 2013 Board meeting.
>
> Please note that some location names have been changed to numbers to eliminate the disclosure of site-specific location information in this document.

**Taft comments to Plants, part III (10/23/2013)**
**Table 1** includes coding that differs from prior Board listing decisions that were addressed by the proposed resolution regarding IESPB listing of subspecific taxa. Taxa involved include:

*Alnus incana* ssp. *rugosa*
*Carex canescens* var. *disjuncta*
*Carex inops* ssp. *heliophila*
*Cypripedium parviflorum* var. *makasin*
*Lonicera dioica* var. *glaucescens*
*Phlox pilosa* ssp. *sangamonensis*
*Platanthera flava* (formerly on this list, is no longer earmarked for delisting)
*Symphorcarpos albus* var. *albus*

That *Platanthera flava* coding has changed (not highlighted in blue) suggests the remaining coding is intended to reflect Board listing decisions. My recollection is that most of these taxa were to remain listed (excepting *L. dioica* var. *glaucescens*), in some cases under slightly modified nomenclature, according to the proposed resolution. The resolution written as guidelines for Board decisions with regard to subspecific taxa is detailed below since it was not included into the public record.

**Proposed Resolution Regarding IESPB Listing of Subspecific Taxa**
1. Endemic taxa: special consideration given to subspecific taxa; there is 1 in Illinois (Phlox pilosa ssp. Sangamonensis)
2. Multiple subpecific taxa recognized by at least one authority:
-when all are rare and already listed (e.g., *Platanthera flava* var. *flava* and *Platanthera flava* var. *herbiola*) list at the species level.
-where all are rare and only one listed or taxa difficult to distinguish, if all qualify list the taxa at the species level (e.g., *Carex canescens* var. *disjuncta and C. canescens* var. *subliliacea*: list as *Carex canescens; Alnus incana* ssp*. rugosa* and *A. incana* ssp. *americana:* list as *A. rugosa*).
-where multiple subspecific taxa exist, but only one is native, maintain as listed.

> Mankowski response: Comments noted. *Platanthera flava* var. *flava*, *P. flava* var. *herbiola*, and *P. flava*, were not part of the Part 3 review, but were discussed in Parts 1 and 2.
>
> Table 1 is supposed to present currently listed species and related information and is not supposed to reflect Board preliminary decisions for any species from the current review, with one exception – *Platanthera flava*. Since the Board made preliminary decision that would result in functionally combining *P. flava* var. *flava* and *P. flava* var. *herbiola* by listing only *P. flava*, staff did not understand how it made sense to develop a species review for each currently listed variety, so instead developed a species review for the combination – *P. flava*. The species review (from Part 2) includes the following explanation: *"The ESPB voted at the 05/17/2013 meeting to combine varieties flava and herbiola and the species Platanthera flava will be listed as threatened. The proposed change is not official at this time; it would become official if it is continued through the entire statutorily required List revision process. For the purposes of this species review, the species P. flava is generally reviewed using combined data for the two varieties."* Staff has made the following revision to Tables 1 and 2 of Parts 2 and 3 - the species name is now followed the character "++" and includes notation at the bottom of each table with the explanation.
>
> Regarding the commenter's proposed resolution for guidelines for subspecific taxa, the proposed resolution was not discussed or voted on as a resolution or as an adoption of guidelines by the Board at the May ESPB meeting. During that meeting, the Board considered individual elements and variations during the course of discussion for respective individual taxa during the current List review – they were not approved as general guidelines, currently or moving forward. The public record, or minutes from the meeting, reflects the Board's handling of the information in this way. If the commenter wishes for the Board to adopt a resolution for the guidelines for future use in evaluating subspecific taxa, staff suggests that the commenter address the Board with that proposal as an agenda item.

Comments regarding proposed changes
**E to T:**
*Sarracenia purpurea* - Presumably, "clump" refers to genet. Only 4 of the 6 populations have moderately large populations (> 12 genets) and all occur in ecologically fragile peatland habitats prone to degradation from a range of factors including altered hydrology (e.g., lowered water table, increased surface water discharge), exotic species infestation (e.g., *Rhamnus frangula*), nutrient pollution from nitrogen deposition (the insectivorous *S. purpurea* is a specialist in nutrient poor habitats), and climate change. For

example, this species was not found during a botanical survey of #2 during the late 1980s (Taft and Solecki 1990). Sarracenia purpura formerly was known from the site; however, severe infestation of *Rhamnus frangula* appeared to have altered habitat suitability for the species. Based on the same data available to Board staff and in the context of threats to the habitat, changing the listing status for *Sarracenia purpurea* from E to T appears unwarranted, particularly without information on demographics that could support population viability even in large populations when so many threats exist to the habitat.
RECOMMENDATION: MAINTAIN AS ENDANGERED.

Mankowski response: Comments noted. Staff reviewed the Database data again and provides the following additional information and response:

Board staff recommendation for this species was based on the same amount of information, level of detail, temporal scale of consideration, and presentation of information that was consistent with Board approved standards for the current 5-year review of the List. The temporal scale for primary consideration was supposed to be observations from within the last 10 years (2002-2011 - with some inclusion of 2012 data, when possible) in order to focus attention on current status and distribution.

There have been no observations, and three "surveyed w/ no observation", reports at #2 since its first observation in 1976. Staff does not consider a "surveyed w/ no observation" report in 1987 to have weighting against the number of EOs with observations in the most recent 10 years. That #2 has had repeated "surveyed w/ no observation" reports over several decades may mean that the EO should be considered extirpated , however it is not identified as such in the Database. That this EO had "surveyed w/ no observation" with no subsequent observations was noted in the original species review. Staff also notes that the Board has expressed mixed opinions about the currency of observations with respect to considering a location or species extirpated.

Regarding stability of the species, it has persisted at five EOs for at least 18 years and while reported individual population numbers have varied, they have remained similar or improved over time at five EOs; one additional EO saw a decline in 2011, but still had over 1,000 individuals; and, the remaining EO has not had reported observation since 1974. Persistence and reported population numbers at each EO are provided below.

Persistence at individual EOs

| | |
|---|---|
| #1(NP) | at least 36 years |
| #2(NP) | no reported persistence |
| #3(NP) | at least 18 years |
| #4(NP) | at least 15 years, but "surveyed w/ no observation" reported in 2011 |
| #5(NP) | at least 35 years |
| #6(NP) | at least 24 years |
| #7 | at least 23 years |

Reported population numbers at individual EOs

| | |
|---|---|
| #1(NP) | 2011: 988 clumps in 2 locations |
| | 2009: flowering by scattered individuals, common in portions of fen |
| | 2008: 130 flowering clumps |
| | 1993: plants found |
| | 1976: plants observed |
| | |
| #2(NP) | 2011: none found despite search |
| | 2005: None found despite search |

| | |
|---|---|
| | 1987: Not relocated |
| | 1974: 1 big, 12 inch clump |
| | |
| #3(NP) | 2011: 11 clumps |
| | 2009: Scattered individuals with some in flower, rare in semi-open bog |
| | 2009: 5 clumps, 80% flowering |
| | 2008: 4 clumps, 75% flowering |
| | 2007: 4 clumps, 25% flowering |
| | 2006: 3 clumps, 67% flowering |
| | 2003: pop A - 1 large clump with 6 flowering stalks, pop C - 1 small clump |
| | 2003: pop B - 1 large clump, pop D - 1 small clump |
| | 1994: 2 clumps |
| | |
| #4(NP) | 2011: none found despite search |
| | 2005: 3 plants, 2 flowering |
| | 2003: 3 plants |
| | 1997: 25 plants |
| | No Date: Observed |
| | |
| #5(NP) | 2011: approx 1,066 clumps in 3 locations |
| | 2009: 1,623 clumps, 38% flowering |
| | 2008: 988 clumps, 50% reproductive |
| | 1999: Plants observed |
| | 1997: scattered small colonies |
| | 1991: Species observed |
| | 1990: 81 flowering stems |
| | 1989: Species observed |
| | 1988: Species observed |
| | 1977: Species observed |
| | |
| #6(NP) | 2011: approx 400 clumps |
| | 2009: 400 rosettes, 75% flowering |
| | 2007: 201-400 rosettes, 75% reproductive |
| | 2005: 5,760 plants |
| | 1988: Plants found |
| | |
| #7 | 2011: 75 clumps |
| | 2009: < 100 clumps, 20% flowering |
| | 2008: 85 clumps, 30% flowering |
| | 2007: 85 clumps, 40% reproductive |
| | 2004: 76 clumps, 20% reproductive |
| | 1992: Healthy population |
| | 1991: Species observed |
| | 1989: Species observed |
| | 1989: Plant observed |

Staff agrees that this is certainly an unusual species and additional research would likely improve understanding for conservation and possible recovery efforts. However, staff considers the combination of persistence and reported population numbers for at least five EOs currently to be sufficient evidence that the species is more secure than the definition of endangered. Staff maintains a recommendation for changing the status of the species from endangered to threatened.

**T to E:**
*Rubus schneideri* – This blackberry is part of the *Rubus setosus* complex that has been treated in a variety of ways by different authors. The type locality for *R. schneideri* is in Kankakee County, Illinois. Liberty Hyde Bailey described the species based on a 1940 collection by R. A. Schneider. The most defensible approach may be that of Reznicek and Voss (Flora of Michigan update) who simply recognize *R. setosus* as a complex of highly variable taxa. Authors that recognize numerous species within this complex distinguish taxa based on variable characteristics (pubescence, location and abundance of glands, shape of the base of the terminal leaflet) that can be interpreted differently by different botanists. Mohlenbrock recognized *Rubus schneideri* but also distinguishes other seemingly scarce taxa also limited in the state to sand regions in NE Illinois: *R. wheeleri, R. wisconsinensis,* and *R. missouricus*. USDA includes *R. schneideri* as a synonym of *R. missouricus*, a taxon not included in Mohlenbrock (2002), with a range throughout the upper Midwest as well as the central Atlantic states. Some material in the INHS herbarium formerly determined to be *R. schneideri* recently has been annotated by Gerould Wilhelm as other taxa in this complex. The absence of a consensus on the taxonomy of this taxon suggests a degree of caution may be warranted. Furthermore, the suggestion to change *R. schneideri* from T to E based on recent observations of 4 populations ranging in size from moderate to large in 2 counties appears somewhat inconsistent with the proposal to upgrade *Synandra hispidula* from E to T based on 3 large populations limited to a single county. RECOMMENDATION: MAINTAIN AS THREATENED.

> Mankowski response: Comments noted. Staff reviewed the Database data and previous staff recommendations for both *Rubus schneideri* and *Synandra hispidula* and provides the following:
>
> Board staff recommendation for this species was based on the same amount of information, level of detail, temporal scale of consideration, and presentation of information that was consistent with Board approved standards for the current 5-year review of the List.
>
> The commenter provides significant information about the taxonomic uncertainty of the species. However, it is unclear to staff from the commenter's comments, how the absence of consensus on the taxonomy of *Rubus schneideri* relates to a recommendation for maintaining the species' status as threatened. The Database has not received information from any institution or individual that any EO or individual report is based on a misidentified specimen. If the commenter is proposing an overall re-evaluation of the taxon and a subsequent re-evaluation of its placement on the Illinois List, staff suggests that it may be most appropriate for the commenter to specifically address the Board with that proposal as an agenda item.
>
> Board staff appreciates that I may have been inconsistent over the course of reviewing all 484 species. However, staff believes that previous staff recommendations for *Synandra hispidula* and *Rubus schneideri* are not inconsistent for multiple reasons including relative consideration of changes in the numbers of EOs since listing, the number of EOs with recent observations, and the reported population numbers in recent observations. For ease of reference, the 1st cut draft staff notes and recommendations for both species are pasted below.
>
> > ***Mankowski 1st cut draft notes and recommendation for Synandra hispidula:***
> > *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 3 of the 5 EOs, staff recommends a change in status from endangered to threatened.*
***Mankowski 1st cut draft recommendation for Synandra hispidula** – change from endangered to threatened*

***Mankowski 1st cut draft notes and recommendation for Rubus schneideri:***
*When the species was originally listed as endangered in 1980, there was only one known occurrence in one county that was established as an EO. Since then, eight EOs have been added; three EOs and two counties were added in the 1980s, two EOs and two counties were added in the 1990s, and three EOs were added in the 2000s. Three EOs are protected in Nature Preserves. The addition of the eight EOs and four counties, apparently led to the species' upgrade to threatened in 2004. Six EOs (86% of total) are protected in Nature Preserves. Since 2002, four EOs (44% of total) have had reported observations and no EOs have had "surveyed w/ no observation" reports. Most recent reported observation/population numbers for the four EOs with observations since 2002 are: several hundred stems; plants cover 30' diameter; observed; and, 25 plants. The combination of a relatively low number of EOs with recent observations and relatively low reported population numbers, suggests that the species' status may now be less secure than when it was upgraded.*
***Mankowski 1st cut draft recommendation for Rubus schneideri** – change from threatened to endangered.*

Staff maintains a recommendation for changing the status of Rubus schneideri from threatened to endangered.

Citations:
MICHIGAN FLORA ONLINE. A. A. Reznicek, E. G. Voss, & B. S. Walters. February 2011. University of Michigan. Web. 10-23-2013. http://michiganflora.net/home.aspx.

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.

**1B(2). ESPB TEC Susanne Masi sent email on 10/24/2013 with comments on Part 3, Plant list 1st cut draft recommendations and Mankowski 11/01/2013 responses to comments.**

Mankowski introductory note: Thank you for the time you put into reviewing the document and preparing comments. Staff responses to comments are prepared and presented in the format of a regulatory comments/response to comments framework. In some cases the same response or portions of it have been repeated for more than one comment, as appropriate. The Board appreciates and considers expert comments and information as a level of evidence, but please note that mention of a document, reference, or species occurrence may not constitute evidence necessary for Board action, since Board listing decisions are required to be based on scientific evidence. All ESPB TEC comments that are germane to the current document and staff responses will be presented together in the front section of the Part 3, Plant List 1st Cut final document; and, germane ESPB TEC comments and staff responses will also be added to respective species reviews when ESPB TEC comments and recommendations were contrary to staff recommendations. For some species, ESPB TEC comments caused staff to be less convinced of staff recommendations, but they were maintained so that staff can gain feedback from the Board. While ESPB TEC comments may not have persuaded staff to change the staff recommendation for a species, Board members will have access to all germane ESPB TEC comments, staff responses, and species

reviews when they review the information and discuss and vote on listing decisions during the November 15, 2013 Board meeting.

Please note that some location names have been changed to numbers to eliminate the disclosure of site-specific location information in this document.

***Sarracenia purpurea*. Susanne Masi comments on staff recommendation to change status from Endangered to Threatened.**

Submitted by Susanne Masi, October 24, 2013, for discussion at the Endangered Species Protection Board meeting on November 15, 2013.

While the five remaining populations are protected and seem stable. Three populations (#5, #1, and #6) support significant plant numbers, but two populations small (#3 reports 8-11 plants in recent years and #7 reports = /< 100 - the recent Plants of Concern reports of 22-29 plants at #7 represent only a 25% sample along a transect, since trampling is a concern).

Threats reported at almost every population are brush encroachment, invasives (mostly cattails, *Rhamnus* spp. (likely *R. frangula*), and *Cornus* spp.). Water quality issues are an issue from subdivision runoff at one site.

Three historical populations have disappeared:
- #2 – reported to the Natural Heritage Database as not found in 2011

- Wauconda Bog (Ken klick will submit a report to the Natural Heritage Database on Wauconda Bog; he has a record of an historical occurrence there which was not in the Database. His subsequent searches have been unsuccessful.)

- #4 (Dan Fink recently submitted his report to Plants of Concern on the population at #4 . It was not found in 2011 . This search/report was part of his masters' thesis on *Sarracenia purpurea* in Illinois.) See report and citation below. Plants of Concern has also forwarded this report to the Database.

All of these extirpated populations were reported as having succumbed to massive *Rhamnus* sp., Cattail, and Reed Canary Grass invasion. It is unlikely that extensive impact of cattails and *Rhamnus* on the ecosystem can be reversed even if these species are removed. These invasive organisms may reflect and also help exacerbate changes in soil nutrients such as nitrogen.

Altogether, these five populations remain a very small number. The reason for listing in 1980 was given as "restricted habitats or low pops in IL". These reasons are still the case for this species. Although the staff recommendation states that six EOs were observed since 2002, we are quite sure that only five of these remain based on observations since 2011. That brings us to five from the original three when listed, in my opinion not enough to warrant the change to Threatened.

Before changing the status from endangered to threatened, I believe there are research questions that need to be addressed to determine whether these populations are at high risk levels. Some of these were suggested by Ken Klick in recent correspondence.

- Life history – recruitment (juveniles have been observed at some populations and the species is known to reproduce vegetatively) but Plants of Concern monitoring does not have a good demographic handle on levels of recruitment.) Do we really know if populations are stable? Margo Milde, a respected field botanist in NE Illinois who did a botanic survey of #3 and other sites for IDNR, reports that the

*Sarracenia* population at #3 was totally extirpated by poaching several decades ago before the site was protected and that the current population at Volo was a reintroduction. Margo has observed two newer clumps (possibly vegetative offspring from the plantings or from a seed bank) and notes that "these plants grow and establish themselves very very slowly. I've watched the two spontaneous clumps there for years: one…started about 20 years ago and only in the last few years did it reach the size of the [mature plant]…the second one…is more recent and still small." (email correspondence, 10/23/2013)

Genetics – Dan Fink's masters thesis for NEIU (citation below) concluded that there are significant morphological differences among the five populations he studied, strongly suggesting different ecotypes if not genotypes in each population. If there are significant ecotypical or genotypical differences among the populations, each population might be considered unique and individually endangered. A genetic study among our Illinois populations would help define this further.

Climate change effects – as a bog species *Sarracenia* is a northern relict where it occurs in the Upper Midwest and can be expected to be threatened by climbing temperatures.

Water quantity and quality - changes in hydrology can lower water tables on which *Sarracenia* depends. Road and agricultural runoff may be impacting water quality.

Bogs and fens themselves are rare and threatened peatland ecosystems in Illinois that can't be replaced or created in the same ways that prairies or savannas can. There are few if any options for translocation of *Sarracenia* into similar habitats. "Most of our bog/floating mat habitats are changing through succession and by invasive plants – habitat is only getting smaller. Additional habitat cannot be created for this species." (Ken Klick, email correspondence, 1-/18- 2013)

A final point to be made is the potential threat of poaching, mentioned above for #3. I am not aware of any other recent reports of poaching in our five populations, but have learned of the poaching of pitcher plants from Dan Mason at Indiana Dunes National Lakeshore within the past two years. Carnivorous plants are especially vulnerable to this activity.

Citations

Fink, D. 2012. The Geographic Distribution of *Sarracenia purpurea* in Illinois and its Associated Species. Thesis presented to the faculty of the Department of Geography and Environmental Studies, Northeastern Illinois University. Unpublished ms. Contains an excellent and up to date reference list.

Gotelli, N.J. and A.M. Ellison. 2002. Nitrogen Deposition and Extinction Risk in the Northern Pitcher Plant, *Sarracenia purpurea. Ecology*. Vol 83, No 10 (Oct. 2002) pp. 2758-2765. Contains an excellent reference list.

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. Taft and Solecki did not find *Sarracenia purpurea* while doing this survey.

Note – the Plants of Concern report form that was included in the commenter's document has been omitted from this current document.

> Mankowski response: Comments noted. Staff reviewed the Database data again and provides the following correction, additional information, and response:
>
> Board staff recommendation for this species was based on the same amount of information, level of detail, temporal scale of consideration, and presentation of information that was consistent

with Board approved standards for the current 5-year review of the List. The temporal scale for primary consideration was supposed to be observations from within the last 10 years (2002-2011 - with some inclusion of 2012 data, when possible) in order to focus attention on current status and distribution.

There have been no observations, and three "surveyed w/ no observation", reports at #2 since its first observation in 1976. Staff does not consider a "surveyed w/ no observation" report in 1987 to have weighting against the number of EOs with observations in the most recent 10 years. That #2 has had repeated "surveyed w/ no observation" reports over several decades may mean that the EO should be considered extirpated , however it is not identified as such in the Database. That this EO had "surveyed w/ no observation" with no subsequent observations was noted in the original species review. Staff also notes that the Board has expressed mixed opinions about the currency of observations with respect to considering a location or species extirpated.

As the commenter notes, Wauconda Bog is not in the Database. Staff would not consider a "surveyed w/ no observation" at a site that has never been an EO, and therefore not considered in the context of any 5-year List review, to have weighting as an extirpated population or against the number of EOs with observations in the most recent 10 years.

The commenter notes that #4 is extirpated. The Database entry for this EO in 2011 notes it as "surveyed w/ no observation" and mentions the dominance of invasive species, however, it was not noted as extirpated. The EO had observation in 2005, so including this EO in the number of EOs with observations from 2002-2011 was correct, but staff made error in not noting the single "surveyed w/ no observation" report in 2011. Neither the Database nor Board Staff considers a single "surveyed w/ no observation" report to represent an extirpation unless the observer specifies that the site/habitat has been destroyed or otherwise rendered completely inhospitable to the subject species.

The commenter notes that #3 is a reintroduction. The Database does not include information documenting this EO as a reintroduction in 1994 (first reported observation) and does not mention information about any subsequent population manipulation. Regardless, the population, while small, has persisted since then (17 years in 2011) and staff would consider this to be a "wild" population.

Regarding stability of the species, it has persisted at five EOs for at least 18 years and while reported individual population numbers have varied, they have remained similar or improved over time at five EOs; one additional EO saw a decline in 2011, but still had over 1,000 individuals; and, the remaining EO has not had reported observation since 1974. Persistence and reported population numbers at each EO are provided below.

Persistence at individual EOs

| | |
|---|---|
| #1(NP) | at least 36 years |
| #2(NP) | no reported persistence |
| #3(NP) | at least 18 years |
| #4(NP) | at least 15 years, but "surveyed w/ no observation" reported in 2011 |
| #5(NP) | at least 35 years |
| #6(NP) | at least 24 years |
| #7 | at least 23 years |

Reported population numbers at individual EOs

| | |
|---|---|
| #1(NP) | 2011: 988 clumps in 2 locations |
| | 2009: flowering by scattered individuals, common in portions of fen |
| | 2008: 130 flowering clumps |
| | 1993: plants found |
| | 1976: plants observed |
| | |
| #2(NP) | 2011: none found despite search |
| | 2005: None found despite search |
| | 1987: Not relocated |
| | 1974: 1 big, 12 inch clump |
| | |
| #3(NP) | 2011: 11 clumps |
| | 2009: Scattered individuals with some in flower, rare in semi-open bog |
| | 2009: 5 clumps, 80% flowering |
| | 2008: 4 clumps, 75% flowering |
| | 2007: 4 clumps, 25% flowering |
| | 2006: 3 clumps, 67% flowering |
| | 2003: pop A - 1 large clump with 6 flowering stalks, pop C - 1 small clump |
| | 2003: pop B - 1 large clump, pop D - 1 small clump |
| | 1994: 2 clumps |
| | |
| #4(NP) | 2011: none found despite search |
| | 2005: 3 plants, 2 flowering |
| | 2003: 3 plants |
| | 1997: 25 plants |
| | No Date: Observed |
| | |
| #5(NP) | 2011: approx 1,066 clumps in 3 locations |
| | 2009: 1,623 clumps, 38% flowering |
| | 2008: 988 clumps, 50% reproductive |
| | 1999: Plants observed |
| | 1997: scattered small colonies |
| | 1991: Species observed |
| | 1990: 81 flowering stems |
| | 1989: Species observed |
| | 1988: Species observed |
| | 1977: Species observed |
| | |
| #6(NP) | 2011: approx 400 clumps |
| | 2009: 400 rosettes, 75% flowering |
| | 2007: 201-400 rosettes, 75% reproductive |
| | 2005: 5,760 plants |
| | 1988: Plants found |
| | |
| #7 | 2011: 75 clumps |
| | 2009: < 100 clumps, 20% flowering |
| | 2008: 85 clumps, 30% flowering |
| | 2007: 85 clumps, 40% reproductive |
| | 2004: 76 clumps, 20% reproductive |
| | 1992: Healthy population |
| | 1991: Species observed |

| | |
|---|---|
| | 1989: Species observed |
| | 1989: Plant observed |

Staff agrees that this is certainly an unusual species and additional research would likely improve understanding for conservation and possible recovery efforts. However, staff considers the combination of persistence and reported population numbers for at least five EOs currently to be sufficient evidence that the species is more secure than the definition of endangered. Staff maintains a recommendation for changing the status of the species from endangered to threatened.

**1B(3). ESPB TEC Chris Benda sent email on 10/25/2013 with comments on Part 3, Plant list 1st cut draft recommendations and Mankowski 10/28/2013 response to comments.**

**ESPB TEC Chris Benda email of 10/25/2013**
Hi Anne,

I don't have any comments to add to the report. Any evidence I have would have already been submitted to heritage. I support the listing recommendations. I know that Viola conspersa is common in the right habitats as is Tomanthera auriculata. I personally think Sedum telephioides should be de-listed, but understand that I would have to add that as an agenda item and provide additional evidence. Unfortunately, I cannot attend the November meeting.

Glad to be a part of this.

Chris

**Mankowski response email of 10/28/2013**
Thanks for the note, Chris.

I'm glad that you're glad to be a part of the Board's TEC process and I have appreciated your input. Sorry to hear that you won't be able to make the meeting.

Thanks.

Anne

**2. ESPB staff listing status recommendations for Part 3, 1st cut Plant list Final review**

| | | |
|---|---|---|
| Endangered to threatened: | Rubus odoratus | Purple-flowering Raspberry |
| | Sarracenia purpurea | Pitcher Plant |
| | Stenanthium gramineum | Grass-leaved Lily |
| | Synandra hispidula | Hairy Synandra |
| Threatened to endangered: | Rhynchospora alba | Beaked Rush |
| | Rubus schneideri | Bristly Blackberry |
| | Sisyrinchium atlanticum | Eastern Blue-eyed Grass |
| | Tradescantia bracteata | Prairie Spiderwort |
| Remove from endangered: | None | |
| Remove from threatened: | Tomanthera auriculata | Ear-leafed Foxglove |
| | Viola conspersa | Dog Violet |
| Add as endangered: | None | |
| Add as threatened: | None | |

No listing status change recommended: (data do not warrant change)

| | |
|---|---|
| Ranunculus rhomboideus | Prairie Buttercup |
| Rhexia mariana | Dull Meadow Beauty |
| Ribes hirtellum | Northern Gooseberry |
| Rubus pubescens | Dwarf Raspberry |
| Rudbeckia missouriensis | Missouri Orange Coneflower |
| Sabatia campestris | Prairie Rose Gentian |
| Salvia azurea subsp. pitcheri | Blue Sage |
| Sambucus racemosa subsp. pubens | Red-berried Elder |
| Schoenoplectus hallii | Hall's Bulrush |
| Scirpus hattorianus | Bulrush |
| Scirpus polyphyllus | Bulrush |
| Scleria pauciflora | Carolina Whipgrass |
| Sedum telephioides | American Orpine |
| Silene regia | Royal Catchfly |
| Sisyrinchium montanum | Mountain Blue-eyed Grass |
| Solidago sciaphila | Cliff Goldenrod |
| Sparganium emersum | Green-fruited Burreed |
| Spiranthes vernalis | Spring Ladies' Tresses |
| Styrax americana | Storax |
| Sullivantia sullivantii | Sullivantia |
| Talinum parviflorum | Small Flower-of-an-hour |
| Tetraneuris herbacea | Lakeside Daisy |
| Tofieldia glutinosa | False Asphodel |
| Trichomanes boschianum | Filmy fern |
| Trientalis borealis | Star-flower |
| Trifolium reflexum | Buffalo Clover |
| Triglochin maritima | Common Bog Arrowgrass |
| Triglochin palustris | Slender Bog Arrowgrass |
| Trillium viride | Green Trillium |
| Urtica chamaedryoides | Nettle |
| Utricularia intermedia | Flat-leaved Bladderwort |
| Utricularia minor | Small Bladderwort |
| Vaccinium macrocarpon | Large Cranberry |

| | |
|---|---|
| Veronica americana | American Brooklime |
| Veronica scutellata | Marsh Speedwell |
| Viburnum molle | Arrowwood |
| Viola blanda | White Hairy Violet |
| Viola canadensis | Canada Violet |
| Viola primulifolia | Primrose Violet |

Table1. Currently listed species – last observed, total occurrences, total seen since Jan 2002, # of protected occurrences, # of topographic quads with occurrences (Illinois Natural Heritage Biotics 4 Database, Febuary (parts 1 and 2) and July 2013 (part 3)).

Any species in light blue type was reviewed in the Plant List, Part 1 review that was discussed at the ESPB 158 mtg, held May 17, 2013

Yellow Cells

Species with 4 or fewer EOs and with observations within the last 20 years (since 1992). For species with no protected EOs, EOs were reviewed to confirm that habitat had not been reported as destroyed at all EOs. Staff recommendation is for no listing status change based on the low number of EOs, observation within the last 20 years, and habitat for species with no protected EOs has not been destroyed. No individual review produced.

Red Cells

Species with 4 or fewer EOs and with no observations within the last 20 years (since 1992). For species with no protected EOs, EOs were reviewed to confirm that habitat had not been reported as destroyed at all EOs. For species listed as threatened, species were reviewed for possible T to E recommendation. Also, surv w/ no obs reports were reviewed to confirm they were insufficient to recommended delisting as extirpated. Staff recommendation is for no listing status change based on the low number of EOs, habitat for species with no protected EOs has not been reported as destroyed, combined ecology/distribution/EO data information was not supportive of T to E recommendation, and surv w/ no obs reports are insufficient to recommend delisting as extirpated. No individual review produced.

Blue Cells

Per the Illinois Endangered Species Protection Act (520 ILCS 10/7), the Illinois List automatically adopts species and subspecies designated as endangered or threatened by the USFWS and the Board has the authority to list species that qualify as endangered or threatened as those terms are defined in the ESPA. The Board has in some cases listed subspecies or varieties of a species if those subspecies or varieties are the only representative of the species in Illinois. These subspecies and varieties have been listed as Illinois endangered or threatened, but are not the only representative of the species in Illinois. Staff recommendation is to remove these subspecies and varieties from the IL List. No individual review produced (see Table 5 for more information).

Gray Cells

Species not considered in this Part 2, 1st cut Plant list review (for Augist, 2013), but will be considered in the Part 3, 1st cut Plant list review (for August, 2013) or a subsequent iteration, if staff is not able to complete all plant reviews in two volumes.

| SCIENTIFIC_NAME | S_PRIMARY_COMMON_NAME | Current Status | Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|---|---|---|
| Adoxa moschatellina | Moschatel | E | 5/23/1986 | 1 | 0 | 0 | 1 | 1 | 0 |
| Agalinus skinneriana | Pale False Foxglove | T | 08/14/2010 | 21 | 16 | 12 | 21 | 14 | 12 |
| Alnus incana subsp. rugosa | Speckled Alder | E | 10/01/2011 | 5 | 4 | 2 | 5 | 4 | 3 |
| Amelanchier interior | Shadbush | T | 2010 | 14 | 10 | 5 | 13 | 6 | 4 |
| Amelanchier sanguinea | Shadbush | E | 06/26/2009 | 8 | 3 | 2 | 7 | 5 | 2 |
| Ammophila breviligulata | Marram Grass | E | 11/23/2009 | 9 | 9 | 2 | 6 | 2 | 2 |
| Amorpha nitens | Smooth False Indigo | E | 8/1/2007 | 2 | 1 | 0 | 2 | 1 | 1 |
| Arctopstaphylos uva-ursi | Bearberry | E | 11/28/2011 | 3 | 1 | 4 | 2 | 3 | 1 |
| Artemisia dracunculus | Dragon Wormwood | E | 8/19/2004 | 2 | 1 | 0 | 2 | 1 | 1 |
| Asclepias lanuginosa | Wooly Milkweed | E | 2009 | 15 | 5 | 7 | 15 | 8 | 4 |
| Asclepias meadii | Mead's Milkweed | IL E; Fed E | 06/21/2012 | 9 | 8 | 5 | 8 | 7 | 5 |
| Asclepias ovalifolia | Oval Milkweed | E | 6/7/2011 | 1 | 1 | 1 | 1 | 1 | 1 |
| Asclepias stenophylla | Narrow-leaved Green Milkweed | E | 7/27/2011 | 7 | 7 | 1 | 7 | 2 | 2 |
| Asplenium bradleyi | Bradley's Spleenwort | E | 10/17/2011 | 6 | 3 | 1 | 5 | 6 | 4 |
| Asplenium resiliens | Black Spleenwort | E | 6/18/2005 | 2 | 2 | 0 | 1 | 1 | 1 |
| Aster furcatus | Forked Aster | T | 08/30/2012 | 30 | 12 | 12 | 26 | 15 | 7 |
| Astragalus crassicarpus var. trichocalyx | Large Ground Plum | E | 8/14/2008 | 4 | 3 | 1 | 4 | 2 | 1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Astragalus distortus | Bent Milk Vetch | E | 04/10/2012 | 7 | 6 | 2 | 7 | 5 | 4 |
| Astragalus tennesseensis | Tennessee Milk Vetch | E | 5/10/2002 | 2 | 1 | 1 | 2 | 2 | 1 |
| Baptisia tinctoria | Yellow Wild Indigo | E | 8/27/2012 | 1 | 1 | 1 | 1 | 2 | 2 |
| Bartonia paniculata | Screwstem | E | 10/4/2006 | 2 | 2 | 1 | 2 | 1 | 1 |
| Beckmannia syzigachne | American Slough Grass | E | 07/31/2009 | 6 | 4 | 0 | 5 | 3 | 2 |
| Berberis canadensis | Allegheny Barberry | E | 1987 | 2 | 0 | 0 | 3 | 2 | 0 |
| Berchemia scandens | Supple-Jack | T | 11/13/1992 | 1 | 0 | 0 | 1 | 1 | 0 |
| Bessya bullii | Kitten Tails | T | 09/23/2011 | 29 | 19 | 9 | 22 | 11 | 11 |
| Betula allehaniensis | Yellow Birch | E | 5/15/2009 | 4 | 3 | 3 | 2 | 3 | 2 |
| Boltonia decurrens | Decurrent False Aster | IL T; Fed T | 10/10/2012 | 31 | 22 | 2 | 30 | 20 | 17 |
| Botrychium biternatum | Southern Grape Fern | T | 6/26/1997 | 7 | 0 | 0 | 7 | 3 | 0 |
| Botrychium campestre | Prairie Moonwort | E | 6/1/2009 | 2 | 2 | 0 | 1 | 1 | 1 |
| Botrychium matricariifolium | Daisyleaf Grape Fern | E | 5/31/2000 | 3 | 0 | 1 | 3 | 2 | 0 |
| Botrychium multifidum | Northern Grape Fern | E | 4/29/1998 | 4 | 0 | 2 | 5 | 3 | 0 |
| Botrychium simplex | Dwarf Grape Fern | E | 6/12/1993 | 4 | 0 | 2 | 4 | 3 | 0 |
| Bouteloua gracilis | Blue Grama | E | 9/30/2011 | 1 | 1 | 0 | 1 | 1 | 1 |
| Buchnera americana | Bluehearts | T | 7/26/2011 | 7 | 4 | 2 | 7 | 7 | 4 |
| Bumelia lanuginosa | Wooly Buckthorn | E | 6/6/2012 | 3 | 3 | 2 | 2 | 1 | 1 |
| Cakile edentula | Sea Rocket | T | 08/18/2009 | 14 | 13 | 2 | 6 | 2 | 2 |
| Calamogrostis insperata | Bluejoint Grass | E | 6/30/2008 | 3 | 2 | 0 | 3 | 1 | 1 |
| Calla palustris | Water Arum | E | 6/23/2009 | 1 | 1 | 1 | 1 | 1 | 1 |
| Calopogon oklahomensis | Oklahoma Grass Pink Orchid | E | 2010 | 2 | 2 | 2 | 2 | 1 | 1 |
| Calopogon tuberosus | Grass Pink Orchid | E | 07/03/2011 | 19 | 9 | 17 | 17 | 9 | 5 |
| Camassia angusta | Wild Hyacinth | E | 6/8/2011 | 1 | 1 | 0 | 1 | 1 | 1 |
| Cardamine pratensis var. palustris | Cuckoo Flower | E | 8/30/2002 | 3 | 1 | 2 | 3 | 2 | 2 |
| Carex alata | Winged Sedge | E | 6/13/2001 | 1 | 0 | 0 | 2 | 1 | 0 |
| Carex arkansana | Arkansas Sedge | E | 9/25/2012 | 5 | 4 | 0 | 7 | 3 | 3 |
| Carex atlantica | Sedge | T | 8/3/2009 | 2 | 2 | 1 | 2 | 1 | 1 |
| Carex aurea | Golden Sedge | T | 07/01/2011 | 16 | 13 | 4 | 12 | 4 | 3 |
| Carex bromoides | Sedge | T | 05/21/2012 | 16 | 12 | 7 | 16 | 9 | 6 |
| Carex brunnescens | Brownish Sedge | E | 6/6/2009 | 2 | 2 | 2 | 2 | 1 | 1 |
| Carex canescens var. disjuncta | Silvery Sedge | E | 7/16/2007 | 1 | 1 | 2 | 1 | 2 | 2 |
| Carex chordorrhiza | Cordroot Sedge | E | 5/24/2004 | 2 | 1 | 1 | 2 | 1 | 1 |
| Carex communis | Fibrous-rooted Sedge | T | 05/31/2012 | 18 | 8 | 6 | 15 | 11 | 5 |
| Carex crawfordii | Crawford's Sedge | E | 7/17/1994 | 2 | 0 | 1 | 2 | 1 | 0 |
| Carex crytolepis | Yellow Sedge | E | 07/01/2011 | 8 | 6 | 0 | 9 | 5 | 4 |
| Carex cumulata | Sedge | E | 2012 | 3 | 3 | 2 | 2 | 2 | 2 |
| Carex decomposita | Cypress-knee Sedge | E | 10/15/2008 | 5 | 3 | 1 | 5 | 4 | 3 |
| Carex diandra | Sedge | E | 6/13/1978 | 2 | 0 | 1 | 2 | 1 | 0 |
| Carex disperma | Shortleaf Sedge | E | 6/17/2008 | 4 | 3 | 4 | 4 | 2 | 2 |
| Carex echinata | Sedge | E | 06/17/2002 | 5 | 1 | 1 | 5 | 4 | 3 |
| Carex formosa | Sedge | E | 07/03/2009 | 5 | 3 | 0 | 4 | 2 | 1 |
| Carex garberi | Elk Sedge | E | 7/20/2011 | 3 | 2 | 1 | 3 | 2 | 1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Carex gigantea | Large Sedge | E | 9/28/2010 | 4 | 3 | 0 | 4 | 4 | 3 |
| Carex inops subsp. heliophila | Plains Sedge | E | 5/26/1985 | 4 | 0 | 1 | 5 | 2 | 0 |
| Carex intumescens | Swollen Sedge | T | 09/26/2011 | 13 | 5 | 3 | 12 | 7 | 3 |
| Carex nigromarginata | Black-edged Sedge | E | 6/28/2011 | 3 | 3 | 0 | 3 | 3 | 3 |
| Carex oligosperma | Few-seeded Sedge | T | 6/23/2009 | 4 | 1 | 2 | 3 | 3 | 1 |
| Carex oxylepis | Sharp-scaled Sedge | T | 6/24/2010 | 16 | 5 | 1 | 13 | 7 | 4 |
| Carex physorhyncha | Bellow's Beak Sedge | E | 6/17/1998 | 3 | 0 | 1 | 3 | 3 | 0 |
| Carex plantaginea | Plaintain-leaved Sedge | E | 5/25/2006 | 2 | 1 | 1 | 2 | 2 | 1 |
| Carex prasina | Drooping Sedge | T | 05/22/2012 | 9 | 4 | 2 | 9 | 9 | 4 |
| Carex reniformis | Reniform Sedge | E | 6/4/2004 | 2 | 1 | 0 | 2 | 1 | 1 |
| Carex trisperma | Three-seeded Sedge | E | 6/7/2009 | 2 | 2 | 3 | 2 | 2 | 2 |
| Carex tuckermanii | Tuckerman's Sedge | E | 2010 | 6 | 2 | 3 | 6 | 3 | 1 |
| Carex viridula | Little Green Sedge | T | 07/07/2011 | 21 | 11 | 5 | 17 | 6 | 4 |
| Carex willdenowii | Willdenow's Sedge | T | 5/20/2011 | 14 | 6 | 0 | 10 | 7 | 4 |
| Carex woodii | Pretty Sedge | T | 2010 | 22 | 17 | 10 | 15 | 8 | 7 |
| Carya aquatica | Water Hickory | T | 6/2/2009 | 5 | 3 | 1 | 6 | 5 | 3 |
| Carya pallida | Pale Hickory | E | 1987-02 | 2 | 0 | 1 | 3 | 2 | 0 |
| Castilleja sessiliflora | Downy Yellow Painted Cup | E | 2009 | 7 | 6 | 7 | 8 | 7 | 6 |
| Ceanothus herbaceus | Redroot | E | 09/28/2009 | 6 | 4 | 2 | 6 | 5 | 3 |
| Chamaedaphne calyculata | Leatherleaf | T | 06/23/2009 | 7 | 3 | 5 | 7 | 4 | 2 |
| Chamaelirium luteum | Fairy Wand | E | 8/3/2009 | 7 | 3 | 1 | 8 | 3 | 3 |
| Chamaesyce polygonifolia | Seaside Spurge | E | 07/20/2010 | 6 | 6 | 2 | 6 | 2 | 2 |
| Chimaphila maculata | Spotted Wintergreen | E | 7/28/1997 | 4 | 0 | 1 | 3 | 3 | 0 |
| Chimaphila umbellata | Pipsissewa | E | 6/12/1993 | 3 | 0 | 1 | 2 | 1 | 0 |
| Cimicifuga americana | American Bugbane | E | 10/9/2008 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cimicifuga racemosa | False Bugbane | E | 06/20/2007 | 4 | 1 | 1 | 4 | 4 | 1 |
| Cimicifuga rubifolia | Black Cohosh | T | 9/17/2010 | 18 | 5 | 1 | 14 | 7 | 3 |
| Circaea alpina | Small Enchanter's Nightshade | E | 1987 | 2 | 0 | 0 | 2 | 1 | 0 |
| Cirsium pitcheri | Pitcher's (Dune) Thistle | IL T; Fed T | 2011 | 2 | 2 | 1 | 2 | 2 | 2 |
| Cladrastis lutea | Yellowwood | E | 11/10/2007 | 1 | 1 | 0 | 1 | 1 | 1 |
| Clematis crispa | Blue Jasmine | E | 5/21/2009 | 5 | 2 | 0 | 5 | 4 | 2 |
| Clematis occidentalis | Mountain Clematis | E | 8/20/2003 | 1 | 1 | 0 | 1 | 1 | 1 |
| Clematis viorna | Leatherflower | E | 5/25/2011 | 2 | 1 | 1 | 2 | 3 | 1 |
| Collinsia violacea | Violet Collinsia | E | 5/21/2012 | 1 | 1 | 0 | 1 | 1 | 1 |
| Comptonia peregrina | Sweetfern | E | 2012 | 2 | 2 | 2 | 2 | 3 | 2 |
| Conioselinum chinense | Hemlock Parsley | E | 9/19/1996 | 1 | 0 | 1 | 1 | 1 | 0 |
| Corallorhiza maculata | Spotted Coral-root Orchid | T | 05/15/2009 | 13 | 2 | 5 | 12 | 9 | 2 |
| Cornus canadensis | Bunchberry | E | 6/14/2001 | 5 | 0 | 3 | 5 | 3 | 0 |
| Corydalis aurea | Golden Corydalis | E | 5/3/1998 | 1 | 0 | 0 | 1 | 1 | 0 |
| Corydalis halei | Hale's Corydalis | E | 4/26/2003 | 1 | 1 | 0 | 1 | 1 | 1 |
| Corydalis sempervirens | Pink Corydalis | E | 5/3/1998 | 2 | 0 | 0 | 2 | 2 | 0 |
| Corylus cornuta | Beaked Hazelnut | E | 7/16/1992 | 1 | 0 | 0 | 1 | 1 | 0 |
| Cynosciadium digitatum | Cynosciadium | E | 8/18/1993 | 3 | 0 | 0 | 1 | 1 | 0 |

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|---|---|---|---|---|---|---|---|---|---|
| Cyperus grayioides | Umbrella Sedge | T | 08/2007 | 12 | 7 | 5 | 13 | 6 | 4 |
| Cyperus lancastriensis | Galingale | T | 10/4/2005 | 3 | 2 | 1 | 3 | 3 | 2 |
| Cypripedium acaula | Moccasin Flower | E | 5/19/1999 | 2 | 0 | 1 | 2 | 2 | 0 |
| Cypripedium candidum | White Lady's Slipper | T | 04/19/2012 | 49 | 37 | 30 | 36 | 9 | 8 |
| Cypripedium parviflorum var. makasin | Small Yellow Lady's Slipper | E | 05/13/2009 | 10 | 7 | 7 | 7 | 3 | 3 |
| Cypripedium reginae | Showy Lady's Slipper | E | 9/15/2009 | 5 | 2 | 5 | 4 | 4 | 2 |
| Cystopteris laurentiana | Laurentian Fragile Fern | E | 1989-PRE | 1 | 0 | 1 | 1 | 1 | 0 |
| Dalea foliosa | Leafy Prairie Clover | IL E; Fed E | 10/07/2010 | 9 | 8 | 3 | 6 | 3 | 3 |
| Delphinium carolinianum | Wild Blue Larkspur | T | 2010 | 10 | 8 | 1 | 11 | 4 | 3 |
| Dennstaedtia punctilobula | Hay-scented Fern | E | 6/22/2011 | 8 | 7 | 1 | 5 | 2 | 2 |
| Deschampsia flexuosa | Hairgraass | E | 2003 | 1 | 1 | 0 | 1 | 1 | 1 |
| Dichanthelium boreale | Northern Panic Grass | E | 6/14/2008 | 3 | 1 | 2 | 2 | 2 | 1 |
| Dichanthelium joori | Panic Grass | E | 2008 | 3 | 1 | 1 | 3 | 2 | 1 |
| Dichanthelium portoricense | Hemlock Panic Grass | E | 8/20/1998 | 1 | 0 | 0 | 1 | 1 | 0 |
| Dichanthelium ravenelii | Ravenel's Panic Grass | E | 6/24/2008 | 3 | 2 | 0 | 3 | 1 | 1 |
| Dichanthelium yadkinense | Panic Grass | E | 8/3/2009 | 8 | 7 | 0 | 7 | 2 | 2 |
| Dodecatheon frenchii | French's Shootingstar | T | 06/22/2011 | 20 | 12 | 0 | 14 | 6 | 5 |
| Draba cuneifolia | Whitlow Grass | E | 7/23/2008 | 5 | 5 | 4 | 5 | 3 | 3 |
| Drosera intermedia | Narrow-leaved Sundew | T | 07/13/2012 | 13 | 5 | 7 | 8 | 7 | 3 |
| Drosera rotundifolia | Round-leaved Sundew | E | 08/11/2009 | 7 | 3 | 6 | 6 | 3 | 2 |
| Dryopteris celsa | Log Fern | E | 5/8/2005 | 1 | 1 | 1 | 1 | 1 | 1 |
| Echinodorus tenellus | Small Burhead | E | 8/25/2010 | 3 | 1 | 1 | 3 | 2 | 1 |
| Eleocharis olivacea | Capitate Spikerush | E | 9/9/2002 | 3 | 1 | 1 | 3 | 2 | 1 |
| Eleocharis pauciflora | Few-flowered Spikerush | E | 10/26/2004 | 4 | 2 | 2 | 3 | 3 | 2 |
| Eleocharis rostellata | Beaked Spike Rush | T | 10/7/2009 | 13 | 5 | 12 | 8 | 5 | 3 |
| Elymus trachycaulus | Bearded Wheat Grass | T | 08/12/2009 | 11 | 3 | 6 | 9 | 6 | 2 |
| Epilobium strictum | Downy Willow Herb | T | 09/15/2009 | 10 | 4 | 9 | 5 | 2 | 2 |
| Equisetum pratense | Meadow Horsetail | T | 6/28/2011 | 10 | 6 | 2 | 8 | 3 | 3 |
| Equisetum scirpoides | Dwarf Scouring Rush | E | 1978 | 1 | 0 | 0 | 1 | 1 | 0 |
| Equisetum sylvaticum | Woodland Horsetail | E | 6/29/2010 | 3 | 2 | 1 | 3 | 2 | 1 |
| Eriophorum virginicum | Rusty Cotton Grass | E | 10/20/2009 | 4 | 2 | 4 | 3 | 2 | 1 |
| Eryngium prostratum | Eryngo | E | 8/8/2002 | 6 | 1 | 0 | 7 | 5 | 1 |
| Euonymus americanus | American Strawberry Bush | E | 6/16/2011 | 5 | 4 | 2 | 7 | 4 | 3 |
| Eupatorium hyssopifolium | Hyssop-leaved Thoroughwort | E | none | 0 | 0 | 0 | 0 | 0 | 0 |
| Euphorbia spathulata | Spurge | E | 5/12/1987 | 1 | 0 | 1 | 1 | 1 | 0 |
| Filipendula rubra | Queen-of-the-Prairie | E | 07/20/2012 | 23 | 15 | 11 | 22 | 13 | 13 |
| Fimbristylis vahlii | Vahl's Fimbristylis | E | 8/23/2006 | 3 | 1 | 0 | 3 | 1 | 1 |
| Galactia mohlenbrockii | Boykin's Dioclea | E | 8/7/1996 | 2 | 0 | 2 | 2 | 1 | 0 |
| Galium lanceolatum | Wild Licorice | E | none | 0 | 0 | 0 | 0 | 0 | 0 |
| Galium virgatum | Dwarf Bedstraw | E | 5/12/2012 | 3 | 2 | 1 | 2 | 1 | 1 |
| Geranium bicknellii | Northern Cranesbill | E | 07/31/2011 | 8 | 6 | 3 | 5 | 3 | 3 |
| Glyceria arkansana | Arkansas Mannagrass | E | 5/24/2007 | 5 | 2 | 0 | 5 | 3 | 2 |
| Gratiola quartermaniae | Hedge Hyssop | E | 6/9/2009 | 1 | 1 | 0 | 1 | 1 | 1 |

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|---|---|---|---|---|---|---|---|---|---|
| Gymnocarpium dryopteris | Oak Fern | E | 6/29/2010 | 2 | 1 | 1 | 2 | 2 | 1 |
| Gymnocarpium robertianum | Scented Oak Fern | E | 1986 | 1 | 0 | 0 | 1 | 1 | 0 |
| Hackelia deflexa var. americana | Stickseed | E | 6/27/1995 | 4 | 0 | 2 | 5 | 2 | 0 |
| Halesia carolina | Silverbell Tree | E | 6/28/2010 | 3 | 2 | 2 | 3 | 2 | 2 |
| Helianthus angustifolius | Narrow-leaved Sunflower | T | 2011 | 4 | 4 | 2 | 4 | 2 | 2 |
| Helianthus giganteus | Tall Sunflower | E | 10/5/2010 | 10 | 4 | 4 | 9 | 6 | 4 |
| Heliotropium tenellum | Slender Heliotrope | E | 5/13/2011 | 3 | 2 | 2 | 4 | 1 | 1 |
| Heteranthera reniformis | Mud Plantian | E | 10/29/2004 | 4 | 1 | 0 | 4 | 3 | 1 |
| Hexalectris spicata | Crested Coralroot Orchid | E | 07/10/2012 | 7 | 5 | 2 | 7 | 4 | 3 |
| Hudsonia tomentosa | False Heather | E | 9/30/2011 | 4 | 3 | 1 | 6 | 4 | 3 |
| Huperzia porophila | Cliff Clubmoss | T | 6/22/2011 | 5 | 1 | 1 | 3 | 2 | 1 |
| Hydrolea uniflora | One-flowered Hydrolea | E | 8/19/2010 | 4 | 1 | 0 | 4 | 3 | 1 |
| Species following this break (and that are not in light blue text) and preceding the next break are those that were reviewed in the Plant List, Part 2 review at the ESPB 159th meeting, held 08/16/13. | | | | | | | | | |
| Hymenopappus scabiosaeus | Old Plainsman | T | 05/21/2012 | 5 | 3 | 2 | 6 | 3 | 3 |
| Hypericum adpressum | Shore St. John's Wort | E | 07/13/2012 | 5 | 4 | 5 | 4 | 4 | 3 |
| Hypericum kalmianum | Kalm's St. John's Wort | E | 07/20/2012 | 4 | 4 | 6 | 4 | 2 | 2 |
| Iliamna remota | Kankakee Mallow | E | 7/16/2009 | 2 | 1 | 2 | 2 | 2 | 1 |
| Iresine rhizomatosa | Bloodleaf | E | 9/22/2010 | 6 | 2 | 2 | 6 | 4 | 2 |
| Isoetes butleri | Butler's Quillwort | E | 2010 | 7 | 6 | 1 | 5 | 2 | 2 |
| Isotria verticillata | Whorled Pogonia | E | 8/3/2009 | 1 | 1 | 0 | 1 | 1 | 1 |
| Juncus alpinus | Richardson's Rush | T | 07/01/2011 | 11 | 8 | 2 | 9 | 4 | 3 |
| Juncus vaseyi | Vasey's Rush | E | 1994 | 1 | 0 | 1 | 1 | 1 | 0 |
| Juniperus communis | Ground Juniper | T | 10/21/2009 | 8 | 3 | 1 | 7 | 4 | 2 |
| Juniperus horizontalis | Trailing Juniper | E | 10/11/2011 | 2 | 2 | 1 | 2 | 2 | 2 |
| Justica ovata | Water Willow | E | 8/20/1991 | 1 | 0 | 0 | 1 | 2 | 1 |
| Larix laricina | Tamarack | T | 06/23/2009 | 5 | 4 | 4 | 4 | 2 | 2 |
| Lathyrus ochroleucus | Pale Vetchling | T | 2010 | 25 | 13 | 9 | 20 | 6 | 4 |
| Lechea intermedia | Pinweed | T | 09/18/2005 | 9 | 2 | 5 | 8 | 6 | 2 |
| Lespdeza leptochachya | Prairie Bush Clover | IL E; Fed E | 07/26/2010 | 11 | 7 | 5 | 11 | 6 | 4 |
| Lesquerella ludoviciana | Silvery Bladderpod | E | 3/29/2012 | 1 | 1 | 1 | 1 | 1 | 1 |
| Liatris scariosa var. nieuwlandii | Blazing Star | T | 08/22/2012 | 45 | 33 | 6 | 44 | 21 | 17 |
| Lonicera dioica var. glaucescens | Red Honeysuckle | E | 6/16/2011 | 3 | 2 | 0 | 3 | 2 | 1 |
| Lonicera flava | Yellow Honeysuckle | E | 5/18/2006 | 5 | 2 | 1 | 4 | 3 | 2 |
| Luzula acuminata | Hairy Woodrush | E | 6/24/2010 | 6 | 3 | 1 | 4 | 3 | 3 |
| Lycopodiella inundata | Bog Clubmoss | E | 7/6/2001 | 2 | 0 | 0 | 1 | 1 | 0 |
| Lycopodium clavatum | Running Pine | E | 10/5/2006 | 5 | 1 | 2 | 5 | 5 | 1 |
| Lycopodium dendroideum | Ground Pine | E | 02/23/2012 | 5 | 1 | 1 | 5 | 5 | 1 |
| Lysimachia radicans | Creeping Loosestrife | E | 9/26/2011 | 4 | 4 | 1 | 2 | 2 | 2 |
| Malus angustifolia | Narrow-leaved Crabapple | E | 7/2/2008 | 2 | 1 | 1 | 2 | 1 | 1 |
| Malvastrum hispidum | False Mallow | E | 08/26/2009 | 4 | 2 | 1 | 3 | 2 | 1 |

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|---|---|---|---|---|---|---|---|---|---|
| Matelea decipiens | Climbing Milkweed | E | 06/02/2012 | 5 | 3 | 2 | 5 | 4 | 2 |
| Matelea obliqua | Climbing Milkweed | T | 05/30/2012 | 20 | 15 | 1 | 10 | 4 | 4 |
| Medeola virginiana | Indian Cucumber Root | E | 5/31/2009 | 1 | 1 | 1 | 1 | 1 | 1 |
| Megalodonta beckii | Water Marigold | E | 10/15/2003 | 2 | 2 | 1 | 1 | 1 | 1 |
| Melanthera nivea | White Melanthera | E | 10/3/2005 | 2 | 2 | 1 | 2 | 2 | 2 |
| Melanthium virginicum | Bunchflower | T | 05/24/2012 | 21 | 9 | 3 | 20 | 12 | 5 |
| Melica mutica | Two-Flowered Melic Grass | E | 5/10/2010 | 3 | 2 | 1 | 2 | 1 | 1 |
| Melothria pendula | Squirting Cucumber | T | 7/1/2007 | 13 | 2 | 0 | 13 | 6 | 2 |
| Menyanthes trifoliata | Buckbean | T | 09/29/2009 | 9 | 6 | 8 | 7 | 2 | 3 |
| Mimulus glabratus | Yellow Monkey Flower | E | 03/2012 | 5 | 3 | 3 | 5 | 5 | 3 |
| Minuartia patula | Slender Sandwort | T | 2010 | 8 | 6 | 4 | 7 | 5 | 4 |
| Mirabilis hirsuta | Hairy Umbrella-wort | E | 2003-08 | 2 | 1 | 1 | 3 | 1 | 1 |
| Nemophila triloba | Baby Blue-eyes | E | 1998-04 | 1 | 0 | 0 | 1 | 1 | 0 |
| Nothocalais cuspidata | Prairie Dandelion | E | 04/27/2012 | 9 | 3 | 5 | 8 | 5 | 3 |
| Oenothera perennis | Small Sundrops | T | 2010 | 20 | 17 | 9 | 16 | 5 | 4 |
| Opuntia fragilis | Fragile Prickly Pear | E | 9/23/2011 | 1 | 1 | 0 | 1 | 1 | 1 |
| Orobanche fasciculata | Clustered Broomrape | E | 6/20/2003 | 4 | 1 | 2 | 2 | 2 | 1 |
| Orobanche ludoviciana | Broomrape | T | 11/28/2012 | 17 | 7 | 4 | 14 | 9 | 6 |
| Oxalis illinoensis | Illinois Wood Sorrel | E | 5/16/2003 | 6 | 6 | 0 | 7 | 3 | 3 |
| Paspalum dissectum | Bead Grass | E | 09/11/1987 | 1 | 0 | 0 | 1 | 1 | 0 |
| Penstemon brevisepalus | Short-sepaled Beard Tongue | E | 5/7/1981 | 1 | 0 | 0 | 1 | 1 | 0 |
| Penstemon grandiflorus | Large-flowered Beard Tongue | E | 6/4/2009 | 5 | 4 | 2 | 5 | 4 | 3 |
| Penstemon tubaeflorus | Tube Beard Tongue | E | 05/21/2012 | 10 | 6 | 3 | 10 | 7 | 4 |
| Phacelia gilioides | Ozark Phacelia | T | 1997 | 1 | 0 | 0 | 1 | 1 | 0 |
| Phaeophyscia leana | Lea's Bog Lichen | T | 2/24/2002 | 23 | 14 | 0 | 13 | 5 | 3 |
| Phegopteris connectilis | Long Beech Fern | E | 12/11/1998 | 2 | 0 | 1 | 3 | 2 | 0 |
| Phlox pilosa subsp. sangamonensis | Sangamon Phlox | E | 07/05/2012 | 7 | 5 | 0 | 4 | 2 | 2 |
| Pinus banksiana | Jack Pine | E | 2008 | 4 | 4 | 3 | 5 | 5 | 5 |
| Pinus echinata | Shortleaf Pine | E | 2012 | 4 | 4 | 1 | 4 | 4 | 4 |
| Pinus resinosa | Red Pine | E | 2001-10 | 1 | 0 | 0 | 1 | 1 | 0 |
| Planera aquatica | Water Elm | T | 9/30/2010 | 6 | 3 | 3 | 6 | 5 | 3 |
| Plantago cordata | Heart-leaved Plantain | E | 06/09/2011 | 15 | 13 | 2 | 11 | 11 | 9 |
| Platanthera ciliaris | Orange Fringed Orchid | E | 7/6/2012 | 2 | 2 | 3 | 2 | 2 | 2 |
| Platanthera clavellata | Wood Orchid | E | 8/11/2009 | 8 | 3 | 4 | 7 | 5 | 2 |
| Platanthera flava++ | Tubercled Orchid++ | T | 07/01/2011 | 23 | 11 | 13 | 15 | 10 | 5 |
| Platanthera leucophaea | Eastern Prairie Fringed Orchid | IL E; Fed T | 2012 | 43 | 34 | 23 | 25 | 11 | 10 |
| Platanthera psycodes | Purple Fringed Orchid | E | 08/08/2009 | 5 | 4 | 5 | 3 | 2 | 2 |
| Poa alsodes | Grove Bluegrass | E | 6/4/2008 | 6 | 2 | 2 | 6 | 4 | 2 |
| Poa languida | Weak Bluegrass | E | 5/14/2012 | 4 | 2 | 1 | 4 | 4 | 2 |
| Poa wolfii | Wolf's Bluegrass | E | 05/14/2012 | 10 | 5 | 1 | 10 | 5 | 5 |
| Pogonia ophioglossoides | Snake-mouth | E | 06/23/2009 | 7 | 2 | 6 | 7 | 3 | 2 |
| Polanisia jamesii | James' Clammyweed | E | 8/31/2012 | 2 | 2 | 0 | 5 | 3 | 3 |
| Polygala incarnata | Pink Milkwort | E | 6/30/2006 | 8 | 1 | 2 | 8 | 7 | 1 |

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|---|---|---|---|---|---|---|---|---|---|
| Polygonatum pubescens | Downy Solomon's Seal | E | 06/06/2009 | 9 | 6 | 1 | 5 | 2 | 2 |
| Polygonum arifolium | Halberd-leaved Tearthumb | E | 6/26/2007 | 3 | 2 | 0 | 3 | 2 | 1 |
| Polygonum careyi | Carey's Heartsease | E | 2010 | 6 | 5 | 2 | 4 | 3 | 2 |
| Populus balsamifera | Balsam Poplar | E | 6/29/2011 | 5 | 4 | 3 | 4 | 3 | 3 |
| Potamogeton gramineus | Grass-leaved Pondweed | T | 05/05/2012 | 15 | 5 | 3 | 7 | 3 | 2 |
| Potamogeton praelongus | White-stemmed Pondweed | E | 9/25/2003 | 7 | 3 | 2 | 3 | 1 | 1 |
| Potamogeton pulcher | Spotted Pondweed | E | 1992 | 1 | 0 | 0 | 2 | 1 | 0 |
| Potamogeton robbinsii | Fern Pondweed | E | 09/25/2003 | 6 | 3 | 1 | 4 | 3 | 1 |
| Potamogeton strictifolius | Stiff Pondweed | E | 7/31/1991 | 1 | 0 | 1 | 1 | 1 | 0 |
| Primula mistassinica | Bird's-eye Primrose | E | 10/21/2004 | 1 | 1 | 0 | 1 | 1 | 1 |
| Ptilimnium nuttallii | Mock's Bishop Weed | E | 8/25/2000 | 2 | 0 | 0 | 3 | 2 | 0 |
| Quercus montana | Rock Chestnut Oak | T | 10/21/2008 | 8 | 4 | 0 | 8 | 6 | 4 |
| Quercus phellos | Willow Oak | T | 9/28/2010 | 10 | 7 | 3 | 9 | 5 | 4 |
| Species following this break (and that are not in light blue text) are anticipated for review in the Plant List , Part 3 review – expected for discussion at the ESPB 160 meeting 11/15/2013 | | | | | | | | | |
| Quercus texana | Nuttall's Oak | E | 7/1/2006 | 4 | 3 | 3 | 3 | 2 | 2 |
| Ranunculus rhomboideus | Prairie Buttercup | T | 04/28/2010 | 9 | 5 | 6 | 6 | 4 | 2 |
| Rhamnus alnifolia | Alder Buckthorn | E | 7/20/1999 | 2 | 0 | 2 | 2 | 2 | 0 |
| Rhexia mariana | Dull Meadow Beauty | E | 8/3/2009 | 8 | 2 | 1 | 6 | 4 | 3 |
| Rhynchospora alba | Beaked Rush | T | 1999 | 7 | 0 | 6 | 7 | 3 | 0 |
| Rhynchospora glomerata | Clustered Beak Rush | E | 6/30/2008 | 3 | 1 | 0 | 2 | 2 | 1 |
| Ribes hirtellum | Northern Gooseberry | E | 2002-07 | 5 | 2 | 2 | 4 | 1 | 1 |
| Rosa acicularis | Bristly Rose | E | 8/20/2003 | 2 | 1 | 0 | 2 | 1 | 1 |
| Rubus odoratus | Purple-flowering Raspberry | E | 06/27/2012 | 10 | 6 | 3 | 7 | 5 | 5 |
| Rubus pubescens | Dwarf Raspberry | T | 05/31/2009 | 12 | 8 | 6 | 9 | 4 | 2 |
| Rubus schneideri | Bristly Blackberry | T | 2009 | 9 | 4 | 3 | 6 | 5 | 2 |
| Rudbeckia missouriensis | Missouri Orange Coneflower | T | 09/30/2011 | 5 | 5 | 3 | 5 | 2 | 2 |
| Sabatia campestris | Prairie Rose Gentian | E | 2009 | 8 | 5 | 1 | 6 | 5 | 4 |
| Sagittaria australis | Arrowhead | E | 8/3/2009 | 1 | 1 | 1 | 1 | 1 | 1 |
| Salix serissima | Autumn Willow | E | 9/3/2009 | 4 | 1 | 4 | 3 | 2 | 1 |
| Salix syrticola | Dune Willow | E | 9/17/2001 | 1 | 0 | 2 | 1 | 1 | 0 |
| Salvia asurea subsp. pitcheri | Blue Sage | T | 6/10/2011 | 8 | 3 | 1 | 7 | 6 | 3 |
| Sambucus racemosa subsp. pubens | Red-berried Elder | E | 7/8/2011 | 8 | 3 | 4 | 5 | 5 | 2 |
| Sanguisorba canadensis | American Burnet | E | 9/1/2011 | 3 | 1 | 0 | 2 | 2 | 1 |
| Sanicula smallii | Southern Sanicula | E | 7/13/2002 | 1 | 1 | 0 | 1 | 1 | 1 |
| Sarracenia purpurea | Pitcher Plant | E | 08/15/2011 | 7 | 6 | 6 | 6 | 2 | 2 |
| Saxifraga virginiensis | Early Saxifrage | E | 10/17/2008 | 4 | 2 | 0 | 2 | 1 | 1 |
| Schizachne purpurascens | False Melic Grass | E | 5/6/2009 | 1 | 1 | 0 | 1 | 1 | 1 |
| Schoenoplectus hallii | Hall's Bulrush | T | 10/22/2010 | 17 | 7 | 2 | 13 | 5 | 1 |
| Schoenoplectus purshianus | Weak Bulrush | E | 2002 | 3 | 0 | 0 | 3 | 3 | 0 |
| Schoenoplectus smithii | Smith's Bulrush | E | 8/28/2003 | 1 | 1 | 1 | 1 | 1 | 1 |

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|---|---|---|---|---|---|---|---|---|---|
| Scirpus hattorianus | Bulrush | E | 2010 | 6 | 4 | 4 | 6 | 4 | 3 |
| Scirpus microcarpus | Bulrush | E | 7/6/2009 | 2 | 2 | 1 | 1 | 1 | 1 |
| Scirpus polyphyllus | Bulrush | T | 8/3/2009 | 6 | 2 | 2 | 6 | 5 | 1 |
| Scleria muhlenbergii | Muhlenberg's Nut Rush | E | 8/9/2002 | 2 | 1 | 0 | 2 | 2 | 1 |
| Scleria pauciflora | Carolina Whipgrass | E | 2012 | 11 | 6 | 0 | 11 | 7 | 4 |
| Sedum telephioides | American Orpine | T | 8/19/2011 | 13 | 5 | 1 | 11 | 8 | 4 |
| Sheperdia canadensis | Buffaloberry | E | 6/14/2011 | 3 | 1 | 0 | 2 | 1 | 1 |
| Silene ovata | Ovate Catchfly | E | 10/17/2008 | 4 | 4 | 0 | 4 | 1 | 1 |
| Silene regia | Royal Catchfly | E | 10/15/2012 | 18 | 15 | 4 | 15 | 13 | 11 |
| Sisyrinchium atlanticum | Eastern Blue-eyed Grass | T | 5/16/2012 | 6 | 3 | 1 | 6 | 4 | 3 |
| Sisyrinchium montanum | Mountain Blue-eyed Grass | E | 2010 | 11 | 6 | 2 | 8 | 3 | 2 |
| Solidago sciaphila | Cliff Goldenrod | T | 9/7/2011 | 13 | 8 | 6 | 15 | 3 | 3 |
| Sorbus americana | American Mountain Ash | E | 6/14/2001 | 1 | 0 | 0 | 1 | 1 | 0 |
| Sparganium americanum | American Burreed | E | 10/5/2004 | 3 | 1 | 1 | 4 | 4 | 1 |
| Sparganium emersum | Green-fruited Burreed | E | 2011 | 7 | 1 | 2 | 8 | 6 | 3 |
| Spiranthes lucida | Yellow-lipped Ladies' Tresses | E | 9/10/2011 | 5 | 5 | 2 | 12 | 9 | 8 |
| Spiranthes vernalis | Spring Ladies' Tresses | E | 06/29/2012 | 12 | 10 | 1 | 12 | 9 | 8 |
| Stellaria pubera | Great Chickweed | E | 05/29/2009 | 4 | 1 | 1 | 4 | 3 | 1 |
| Stenanthium gramineum | Grass-leaved Lily | E | 05/21/2012 | 12 | 10 | 2 | 11 | 9 | 9 |
| Stylisma pickeringii | Patterson's Bindweed | E | 6/4/2009 | 4 | 2 | 0 | 3 | 3 | 2 |
| Styrax americana | Storax | T | 9/26/2011 | 23 | 11 | 5 | 19 | 11 | 6 |
| Styrax grandifolius | Bigleaf Snowbell Bush | E | 11/10/2007 | 1 | 1 | 0 | 1 | 1 | 1 |
| Sullivantia sullivantia | Sullivantia | T | 6/14/2011 | 7 | 3 | 2 | 8 | 4 | 2 |
| Symphoricarpos ablus var. albus | Snowberry | E | 5/1/2007 | 3 | 1 | 2 | 3 | 3 | 1 |
| Synandra hispidula | Hairy Synandra | E | 5/12/2011 | 5 | 5 | 1 | 3 | 1 | 1 |
| Talinum calycinum | Fameflower | E | 7/24/2009 | 2 | 2 | 0 | 2 | 2 | 2 |
| Talinum parviflorum | Small Flower-of-an-hour | T | 7/27/2010 | 8 | 3 | 2 | 9 | 4 | 2 |
| Tetraneuris herbacea | Lakeside Daisy | IL E; Fed E | 05/02/2010 | 6 | 6 | 3 | 5 | 4 | 4 |
| Thelypteris noveboracensis | New York Fern | E | 5/31/2007 | 1 | 1 | 0 | 1 | 1 | 1 |
| Tilia heterophylla | White Basswood | E | 10/2/2005 | 3 | 1 | 2 | 4 | 3 | 1 |
| Tofieldia glutinosa | False Asphodel | T | 09/28/2009 | 9 | 4 | 7 | 8 | 4 | 3 |
| Tomanthera auriculata | Ear-leafed Foxglove | T | 10/01/2012 | 47 | 23 | 12 | 37 | 23 | 13 |
| Torreyochloa pallida | Pole Manna-Grass | E | 6/18/2005 | 2 | 1 | 1 | 2 | 2 | 1 |
| Tradescantia bracteata | Prairie Spiderwort | T | 11/13/2002 | 5 | 2 | 0 | 6 | 3 | 2 |
| Trichomanes boschianum | Filmy fern | E | 9/29/2011 | 9 | 3 | 0 | 6 | 3 | 2 |
| Trichophorum cespitosum | Tufted Bulrush | E | 1991 | 3 | 0 | 3 | 3 | 2 | 0 |
| Trientalis borealis | Star-flower | E | 06/23/2009 | 6 | 3 | 4 | 7 | 4 | 3 |
| Trifolium reflexum | Buffalo Clover | T | 2012 | 21 | 12 | 2 | 21 | 13 | 8 |
| Triglochin maritima | Common Bog Arrowgrass | T | 06/29/2011 | 18 | 9 | 7 | 13 | 3 | 2 |
| Triglochin palustris | Slender Bog Arrowgrass | T | 09/11/2009 | 16 | 7 | 12 | 14 | 6 | 5 |
| Trillium cernuum | Nodding Trillium | E | 06/12/2009 | 4 | 4 | 2 | 4 | 2 | 2 |
| Trillium erectum | Ill-scented Trillium | E | 6/15/2011 | 4 | 3 | 3 | 4 | 3 | 3 |
| Trillium viride | Green Trillium | E | 5/15/2008 | 6 | 2 | 1 | 7 | 6 | 2 |

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|---|---|---|---|---|---|---|---|---|---|
| Ulmus thomasii | Rock Elm | E | 5/3/2011 | 3 | 1 | 0 | 3 | 3 | 1 |
| Urtica chamaedryoides | Nettle | T | 5/24/2007 | 5 | 1 | 0 | 3 | 2 | 1 |
| Utricularia cornuta | Horned Bladderwort | E | 9/18/2009 | 2 | 1 | 2 | 2 | 2 | 1 |
| Utricularia intermedia | Flat-leaved Bladderwort | T | 09/18/2009 | 12 | 9 | 7 | 9 | 4 | 3 |
| Utricularia minor | Small Bladderwort | E | 09/09/2009 | 5 | 3 | 3 | 5 | 3 | 2 |
| Vaccinium corymbosum | Highbush Blueberry | E | 2012 | 4 | 3 | 3 | 4 | 4 | 3 |
| Vaccinium macrocarpon | Large Cranberry | E | 11/13/2005 | 9 | 4 | 8 | 8 | 4 | 2 |
| Vaccinium oxycoccos | Small Cranberry | E | 6/23/2011 | 4 | 3 | 3 | 5 | 2 | 1 |
| Vaccinium stamineum | Deerberry | E | 7/10/2002 | 1 | 1 | 0 | 1 | 1 | 0 |
| Valeriana uliginosa | Marsh Valerian | E | 6/6/2007 | 2 | 2 | 2 | 3 | 1 | 1 |
| Valerianella chenopodifolia | Corn Salad | E | 5/2/1987 | 1 | 0 | 0 | 1 | 1 | 0 |
| Valerianella umbilicata | Corn Salad | E | 5/31/2011 | 3 | 2 | 1 | 3 | 3 | 2 |
| Veronica americana | American Brooklime | E | 6/23/2005 | 5 | 1 | 1 | 5 | 3 | 1 |
| Veronica scutellata | Marsh Speedwell | T | 08/25/2009 | 25 | 14 | 14 | 18 | 7 | 5 |
| Viburnum molle | Arrowwood | T | 11/6/2004 | 10 | 5 | 2 | 10 | 6 | 4 |
| Viola blanda | White Hairy Violet | E | 2000 | 5 | 0 | 2 | 5 | 4 | 0 |
| Viola canadensis | Canada Violet | E | 10/9/2008 | 7 | 4 | 2 | 6 | 5 | 3 |
| Viola conspersa | Dog Violet | T | 05/05/2010 | 19 | 16 | 6 | 10 | 6 | 5 |
| Viola primulifolia | Primrose Violet | E | 09/18/2012 | 5 | 5 | 2 | 3 | 2 | 2 |
| Woodsia ilvensis | Rusty Woodsia | E | 6/24/2010 | 3 | 1 | 2 | 3 | 2 | 1 |
| Zigadenus elegans | White Camass | E | 6/14/2011 | 3 | 1 | 2 | 3 | 2 | 1 |

*++ = The ESPB voted at the 05/17/2013 meeting to combine varieties flava and herbiola and the species Platanthera flava will be listed as threatened. The proposed change is not official at this time; it would become official if it is continued through the entire statutorily required List revision process. For the purposes of this species review, the species P. flava is generally reviewed using combined data for the two varieties.*

Table 2. Currently listed species, observed element occurrences and counties with observed occurrences for respective 5-year intervals ending in 2011 (some species include 2012 data also) (Illinois Natural Heritage Biotics 4 Database, Febuary (parts 1 and 2) and July 2013 (part 3)).

Any species in light blue type was reviewed in the Plant List, Part 1 review that was discussed at the ESPB 158 mtg, held May 17, 2013

Yellow Cells

Species with 4 or fewer EOs and with observations within the last 20 years (since 1992). For species with no protected EOs, EOs were reviewed to confirm that habitat had not been reported as destroyed at all EOs. Staff recommendation is for no listing status change based on the low number of EOs, observation within the last 20 years, and habitat for species with no protected EOs has not been destroyed. No individual review produced.

Red Cells

Species with 4 or fewer EOs and with no observations within the last 20 years (since 1992). For species with no protected EOs, EOs were reviewed to confirm that habitat had not been reported as destroyed at all EOs. For species listed as threatened, species were reviewed for possible T to E recommendation. Also, surv w/ no obs reports were reviewed to confirm they were insufficient to recommended delisting as extirpated. Staff recommendation is for no listing status change based on the low number of EOs, habitat for species with no protected EOs has not been reported as destroyed, combined ecology/distribution/EO data information was not supportive of T to E recommendation, and surv w/ no obs reports are insufficient to recommend delisting as extirpated. No individual review produced.

Blue Cells

Per the Illinois Endangered Species Protection Act (520 ILCS 10/7), the Illinois List automatically adopts species and subspecies designated as endangered or threatened by the USFWS and the Board has the authority to list species that qualify as endangered or threatened as those terms are defined in the ESPA. The Board has in some cases listed subspecies or varieties of a species if those subspecies or varieties are the only representative of the species in Illinois. These subspecies and varieties have been listed as Illinois endangered or threatened, but are not the only representative of the species in Illinois. Staff recommendation is to remove these subspecies and varieties from the IL List. No individual review produced (see Table 5 for more information).

Gray Cells

Species not considered in this Part 2, 1st cut Plant list review (for Augist, 2013), but will be considered in the Part 3, 1st cut Plant list review (for August, 2013) or a subsequent iteration, if staff is not able to complete all plant reviews in two volumes.

| SCIENTIFIC_NAME | S_PRIMARY_COMMON_NAME | EO 1982-1986 | EO 1987-1991 | EO 1992-1996 | EO 1997-2001 | EO 2002-2006 | EO 2007-2011 | EO 2012 | # Cos 1982-1986 | # Cos 1987-1991 | # Cos 1992-1996 | # Cos 1997-2001 | # Cos 2002-2006 | # Cos 2007-2011 | # Cos 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adoxa moschatellina | Moschatel | | | | | | | | | | | | | | |
| Agalinus skinneriana | Pale False Foxglove | 1 | 0 | 11 | 13 | 14 | 5 | 0 | 1 | 0 | 8 | 10 | 10 | 5 | 0 |
| Alnus incana subsp. rugosa | Speckled Alder | | | | | | | | | | | | | | |
| Amelanchier interior | Shadbush | 2 | 2 | 6 | 4 | 5 | 8 | 0 | 1 | 2 | 4 | 2 | 3 | 3 | 0 |
| Amelanchier sanguinea | Shadbush | 0 | 1 | 2 | 3 | 2 | 3 | 0 | 0 | 1 | 2 | 3 | 1 | 2 | 0 |
| Ammophila breviligulata | Marram Grass | 1 | 3 | 3 | 4 | 6 | 6 | 0 | 1 | 3 | 3 | 4 | 6 | 6 | 0 |
| Amorpha nitens | Smooth False Indigo | | | | | | | | | | | | | | |
| Arctopstaphylos uva-ursi | Bearberry | | | | | | | | | | | | | | |
| Artemisia dracunculus | Dragon Wormwood | | | | | | | | | | | | | | |
| Asclepias lanuginosa | Wooly Milkweed | 5 | 6 | 4 | 1 | 3 | 4 | 0 | 4 | 4 | 4 | 1 | 3 | 4 | 0 |
| Asclepias meadii | Mead's Milkweed | 3 | 3 | 9 | 10 | 3 | 5 | 2 | 2 | 2 | 6 | 7 | 2 | 4 | 2 |
| Asclepias ovalifolia | Oval Milkweed | | | | | | | | | | | | | | |
| Asclepias stenophylla | Narrow-leaved Green Milkweed | 1 | 4 | 3 | 4 | 7 | 3 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 0 |
| Asplenium bradleyi | Bradley's Spleenwort | 1 | 1 | 3 | 3 | 1 | 2 | 0 | 1 | 1 | 5 | 3 | 1 | 3 | 0 |
| Asplenium resiliens | Black Spleenwort | | | | | | | | | | | | | | |
| Aster furcatus | Forked Aster | 2 | 6 | 8 | 13 | 10 | 7 | 1 | 2 | 5 | 5 | 7 | 5 | 5 | 1 |
| Astragalus crassicarpus var. trichocalyx | Large Ground Plum | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Astragalus distortus | Bent Milk Vetch | 2 | 1 | 1 | 4 | 4 | 0 | 1 | 2 | 1 | 1 | 2 | 3 | 0 | 1 |
| Astragalus tennesseensis | Tennessee Milk Vetch | | | | | | | | | | | | | | |
| Baptisia tinctoria | Yellow Wild Indigo | | | | | | | | | | | | | | |
| Bartonia paniculata | Screwstem | | | | | | | | | | | | | | |
| Beckmannia syzigachne | American Slough Grass | 1 | 3 | 2 | 2 | 2 | 3 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 0 |
| Berberis canadensis | Allegheny Barberry | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Berchemia scandens | Supple-Jack | | | | | | | | | | | | | | |
| Bessya bullii | Kitten Tails | 13 | 11 | 13 | 7 | 6 | 18 | 0 | 4 | 7 | 6 | 7 | 7 | 10 | 0 |
| Betula allehaniensis | Yellow Birch | | | | | | | | | | | | | | |
| Boltonia decurrens | Decurrent False Aster | 2 | 17 | 23 | 23 | 16 | 7 | 0 | 3 | 14 | 15 | 18 | 15 | 7 | 0 |
| Botrychium biternatum | Southern Grape Fern | 2 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Botrychium campestre | Prairie Moonwort | | | | | | | | | | | | | | |
| Botrychium matricariifolium | Daisyleaf Grape Fern | | | | | | | | | | | | | | |
| Botrychium multifidum | Northern Grape Fern | | | | | | | | | | | | | | |
| Botrychium simplex | Dwarf Grape Fern | | | | | | | | | | | | | | |
| Bouteloua gracilis | Blue Grama | | | | | | | | | | | | | | |
| Buchnera americana | Bluehearts | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 |
| Bumelia lanuginosa | Wooly Buckthorn | | | | | | | | | | | | | | |
| Cakile edentula | Sea Rocket | 0 | 2 | 6 | 8 | 9 | 10 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 0 |
| Calamogrostis insperata | Bluejoint Grass | | | | | | | | | | | | | | |
| Calla palustris | Water Arum | | | | | | | | | | | | | | |
| Calopogon oklahomensis | Oklahoma Grass Pink Orchid | | | | | | | | | | | | | | |
| Calopogon tuberosus | Grass Pink Orchid | 3 | 7 | 4 | 7 | 7 | 6 | 0 | 3 | 5 | 4 | 6 | 5 | 5 | 0 |
| Camassia angusta | Wild Hyacinth | | | | | | | | | | | | | | |
| Cardamime pratensis var. palustris | Cuckoo Flower | | | | | | | | | | | | | | |
| Carex alata | Winged Sedge | | | | | | | | | | | | | | |
| Carex arkansana | Arkansas Sedge | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| Carex atlantica | Sedge | | | | | | | | | | | | | | |
| Carex aurea | Golden Sedge | 0 | 4 | 3 | 9 | 10 | 11 | 0 | 0 | 4 | 2 | 3 | 4 | 3 | 0 |
| Carex bromoides | Sedge | 2 | 4 | 2 | 3 | 7 | 8 | 1 | 2 | 3 | 2 | 3 | 4 | 4 | 1 |
| Carex brunnescens | Brownish Sedge | | | | | | | | | | | | | | |
| Carex canescens var. disjuncta | Silvery Sedge | | | | | | | | | | | | | | |
| Carex chordorrhiza | Cordroot Sedge | | | | | | | | | | | | | | |
| Carex communis | Fibrous-rooted Sedge | 1 | 5 | 3 | 9 | 4 | 2 | 3 | 1 | 5 | 2 | 4 | 3 | 2 | 2 |
| Carex crawfordii | Crawford's Sedge | | | | | | | | | | | | | | |
| Carex crytolepis | Yellow Sedge | 0 | 1 | 2 | 2 | 3 | 6 | 0 | 0 | 1 | 2 | 2 | 2 | 4 | 0 |
| Carex cumulata | Sedge | | | | | | | | | | | | | | |
| Carex decomposita | Cypress-knee Sedge | 0 | 1 | 2 | 2 | 1 | 2 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 0 |
| Carex diandra | Sedge | | | | | | | | | | | | | | |
| Carex disperma | Shortleaf Sedge | | | | | | | | | | | | | | |
| Carex echinata | Sedge | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 |
| Carex formosa | Sedge | 0 | 0 | 3 | 1 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 0 |
| Carex garberi | Elk Sedge | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carex gigantea | Large Sedge | | | | | | | | | | | | | | |
| Carex inops subsp. heliophila | Plains Sedge | | | | | | | | | | | | | | |
| Carex intumescens | Swollen Sedge | 1 | 2 | 7 | 2 | 2 | 3 | 0 | 1 | 2 | 5 | 2 | 2 | 2 | 0 |
| Carex nigromarginata | Black-edged Sedge | | | | | | | | | | | | | | |
| Carex oligosperma | Few-seeded Sedge | | | | | | | | | | | | | | |
| Carex oxylepis | Sharp-scaled Sedge | 0 | 2 | 8 | 4 | 1 | 4 | 0 | 0 | 3 | 4 | 3 | 1 | 4 | 0 |
| Carex physorhyncha | Bellow's Beak Sedge | | | | | | | | | | | | | | |
| Carex plantaginea | Plaintain-leaved Sedge | | | | | | | | | | | | | | |
| Carex prasina | Drooping Sedge | 2 | 2 | 4 | 6 | 3 | 0 | 2 | 2 | 2 | 4 | 6 | 3 | 0 | 2 |
| Carex reniformis | Reniform Sedge | | | | | | | | | | | | | | |
| Carex trisperma | Three-seeded Sedge | | | | | | | | | | | | | | |
| Carex tuckermanii | Tuckerman's Sedge | 3 | 4 | 5 | 4 | 2 | 2 | 0 | 2 | 2 | 3 | 3 | 1 | 1 | 0 |
| Carex viridula | Little Green Sedge | 3 | 3 | 11 | 11 | 11 | 6 | 0 | 2 | 1 | 3 | 6 | 4 | 4 | 0 |
| Carex willdenowii | Willdenow's Sedge | 0 | 3 | 6 | 2 | 1 | 6 | 0 | 0 | 3 | 4 | 1 | 1 | 4 | 0 |
| Carex woodii | Pretty Sedge | 2 | 3 | 7 | 9 | 12 | 16 | 0 | 1 | 3 | 3 | 4 | 5 | 6 | 0 |
| Carya aquatica | Water Hickory | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 0 |
| Carya pallida | Pale Hickory | | | | | | | | | | | | | | |
| Castilleja sessiliflora | Downy Yellow Painted Cup | 1 | 3 | 1 | 3 | 5 | 3 | 0 | 1 | 4 | 1 | 4 | 6 | 3 | 0 |
| Ceanothus herbaceus | Redroot | 1 | 5 | 5 | 2 | 4 | 1 | 0 | 1 | 5 | 4 | 2 | 3 | 1 | 0 |
| Chamaedaphne calyculata | Leatherleaf | 1 | 6 | 1 | 1 | 3 | 3 | 0 | 1 | 4 | 1 | 1 | 2 | 2 | 0 |
| Chamaelirium luteum | Fairy Wand | 1 | 0 | 0 | 0 | 5 | 3 | 0 | 1 | 0 | 0 | 0 | 3 | 3 | 0 |
| Chamaesyce polygonifolia | Seaside Spurge | 0 | 1 | 2 | 3 | 6 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 0 |
| Chimaphila maculata | Spotted Wintergreen | | | | | | | | | | | | | | |
| Chimaphila umbellata | Pipsissewa | | | | | | | | | | | | | | |
| Cimicifuga americana | American Bugbane | | | | | | | | | | | | | | |
| Cimicifuga racemosa | False Bugbane | | | | | | | | | | | | | | |
| Cimicifuga rubifolia | Black Cohosh | 1 | 0 | 11 | 17 | 3 | 3 | 0 | 1 | 0 | 4 | 5 | 2 | 2 | 0 |
| Circaea alpina | Small Enchanter's Nightshade | | | | | | | | | | | | | | |
| Cirsium pitcheri | Pitcher's (Dune) Thistle | | | | | | | | | | | | | | |
| Cladrastis lutea | Yellowwood | | | | | | | | | | | | | | |
| Clematis crispa | Blue Jasmine | 0 | 1 | 1 | 2 | 1 | 2 | 1 | 0 | 1 | 1 | 2 | 1 | 2 | 1 |
| Clematis occidentalis | Mountain Clematis | | | | | | | | | | | | | | |
| Clematis viorna | Leatherflower | | | | | | | | | | | | | | |
| Collinsia violacea | Violet Collinsia | | | | | | | | | | | | | | |
| Comptonia peregrina | Sweetfern | | | | | | | | | | | | | | |
| Conioselinum chinense | Hemlock Parsley | | | | | | | | | | | | | | |
| Corallorhiza maculata | Spotted Coral-root Orchid | 3 | 5 | 2 | 4 | 1 | 1 | 0 | 3 | 4 | 2 | 4 | 1 | 1 | 0 |
| Cornus canadensis | Bunchberry | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| Corydalis aurea | Golden Corydalis | | | | | | | | | | | | | | |
| Corydalis halei | Hale's Corydalis | | | | | | | | | | | | | | |
| Corydalis sempervirens | Pink Corydalis | | | | | | | | | | | | | | |
| Corylus cornuta | Beaked Hazelnut | | | | | | | | | | | | | | |
| Cynosciadium digitatum | Cynosciadium | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyperus grayioides | Umbrella Sedge | 11 | 3 | 9 | 9 | 6 | 1 | 0 | 5 | 2 | 5 | 5 | 5 | 1 | 0 |
| Cyperus lancastriensis | Galingale | | | | | | | | | | | | | | |
| Cypripedium acaula | Moccasin Flower | | | | | | | | | | | | | | |
| Cypripedium candidum | White Lady's Slipper | 6 | 20 | 18 | 20 | 29 | 34 | 1 | 4 | 5 | 8 | 8 | 7 | 8 | 1 |
| Cypripedium parviflorum var. makasin | Small Yellow Lady's Slipper | | | | | | | | | | | | | | |
| Cypripedium reginae | Showy Lady's Slipper | 1 | 2 | 4 | 3 | 2 | 1 | 0 | 1 | 2 | 4 | 3 | 2 | 1 | 0 |
| Cystopteris laurentiana | Laurentian Fragile Fern | | | | | | | | | | | | | | |
| Dalea foliosa | Leafy Prairie Clover | 1 | 4 | 5 | 5 | 7 | 7 | 0 | 1 | 2 | 2 | 2 | 3 | 3 | 0 |
| Delphinium carolinianum | Wild Blue Larkspur | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Dennstaedtia punctilobula | Hay-scented Fern | 0 | 2 | 1 | 0 | 6 | 2 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 |
| Deschampsia flexuosa | Hairgraass | | | | | | | | | | | | | | |
| Dichanthelium boreale | Northern Panic Grass | | | | | | | | | | | | | | |
| Dichanthelium joori | Panic Grass | | | | | | | | | | | | | | |
| Dichanthelium portoricense | Hemlock Panic Grass | | | | | | | | | | | | | | |
| Dichanthelium ravenelii | Ravenel's Panic Grass | | | | | | | | | | | | | | |
| Dichanthelium yadkinense | Panic Grass | 1 | 1 | 0 | 2 | 2 | 7 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 |
| Dodecatheon frenchii | French's Shootingstar | 1 | 1 | 1 | 1 | 5 | 9 | 0 | 2 | 1 | 1 | 1 | 5 | 4 | 0 |
| Draba cuneifolia | Whitlow Grass | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| Drosera intermedia | Narrow-leaved Sundew | 1 | 2 | 3 | 4 | 3 | 3 | 1 | 1 | 2 | 3 | 2 | 3 | 2 | 1 |
| Drosera rotundifolia | Round-leaved Sundew | 1 | 1 | 2 | 1 | 3 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 0 |
| Dryopteris celsa | Log Fern | | | | | | | | | | | | | | |
| Echinodorus tenellus | Small Burhead | | | | | | | | | | | | | | |
| Eleocharis olivacea | Capitate Spikerush | | | | | | | | | | | | | | |
| Eleocharis pauciflora | Few-flowered Spikerush | | | | | | | | | | | | | | |
| Eleocharis rostellata | Beaked Spike Rush | 0 | 9 | 6 | 6 | 3 | 2 | 0 | 0 | 5 | 4 | 3 | 3 | 2 | 0 |
| Elymus trachycaulus | Bearded Wheat Grass | 2 | 3 | 7 | 3 | 2 | 2 | 0 | 2 | 3 | 4 | 3 | 2 | 2 | 0 |
| Epilobium strictum | Downy Willow Herb | 1 | 3 | 2 | 2 | 3 | 1 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 0 |
| Equisetum pratense | Meadow Horsetail | 2 | 1 | 7 | 3 | 3 | 4 | 0 | 1 | 1 | 3 | 2 | 2 | 3 | 0 |
| Equisetum scirpoides | Dwarf Scouring Rush | | | | | | | | | | | | | | |
| Equisetum sylvaticum | Woodland Horsetail | | | | | | | | | | | | | | |
| Eriophorum virginicum | Rusty Cotton Grass | | | | | | | | | | | | | | |
| Eryngium prostratum | Eryngo | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 |
| Euonymus americanus | American Strawberry Bush | 1 | 0 | 2 | 1 | 3 | 3 | 0 | 2 | 0 | 3 | 1 | 3 | 3 | 0 |
| Eupatorium hyssopifolium | Hyssop-leaved Thoroughwort | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Euphorbia spathulata | Spurge | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Filipendula rubra | Queen-of-the-Prairie | 1 | 6 | 7 | 10 | 11 | 9 | 1 | 1 | 5 | 7 | 11 | 9 | 10 | 1 |
| Fimbristylis vahlii | Vahl's Fimbristylis | | | | | | | | | | | | | | |
| Galactia mohlenbrockii | Boykin's Dioclea | | | | | | | | | | | | | | |
| Galium lanceolatum | Wild Licorice | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Galium virgatum | Dwarf Bedstraw | | | | | | | | | | | | | | |
| Geranium bicknellii | Northern Cranesbill | 0 | 1 | 2 | 1 | 3 | 4 | 0 | 0 | 1 | 2 | 1 | 2 | 3 | 0 |
| Glyceria arkansana | Arkansas Mannagrass | 1 | 1 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gratiola quartermaniae | Hedge Hyssop | | | | | | | | | | | | | | |
| Gymnocarpium dryopteris | Oak Fern | | | | | | | | | | | | | | |
| Gymnocarpium robertianum | Scented Oak Fern | | | | | | | | | | | | | | |
| Hackelia deflexa var. americana | Stickseed | | | | | | | | | | | | | | |
| Halesia carolina | Silverbell Tree | | | | | | | | | | | | | | |
| Helianthus angustifolius | Narrow-leaved Sunflower | | | | | | | | | | | | | | |
| Helianthus giganteus | Tall Sunflower | 0 | 3 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 1 | 2 | 2 | 2 | 0 |
| Heliotropium tenellum | Slender Heliotrope | | | | | | | | | | | | | | |
| Heteranthera reniformis | Mud Plantian | | | | | | | | | | | | | | |
| Hexalectris spicata | Crested Coralroot Orchid | 0 | 0 | 1 | 2 | 3 | 5 | 2 | 0 | 0 | 1 | 2 | 2 | 3 | 2 |
| Hudsonia tomentosa | False Heather | | | | | | | | | | | | | | |
| Huperzia porophila | Cliff Clubmoss | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Hydrolea uniflora | One-flowered Hydrolea | | | | | | | | | | | | | | |
| Species following this break (and that are not in light blue text) and preceding the next break are those that were reviewed in the Plant List, Part 2 review at the ESPB 159th meeting, held 08/16/13. | | | | | | | | | | | | | | | |
| Hymenopappus scabiosaeus | Old Plainsman | 1 | 0 | 1 | 4 | 1 | 3 | 0 | 2 | 0 | 1 | 3 | 1 | 3 | 0 |
| Hypericum adpressum | Shore St. John's Wort | 2 | 0 | 2 | 2 | 4 | 3 | 2 | 3 | 0 | 2 | 2 | 3 | 3 | 2 |
| Hypericum kalmianum | Kalm's St. John's Wort | | | | | | | | | | | | | | |
| Iliamna remota | Kankakee Mallow | | | | | | | | | | | | | | |
| Iresine rhizomatosa | Bloodleaf | 0 | 1 | 2 | 5 | 2 | 1 | 0 | 0 | 1 | 1 | 4 | 2 | 1 | 0 |
| Isoetes butleri | Butler's Quillwort | 0 | 1 | 2 | 5 | 5 | 5 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 0 |
| Isotria verticillata | Whorled Pogonia | | | | | | | | | | | | | | |
| Juncus alpinus | Richardson's Rush | 3 | 0 | 2 | 4 | 7 | 5 | 0 | 4 | 0 | 2 | 3 | 3 | 3 | 0 |
| Juncus vaseyi | Vasey's Rush | | | | | | | | | | | | | | |
| Juniperus communis | Ground Juniper | 0 | 6 | 5 | 3 | 2 | 2 | 0 | 0 | 3 | 4 | 3 | 1 | 2 | 0 |
| Juniperus horizontalis | Trailing Juniper | | | | | | | | | | | | | | |
| Justica ovata | Water Willow | | | | | | | | | | | | | | |
| Larix laricina | Tamarack | 0 | 4 | 3 | 1 | 3 | 2 | 0 | 0 | 2 | 2 | 1 | 2 | 2 | 0 |
| Lathyrus ochroleucus | Pale Vetchling | 6 | 7 | 7 | 6 | 10 | 11 | 0 | 2 | 4 | 3 | 3 | 4 | 3 | 6 |
| Lechea intermedia | Pinweed | 4 | 2 | 1 | 2 | 2 | 0 | 0 | 1 | 2 | 1 | 2 | 2 | 0 | 4 |
| Lespdeza leptochachya | Prairie Bush Clover | 5 | 9 | 11 | 5 | 9 | 6 | 0 | 6 | 7 | 6 | 4 | 4 | 4 | 5 |
| Lesquerella ludoviciana | Silvery Bladderpod | | | | | | | | | | | | | | |
| Liatris scariosa var. nieuwlandii | Blazing Star | 0 | 13 | 20 | 30 | 20 | 20 | 1 | 0 | 10 | 15 | 17 | 12 | 12 | 1 |
| Lonicera dioica var. glaucescens | Red Honeysuckle | | | | | | | | | | | | | | |
| Lonicera flava | Yellow Honeysuckle | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 |
| Luzula acuminata | Hairy Woodrush | 1 | 2 | 1 | 2 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 0 |
| Lycopodiella inundata | Bog Clubmoss | | | | | | | | | | | | | | |
| Lycopodium clavatum | Running Pine | 1 | 3 | 3 | 1 | 1 | 0 | 0 | 1 | 3 | 3 | 1 | 1 | 0 | 0 |
| Lycopodium dendroideum | Ground Pine | 0 | 3 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 2 | 1 | 1 | 0 | 1 |
| Lysimachia radicans | Creeping Loosestrife | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Malus angustifolia | Narrow-leaved Crabapple | | | | | | | | | | | | | | |
| Malvastrum hispidum | False Mallow | | | | | | | | | | | | | | |
| Matelea decipiens | Climbing Milkweed | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 1 |
| Matelea obliqua | Climbing Milkweed | 2 | 6 | 6 | 2 | 12 | 8 | 1 | 1 | 3 | 4 | 2 | 4 | 2 | 1 |
| Medeola virginiana | Indian Cucumber Root | | | | | | | | | | | | | | |
| Megalodonta beckii | Water Marigold | | | | | | | | | | | | | | |
| Melanthera nivea | White Melanthera | | | | | | | | | | | | | | |
| Melanthium virginicum | Bunchflower | 3 | 1 | 5 | 8 | 8 | 6 | 1 | 2 | 1 | 3 | 3 | 4 | 4 | 1 |
| Melica mutica | Two-Flowered Melic Grass | | | | | | | | | | | | | | |
| Melothria pendula | Squirting Cucumber | 3 | 2 | 2 | 7 | 1 | 1 | 0 | 3 | 2 | 2 | 5 | 1 | 1 | 0 |
| Menyanthes trifoliata | Buckbean | 1 | 0 | 0 | 0 | 3 | 5 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| Mimulus glabratus | Yellow Monkey Flower | 0 | 3 | 1 | 3 | 3 | 1 | 1 | 0 | 3 | 1 | 3 | 3 | 1 | 1 |
| Minuartia patula | Slender Sandwort | 1 | 3 | 2 | 5 | 5 | 5 | 0 | 1 | 3 | 3 | 4 | 3 | 4 | 0 |
| Mirabilis hirsuta | Hairy Umbrella-wort | | | | | | | | | | | | | | |
| Nemophila triloba | Baby Blue-eyes | | | | | | | | | | | | | | |
| Nothocalais cuspidata | Prairie Dandelion | 6 | 2 | 4 | 2 | 1 | 3 | 2 | 3 | 2 | 4 | 2 | 1 | 3 | 2 |
| Oenothera perennis | Small Sundrops | 2 | 4 | 9 | 11 | 11 | 16 | 0 | 2 | 3 | 2 | 2 | 4 | 4 | 0 |
| Opuntia fragilis | Fragile Prickly Pear | | | | | | | | | | | | | | |
| Orobanche fasciculata | Clustered Broomrape | | | | | | | | | | | | | | |
| Orobanche ludoviciana | Broomrape | 0 | 7 | 7 | 6 | 2 | 4 | 3 | 0 | 4 | 7 | 4 | 2 | 3 | 3 |
| Oxalis illinoensis | Illinois Wood Sorrel | 0 | 1 | 1 | 1 | 6 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 0 |
| Paspalum dissectum | Bead Grass | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Penstemon brevisepalus | Short-sepaled Beard Tongue | | | | | | | | | | | | | | |
| Penstemon grandiflorus | Large-flowered Beard Tongue | 0 | 3 | 3 | 2 | 3 | 4 | 0 | 0 | 4 | 4 | 3 | 3 | 3 | 0 |
| Penstemon tubaeflorus | Tube Beard Tongue | 0 | 0 | 2 | 2 | 5 | 5 | 1 | 0 | 0 | 2 | 2 | 3 | 3 | 1 |
| Phacelia gilioides | Ozark Phacelia | | | | | | | | | | | | | | |
| Phaeophyscia leana | Lea's Bog Lichen | 0 | 4 | 6 | 1 | 13 | 0 | 0 | 0 | 2 | 3 | 1 | 3 | 0 | 0 |
| Phegopteris connectilis | Long Beech Fern | | | | | | | | | | | | | | |
| Phlox pilosa subsp. sangamonensis | Sangamon Phlox | | | | | | | | | | | | | | |
| Pinus banksiana | Jack Pine | | | | | | | | | | | | | | |
| Pinus echinata | Shortleaf Pine | | | | | | | | | | | | | | |
| Pinus resinosa | Red Pine | | | | | | | | | | | | | | |
| Planera aquatica | Water Elm | 0 | 4 | 2 | 0 | 3 | 2 | 0 | 0 | 5 | 2 | 0 | 3 | 2 | 0 |
| Plantago cordata | Heart-leaved Plantain | 2 | 9 | 6 | 4 | 7 | 8 | 0 | 2 | 7 | 5 | 3 | 5 | 7 | 0 |
| Platanthera ciliaris | Orange Fringed Orchid | | | | | | | | | | | | | | |
| Platanthera clavellata | Wood Orchid | 0 | 3 | 3 | 5 | 3 | 2 | 0 | 0 | 3 | 3 | 4 | 3 | 2 | 0 |
| Platanthera flava++ | Tubercled Orchid++ | 1 | 1 | 7 | 14 | 10 | 8 | 0 | 1 | 1 | 5 | 8 | 5 | 5 | 0 |
| Platanthera leucophaea | Eastern Prairie Fringed Orchid | 17 | 18 | 25 | 31 | 28 | 31 | 23 | 7 | 8 | 11 | 10 | 11 | 10 | 8 |
| Platanthera psycodes | Purple Fringed Orchid | 2 | 0 | 5 | 5 | 3 | 4 | 0 | 1 | 0 | 2 | 2 | 1 | 2 | 0 |
| Poa alsodes | Grove Bluegrass | 1 | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 2 | 0 | 1 | 0 | 2 | 0 |
| Poa languida | Weak Bluegrass | | | | | | | | | | | | | | |
| Poa wolfii | Wolf's Bluegrass | 0 | 4 | 0 | 3 | 2 | 2 | 1 | 0 | 3 | 0 | 3 | 2 | 2 | 1 |
| Pogonia ophioglossoides | Snake-mouth | 1 | 2 | 2 | 2 | 2 | 2 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 0 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Polanisia jamesii | James' Clammyweed | | | | | | | | | | | | | | |
| Polygala incarnata | Pink Milkwort | 2 | 3 | 4 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 1 | 0 | 0 |
| Polygonatum pubescens | Downy Solomon's Seal | 5 | 1 | 1 | 5 | 4 | 5 | 0 | 2 | 1 | 1 | 1 | 2 | 2 | 0 |
| Polygonum arifolium | Halberd-leaved Tearthumb | | | | | | | | | | | | | | |
| Polygonum careyi | Carey's Heartsease | 1 | 0 | 1 | 4 | 4 | 3 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 0 |
| Populus balsamifera | Balsam Poplar | 0 | 2 | 3 | 1 | 3 | 1 | 0 | 0 | 2 | 3 | 1 | 2 | 1 | 0 |
| Potamogeton gramineus | Grass-leaved Pondweed | 0 | 12 | 0 | 5 | 4 | 0 | 1 | 0 | 2 | 0 | 1 | 2 | 0 | 1 |
| Potamogeton praelongus | White-stemmed Pondweed | 0 | 4 | 0 | 2 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Potamogeton pulcher | Spotted Pondweed | | | | | | | | | | | | | | |
| Potamogeton robbinsii | Fern Pondweed | 0 | 5 | 2 | 2 | 3 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 0 | 0 |
| Potamogeton strictifolius | Stiff Pondweed | | | | | | | | | | | | | | |
| Primula mistassinica | Bird's-eye Primrose | | | | | | | | | | | | | | |
| Ptilimnium nuttallii | Mock's Bishop Weed | | | | | | | | | | | | | | |
| Quercus montana | Rock Chestnut Oak | 0 | 3 | 5 | 5 | 2 | 3 | 0 | 0 | 3 | 4 | 3 | 2 | 3 | 0 |
| Quercus phellos | Willow Oak | 3 | 4 | 2 | 1 | 6 | 2 | 0 | 2 | 3 | 2 | 1 | 4 | 2 | 0 |
| Species following this break (and that are not in light blue text) are anticipated for review in the Plant List , Part 3 review – expected for discussion at the ESPB 160 meeting 11/15/2013. | | | | | | | | | | | | | | | |
| Quercus texana | Nuttall's Oak | | | | | | | | | | | | | | |
| Ranunculus rhomboideus | Prairie Buttercup | 2 | 4 | 3 | 2 | 2 | 3 | 0 | 1 | 2 | 2 | 1 | 1 | 2 | 0 |
| Rhamnus alnifolia | Alder Buckthorn | | | | | | | | | | | | | | |
| Rhexia mariana | Dull Meadow Beauty | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 2 | 0 |
| Rhynchospora alba | Beaked Rush | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| Rhynchospora glomerata | Clustered Beak Rush | | | | | | | | | | | | | | |
| Ribes hirtellum | Northern Gooseberry | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Rosa acicularis | Bristly Rose | | | | | | | | | | | | | | |
| Rubus odoratus | Purple-flowering Raspberry | 0 | 1 | 4 | 3 | 3 | 6 | 1 | 0 | 1 | 3 | 2 | 3 | 5 | 1 |
| Rubus pubescens | Dwarf Raspberry | 3 | 0 | 6 | 6 | 7 | 6 | 0 | 2 | 0 | 3 | 2 | 2 | 2 | 0 |
| Rubus schneideri | Bristly Blackberry | 0 | 1 | 2 | 6 | 4 | 1 | 0 | 0 | 1 | 1 | 3 | 2 | 1 | 0 |
| Rudbeckia missouriensis | Missouri Orange Coneflower | 0 | 1 | 0 | 4 | 3 | 5 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 0 |
| Sabatia campestris | Prairie Rose Gentian | 3 | 2 | 3 | 8 | 3 | 3 | 0 | 3 | 3 | 2 | 5 | 2 | 3 | 0 |
| Sagittaria australis | Arrowhead | | | | | | | | | | | | | | |
| Salix serissima | Autumn Willow | | | | | | | | | | | | | | |
| Salix syrticola | Dune Willow | | | | | | | | | | | | | | |
| Salvia asurea subsp. pitcheri | Blue Sage | 1 | 1 | 3 | 2 | 2 | 2 | 0 | 1 | 1 | 3 | 2 | 2 | 2 | 0 |
| Sambucus racemosa subsp. pubens | Red-berried Elder | 2 | 2 | 1 | 2 | 2 | 2 | 0 | 3 | 2 | 1 | 1 | 1 | 2 | 0 |
| Sanguisorba canadensis | American Burnet | | | | | | | | | | | | | | |
| Sanicula smallii | Southern Sanicula | | | | | | | | | | | | | | |
| Sarracenia purpurea | Pitcher Plant | 0 | 3 | 3 | 2 | 4 | 5 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 0 |
| Saxifraga virginiensis | Early Saxifrage | | | | | | | | | | | | | | |
| Schizachne purpurascens | False Melic Grass | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Schoenoplectus hallii | Hall's Bulrush | 3 | 1 | 16 | 2 | 1 | 6 | 0 | 1 | 1 | 5 | 1 | 1 | 1 | 0 |
| Schoenoplectus purshianus | Weak Bulrush | | | | | | | | | | | | | | |
| Schoenoplectus smithii | Smith's Bulrush | | | | | | | | | | | | | | |
| Scirpus hattorianus | Bulrush | 0 | 1 | 3 | 3 | 4 | 3 | 0 | 0 | 1 | 2 | 2 | 3 | 2 | 0 |
| Scirpus microcarpus | Bulrush | | | | | | | | | | | | | | |
| Scirpus polyphyllus | Bulrush | 2 | 4 | 4 | 1 | 2 | 2 | 0 | 2 | 3 | 4 | 1 | 1 | 1 | 0 |
| Scleria muhlenbergii | Muhlenberg's Nut Rush | | | | | | | | | | | | | | |
| Scleria pauciflora | Carolina Whipgrass | 1 | 2 | 2 | 0 | 4 | 4 | 1 | 1 | 2 | 2 | 0 | 2 | 4 | 1 |
| Sedum telephioides | American Orpine | 1 | 0 | 1 | 0 | 0 | 5 | 0 | 1 | 0 | 1 | 0 | 0 | 4 | 0 |
| Sheperdia canadensis | Buffaloberry | | | | | | | | | | | | | | |
| Silene ovata | Ovate Catchfly | | | | | | | | | | | | | | |
| Silene regia | Royal Catchfly | 2 | 3 | 5 | 9 | 9 | 10 | 6 | 2 | 3 | 3 | 7 | 7 | 6 | 5 |
| Sisyrinchium atlanticum | Eastern Blue-eyed Grass | 1 | 1 | 2 | 6 | 3 | 1 | 2 | 2 | 2 | 4 | 4 | 3 | 1 | 2 |
| Sisyrinchium montanum | Mountain Blue-eyed Grass | 2 | 6 | 4 | 7 | 4 | 3 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| Solidago sciaphila | Cliff Goldenrod | 0 | 4 | 5 | 6 | 7 | 4 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 0 |
| Sorbus americana | American Mountain Ash | | | | | | | | | | | | | | |
| Sparganium americanum | American Burreed | | | | | | | | | | | | | | |
| Sparganium emersum | Green-fruited Burreed | 0 | 2 | 2 | 3 | 1 | 1 | 0 | 0 | 4 | 2 | 4 | 3 | 3 | 0 |
| Spiranthes lucida | Yellow-lipped Ladies' Tresses | | | | | | | | | | | | | | |
| Spiranthes vernalis | Spring Ladies' Tresses | 1 | 3 | 3 | 2 | 5 | 7 | 1 | 1 | 3 | 3 | 2 | 4 | 6 | 1 |
| Stellaria pubera | Great Chickweed | | | | | | | | | | | | | | |
| Stenanthium gramineum | Grass-leaved Lily | 0 | 2 | 4 | 3 | 8 | 6 | 2 | 0 | 2 | 3 | 3 | 7 | 6 | 2 |
| Stylisma pickeringii | Patterson's Bindweed | | | | | | | | | | | | | | |
| Styrax americana | Storax | 5 | 7 | 8 | 7 | 5 | 9 | 0 | 3 | 5 | 6 | 6 | 4 | 6 | 0 |
| Styrax grandifolius | Bigleaf Snowbell Bush | | | | | | | | | | | | | | |
| Sullivantia sullivantia | Sullivantia | 1 | 3 | 4 | 2 | 2 | 1 | 0 | 1 | 2 | 3 | 1 | 2 | 1 | 0 |
| Symphoricarpos ablus var. albus | Snowberry | | | | | | | | | | | | | | |
| Synandra hispidula | Hairy Synandra | 1 | 3 | 4 | 0 | 5 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| Talinum calycinum | Fameflower | | | | | | | | | | | | | | |
| Talinum parviflorum | Small Flower-of-an-hour | 0 | 0 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 |
| Tetraneuris herbacea | Lakeside Daisy | 0 | 3 | 4 | 2 | 4 | 5 | 2 | 0 | 2 | 3 | 2 | 3 | 3 | 1 |
| Thelypteris noveboracensis | New York Fern | | | | | | | | | | | | | | |
| Tilia heterophylla | White Basswood | | | | | | | | | | | | | | |
| Tofieldia glutinosa | False Asphodel | 1 | 2 | 2 | 5 | 4 | 2 | 0 | 1 | 1 | 2 | 3 | 4 | 2 | 0 |
| Tomanthera auriculata | Ear-leafed Foxglove | 8 | 12 | 14 | 13 | 18 | 16 | 3 | 6 | 8 | 9 | 5 | 8 | 9 | 2 |
| Torreyochloa pallida | Pole Manna-Grass | | | | | | | | | | | | | | |
| Tradescantia bracteata | Prairie Spiderwort | 1 | 6 | 1 | 2 | 2 | 0 | 0 | 1 | 5 | 1 | 2 | 2 | 0 | 0 |
| Trichomanes boschianum | Filmy fern | 0 | 0 | 1 | 9 | 3 | 1 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 0 |
| Trichophorum cespitosum | Tufted Bulrush | | | | | | | | | | | | | | |
| Trientalis borealis | Star-flower | 2 | 1 | 3 | 4 | 3 | 2 | 0 | 2 | 1 | 3 | 4 | 2 | 3 | 0 |
| Trifolium reflexum | Buffalo Clover | 0 | 9 | 4 | 5 | 9 | 6 | 0 | 0 | 7 | 5 | 6 | 6 | 4 | 0 |
| Triglochin maritima | Common Bog Arrowgrass | 1 | 8 | 4 | 6 | 5 | 6 | 0 | 1 | 3 | 2 | 2 | 2 | 2 | 0 |
| Triglochin palustris | Slender Bog Arrowgrass | 2 | 10 | 3 | 6 | 4 | 6 | 0 | 2 | 5 | 3 | 4 | 4 | 4 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trillium cernuum | Nodding Trillium | | | | | | | | | | | | | | |
| Trillium erectum | Ill-scented Trillium | | | | | | | | | | | | | | |
| Trillium viride | Green Trillium | 3 | 2 | 1 | 2 | 2 | 1 | 0 | 3 | 2 | 1 | 2 | 2 | 1 | 0 |
| Ulmus thomasii | Rock Elm | | | | | | | | | | | | | | |
| Urtica chamaedryoides | Nettle | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 |
| Utricularia cornuta | Horned Bladderwort | | | | | | | | | | | | | | |
| Utricularia intermedia | Flat-leaved Bladderwort | 2 | 3 | 3 | 2 | 7 | 5 | 0 | 2 | 2 | 2 | 2 | 3 | 3 | 0 |
| Utricularia minor | Small Bladderwort | 2 | 1 | 0 | 3 | 2 | 2 | 0 | 2 | 1 | 0 | 3 | 2 | 2 | 0 |
| Vaccinium corymbosum | Highbush Blueberry | | | | | | | | | | | | | | |
| Vaccinium macrocarpon | Large Cranberry | 2 | 1 | 2 | 2 | 4 | 0 | 0 | 2 | 1 | 1 | 2 | 2 | 0 | 0 |
| Vaccinium oxycoccos | Small Cranberry | | | | | | | | | | | | | | |
| Vaccinium stamineum | Deerberry | | | | | | | | | | | | | | |
| Valeriana uliginosa | Marsh Valerian | | | | | | | | | | | | | | |
| Valerianella chenopodifolia | Corn Salad | | | | | | | | | | | | | | |
| Valerianella umbilicata | Corn Salad | | | | | | | | | | | | | | |
| Veronica americana | American Brooklime | 0 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 0 |
| Veronica scutellata | Marsh Speedwell | 5 | 4 | 12 | 6 | 11 | 9 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 1 |
| Viburnum molle | Arrowwood | 1 | 3 | 4 | 5 | 5 | 0 | 0 | 1 | 4 | 4 | 4 | 4 | 0 | 0 |
| Viola blanda | White Hairy Violet | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 |
| Viola canadensis | Canada Violet | 2 | 2 | 3 | 2 | 3 | 2 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 0 |
| Viola conspersa | Dog Violet | 5 (1) | 4 | 8 | 10 | 14 | 12 | 0 | 4 | 3 | 3 | 3 | 4 | 5 | 0 |
| Viola primulifolia | Primrose Violet | 1 | 1 | 1 | 2 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Woodsia ilvensis | Rusty Woodsia | | | | | | | | | | | | | | |
| Zigadenus elegans | White Camass | | | | | | | | | | | | | | |

*++ = The ESPB voted at the 05/17/2013 meeting to combine varieties flava and herbiola and the species Platanthera flava will be listed as threatened. The proposed change is not official at this time; it would become official if it is continued through the entire statutorily required List revision process. For the purposes of this species review, the species P. flava is generally reviewed using combined data for the two varieties.*

**Currently listed species individual reviews – for species with reviews, each review includes:**
(Note – In the reviews, I provide "notes and recommendations" for those species for which I am recommending listing status change and for those where I felt it necessary to explain my lack of recommendation for a change in listing status. If a species review does not include "notes and recommendations", it means that I am not recommending any change in listing status.)

a. Date of listing, reason for listing;
b. ESPB status and distribution publication species acct;
c. species data from Tables 1 and 2;
d. 1982-2011 5-year element occurrence trend graph;
e. status review triggers (if any) and listing status change recommendation (if any); and
f. NatureServe conservation status, lower 48 (for some spp).

Any species in light blue type was reviewed in the Plant List, Part 1 review that was discussed at the ESPB 158 mtg, held May 17, 2013

Yellow Cells
Species with 4 or fewer EOs and with observations within the last 20 years (since 1992). For species with no protected EOs, EOs were reviewed to confirm that habitat had not been reported as destroyed at all EOs. Staff recommendation is for no listing status change based on the low number of EOs, observation within the last 20 years, and habitat for species with no protected EOs has not been destroyed. No individual review produced.

Red Cells
Species with 4 or fewer EOs and with no observations within the last 20 years (since 1992). For species with no protected EOs, EOs were reviewed to confirm that habitat had not been reported as destroyed at all EOs. For species listed as threatened, species were reviewed for possible T to E recommendation. Also, surv w/ no obs reports were reviewed to confirm they were insufficient to recommended delisting as extirpated. Staff recommendation is for no listing status change based on the low number of EOs, habitat for species with no protected EOs has not been reported as destroyed, combined ecology/distribution/EO data information was not supportive of T to E recommendation, and surv w/ no obs reports are insufficient to recommend delisting as extirpated. No individual review produced.

Blue Cells
Per the Illinois Endangered Species Protection Act (520 ILCS 10/7), the Illinois List automatically adopts species and subspecies designated as endangered or threatened by the USFWS and the Board has the authority to list species that qualify as endangered or threatened as those terms are defined in the ESPA. The Board has in some cases listed subspecies or varieties of a species if those subspecies or varieties are the only representative of the species in Illinois. These subspecies and varieties have been listed as Illinois endangered or threatened, but are not the only representative of the species in Illinois. Staff recommendation is to remove these subspecies and varieties from the IL List. No individual review produced (see Table 5 for more information).

Gray Cells
Species not considered in this Part 2, 1st cut Plant list review (for Augist, 2013), but will be considered in the Part 3, 1st cut Plant list review (for August, 2013) or a subsequent iteration, if staff is not able to complete all plant reviews in two volumes.

| | | Page or Table |
|---|---|---|
| Adoxa moschatellina | Moschatel | |
| Agalinus skinneriana | Pale False Foxglove | |
| Alnus incana subsp. rugosa | Speckled Alder | |
| Amelanchier interior | Shadbush | |
| Amelanchier sanguinea | Shadbush | |
| Ammophila breviligulata | Marram Grass | |
| Amorpha nitens | Smooth False Indigo | |
| Arctopstaphylos uva-ursi | Bearberry | |
| Artemisia dracunculus | Dragon Wormwood | |
| Asclepias lanuginosa | Wooly Milkweed | |
| Asclepias meadii | Mead's Milkweed | |
| Asclepias ovalifolia | Oval Milkweed | |
| Asclepias stenophylla | Narrow-leaved Green Milkweed | |
| Asplenium bradleyi | Bradley's Spleenwort | |
| Asplenium resiliens | Black Spleenwort | |
| Aster furcatus | Forked Aster | |
| Astragalus crassicarpus var. trichocalyx | Large Ground Plum | |
| Astragalus distortus | Bent Milk Vetch | |
| Astragalus tennesseensis | Tennessee Milk Vetch | |
| Baptisia tinctoria | Yellow Wild Indigo | |
| Bartonia paniculata | Screwstem | |
| Beckmannia syzigachne | American Slough Grass | |
| Berberis canadensis | Allegheny Barberry | |

| | | |
|---|---|---|
| Berchemia scandens | Supple-Jack | |
| Bessya bullii | Kitten Tails | |
| Betula allehaniensis | Yellow Birch | |
| Boltonia decurrens | Decurrent False Aster | |
| Botrychium biternatum | Southern Grape Fern | |
| Botrychium campestre | Prairie Moonwort | |
| Botrychium matricariifolium | Daisyleaf Grape Fern | |
| Botrychium multifidum | Northern Grape Fern | |
| Botrychium simplex | Dwarf Grape Fern | |
| Bouteloua gracilis | Blue Grama | |
| Buchnera americana | Bluehearts | |
| Bumelia lanuginosa | Wooly Buckthorn | |
| Cakile edentula | Sea Rocket | |
| Calamogrostis insperata | Bluejoint Grass | |
| Calla palustris | Water Arum | |
| Calopogon oklahomensis | Oklahoma Grass Pink Orchid | |
| Calopogon tuberosus | Grass Pink Orchid | |
| Camassia angusta | Wild Hyacinth | |
| Cardamime pratensis var. palustris | Cuckoo Flower | |
| Carex alata | Winged Sedge | |
| Carex arkansana | Arkansas Sedge | |
| Carex atlantica | Sedge | |
| Carex aurea | Golden Sedge | |
| Carex bromoides | Sedge | |
| Carex brunnescens | Brownish Sedge | |
| Carex canescens var. disjuncta | Silvery Sedge | |
| Carex chordorrhiza | Cordroot Sedge | |
| Carex communis | Fibrous-rooted Sedge | |
| Carex crawfordii | Crawford's Sedge | |
| Carex crytolepis | Yellow Sedge | |
| Carex cumulata | Sedge | |
| Carex decomposita | Cypress-knee Sedge | |
| Carex diandra | Sedge | |
| Carex disperma | Shortleaf Sedge | |
| Carex echinata | Sedge | |
| Carex formosa | Sedge | |
| Carex garberi | Elk Sedge | |
| Carex gigantea | Large Sedge | |
| Carex inops subsp. heliophila | Plains Sedge | |
| Carex intumescens | Swollen Sedge | |
| Carex nigromarginata | Black-edged Sedge | |
| Carex oligosperma | Few-seeded Sedge | |
| Carex oxylepis | Sharp-scaled Sedge | |
| Carex physorhyncha | Bellow's Beak Sedge | |
| Carex plantaginea | Plaintain-leaved Sedge | |
| Carex prasina | Drooping Sedge | |
| Carex reniformis | Reniform Sedge | |
| Carex trisperma | Three-seeded Sedge | |
| Carex tuckermanii | Tuckerman's Sedge | |
| Carex viridula | Little Green Sedge | |
| Carex willdenowii | Willdenow's Sedge | |
| Carex woodii | Pretty Sedge | |
| Carya aquatica | Water Hickory | |
| Carya pallida | Pale Hickory | |
| Castilleja sessiliflora | Downy Yellow Painted Cup | |
| Ceanothus herbaceus | Redroot | |
| Chamaedaphne calyculata | Leatherleaf | |
| Chamaelirium luteum | Fairy Wand | |

| | | |
|---|---|---|
| Chamaesyce polygonifolia | Seaside Spurge | |
| Chimaphila maculata | Spotted Wintergreen | |
| Chimaphila umbellata | Pipsissewa | |
| Cimicifuga americana | American Bugbane | |
| Cimicifuga racemosa | False Bugbane | |
| Cimicifuga rubifolia | Black Cohosh | |
| Circaea alpina | Small Enchanter's Nightshade | |
| Cirsium pitcheri | Pitcher's (Dune) Thistle | |
| Cladrastis lutea | Yellowwood | |
| Clematis crispa | Blue Jasmine | |
| Clematis occidentalis | Mountain Clematis | |
| Clematis viorna | Leatherflower | |
| Collinsia violacea | Violet Collinsia | |
| Comptonia peregrina | Sweetfern | |
| Conioselinum chinense | Hemlock Parsley | |
| Corallorhiza maculata | Spotted Coral-root Orchid | |
| Cornus canadensis | Bunchberry | |
| Corydalis aurea | Golden Corydalis | |
| Corydalis halei | Hale's Corydalis | |
| Corydalis sempervirens | Pink Corydalis | |
| Corylus cornuta | Beaked Hazelnut | |
| Cynosciadium digitatum | Cynosciadium | |
| Cyperus grayioides | Umbrella Sedge | |
| Cyperus lancastriensis | Galingale | |
| Cypripedium acaula | Moccasin Flower | |
| Cypripedium candidum | White Lady's Slipper | |
| Cypripedium parviflorum var. makasin | Small Yellow Lady's Slipper | |
| Cypripedium reginae | Showy Lady's Slipper | |
| Cystopteris laurentiana | Laurentian Fragile Fern | |
| Dalea foliosa | Leafy Prairie Clover | |
| Delphinium carolinianum | Wild Blue Larkspur | |
| Dennstaedtia punctilobula | Hay-scented Fern | |
| Deschampsia flexuosa | Hairgraass | |
| Dichanthelium boreale | Northern Panic Grass | |
| Dichanthelium joori | Panic Grass | |
| Dichanthelium portoricense | Hemlock Panic Grass | |
| Dichanthelium ravenelii | Ravenel's Panic Grass | |
| Dichanthelium yadkinense | Panic Grass | |
| Dodecatheon frenchii | French's Shootingstar | |
| Draba cuneifolia | Whitlow Grass | |
| Drosera intermedia | Narrow-leaved Sundew | |
| Drosera rotundifolia | Round-leaved Sundew | |
| Dryopteris celsa | Log Fern | |
| Echinodorus tenellus | Small Burhead | |
| Eleocharis olivacea | Capitate Spikerush | |
| Eleocharis pauciflora | Few-flowered Spikerush | |
| Eleocharis rostellata | Beaked Spike Rush | |
| Elymus trachycaulus | Bearded Wheat Grass | |
| Epilobium strictum | Downy Willow Herb | |
| Equisetum pratense | Meadow Horsetail | |
| Equisetum scirpoides | Dwarf Scouring Rush | |
| Equisetum sylvaticum | Woodland Horsetail | |
| Eriophorum virginicum | Rusty Cotton Grass | |
| Eryngium prostratum | Eryngo | |
| Euonymus americanus | American Strawberry Bush | |
| Eupatorium hyssopifolium | Hyssop-leaved Thoroughwort | |
| Euphorbia spathulata | Spurge | |
| Filipendula rubra | Queen-of-the-Prairie | |

| | | |
|---|---|---|
| Fimbristylis vahlii | Vahl's Fimbristylis | |
| Galactia mohlenbrockii | Boykin's Dioclea | |
| Galium lanceolatum | Wild Licorice | |
| Galium virgatum | Dwarf Bedstraw | |
| Geranium bicknellii | Northern Cranesbill | |
| Glyceria arkansana | Arkansas Mannagrass | |
| Gratiola quartermaniae | Hedge Hyssop | |
| Gymnocarpium dryopteris | Oak Fern | |
| Gymnocarpium robertianum | Scented Oak Fern | |
| Hackelia deflexa var. americana | Stickseed | |
| Halesia carolina | Silverbell Tree | |
| Helianthus angustifolius | Narrow-leaved Sunflower | |
| Helianthus giganteus | Tall Sunflower | |
| Heliotropium tenellum | Slender Heliotrope | |
| Heteranthera reniformis | Mud Plantian | |
| Hexalectris spicata | Crested Coralroot Orchid | |
| Hudsonia tomentosa | False Heather | |
| Huperzia porophila | Cliff Clubmoss | |
| Hydrolea uniflora | One-flowered Hydrolea | |
| Species following this break (and that are not in light blue text) and preceding the next break are those that were reviewed in the Plant List, Part 2 review at the ESPB 159th meeting, held 08/16/13. | | |
| Hymenopappus scabiosaeus | Old Plainsman | |
| Hypericum adpressum | Shore St. John's Wort | |
| Hypericum kalmianum | Kalm's St. John's Wort | |
| Iliamna remota | Kankakee Mallow | |
| Iresine rhizomatosa | Bloodleaf | |
| Isoetes butleri | Butler's Quillwort | |
| Isotria verticillata | Whorled Pogonia | |
| Juncus alpinus | Richardson's Rush | |
| Juncus vaseyi | Vasey's Rush | |
| Juniperus communis | Ground Juniper | |
| Juniperus horizontalis | Trailing Juniper | |
| Justica ovata | Water Willow | |
| Larix laricina | Tamarack | |
| Lathyrus ochroleucus | Pale Vetchling | |
| Lechea intermedia | Pinweed | |
| Lespdeza leptochachya | Prairie Bush Clover | |
| Lesquerella ludoviciana | Silvery Bladderpod | |
| Liatris scariosa var. nieuwlandii | Blazing Star | |
| Lonicera dioica var. glaucescens | Red Honeysuckle | |
| Lonicera flava | Yellow Honeysuckle | |
| Luzula acuminata | Hairy Woodrush | |
| Lycopodiella inundata | Bog Clubmoss | |
| Lycopodium clavatum | Running Pine | |
| Lycopodium dendroideum | Ground Pine | |
| Lysimachia radicans | Creeping Loosestrife | |
| Malus angustifolia | Narrow-leaved Crabapple | |
| Malvastrum hispidum | False Mallow | |
| Matelea decipiens | Climbing Milkweed | |
| Matelea obliqua | Climbing Milkweed | |
| Medeola virginiana | Indian Cucumber Root | |
| Megalodonta beckii | Water Marigold | |
| Melanthera nivea | White Melanthera | |
| Melanthium virginicum | Bunchflower | |
| Melica mutica | Two-Flowered Melic Grass | |

| | | |
|---|---|---|
| Melothria pendula | Squirting Cucumber | |
| Menyanthes trifoliata | Buckbean | |
| Mimulus glabratus | Yellow Monkey Flower | |
| Minuartia patula | Slender Sandwort | |
| Mirabilis hirsuta | Hairy Umbrella-wort | |
| Nemophila triloba | Baby Blue-eyes | |
| Nothocalais cuspidata | Prairie Dandelion | |
| Oenothera perennis | Small Sundrops | |
| Opuntia fragilis | Fragile Prickly Pear | |
| Orobanche fasciculata | Clustered Broomrape | |
| Orobanche ludoviciana | Broomrape | |
| Oxalis illinoensis | Illinois Wood Sorrel | |
| Paspalum dissectum | Bead Grass | |
| Penstemon brevisepalus | Short-sepaled Beard Tongue | |
| Penstemon grandiflorus | Large-flowered Beard Tongue | |
| Penstemon tubaeflorus | Tube Beard Tongue | |
| Phacelia gilioides | Ozark Phacelia | |
| Phaeophyscia leana | Lea's Bog Lichen | |
| Phegopteris connectilis | Long Beech Fern | |
| Phlox pilosa subsp. sangamonensis | Sangamon Phlox | |
| Pinus banksiana | Jack Pine | |
| Pinus echinata | Shortleaf Pine | |
| Pinus resinosa | Red Pine | |
| Planera aquatica | Water Elm | |
| Plantago cordata | Heart-leaved Plantain | |
| Platanthera ciliaris | Orange Fringed Orchid | |
| Platanthera clavellata | Wood Orchid | |
| Platanthera flava++ | Tubercled Orchid++ | |
| Platanthera leucophaea | Eastern Prairie Fringed Orchid | |
| Platanthera psycodes | Purple Fringed Orchid | |
| Poa alsodes | Grove Bluegrass | |
| Poa languida | Weak Bluegrass | |
| Poa wolfii | Wolf's Bluegrass | |
| Pogonia ophioglossoides | Snake-mouth | |
| Polanisia jamesii | James' Clammyweed | |
| Polygala incarnata | Pink Milkwort | |
| Polygonatum pubescens | Downy Solomon's Seal | |
| Polygonum arifolium | Halberd-leaved Tearthumb | |
| Polygonum careyi | Carey's Heartsease | |
| Populus balsamifera | Balsam Poplar | |
| Potamogeton gramineus | Grass-leaved Pondweed | |
| Potamogeton praelongus | White-stemmed Pondweed | |
| Potamogeton pulcher | Spotted Pondweed | |
| Potamogeton robbinsii | Fern Pondweed | |
| Potamogeton strictifolius | Stiff Pondweed | |
| Primula mistassinica | Bird's-eye Primrose | |
| Ptilimnium nuttallii | Mock's Bishop Weed | |
| Quercus montana | Rock Chestnut Oak | |
| Quercus phellos | Willow Oak | |
| Species following this break (and that are not in light blue text) are anticipated for review in the Plant List , Part 3 review – expected for discussion at the ESPB 160 meeting 11/15/20013 | | |
| Quercus texana | Nuttall's Oak | |
| Ranunculus rhomboideus | Prairie Buttercup | 40 |
| Rhamnus alnifolia | Alder Buckthorn | |
| Rhexia mariana | Dull Meadow Beauty | 42 |
| Rhynchospora alba | Beaked Rush | 44 |

| | | |
|---|---|---|
| Rhynchospora glomerata | Clustered Beak Rush | |
| Ribes hirtellum | Northern Gooseberry | 46 |
| Rosa acicularis | Bristly Rose | |
| Rubus odoratus | Purple-flowering Raspberry | 48 |
| Rubus pubescens | Dwarf Raspberry | 50 |
| Rubus schneideri | Bristly Blackberry | 52 |
| Rudbeckia missouriensis | Missouri Orange Coneflower | 56 |
| Sabatia campestris | Prairie Rose Gentian | 58 |
| Sagittaria australis | Arrowhead | |
| Salix serissima | Autumn Willow | |
| Salix syrticola | Dune Willow | |
| Salvia asurea subsp. pitcheri | Blue Sage | 60 |
| Sambucus racemosa subsp. pubens | Red-berried Elder | 62 |
| Sanguisorba canadensis | American Burnet | |
| Sanicula smallii | Southern Sanicula | |
| Sarracenia purpurea | Pitcher Plant | 64 |
| Saxifraga virginiensis | Early Saxifrage | |
| Schizachne purpurascens | False Melic Grass | |
| Schoenoplectus hallii | Hall's Bulrush | 72 |
| Schoenoplectus purshianus | Weak Bulrush | |
| Schoenoplectus smithii | Smith's Bulrush | |
| Scirpus hattorianus | Bulrush | 74 |
| Scirpus microcarpus | Bulrush | |
| Scirpus polyphyllus | Bulrush | 76 |
| Scleria muhlenbergii | Muhlenberg's Nut Rush | |
| Scleria pauciflora | Carolina Whipgrass | 78 |
| Sedum telephioides | American Orpine | 80 |
| Sheperdia canadensis | Buffaloberry | |
| Silene ovata | Ovate Catchfly | |
| Silene regia | Royal Catchfly | 82 |
| Sisyrinchium atlanticum | Eastern Blue-eyed Grass | 85 |
| Sisyrinchium montanum | Mountain Blue-eyed Grass | 87 |
| Solidago sciaphila | Cliff Goldenrod | 89 |
| Sorbus americana | American Mountain Ash | |
| Sparganium americanum | American Burreed | |
| Sparganium emersum | Green-fruited Burreed | 91 |
| Spiranthes lucida | Yellow-lipped Ladies' Tresses | |
| Spiranthes vernalis | Spring Ladies' Tresses | 93 |
| Stellaria pubera | Great Chickweed | |
| Stenanthium gramineum | Grass-leaved Lily | 95 |
| Stylisma pickeringii | Patterson's Bindweed | |
| Styrax americana | Storax | 97 |
| Styrax grandifolius | Bigleaf Snowbell Bush | |
| Sullivantia sullivantia | Sullivantia | 99 |
| Symphoricarpos ablus var. albus | Snowberry | |
| Synandra hispidula | Hairy Synandra | 101 |
| Talinum calycinum | Fameflower | |
| Talinum parviflorum | Small Flower-of-an-hour | 103 |
| Tetraneuris herbacea | Lakeside Daisy | 105 |
| Thelypteris noveboracensis | New York Fern | |
| Tilia heterophylla | White Basswood | |
| Tofieldia glutinosa | False Asphodel | 107 |
| Tomanthera auriculata | Ear-leafed Foxglove | 109 |
| Torreyochloa pallida | Pole Manna-Grass | |
| Tradescantia bracteata | Prairie Spiderwort | 112 |
| Trichomanes boschianum | Filmy fern | 114 |
| Trichophorum cespitosum | Tufted Bulrush | |
| Trientalis borealis | Star-flower | 116 |

| | | |
|---|---|---|
| Trifolium reflexum | Buffalo Clover | 118 |
| Triglochin maritima | Common Bog Arrowgrass | 120 |
| Triglochin palustris | Slender Bog Arrowgrass | 122 |
| Trillium cernuum | Nodding Trillium | |
| Trillium erectum | Ill-scented Trillium | |
| Trillium viride | Green Trillium | 124 |
| Ulmus thomasii | Rock Elm | |
| Urtica chamaedryoides | Nettle | 126 |
| Utricularia cornuta | Horned Bladderwort | |
| Utricularia intermedia | Flat-leaved Bladderwort | 128 |
| Utricularia minor | Small Bladderwort | 130 |
| Vaccinium corymbosum | Highbush Blueberry | |
| Vaccinium macrocarpon | Large Cranberry | 132 |
| Vaccinium oxycoccos | Small Cranberry | |
| Vaccinium stemineum | Deerberry | |
| Valeriana uliginosa | Marsh Valerian | |
| Valerianella chenopodifolia | Corn Salad | |
| Valerianella umbilicata | Corn Salad | |
| Veronica americana | American Brooklime | 134 |
| Veronica scutellata | Marsh Speedwell | 136 |
| Viburnum molle | Arrowwood | 138 |
| Viola blanda | White Hairy Violet | 140 |
| Viola canadensis | Canada Violet | 142 |
| Viola conspersa | Dog Violet | 144 |
| Viola primulifolia | Primrose Violet | 147 |
| Woodsia ilvensis | Rusty Woodsia | |
| Zigadenus elegans | White Camass | |

*++ = The ESPB voted at the 05/17/2013 meeting to combine varieties flava and herbiola and the species Platanthera flava will be listed as threatened. The proposed change is not official at this time; it would become official if it is continued through the entire statutorily required List revision process. For the purposes of this species review, the species P. flava is generally reviewed using combined data for the two varieties.*

**Nominations for species to be added as endangered or threatened:**

none

Prairie Buttercup, Ranunculus rhomboideus (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## ***Ranunculus rhomboideus*** Goldie

**PRAIRIE BUTTERCUP** **RANUNCULACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial herb, stems 10-25 cm tall.
**Range:** North-central and western United States and adjacent Canada.

*Ranunculus rhomboideus* occurs in both disturbed and undisturbed dry gravel and dolomite prairies across northern Illinois. Presently it is known from five localities in the state, including four state nature preserves.
**References:** Fassett (1946), Benson (1948), Fell and Fell (1956), Whittemore (1997b).

## KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species in 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.

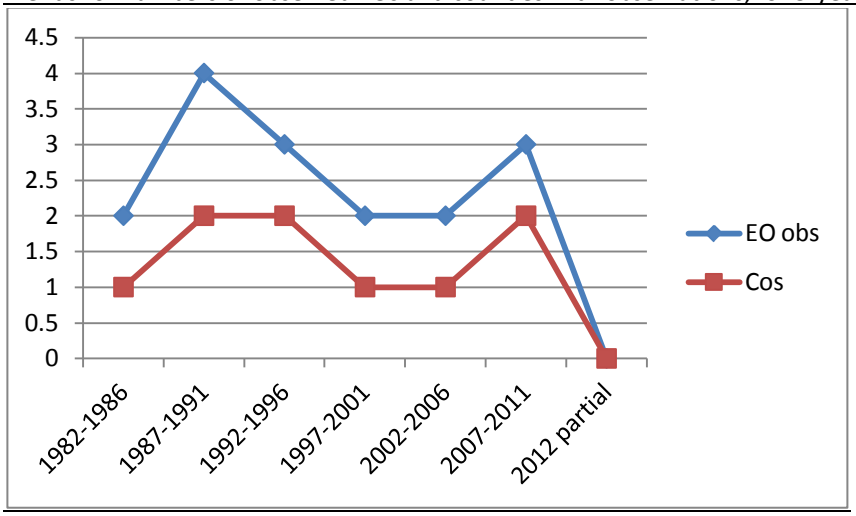
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 04/28/2010 | 9 | 5 | 6 | 6 | 4 | 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 | 4 | 3 | 2 | 2 | 3 | 0 |
| Cos | 1 | 2 | 2 | 1 | 1 | 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 were two known occurrences in two counties that were established as EOs. Since then, seven EOs and two counties have been added; three EOs and one county added in the 1980s, two EOs added in the 1990s, one EO and one county added in the 2000s, and one EO and added since 2010. Five EOs (56% of total) have had observations from 2002-2011. One EO is reported as "destroyed". No EOs have "surveyed w/ no observation" reports. Six EOs (67%) are protected in Nature Preserves. While there are only five EOs with observations in the most recent 10 years, relative to the number of EOs when the species was initially listed and the number of protected EOs, staff recommendation is for no status change.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

Dull Meadow Beauty, Rhexia mariana (Illinois endangered)

Listed as IL E, 09/01/2004
Reason for listing: restricted habitats or low pops in IL;

## *Rhexia mariana* L.

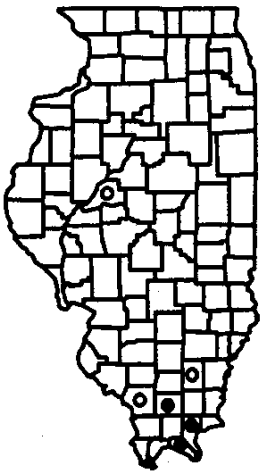
**DULL MEADOW BEAUTY** **MELASTOMACEAE** **Status:** Endangered in Illinois.

**Habit:** Freely branched rhizomatous perennial herb, stems to 1 m tall.

**Range:** Southeastern United States.

*Rhexia mariana* is commonly found in wet meadows and sandy fields with acidic soils in southeast United States. It reaches its northwestern range limit in southern Missouri and Illinois where it is occasionally found in wet meadows, around ponds, and in seep springs. Dull meadow beauty seems to be common in seep springs in the Cretaceous Hills Section of the Coastal Plain Division of southern Illinois. It has recently been reported from a state nature preserve in Pope County.

**References:** Gleason and Conquist (1991).



## MAP

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.

Citation: Nyboer, R. W. and J. E. Ebinger, editors. 2004. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 3: 2004 Changes to the Illinois List of Endangered and Threatened Plant Species. Illinois Endangered Species Protection Board, Springfield, Illinois. 34 pp.

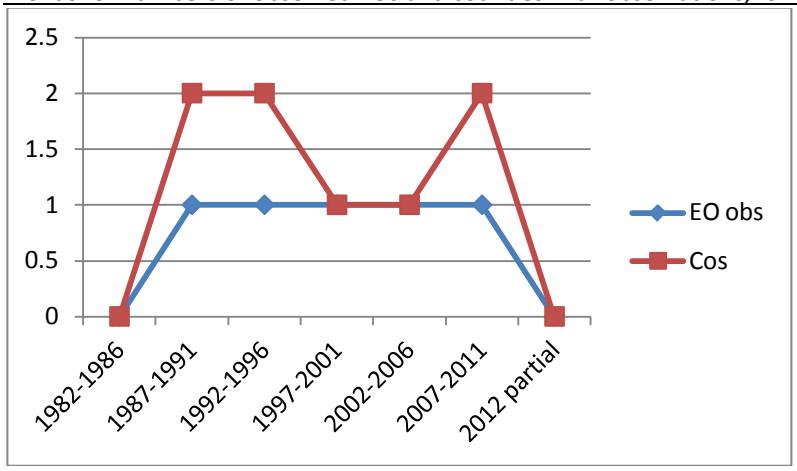
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 8/3/2009 | 8 | 2 | 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 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| Cos | 0 | 2 | 2 | 1 | 1 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

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 cespitose 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

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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.

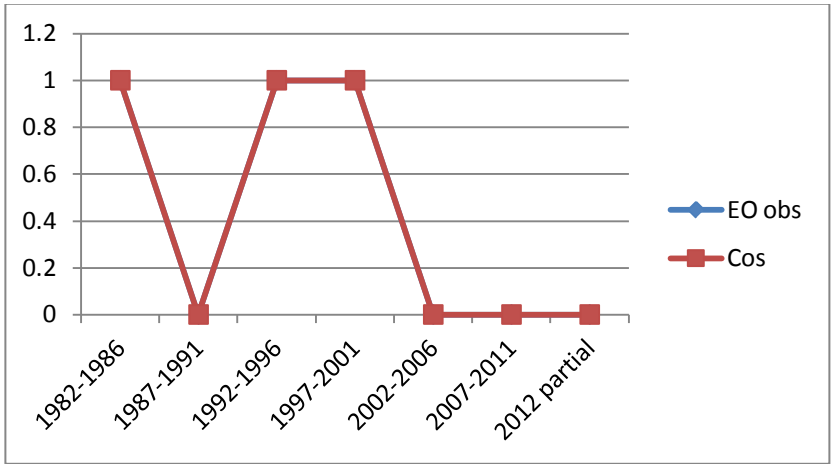
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 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.

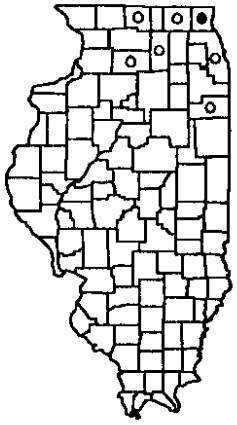
Northern Gooseberry, Ribes hirtellum (Illinois threatened, Illinois endangered)

Listed as IL E, 5/20/1980;
Reason for listing: restricted habitats or low pops in IL;

## *Ribes hirtellum* Michx.

**NORTHERN GOOSEBERRY** **GROSSULARIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Shrub, to 3.5 m tall with weak spines.
**Range:** Canada and adjacent northern United States.



*Ribes hirtellum* occurs in northern bogs and swamp forests. This species reaches its southwestern range limit in Illinois, where it is exceedingly rare. It has not been relocated at historic collection sites in two Lake County bogs, where only single plants were reported. A Lee County collection, made from a sandstone cliff in 1981, also has not been relocated. This shrub was recently discovered in a third Lake County bog, which is protected as a state nature preserve. There are unverified reports of this species from LaSalle and Menard counties.

**References:** Fassett (1932), Tehon (1942), Taft and Solecki (1990).

## KEY

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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.

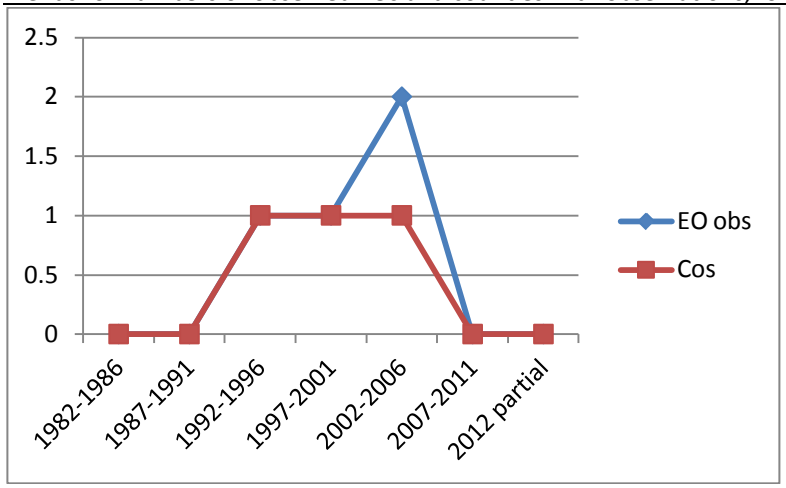
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2002-07 | 5 | 2 | 2 | 4 | 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 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| Cos | 0 | 0 | 1 | 1 | 1 | 0 | 0 |

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




NatureServe Conservation Status in United States

None queried.

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:** Tehon (1942), Wunderlin (1966).

## KEY

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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.

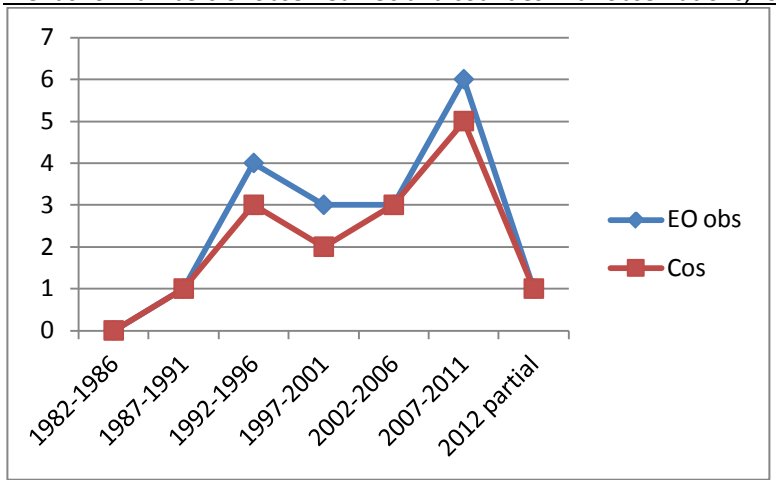
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| 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: 15 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.

Dwarf Raspberry, Rubus pubescens (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T, 3/13/1989
Reason for listing: restricted habitats or low pops in IL;

## ***Rubus pubescens*** Raf.

**DWARF RASPBERRY** **ROSACEAE**

**Status:** Threatened in Illinois.
**Habit:** Shrub with trailing herbaceous stems, upright stems 20-60 cm tall.
**Range:** Boreal Canada, south into northern United States.

In Illinois, *Rubus pubescens* occurs in mesic ravine forests, bogs, fens, and flatwoods in the northern part of the state. Until recently a single population was known from a state nature preserve in Lake County. Since 1990, populations have been found at seven localities in three northeastern counties. Currently four sites are in state nature preserves and others are in county forest preserves.
**Reference:** Evert (1988).

## KEY

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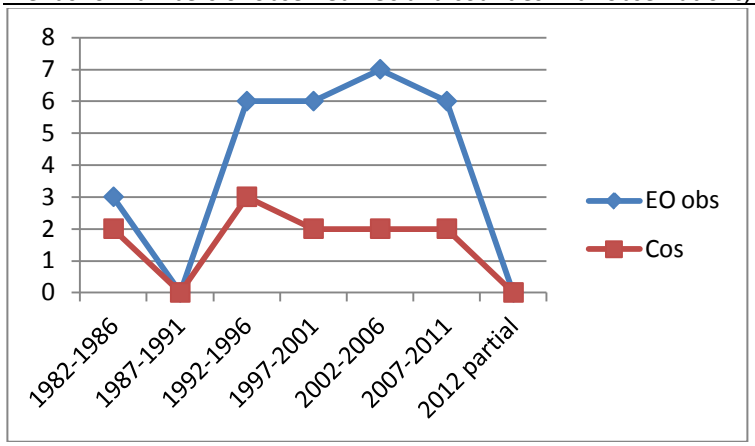
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 05/31/2009 | 12 | 8 | 6 | 9 | 4 | 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 | 0 | 6 | 6 | 7 | 6 | 0 |
| Cos | 2 | 0 | 3 | 2 | 2 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

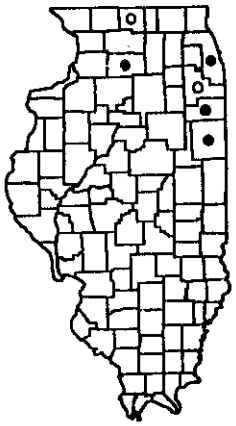
Bristly Blackberry, Rubus schneideri (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T, 09/01/2004
Reason for listing: restricted habitats or low pops in IL;

## ***Rubus setosus*** Bigelow

**BRISTLY BLACKBERRY** **ROSACEAE**

**Status:** Endangered in Illinois.
**Synonym:** *Rubus schneideri* Bailey.
**Habit:** Armed shrub with arching stems, to 1 m long.
**Range:** Northeastern United States and adjacent Canada.



*Rubus setosus* is relatively common in wet-mesic sand prairies in the Kankakee Sand Area Section of the Grand Prairie Natural Division of Illinois. Presently five Illinois populations are known from wet sand prairies in Cook, Iroquois, Kankakee and Lee counties, one in a state nature preserve and another in a state conservation area.
**References:** Bailey (1941), Jones (1952), Hodgdon and Steele (1966).

## KEY

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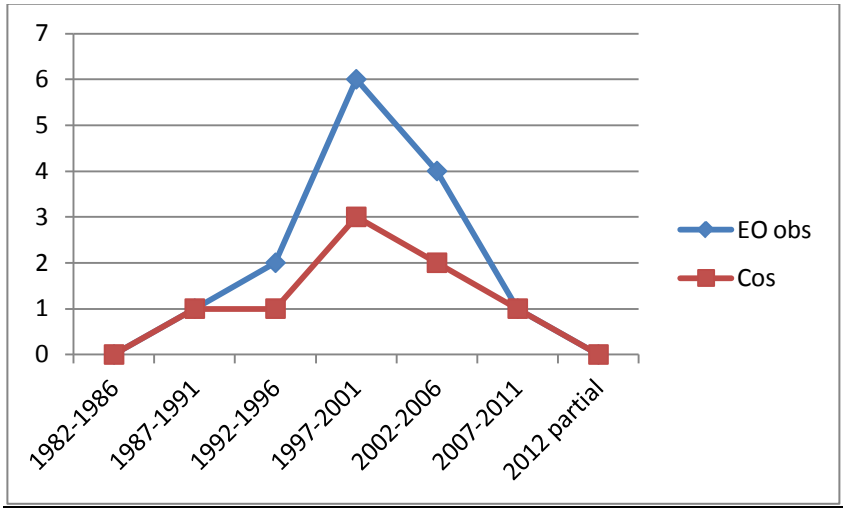
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2009 | 9 | 4 | 3 | 6 | 5 | 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 | 0 | 1 | 2 | 6 | 4 | 1 | 0 |
| Cos | 0 | 1 | 1 | 3 | 2 | 1 | 0 |

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




**Mankowski 10/13/2013 notes and recommendation:**
When the species was originally listed as endangered in 1980, there was only one known occurrence in one county that was established as an EO. Since then, eight EOs have been added; three EOs and two counties were added in the 1980s, two EOs and two counties were added in the 1990s, and three EOs were added in the 2000s. Three EOs are protected in Nature Preserves. The addition of the eight EOs and four counties, apparently led to the species' upgrade to threatened in 2004. Six EOs (86% of total) are protected in Nature Preserves. Since 2002, four EOs (44% of total) have had reported observations and no EOs have had "surveyed w/ no observation" reports. Most recent reported observation/population numbers for the four EOs with observations since 2002 are: several hundred stems; plants cover 30' diameter; observed; and, 25 plants. The combination of a relatively low number of EOs with recent observations and relatively low reported population numbers, suggests that the species' status may now be less secure than when it was upgraded.
**Mankowski 10/13/2013 recommendation** – change from threatened to endangered.

**ESPB staff 11/01/13 responses to ESPB TEC John Taft 10/23/13 comments on Part 3, Plant List 1st cut staff draft recommendations**

**ESPB TEC John Taft comments:**
*Rubus schneideri* – This blackberry is part of the *Rubus setosus* complex that has been treated in a variety of ways by different authors. The type locality for *R. schneideri* is in Kankakee County, Illinois. Liberty Hyde Bailey described the species based on a 1940 collection by R. A. Schneider. The most defensible approach may be that of Reznicek and Voss (Flora of Michigan update) who simply recognize *R. setosus* as a complex of highly variable taxa. Authors that recognize numerous species within this complex distinguish taxa based on variable

characteristics (pubescence, location and abundance of glands, shape of the base of the terminal leaflet) that can be interpreted differently by different botanists. Mohlenbrock recognized *Rubus schneideri* but also distinguishes other seemingly scarce taxa also limited in the state to sand regions in NE Illinois: *R. wheeleri, R. wisconsinensis,* and *R. missouricus*. USDA includes *R. schneideri* as a synonym of *R. missouricus*, a taxon not included in Mohlenbrock (2002), with a range throughout the upper Midwest as well as the central Atlantic states. Some material in the INHS herbarium formerly determined to be *R. schneideri* recently has been annotated by Gerould Wilhelm as other taxa in this complex. The absence of a consensus on the taxonomy of this taxon suggests a degree of caution may be warranted. Furthermore, the suggestion to change *R. schneideri* from T to E based on recent observations of 4 populations ranging in size from moderate to large in 2 counties appears somewhat inconsistent with the proposal to upgrade *Synandra hispidula* from E to T based on 3 large populations limited to a single county. RECOMMENDATION: MAINTAIN AS THREATENED.

Mankowski response: Comments noted. Staff reviewed the Database data and previous staff recommendations for both *Rubus schneideri* and *Synandra hispidula* and provides the following:

Board staff recommendation for this species was based on the same amount of information, level of detail, temporal scale of consideration, and presentation of information that was consistent with Board approved standards for the current 5-year review of the List.

The commenter provides significant information about the taxonomic uncertainty of the species. However, it is unclear to staff from the commenter's comments, how the absence of consensus on the taxonomy of *Rubus schneideri* relates to a recommendation for maintaining the species' status as threatened. The Database has not received information from any institution or individual that any EO or individual report is based on a misidentified specimen. If the commenter is proposing an overall re-evaluation of the taxon and a subsequent re-evaluation of its placement on the Illinois List, staff suggests that it may be most appropriate for the commenter to specifically address the Board with that proposal as an agenda item.

Board staff appreciates that I may have been inconsistent over the course of reviewing all 484 species. However, staff believes that previous staff recommendations for *Synandra hispidula* and *Rubus schneideri* are not inconsistent for multiple reasons including relative consideration of changes in the numbers of EOs since listing, the number of EOs with recent observations, and the reported population numbers in recent observations. For ease of reference, the 1st cut draft staff notes and recommendations for both species are pasted below.

***Mankowski 1st cut draft notes and recommendation for Synandra hispidula:***
*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 3 of the 5 EOs, staff recommends a change in status from endangered to threatened.*
***Mankowski 1st cut draft recommendation for Synandra hispidula** – change from endangered to threatened*

***Mankowski 1st cut draft notes and recommendation for Rubus schneideri:***
*When the species was originally listed as endangered in 1980, there was only one known occurrence in one county that was established as an EO. Since then, eight EOs have been added; three EOs and two counties were added in the 1980s, two EOs and two counties were added in the*

*1990s, and three EOs were added in the 2000s. Three EOs are protected in Nature Preserves. The addition of the eight EOs and four counties, apparently led to the species' upgrade to threatened in 2004. Six EOs (86% of total) are protected in Nature Preserves. Since 2002, four EOs (44% of total) have had reported observations and no EOs have had "surveyed w/ no observation" reports. Most recent reported observation/population numbers for the four EOs with observations since 2002 are: several hundred stems; plants cover 30' diameter; observed; and, 25 plants. The combination of a relatively low number of EOs with recent observations and relatively low reported population numbers, suggests that the species' status may now be less secure than when it was upgraded.*

***Mankowski 1st cut draft recommendation for Rubus schneideri** – change from threatened to endangered.*

Staff maintains a recommendation for changing the status of Rubus schneideri from threatened to endangered.

Citations:

MICHIGAN FLORA ONLINE. A. A. Reznicek, E. G. Voss, & B. S. Walters. February 2011. University of Michigan. Web. 10-23-2013. http://michiganflora.net/home.aspx.

NatureServe Conservation Status in United States

None queried.

Missouri Orange Coneflower, Rudbeckia missouriensis (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;

## ***Rudbeckia missouriensis*** Engelm.

**MISSOURI ORANGE CONEFLOWER ASTERACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial herb, stems to 1 m tall.
**Range:** South-central United States.

*Rudbeckia missouriensis* reaches its northeastern range limit in Illinois. A few populations presently occur on limestone glades and loess hill prairies along a limited stretch of the Mississippi River in the Ozark Natural Division. One of these is in a state nature preserve and the others are in private ownership. There is an unverified report of this species from Hardin County.
**References:** Evers (1951, 1955), Schwegman and Mohlenbrock (1966), Ozment (1967).

## KEY

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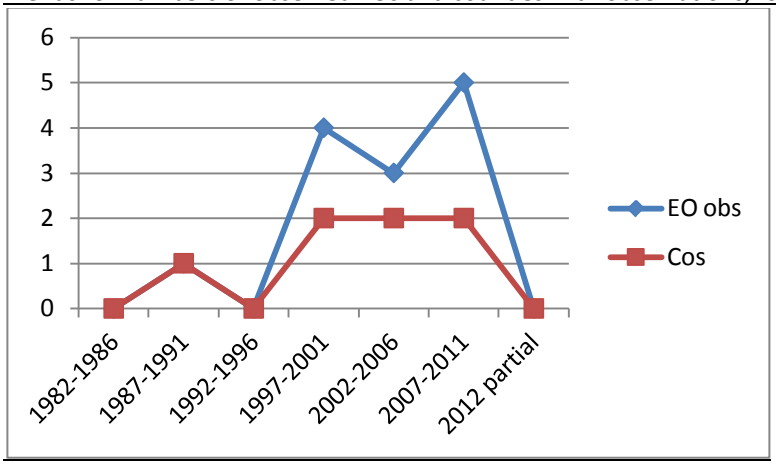
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 09/30/2011 | 5 | 5 | 3 | 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 | 0 | 1 | 0 | 4 | 3 | 5 | 0 |
| Cos | 0 | 1 | 0 | 2 | 2 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

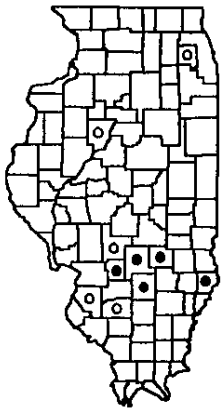
Prairie Rose Gentian, Sabatia campestris (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

## *Sabatia campestris* Nutt.

**PRAIRIE ROSE GENTIAN** **GENTIANACEAE**

**Status:** Endangered in Illinois.
**Habit:** Annual herb, stems 20-40 cm tall.
**Range:** South-central United States.



A plant of mesic prairies, *Sabatia campestris* reaches its eastern and northern range limit in Illinois. This species was formerly more common in Illinois, but has been almost eliminated by the destruction of its habitat. Until recently, a Bond County station contained the only known extant Illinois population of this species. This annual species is erratic in appearance. It is presently known from eight populations from Bond, Effingham, Fayette, Lawrence, and Marion counties.
**References:** Jones (1947), Wilbur (1955).

## KEY

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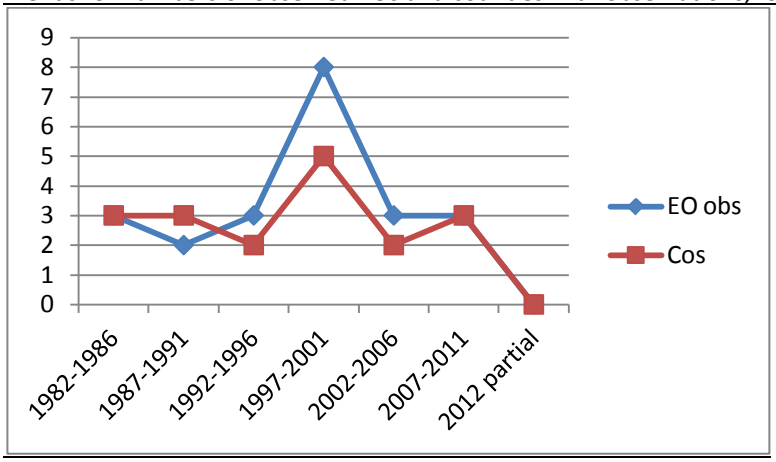
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2009 | 8 | 5 | 1 | 6 | 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 | 3 | 2 | 3 | 8 | 3 | 3 | 0 |
| Cos | 3 | 3 | 2 | 5 | 2 | 3 | 0 |

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




NatureServe Conservation Status in United States

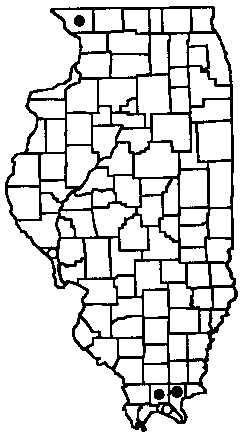
None queried.

Blue Sage, Salvia azurea subsp. pitcheri (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## ***Salvia azurea*** Michx. & Lam. subsp. ***pitcheri*** (Torr.) Epling

**BLUE SAGE** **LAMIACEAE**



**Status:** Threatened in Illinois.
**Synonym:** *Salvia pitcheri* Torr.; *Salvia azurea* Michx. & Lam. var. *grandiflora* Benth.
**Habit:** Perennial herb, stems to 1 m tall.
**Range:** Central United States.

*Salvia azurea* subsp. *pitcheri* has been collected from a few scattered sites throughout Illinois. Most of these stations probably represent garden escapes and railroad waifs. Indigenous populations are primarily limited to limestone glades and hill prairies in the southern tip of Illinois. Presently three indigenous populations are known in the state. One population is in a state nature preserve, another in a natural heritage landmark, and one on federal land.
**Note:** Only the counties where this species is considered indigenous are mapped.
**References:** Ozment (1967), Schwegman and Mohlenbrock (1968), Schwegman (1991), Kindscher and Tieszen (1998).

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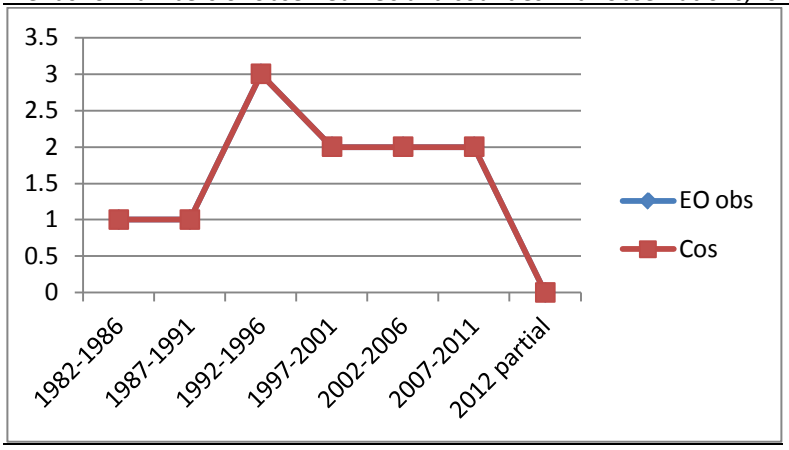
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 6/10/2011 | 8 | 3 | 1 | 7 | 6 | 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 | 3 | 2 | 2 | 2 | 0 |
| Cos | 1 | 1 | 3 | 2 | 2 | 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 only one known occurrence in one county that was established as an EO. Since then, seven EOs and five counties have been added; four EOs and two counties were added in the 1980s, one EO and one county were added in the 1990s, and two EOs and one county were added in the 2000s. One EO is protected in a Nature Preserve. While there are only three EOs with observations in the most recent 10 years, relative to the number of EOs when the species was initially listed, staff recommendation is for no status change.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

Red-berried Elder, Sambucus racemosa subsp. pubens (Illinois endangered)

Listed as IL T, 5/20/1980; Listed as IL E 12/31/1998
Reason for listing: restricted habitats or low pops in IL;

## ***Sambucus pubens*** Michx.

**RED-BERRIED ELDER** **CAPRIFOLIACEAE**

**Status:** Endangered in Illinois.
**Synonym:** *Sambucus racemosa* L. spp. *pubens* (Michx.) House.
**Habit:** Shrub, to 3 m tall.
**Range:** Circumboreal, northern United States, and south in the Appalachians.

*Sambucus pubens* ranges south into northern Illinois in rocky forest slopes and occasionally bogs. Presently it is known from five localities in Illinois, including two state nature preserves, a state park, and a national heritage corridor.
**Reference:** Tehon (1942).

## KEY

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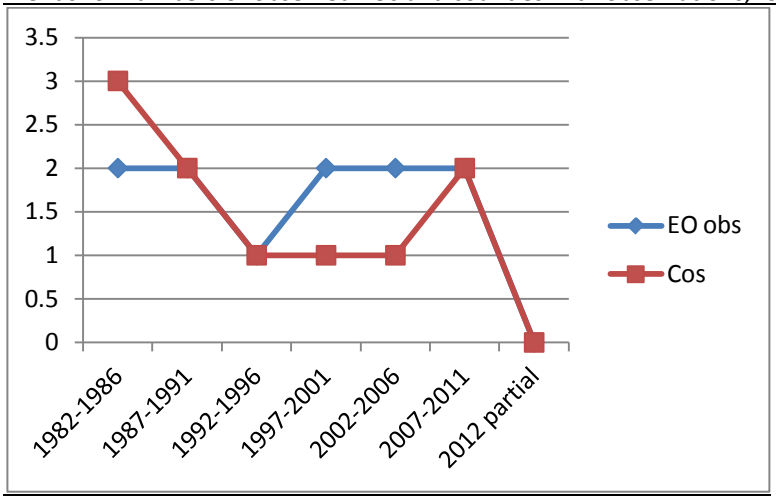
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 7/8/2011 | 8 | 3 | 4 | 5 | 5 | 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 | 2 | 1 | 2 | 2 | 2 | 0 |
| Cos | 3 | 2 | 1 | 1 | 1 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

Pitcher Plant, Sarracenia purpurea (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Sarracenia purpurea* L.

**PITCHER PLANT** **SARRACENIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial insectivouous herb, scapes 30-50 cm tall.
**Range:** Boreal Canada, south into northeastern United States and the Coastal Plain.

*Sarracenia purpurea* occurs in bogs, fens, and calcareous floating mats and is restricted in Illinois to the extreme northeastern counties. Habitat destruction has eliminated some stations, and most surviving populations are threatened by collecting. Presently, populations are known from four state nature preserves, a state park, and private land. This species probably persists at two other state nature preserves.
**References:** Emerson (1921), Sheviak and Haney (1973), Evers and Page (1977), Moran (1981).

## KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species in 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.

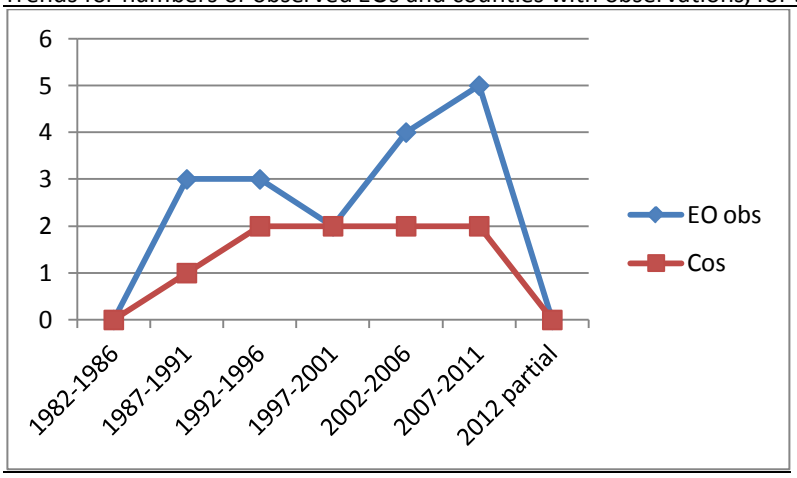
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 08/15/2011 | 7 | 6 | 6 | 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 | 0 | 3 | 3 | 2 | 4 | 5 | 0 |
| Cos | 0 | 1 | 2 | 2 | 2 | 2 | 0 |

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




**Mankowski 10/13/2013 notes and recommendation:**
When the species was originally listed as endangered in 1980, there were three known occurrence in two counties that were established as EOs. Since then, four EOs have been added; two EOs were added in the 1980s and two EOs were added in the 1990s. Six EOs (86% of total) have had reported observations since 2002. One EO has had a "surveyed w/ no observation" report for which there was not subsequent observation. Six EOs are protected in Nature Preserves. Most recent reported observation/population numbers for the six EOs with observations since 2002 are: 988 clumps in 2 locations; 11 clumps; 3 plants; 1,066 clumps in 3 locations; 400 clumps; and, 75 clumps. While some of the recent reported population numbers are not very large, relative to the status and distribution at initial listing and considering that most EOs are protected in Nature Preserves, it appears the species' status is now more secure and may exceed the definition of endangered.
**Mankowski 10/13/2013 recommendation** – change from endangered to threatened.

**ESPB staff 11/01/13 responses to ESPB TEC John Taft 10/23/13 comments on Part 3, Plant List 1st cut staff draft recommendations**

**ESPB TEC John Taft comments:**
*Sarracenia purpurea* - Presumably, "clump" refers to genet. Only 4 of the 6 populations have moderately large populations (> 12 genets) and all occur in ecologically fragile peatland habitats prone to degradation from a range of factors including altered hydrology (e.g., lowered water table, increased surface water discharge), exotic species infestation (e.g., *Rhamnus frangula*), nutrient pollution from nitrogen deposition (the insectivorous *S. purpurea* is a specialist in nutrient poor habitats), and climate change. For example, this species was not found during a botanical survey of #2 during the late 1980s (Taft and Solecki 1990). Sarracenia purpura formerly was

known from the site; however, severe infestation of *Rhamnus frangula* appeared to have altered habitat suitability for the species. Based on the same data available to Board staff and in the context of threats to the habitat, changing the listing status for *Sarracenia purpurea* from E to T appears unwarranted, particularly without information on demographics that could support population viability even in large populations when so many threats exist to the habitat. RECOMMENDATION: MAINTAIN AS ENDANGERED.

Mankowski response: Comments noted. Staff reviewed the Database data again and provides the following additional information and response:

Board staff recommendation for this species was based on the same amount of information, level of detail, temporal scale of consideration, and presentation of information that was consistent with Board approved standards for the current 5-year review of the List. The temporal scale for primary consideration was supposed to be observations from within the last 10 years (2002-2011 - with some inclusion of 2012 data, when possible) in order to focus attention on current status and distribution.

There have been no observations, and three "surveyed w/ no observation", reports at #2 since its first observation in 1976. Staff does not consider a "surveyed w/ no observation" report in 1987 to have weighting against the number of EOs with observations in the most recent 10 years. That #2 has had repeated "surveyed w/ no observation" reports over several decades may mean that the EO should be considered extirpated , however it is not identified as such in the Database. That this EO had "surveyed w/ no observation" with no subsequent observations was noted in the original species review. Staff also notes that the Board has expressed mixed opinions about the currency of observations with respect to considering a location or species extirpated.

Regarding stability of the species, it has persisted at five EOs for at least 18 years and while reported individual population numbers have varied, they have remained similar or improved over time at five EOs; one additional EO saw a decline in 2011, but still had over 1,000 individuals; and, the remaining EO has not had reported observation since 1974. Persistence and reported population numbers at each EO are provided below.

Persistence at individual EOs

| | |
|---|---|
| #1(NP) | at least 36 years |
| #2(NP) | no reported persistence |
| #3(NP) | at least 18 years |
| #4(NP) | at least 15 years, but "surveyed w/ no observation" reported in 2011 |
| #5(NP) | at least 35 years |
| #6(NP) | at least 24 years |
| #7 | at least 23 years |

Reported population numbers at individual EOs

| | |
|---|---|
| #1(NP) | 2011: 988 clumps in 2 locations |
| | 2009: flowering by scattered individuals, common in portions of fen |
| | 2008: 130 flowering clumps |
| | 1993: plants found |
| | 1976: plants observed |
| | |
| #2(NP) | 2011: none found despite search |
| | 2005: None found despite search |
| | 1987: Not relocated |
| | 1974: 1 big, 12 inch clump |
| | |

| | |
|---|---|
| #3(NP) | 2011: 11 clumps |
| | 2009: Scattered individuals with some in flower, rare in semi-open bog |
| | 2009: 5 clumps, 80% flowering |
| | 2008: 4 clumps, 75% flowering |
| | 2007: 4 clumps, 25% flowering |
| | 2006: 3 clumps, 67% flowering |
| | 2003: pop A - 1 large clump with 6 flowering stalks, pop C - 1 small clump |
| | 2003: pop B - 1 large clump, pop D - 1 small clump |
| | 1994: 2 clumps |
| | |
| #4(NP) | 2011: none found despite search |
| | 2005: 3 plants, 2 flowering |
| | 2003: 3 plants |
| | 1997: 25 plants |
| | No Date: Observed |
| | |
| #5(NP) | 2011: approx 1,066 clumps in 3 locations |
| | 2009: 1,623 clumps, 38% flowering |
| | 2008: 988 clumps, 50% reproductive |
| | 1999: Plants observed |
| | 1997: scattered small colonies |
| | 1991: Species observed |
| | 1990: 81 flowering stems |
| | 1989: Species observed |
| | 1988: Species observed |
| | 1977: Species observed |
| | |
| #6(NP) | 2011: approx 400 clumps |
| | 2009: 400 rosettes, 75% flowering |
| | 2007: 201-400 rosettes, 75% reproductive |
| | 2005: 5,760 plants |
| | 1988: Plants found |
| | |
| #7 | 2011: 75 clumps |
| | 2009: < 100 clumps, 20% flowering |
| | 2008: 85 clumps, 30% flowering |
| | 2007: 85 clumps, 40% reproductive |
| | 2004: 76 clumps, 20% reproductive |
| | 1992: Healthy population |
| | 1991: Species observed |
| | 1989: Species observed |
| | 1989: Plant observed |

Staff agrees that this is certainly an unusual species and additional research would likely improve understanding for conservation and possible recovery efforts. However, staff considers the combination of persistence and reported population numbers for at least five EOs currently to be sufficient evidence that the species is more secure than the definition of endangered. Staff maintains a recommendation for changing the status of the species from endangered to threatened.

**ESPB staff 11/01/13 responses to ESPB TEC Susanne Masi 10/24/13 comments on Part 3, Plant List 1st cut staff draft recommendations**

**ESPB TEC Susanne Masi comments:**
While the five remaining populations are protected and seem stable. Three populations (#5, #1, and #6) support significant plant numbers, but two populations small (#3 reports 8-11 plants in recent years and #7 reports = /< 100 - the recent Plants of Concern reports of 22-29 plants at #7 represent only a 25% sample along a transect, since trampling is a concern).

Threats reported at almost every population are brush encroachment, invasives (mostly cattails, *Rhamnus* spp. (likely *R. frangula*), and *Cornus* spp.). Water quality issues are an issue from subdivision runoff at one site.

Three historical populations have disappeared:
- #2 – reported to the Natural Heritage Database as not found in 2011

- Wauconda Bog (Ken klick will submit a report to the Natural Heritage Database on Wauconda Bog; he has a record of an historical occurrence there which was not in the Database. His subsequent searches have been unsuccessful.)

- #4 (Dan Fink recently submitted his report to Plants of Concern on the population at #4 . It was not found in 2011 . This search/report was part of his masters' thesis on *Sarracenia purpurea* in Illinois.) See report and citation below. Plants of Concern has also forwarded this report to the Database.

All of these extirpated populations were reported as having succumbed to massive *Rhamnus* sp., Cattail, and Reed Canary Grass invasion. It is unlikely that extensive impact of cattails and *Rhamnus* on the ecosystem can be reversed even if these species are removed. These invasive organisms may reflect and also help exacerbate changes in soil nutrients such as nitrogen.

Altogether, these five populations remain a very small number. The reason for listing in 1980 was given as "restricted habitats or low pops in IL". These reasons are still the case for this species. Although the staff recommendation states that six EOs were observed since 2002, we are quite sure that only five of these remain based on observations since 2011. That brings us to five from the original three when listed, in my opinion not enough to warrant the change to Threatened.

Before changing the status from endangered to threatened, I believe there are research questions that need to be addressed to determine whether these populations are at high risk levels. Some of these were suggested by Ken Klick in recent correspondence.

- Life history – recruitment (juveniles have been observed at some populations and the species is known to reproduce vegetatively) but Plants of Concern monitoring does not have a good demographic handle on levels of recruitment.) Do we really know if populations are stable? Margo Milde, a respected field botanist in NE Illinois who did a botanic survey of #3 and other sites for IDNR, reports that the *Sarracenia* population at #3 was totally extirpated by poaching several decades ago before the site was protected and that the current population at Volo was a reintroduction. Margo has observed two newer clumps (possibly vegetative offspring from the plantings or from a seed bank) and notes that "these plants grow and establish themselves very very slowly. I've watched the two spontaneous clumps there for years: one…started about 20 years ago and only in the last few years did it reach the size of the [mature plant]…the second one…is more recent and still small." (email correspondence, 10/23/2013)

- Genetics – Dan Fink's masters thesis for NEIU (citation below) concluded that there are significant morphological differences among the five populations he studied, strongly suggesting different ecotypes if not genotypes in each population. If there are significant ecotypical or genotypical differences among the

populations, each population might be considered unique and individually endangered. A genetic study among our Illinois populations would help define this further.

Climate change effects – as a bog species *Sarracenia* is a northern relict where it occurs in the Upper Midwest and can be expected to be threatened by climbing temperatures.

Water quantity and quality - changes in hydrology can lower water tables on which *Sarracenia* depends. Road and agricultural runoff may be impacting water quality.

Bogs and fens themselves are rare and threatened peatland ecosystems in Illinois that can't be replaced or created in the same ways that prairies or savannas can. There are few if any options for translocation of *Sarracenia* into similar habitats. "Most of our bog/floating mat habitats are changing through succession and by invasive plants – habitat is only getting smaller. Additional habitat cannot be created for this species." (Ken Klick, email correspondence, 1-/18- 2013)

A final point to be made is the potential threat of poaching, mentioned above for #3. I am not aware of any other recent reports of poaching in our five populations, but have learned of the poaching of pitcher plants from Dan Mason at Indiana Dunes National Lakeshore within the past two years. Carnivorous plants are especially vulnerable to this activity.

Citations

Fink, D. 2012. The Geographic Distribution of *Sarracenia purpurea* in Illinois and its Associated Species. Thesis presented to the faculty of the Department of Geography and Environmental Studies, Northeastern Illinois University. Unpublished ms. Contains an excellent and up to date reference list.

Gotelli, N.J. and A.M. Ellison. 2002. Nitrogen Deposition and Extinction Risk in the Northern Pitcher Plant, *Sarracenia purpurea. Ecology*. Vol 83, No 10 (Oct. 2002) pp. 2758-2765. Contains an excellent reference list.

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. Taft and Solecki did not find *Sarracenia purpurea* while doing this survey.

Note – the Plants of Concern report form that was included in the commenter's document has been omitted from this current document.

> Mankowski response: Comments noted. Staff reviewed the Database data again and provides the following correction, additional information, and response:
>
> Board staff recommendation for this species was based on the same amount of information, level of detail, temporal scale of consideration, and presentation of information that was consistent with Board approved standards for the current 5-year review of the List. The temporal scale for primary consideration was supposed to be observations from within the last 10 years (2002-2011 - with some inclusion of 2012 data, when possible) in order to focus attention on current status and distribution.
>
> There have been no observations, and three "surveyed w/ no observation", reports at #2 since its first observation in 1976. Staff does not consider a "surveyed w/ no observation" report in 1987 to have weighting against the number of EOs with observations in the most recent 10 years. That #2 has had repeated "surveyed w/ no observation" reports over several decades may mean that the EO should be considered extirpated , however it is not identified as such in the Database. That this EO had "surveyed w/ no observation" with no subsequent observations was noted in the original species review. Staff also

notes that the Board has expressed mixed opinions about the currency of observations with respect to considering a location or species extirpated.

As the commenter notes, Wauconda Bog is not in the Database. Staff would not consider a "surveyed w/ no observation" at a site that has never been an EO, and therefore not considered in the context of any 5-year List review, to have weighting as an extirpated population or against the number of EOs with observations in the most recent 10 years.

The commenter notes that #4 is extirpated. The Database entry for this EO in 2011 notes it as "surveyed w/ no observation" and mentions the dominance of invasive species, however, it was not noted as extirpated. The EO had observation in 2005, so including this EO in the number of EOs with observations from 2002-2011 was correct, but staff made error in not noting the single "surveyed w/ no observation" report in 2011. Neither the Database nor Board Staff considers a single "surveyed w/ no observation" report to represent an extirpation unless the observer specifies that the site/habitat has been destroyed or otherwise rendered completely inhospitable to the subject species.

The commenter notes that #3 is a reintroduction. The Database does not include information documenting this EO as a reintroduction in 1994 (first reported observation) and does not mention information about any subsequent population manipulation. Regardless, the population, while small, has persisted since then (17 years in 2011) and staff would consider this to be a "wild" population.

Regarding stability of the species, it has persisted at five EOs for at least 18 years and while reported individual population numbers have varied, they have remained similar or improved over time at five EOs; one additional EO saw a decline in 2011, but still had over 1,000 individuals; and, the remaining EO has not had reported observation since 1974. Persistence and reported population numbers at each EO are provided below.

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| | 2003: pop B - 1 large clump, pop D - 1 small clump |
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| | 2004: 76 clumps, 20% reproductive |
| | 1992: Healthy population |
| | 1991: Species observed |
| | 1989: Species observed |
| | 1989: Plant observed |

Staff agrees that this is certainly an unusual species and additional research would likely improve understanding for conservation and possible recovery efforts. However, staff considers the combination of persistence and reported population numbers for at least five EOs currently to be sufficient evidence that the species is more secure than the definition of endangered. Staff maintains a recommendation for changing the status of the species from endangered to threatened.

NatureServe Conservation Status in United States

None queried.

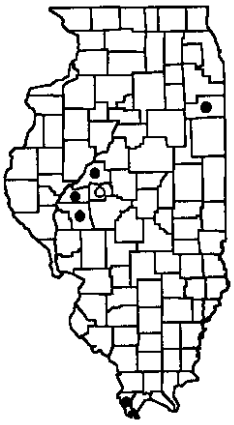
Hall's Bulrush, Schoenoplectus hallii (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 12/31/1998
Reason for listing: restricted habitats or low pops in IL;

## *Scirpus hallii* Gray

**HALL'S BULRUSH** **CYPERACEAE**

**Status:** Threatened in Illinois.
**Habit:** Annual cespitose bulrush, culms 10-40 cm tall.
**Range:** Widely disjunct localities in eastern United States and the Midwest, including central Illinois.



*Scirpus hallii* is presently known from eight states, six with only one population. During wet years this species can become a common component of sand pond vegetation. During dry years this species will remain in the seed bank, the seeds remaining viable for many years. It was recently found in a state nature preserve.
**Note:** The scientific name of this species is presently considered to be *Schoenoplectus hallii* (Gray) S. G. Smith.
**References:** Jones (1947, 1952), Winterringer (1959), Mohlenbrock (1963b), Schuyler (1969), Robertson *et al.* (1993), McClain *et al.* (1997), McKenzie (1998).

## KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species in 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.

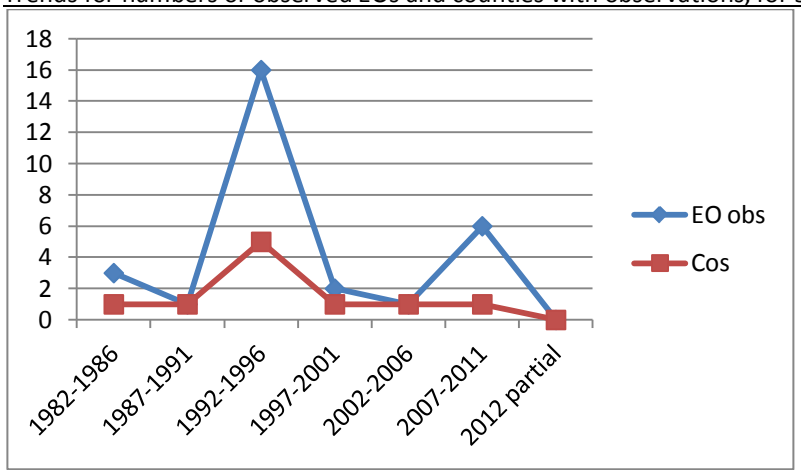
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 10/22/2010 | 17 | 7 | 2 | 13 | 5 | 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 | 3 | 1 | 16 | 2 | 1 | 6 | 0 |
| Cos | 1 | 1 | 5 | 1 | 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 only one known occurrence in one county that was established as an EO. Since then, 16 EOs and 4 counties have been added; 3 EOs were added in the 1980s, 12 EOs and 4 counties were added in the 1990s, and 1 EO was added in the 2000s. The additions of 15 EOs and 4 counties in the 1980s and 1990s apparently led to the species' upgrade to threatened in 1998. Two EOs are protected in Nature Preserves. Seven EOs (41% of total) have had reported observations since 2002, with the following most recent reported observation/population numbers: 10,000s of plants in 2 locations; 100,000s of plants; 10,000s of plants; 6 plants; 100,000s of plants; 100s of plants; and, 1,000s of plants. Eight EOs(47% of total) have had "surveyed w/ no observation" reports for which there were not subsequent observations. While the number of EOs with recent observations represents only 41% of total EOs and only one county and the number of EOs with "surveyed w/ no observation" reports represents 47% of total EOs, the very high reported population numbers across recent observations suggests the species' status remains secure at the threatened level.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

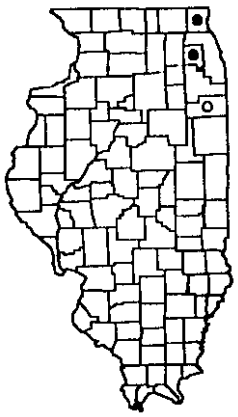
Bulrush, Scirpus hattorianus (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## ***Scirpus hattorianus*** Makino

**BULRUSH** **CYPERACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial cespitose bulrush, culms to 1.5 m tall.
**Range:** Northeastern United States and adjacent Canada.



*Scirpus hattorianus* occurs in open wetlands and until recently was known in Illinois from a single collection made in a Kankakee County state park in 1973. It has recently been reported from a forest preserve in DuPage County, and from a state natural area and a state conservation area in Lake County.
**References:** Mohlenbrock (1963b), 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 in 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.

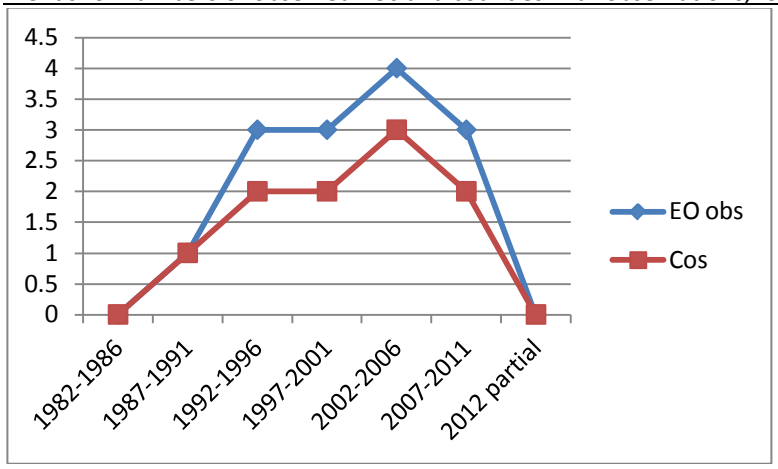
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2010 | 6 | 4 | 4 | 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 | 0 | 1 | 3 | 3 | 4 | 3 | 0 |
| Cos | 0 | 1 | 2 | 2 | 3 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

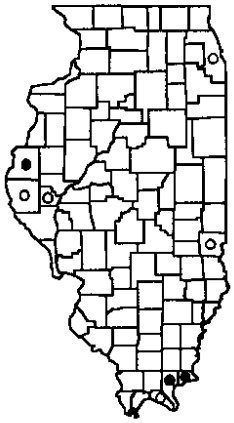
Bulrush, Scirpus polyphyllus (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## ***Scirpus polyphyllus*** Vahl

**BULRUSH** **CYPERACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial rhizomatous bulrush, culms 0.5-1.5 m tall.
**Range:** Eastern United States.



A species of open forested seeps, *Scirpus polyphyllus* reaches its western range limit in Illinois. It is presently known from several populations, many restricted to a contiguous part of Pope and Massac counties. This species is presently found in two state nature preserves. Most populations occur in the Shawnee National Forest.
**References:** Mohlenbrock (1963b), Myers and Henry (1976).

## KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species in 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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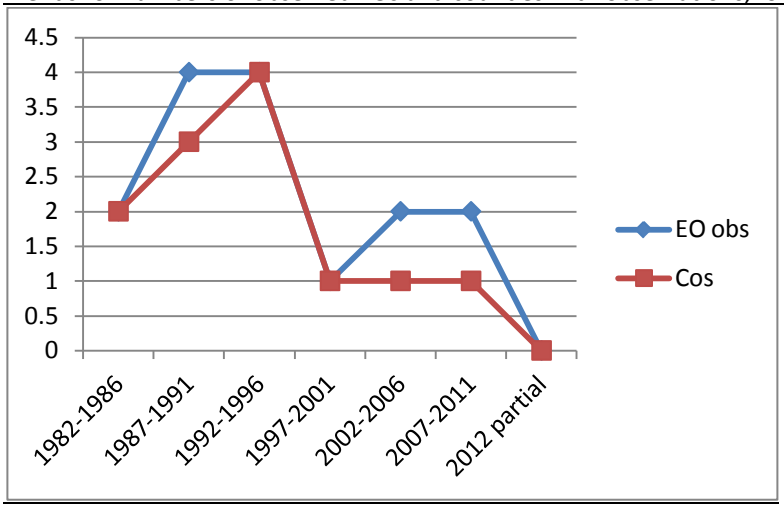
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 8/3/2009 | 6 | 2 | 2 | 6 | 5 | 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 | 2 | 4 | 4 | 1 | 2 | 2 | 0 |
| Cos | 2 | 3 | 4 | 1 | 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 threatened in 1980, there was only one known occurrence in one county that was established as an EO. Since then, five EOs and four counties have been added; four EOs and three counties were added in the 1980s, and one EO and one county was added in the 1990s. The additions of 15 EOs and 4 counties in the 1980s and 1990s apparently led to the species' upgrade to threatened in 1998. Two EOs are protected in Nature Preserves. While only two EOs (33% of total) have had reported observations since 2002, both have had repeated observations in both of the last two 5-year intervals and relatively large reported population numbers, with most recent reported population numbers of 400-575 plants across 5 nested sites and 275-400 plants across 5 nested sites. No EOs have had "surveyed w/ no observation" reports. Relative to the number of EOs at initial listing and recent reported population numbers, staff does not recommend a status change.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

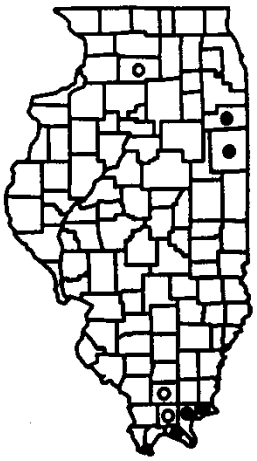
None queried.

Carolina Whipgrass, Scleria pauciflora (Illinois endangered)

Listed as IL E 09/01/2004
Reason for listing: restricted habitats or low pops in IL;

## *Scleria pauciflora* Muhl.

**CAROLINA WHIPGRASS** **CYPERACEAE** **Status:** Endangered in Illinois



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

**Range:** Eastern United States and adjacent Mexico.

A species of dry to moist sand deposits *Scleria pauciflora* has been reported from eight Illinois counties. Most Illinois populations are associated with open sandy woods, but this species has also been reported from barrens, glades, and disturbed field in southern Illinois. Many of the sightings of this species are more than 30 years old, but it has recently been reported from a private preserve and from a state nature preserve, both in the Kankakee sand deposits of northeastern Illinois.

**Note:** Both variety *pauciflora* and variety *caroliniana* (Willd.) Wood are known from Illinois.

**References:** Fairey (1969), Gleason and Cronquist (1991), Reznicek et al. (2002).

## MAP

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.

Citation: Nyboer, R. W. and J. E. Ebinger, editors. 2004. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 3: 2004 Changes to the Illinois List of Endangered and Threatened Plant Species. Illinois Endangered Species Protection Board, Springfield, Illinois. 34 pp.

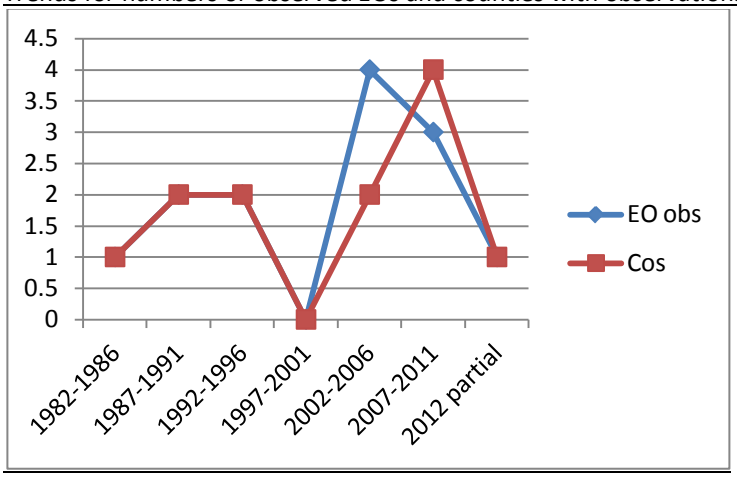
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2012 | 11 | 6 | 0 | 11 | 7 | 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 | 1 | 2 | 2 | 0 | 4 | 3 | 1 |
| Cos | 1 | 2 | 2 | 0 | 2 | 4 | 1 |

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




NatureServe Conservation Status in United States

None queried.

American orpine, Sedum telephioides (Illinois threatened,)

Listed as IL T 09/01/2004
Reason for listing: restricted habitats or low pops in IL; significant disjuncts in IL - IL pop far removed from rest of species' range

## *Sedum telephioides* Michx.

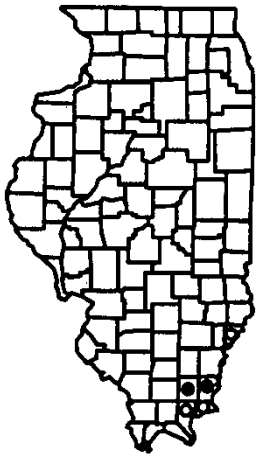
**AMERICAN ORPINE** **CRASSULACEAE** **Status:** Threatened in Illinois

**Habit:** Coarse perennial from a stout caudex, stems 20-60 cm tall.

**Range:** Eastern United States.

*Sedum telephioides* is relatively common on sandstone cliffs, and on dry rocky places mostly in the mountains from southern Pennsylvania to North Carolina. American orpine is disjunct in southern Illinois, adjacent Indiana, and western Kentucky where it occurs on sandstone cliffs, particularly along the Ohio River. This species is probably only native in extreme southern Illinois, sightings from the rest of the state represent cultivated and adventive individuals.

**References:** Gleason and Cronquist (1991).



## MAP

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Citation: Nÿboer, R. W. and J. E. Ebinger, editors. 2004. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 3: 2004 Changes to the Illinois List of Endangered and Threatened Plant Species. Illinois Endangered Species Protection Board, Springfield, Illinois. 34 pp.

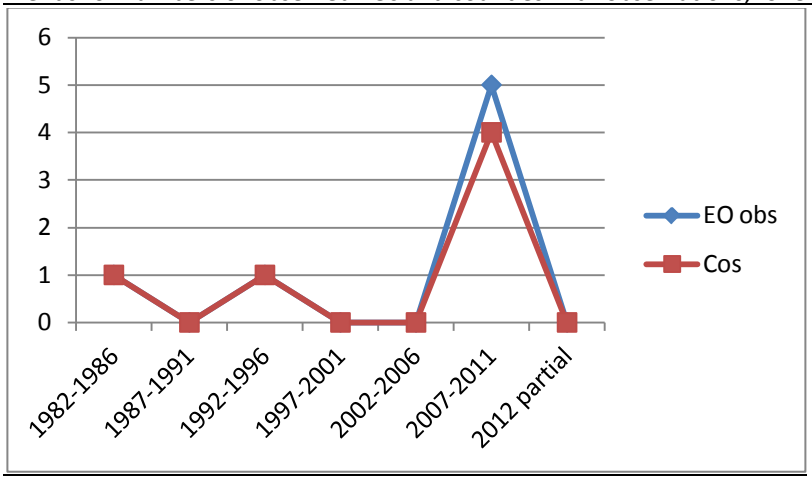
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 8/19/2011 | 13 | 5 | 1 | 11 | 8 | 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 | 1 | 0 | 1 | 0 | 0 | 5 | 0 |
| Cos | 1 | 0 | 1 | 0 | 0 | 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 threatened in 2004, there were 11 records in 8 counties that were established as EOs. Since then, 2 EOs have been added; 1 EO was added in the 2000s and 1 EO was added since 2010. Of the total 13 EOs for the species, it appears that 8 EOs (62% of total) were established from museum/collections records and observations were not verified at the time of listing in 2004 and have no reports (of observations or "surveyed w/ no observation") since; 6 EOs have had no reports since at least 1953, 1 EO has had no report since 1978, and 1 EO has had no report since 1985. The remaining 5 EOs (38% of total) have had observations since 2002 and one EO is protected in a Nature Preserve. While the number of EOs with recent observation appears to be a relatively low percentage of total EOs (38%), those 5 EOs represent 100% of the EOs with any observations going back for at least 19 years prior to the time the species was listed. Given this perspective, staff recommends that the species is as secure now as when it was listed.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

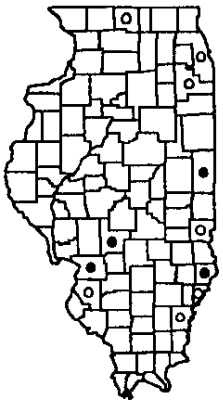
Royal Catchfly, Silene regia (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

## *Silene regia* Sims

**ROYAL CATCHFLY** **CARYOPHYLLACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial herb, stems 0.5-1.6 m tall.
**Range:** Southeastern United States.



*Silene regia* occurs in dry-mesic barrens and prairies. In Illinois it is known from both the Wabash and lower Mississippi river drainages. Presently, eight Illinois stations are known, some of these representing re-established populations. One population was found in 1985 in a Madison County railroad prairie and still persists. At least two populations occur in Lawrence County, one in a state nature preserve. In 1957 it was collected from a loess hill prairie in St. Clair County and may persist in that area.
**References:** Buhl (1934), King (1981), Dolan (1995).

## KEY

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

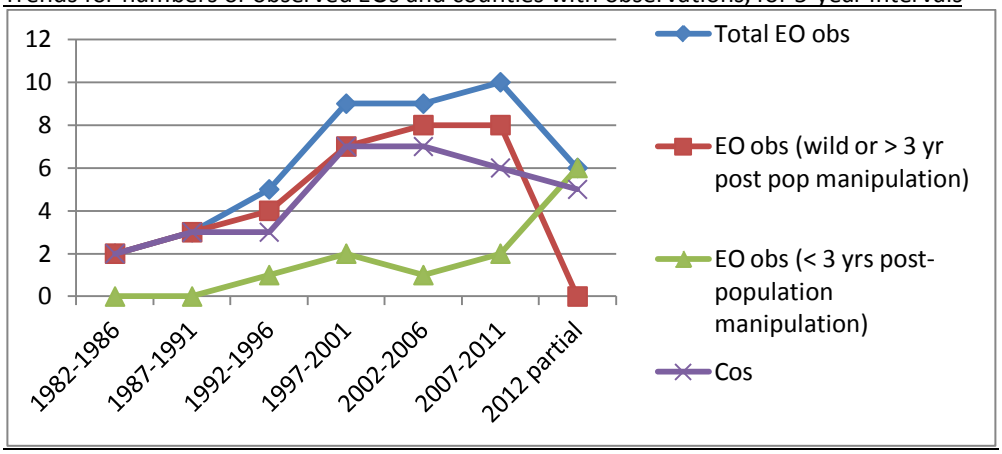
| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 10/15/2012 | 18 | 15 | 4 | 15 | 13 | 11 |

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 |
|---|---|---|---|---|---|---|---|
| Total EO obs | 2 | 3 | 5 | 9 | 9 | 10(1) | 6 |
| EO obs (wild or > 3 yr post pop manipulation) | 2 | 3 | 4 | 7 | 8 | 8(1) | 0 |
| EO obs (< 3 yrs post-population manipulation) | 0 | 0 | 1 | 2 | 1 | 2 | 6 |
| Cos | 2 | 3 | 3 | 7 | 7 | 6 | 5 |

(#) = EO with at least 3 years of "surveyed w/ no observation" reports

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 one record in one county established as an EO. Since the time of listing, 17 EOs and 12 counties were added (9 wild EOs in 8 counties and 8 planted/augmented EOs in 4 counties). There were 2 wild EOs added in the 1980s, 2 wild EOs added in the 1990s, and 5 wild EOs added in the 2000s, and 2 planted EOs added in the 1990s, 1 planted EO added in the 2000s, and 5 planted EOs added since 2010). One EO was reported as destroyed in 1999 and one EO has had three-years of "surveyed w/ no observation" reports over a 5-year period. Four EOs are protected in Nature Preserves and four additional EOs are protected in Land and Water Reserves.

Since 2002, there are 10 extant EOs that are wild or that have been liberated from population manipulation (augmentation or planting) for > 3 years. Eight wild or > 3 years post population manipulation EOs (44% of total EOs and 80% of wild or liberated EOs) have had reported observations since 2002. Most recent reported observation/population numbers for those 8 EOs were:

| |
|---|
| 26 plants across 2 nested sites (2011) |
| 30 flowering stems (2002) |
| stable (2007) |
| 11 flowering clumps (2009) |
| 85 stems, 79% flowering (2009) |
| 20 flowering plants (2010) |
| 2 stems, 1 flowering (2009) |
| 5 plants (2008) |

Since 2002, there are 7 EOs that have been newly established by planting or undergone population manipulation or are < 3 years liberated from population manipulation. Most recent reported observation/population numbers for those 7 EOs were:

| |
|---|
| 207 plants in 11 locations (2012 - augmentations begun in 1992?-2012) |
| stable (2007 - planting/augmentation begun 1998?) |
| 1,056 plants across 3 nested sites (2012 - plantings begun in 2010) |
| 227 plants in 6 locations (2012 - plantings begun in 2012) |
| 38 plants in 10 locations (2012 - plantings begun 2012) |
| 245 seedlings planted (2012 - plantings begun 2012) |
| 110 plants in 6 locations (2012 - plantings begun 2012) |

While 8 wild or > 3 year liberated EOs with recent observations is a considerable increase from the number of EOs at time of listing, the relatively small reported population numbers suggest that those EOs may not be very secure. Recovery activities for this species have demonstrated some positive initial results and it is expected that the species' status will improve and become more secure as those activities continue. Staff does not recommend a status change at this time.

**Mankowski recommendation:** no change in status.

NatureServe Conservation Status in United States

None queried.

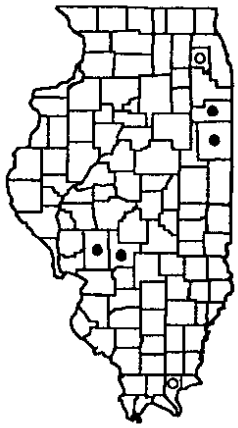
Eastern Blue-eyed Grass, Sisyrinchium atlanticum (Illinois threatened)

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 mesic 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

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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.

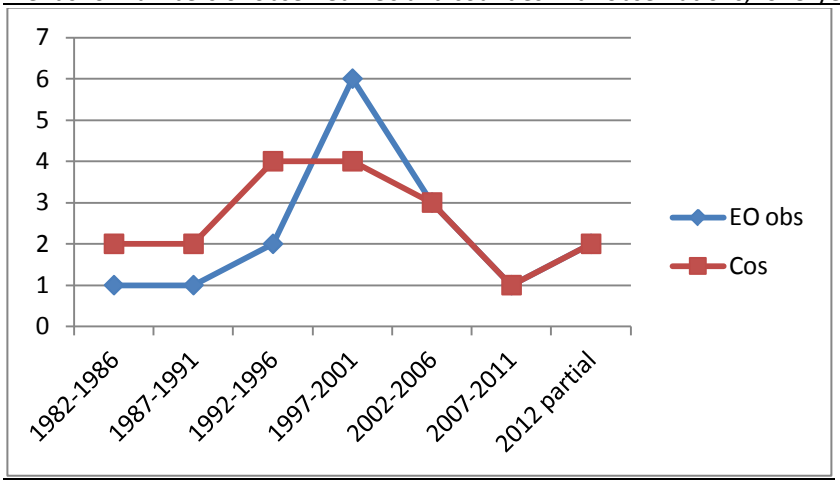
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| 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.

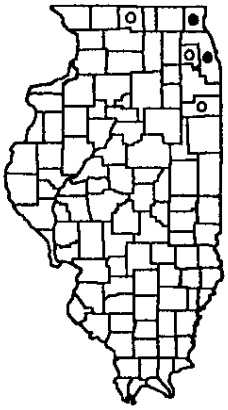
Mountain Blue-eyed Grass, Sisyrinchium montanum (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## ***Sisyrinchium montanum*** Greene

**MOUNTAIN BLUE-EYED GRASS** **IRIDACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial cespitose herb, stems 10-60 cm tall.
**Range:** Boreal Canada, adjacent northern United States and south into the Appalachians.



A species of mesic prairies, *Sisyrinchium montanum* enters northern Illinois along the southern margin of its range. Most collections were made prior to 1936 in Cook, DuPage and Lake counties, with unverified reports from Winnebago and Kankakee counties. Most of the Illinois stations were thought to have been destroyed. However, this species was recently collected at two Cook County forest preserves and has been reported from five other Cook County stations. It is also known from a state nature preserve in Lake County.
**Note:** This taxon is represented in Illinois by both variety *montanum* and variety *crebrum* Fern.
**References:** Fernald (1946), Bowles *et al.* (1991).

## KEY

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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.

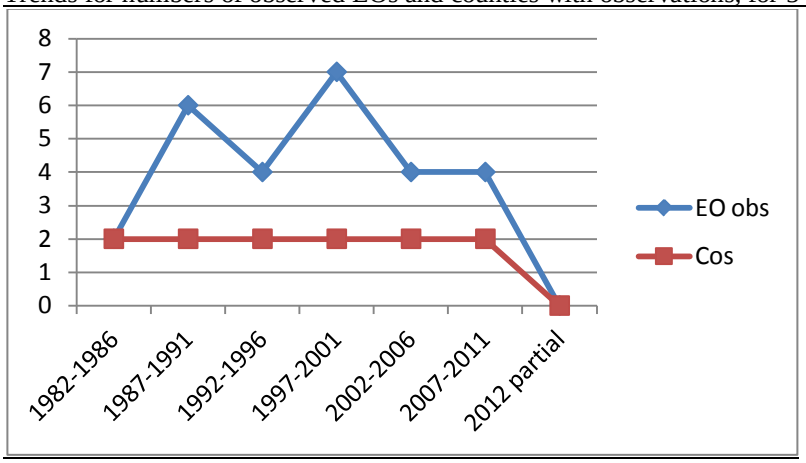
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2010 | 11 | 6 | 2 | 8 | 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 | 2 | 6 | 4 | 7 | 4 | 4 | 0 |
| Cos | 2 | 2 | 2 | 2 | 2 | 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 endangered in 1980, there were no records established as EOs. Since then, 11 EOs across 3 counties have been added; 4 EOs in 2 counties were added in the 1980s, 3 EOs were added in the 1990s, and 4 EOs and 1 county was added in the 2000s. Two EOs are protected in Nature Preserves. Six EOs (55% of total) have had reported observations since 2002. However, one of those EOs also had a "surveyed w/ no observation" report with no subsequent observations and three of those EOs were prescribed for or were relocated in 2012 with no known follow-up reporting regarding survivorship. Given this uncertainty, staff recommends the species remain as endangered.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

Cliff Goldenrod, Solidago sciaphila (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Solidago sciaphila* Steele

**CLIFF GOLDENROD** **ASTERACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial herb, stems 0.4-1.1 m tall.
**Range:** Michigan to Minnesota, south to northern Illinois and northeastern Iowa.

*Solidago sciaphila* occurs on shaded or exposed dolomite and sandstone cliffs and in associated sand forests in northwestern Illinois. Presently it is known from nine state localities. Two very extensive populations are found in state parks, while other populations occur in state nature preserves.
**References:** Salamun (1963), Wunderlin (1966), Schwegman (1986).

## KEY

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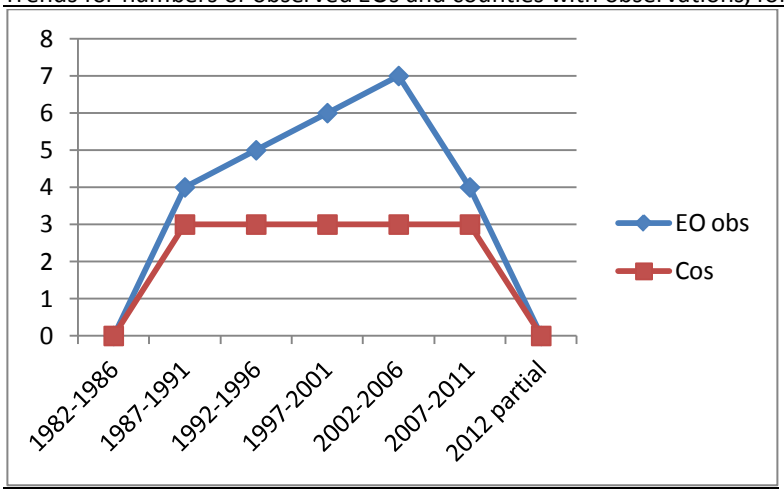
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 9/7/2011 | 13 | 8 | 6 | 15 | 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 | 4 | 5 | 6 | 7 | 4 | 0 |
| Cos | 0 | 3 | 3 | 3 | 3 | 3 | 0 |

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




NatureServe Conservation Status in United States

None queried.

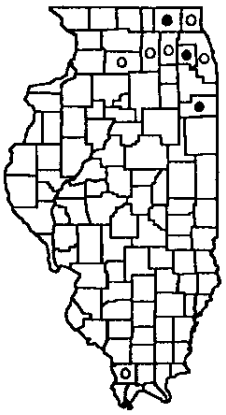
Green-fruited Burreed, Sparaganium emersum (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Sparganium chlorocarpum* Rydb.

**GREEN-FRUITED BURREED** **SPARGANIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial rhizomatous aquatic herb, stems to 2 m tall.
**Range:** Eastern Canada and northeastern United States.



A species of muddy and peaty shores and shallow water, *Sparganium chlorocarpum* reaches its southern range limit in Illinois. It is presently known from a forest preserve in DuPage County, a state park in Kankakee County, and from a state nature preserve and private land in McHenry County.
**Note:** Kaul (2000) considers this taxon to be a part of the widespread *Sparganium emersum* Rehmann.
**References:** Fassett (1960), Mohlenbrock *et al.* (1961), Mohlenbrock and Voigt (1965).

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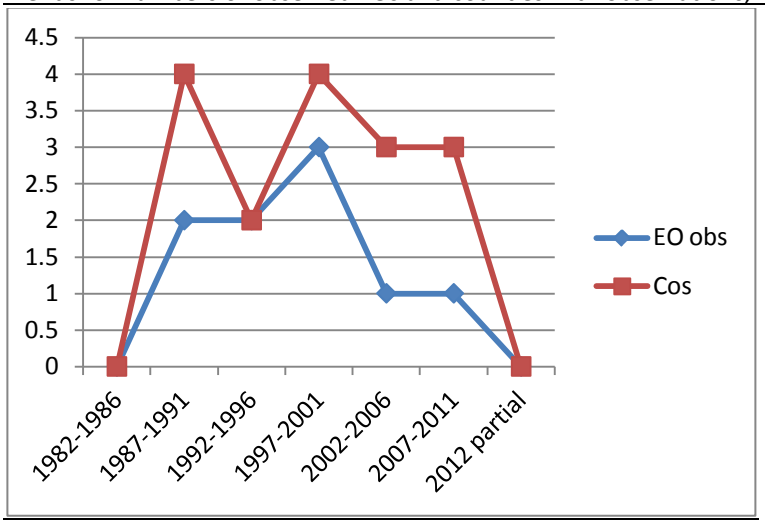
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2011 | 7 | 1 | 2 | 8 | 6 | 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 | 2 | 2 | 3 | 1 | 1 | 0 |
| Cos | 0 | 4 | 2 | 4 | 3 | 3 | 0 |

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




NatureServe Conservation Status in United States

None queried.

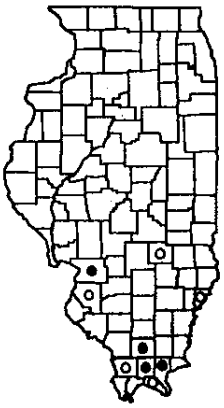
Spring Ladies' Tresses, Spiranthes vernalis (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Spiranthes vernalis* Engelm. & Gray

**SPRING LADIES' TRESSES** **ORCHIDACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial tuberous orchid, stems to 60 cm tall.
**Range:** Southeastern and south-central United States, north into southern New England.



*Spiranthes vernalis* occurs in acidic soils in prairies and old fields in the southern third of Illinois. Presently it is known from a Pope County state nature preserve, a railroad prairie in Madison County, a national wildlife refuge in Williamson County, and private land in Johnson County. This species has been collected as recently as 1968 in Wabash County and may persist there. A collection site from Effingham County in 1951 has not been relocated.
**References:** Schwegman and Mohlenbrock (1966), Sheviak (1974a, 1974b), Evans and Wadham (1978), Lynn (2001).

## KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species in 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.

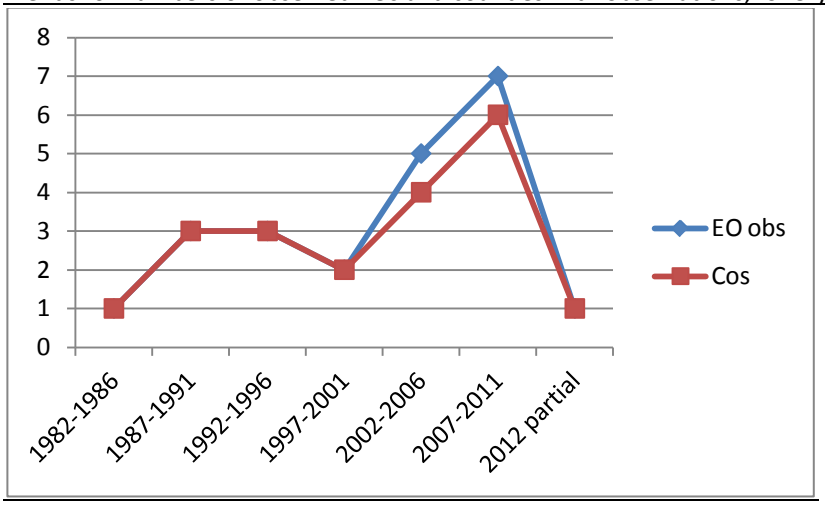
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 06/29/2012 | 12 | 10 | 1 | 12 | 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 | 1 | 3 | 3 | 2 | 5 | 7 | 1 |
| Cos | 1 | 3 | 3 | 2 | 4 | 6 | 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 1980, there was occurrence information to establish one EO in one county. Since then, 11 EOs across 8 counties have been added; 1 EO and 1 county were added in the 1980s, 1 EO and 1 county were added in the 1990s, 8 EOs and 5 counties were added in the 2000s, and 1 EO and 1 county have been added since 2010. One EO is protected in a Nature Preserve. Ten EOs (83% of total) have had reported observations since 2002. Most recent reported observation/populations numbers since 2002 for those 10 EOs were: 24 plants; 3 flowering plants; 12 flowering stems; 4 plants in 2 locations; 20 flowering plants at each of 2 EOs; 1 flowering plant at each of 3 EOs; and, 2 flowering plants. While there have been 11 EOs and 8 counties added to the known current status and distribution suggests that the species may be more common in distribution than thought when listed as endangered. However, since the reported population numbers are so low (6 of 10 EOs had 4 or fewer plants) and only one EO is protected in a Nature Preserve, the species may not be secure beyond the definition of endangered.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

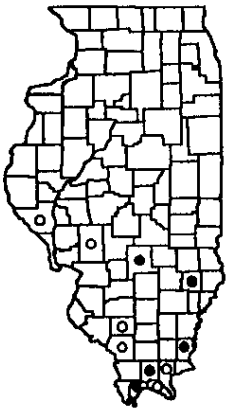
Grass-leaved Lily, Stenanthium gramineum (Illinois endangered)

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 in 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.

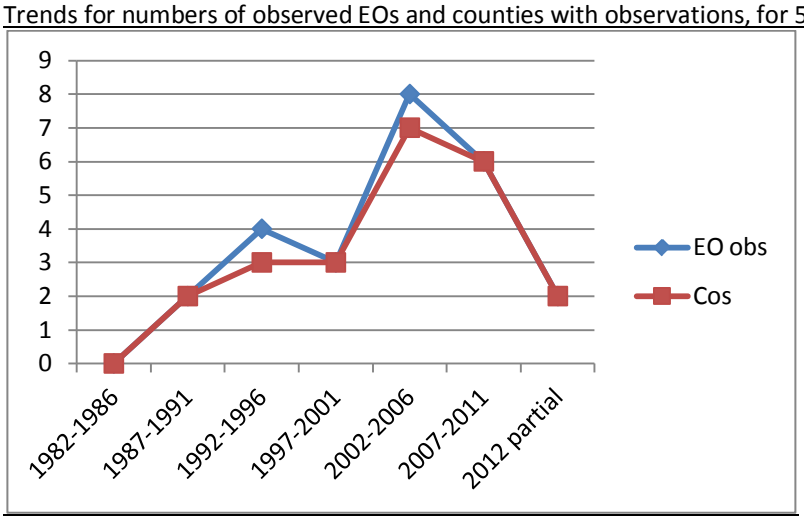
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| 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 |
|---|---|---|---|---|---|---|---|
| 0 | 2 | 4 | 3 | 8 | 6 | 2 | 0 |
| 0 | 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: 5 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; 55 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.

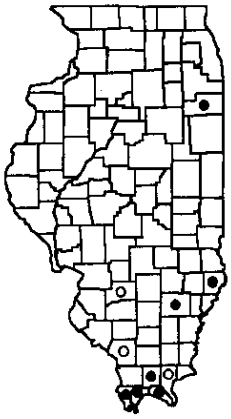
Storax, Styrax americana (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Styrax americana* Lam.

**STORAX, AMERICAN SNOWBELL STYRACACEAE**

**Status:** Threatened in Illinois.
**Habit:** Shrub, to 3 m tall.
**Range:** Southeastern United States.



In Illinois *Styrax americana* occurs primarily in southern floodplain forests and swamps, although one northern population occurs in a floodplain forest in Kankakee County. Presently, populations are known in the state from three state nature preserves, a state ecological area, a state conservation area, and from private land.
**References:** Palmer (1921), Tehon (1942), Mohlenbrock *et al.* (1961), Schwegman and Mohlenbrock (1966), Evers and Page (1977).

## KEY

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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.

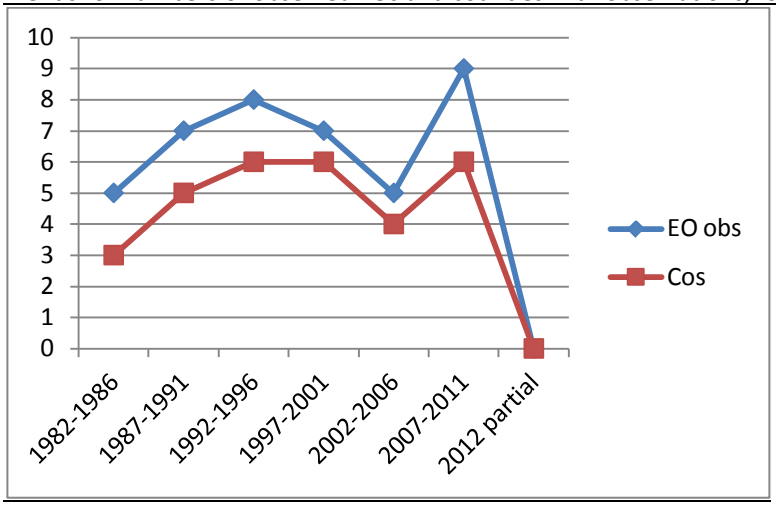
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 9/26/2011 | 23 | 11 | 5 | 19 | 11 | 6 |

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 | 7 | 8 | 7 | 5 | 9 | 0 |
| Cos | 3 | 5 | 6 | 6 | 4 | 6 | 0 |

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




NatureServe Conservation Status in United States

None queried.

Sullivantia, Sullivantia sullivantii (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Sullivantia renifolia* Rosendahl

**SULLIVANTIA** **SAXIFRAGACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial herb, stems 10-40 cm tall.
**Range:** North-central United States.

*Sullivantia renifolia* is restricted in Illinois to moist, shaded, dolomite cliffs in the northwestern counties. It is now known from four populations, two in state parks and adjacent private land, a third in a scout camp, and one on private land.
**Note:** The scientific name of this species is presently considered to be *Sullivantia sullivantii* (Torr. & Gray) Britton.
**References:** Pepoon (1909), Soltis (1982).

## KEY

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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.

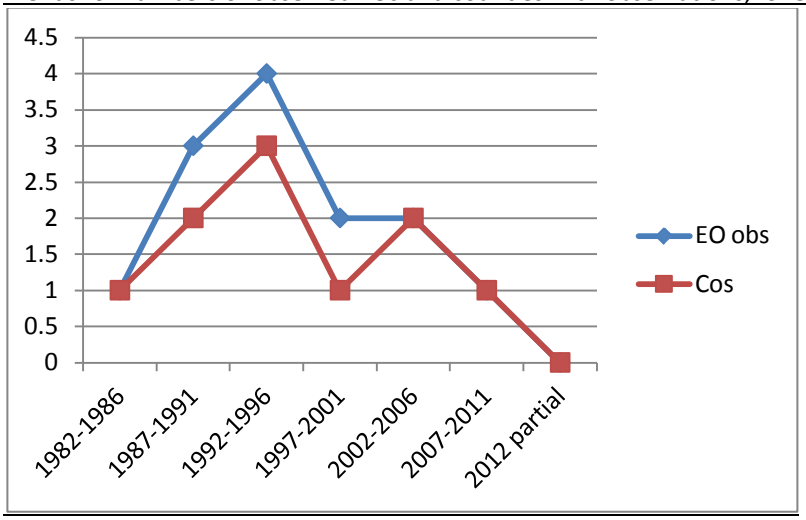
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 6/14/2011 | 7 | 3 | 2 | 8 | 4 | 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 | 4 | 2 | 2 | 1 | 0 |
| Cos | 1 | 2 | 3 | 1 | 2 | 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 threatened in 1980, there was occurrence information to establish five EOs across four counties. Since then, two EOs were added in the 1990s. Two EOs are protected in Nature Preserves. Three EOs (43% of total) have had reported observations since 2002 and four EOs (57% of total) have had reported observations since 2001. While there has been a decline in recent observations, no EOs have had "surveyed w/ no observation" reports. Most recent reported observation/population numbers since 2001 were: "observed" for three EOs and "large pop. along cliff" for the remaining EO. Relative to the number of EOs at listing, staff does not recommend a change in status from threatened to endangered at this time.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

Hairy Synandra, Synandra hispidula (Illinois endangered)

Listed as IL E, 5/20/1980
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

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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.

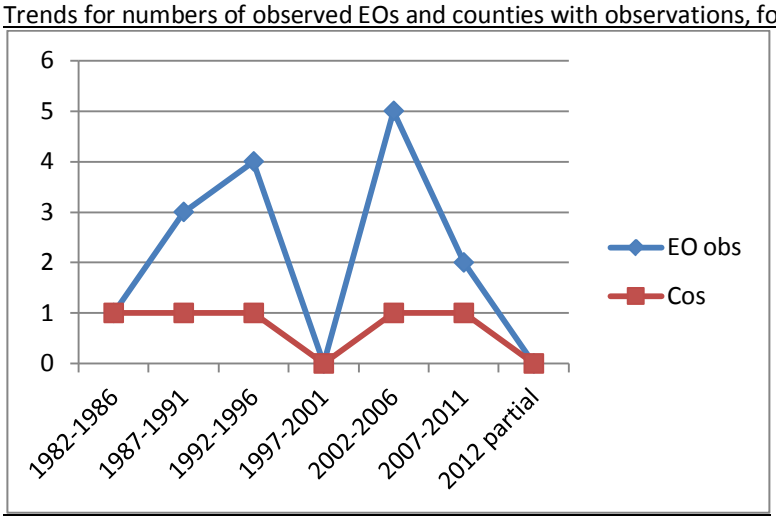
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| 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

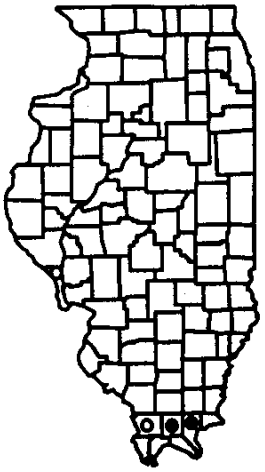
None queried.

Small Flower-of-an-hour, Talinum parviflorum (Illinois threatened)

Listed as IL T 09/01/2004
Reason for listing: restricted habitats or low pops in IL;

## *Talinum parviflorum* Nutt.

**SMALL FLOWER-OF-AN-HOUR** **PORTULACACEAE** **Status:** Threatened in Illinois



**Habit:** Perennial herb, stems to 15 cm tall.

**Range:** Central United States and adjacent Mexico.

*Talinum parviflorum*, a species of exposed sandstone ledges and sand deposits, is near its eastern range limit in southern Illinois. Illinois populations of this species are mostly on exposed sandstone ledges in the Shawnee Hills Division. Many of these populations are in state parks and state natural areas commonly used by hikers and horse riders. This has resulted in the trampling and losses of many individuals and has contributed to the extirpation of some populations. Small flower-of-an-hour populations are presently known from Johnson and Pope counties where it is found in a few state parks and state natural areas.

**References:** Gleason and Cronquist (1991).

## MAP

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.

Citation: Nÿboer, R. W. and J. E. Ebinger, editors. 2004. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 3: 2004 Changes to the Illinois List of Endangered and Threatened Plant Species. Illinois Endangered Species Protection Board, Springfield, Illinois. 34 pp.

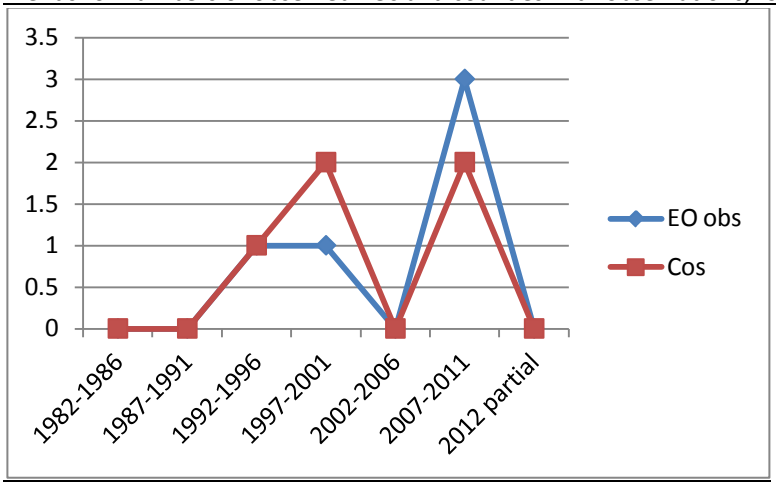
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 7/27/2010 | 8 | 3 | 2 | 9 | 4 | 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 | 0 | 0 | 1 | 1 | 0 | 3 | 0 |
| Cos | 0 | 0 | 1 | 2 | 0 | 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 2004, there were eight records in three counties that were established as EOs. No additional EOs have been added. Of the eight EOs for the species, it appears that three EOs (38% of total) were established from museum/collections records and observations were not verified at the time of listing in 2004 and have no reports (of observations or "surveyed w/ no observation") since; two EOs have had no reports since at least 1952 and one EO has had no report since 1973. Of the remaining five EOs, three EOs (60%) have had reported observations since 2002 and no EOs have reports of "surveyed w/ no observation". Two EOs are protected in Nature Preserves. While the number of EOs with recent observation appears to be a relatively low percentage of total EOs (38%), those three EOs represent 60% of the EOs with any observations going back for at least 31 years prior to the time the species was listed. Given this perspective, staff recommends that the species is as secure now as when it was listed.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

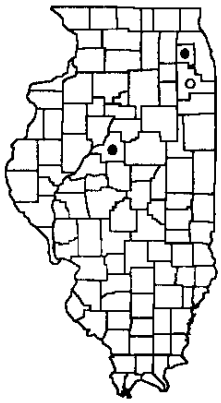
Lakeside Daisy, Tetraneuris herbacea (Illinois endangered, Federally threatened)

Listed as IL E, 5/20/1980; Listed as Fed T 06/231/1988
Reason for listing: proposed Fed E or T; restricted habitats or low pops in IL;

## ***Hymenoxys acaulis*** (Pursh) Parker

**LAKESIDE DAISY** **ASTERACEAE**

**Status:** Endangered in Illinois, Federally Threatened.
**Synonym:** *Actinea herbacea* (Greene) Robins, *Hymenoxys acaulis* (Pursh) Parker var. *glabra* (Gray) Parker, *Tetraneuris herbacea* Greene.
**Habit:** Perennial cespitose herb, scapes to 25 cm tall.
**Range:** DuPage, Tazewell and Will counties, Illinois; Ottawa County, Ohio, Manitoulin Island and Bruce Peninsula, Ontario.



*Hymenoxys acaulis* was historically known from a few dolomite prairies in Will County and a gravel bluff of the Illinois River in Tazewell County. The last known extant population in Illinois was destroyed in Will County in 1981. This species has been recently reintroduced into Tazewell and DuPage counties.
**References:** Pepoon (1927), Voss (1935), Wunderlin (1971), Cusick (1991), DeMauro (1993, 1994), Bowles *et al.* (1999a), Phillippe *et al.* (2000).

## KEY

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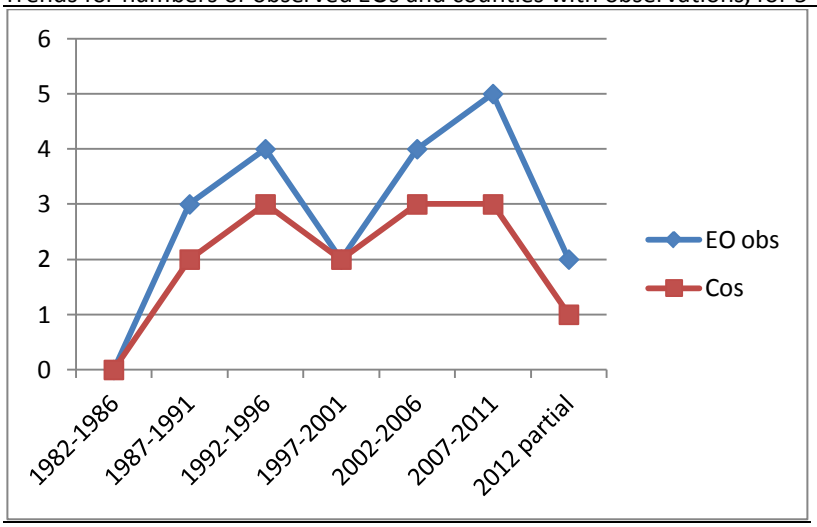
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 05/02/2010 | 6 | 6 | 3 | 5 | 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 | 0 | 3 | 4 | 2 | 4 | 5 | 2 |
| Cos | 0 | 2 | 3 | 2 | 3 | 3 | 1 |

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




NatureServe Conservation Status in United States

None queried.

False Asphodel, Tofieldia glutinosa (Illinois threatened)

Listed as IL T, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Tofieldia glutinosa* (Michx.) Pers.

**FALSE ASPHODEL** **LILIACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial rhizomatous herb, scapes 5-50 cm tall.
**Range:** Canada, south into northern United States, and into the Appalachians.

*Tofieldia glutinosa* is restricted in Illinois to the extreme northeastern counties, where it occurs in wetlands, fens, and interdunal swales along Lake Michigan. Although this species has been severely depleted by urban growth, it is still represented by seven state populations. Four populations are found in state nature preserves, and probably in two others. This species was reported from Will County in 1968 and may persist there.
**References:** Gates (1912), Hitchcock (1944), Moran (1981), Hess and Stoynoff (1989), Bowles (1991b).

## KEY

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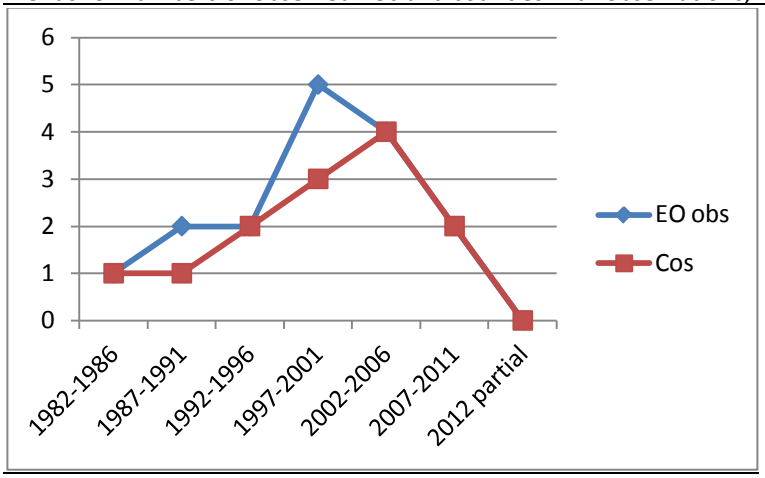
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 09/28/2009 | 9 | 4 | 7 | 8 | 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 | 2 | 2 | 5 | 4 | 2 | 0 |
| Cos | 1 | 1 | 2 | 3 | 4 | 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 were five records in three counties that were established as EOs. Four additional EOs and one county were added in the 1990s. Four EOs (44% of total) have had reported observations since 2002. One EO has had a report of "surveyed w/ no observation" and no subsequent observations. Seven EOs (78% of total) are protected in Nature Preserves. Relative to the number of EOs at listing and in consideration of the number of EOs that are protected in Nature Preserves, that only four EOs have had recent observations, seems to suggest that the species is as secure now as when it was listed.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

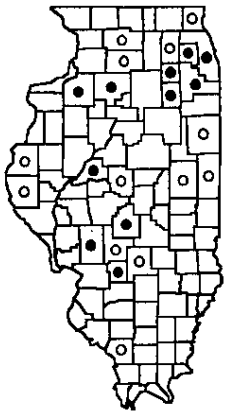
Ear-leafed Foxglove, Tomanthera auriculata (Illinois threatened)

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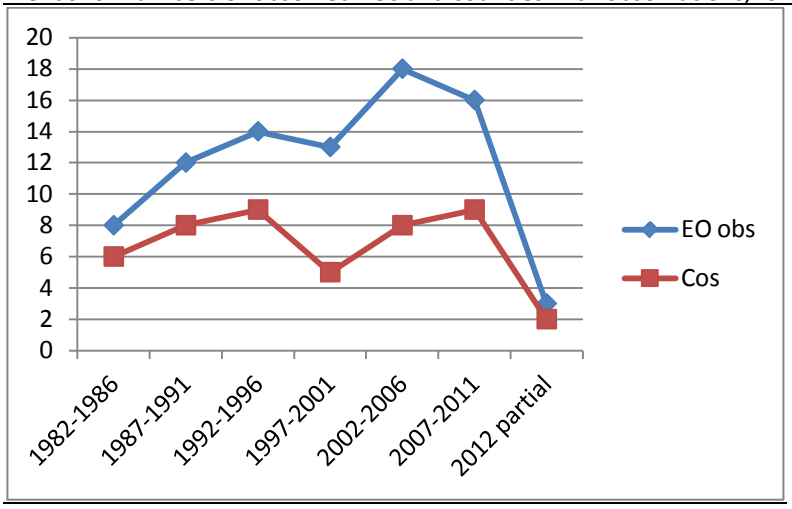
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 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 5 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 an 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) |

| |
|---|
| 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 (2003) |
| 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.

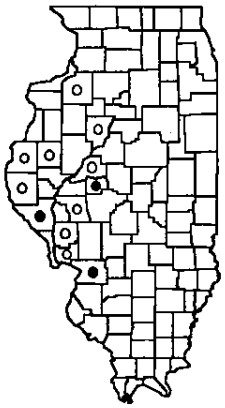
Prairie Spiderwort, Tradescantia bracteata (Illinois threatened)

Listed as IL E, 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

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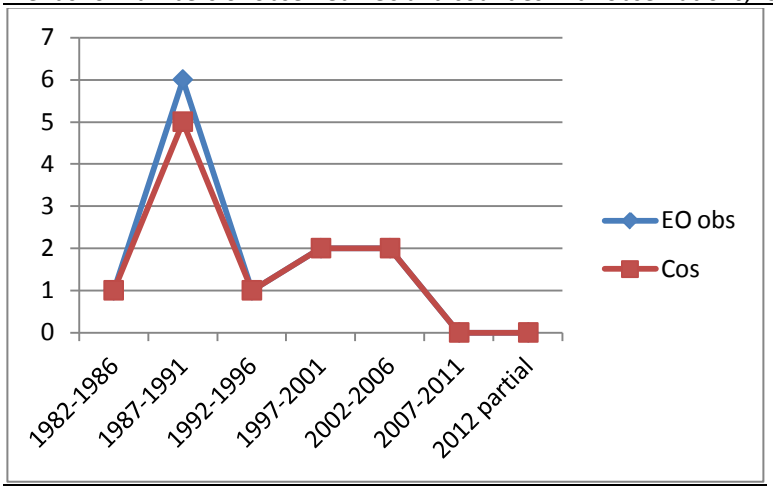
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 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.

Filmy fern, Trichomanes boschianum (Illinois endangered)

Listed as IL T, 01/18/1994; Listed as IL E, 12/03/1998
Reason for listing: restricted habitats or low pops in IL;

## ***Trichomanes boschianum*** Sturm.

**FILMY FERN** **HYMENOPHYLLACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial fern with long rhizomes, fronds to 20 cm long.
**Range:** Southeastern United States.

In Illinois, the filmy fern is restricted to the extreme southern part of the state where it is usually found beneath moist, overhanging sandstone cliffs, or occasionally on sandstone at the entrance to caves. Presently sixteen populations have been reported as extant, most in the Shawnee National Forest. Other populations have been found in the past, and many are probably extant. Populations of this species in Illinois are showing signs of decline.

**References:** Mohlenbrock and Voigt (1959), Schwegman (1982a, 1999), Mohlenbrock (1986), Gleason and Cronquist (1991), Farrar (1993).

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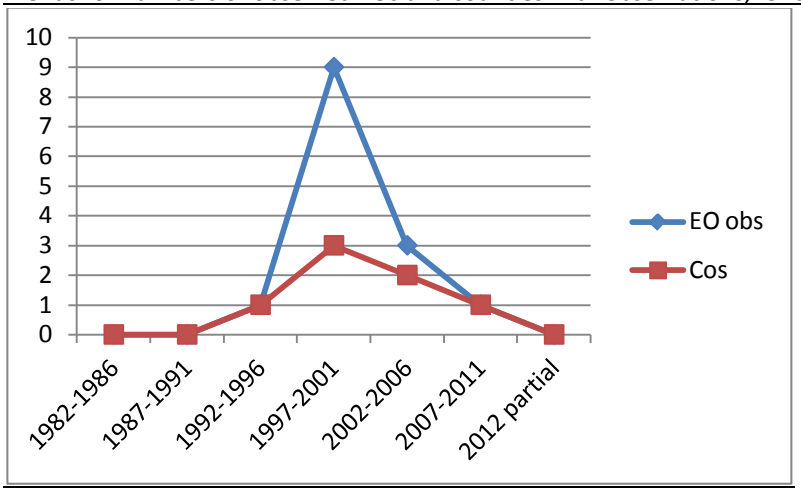
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 9/29/2011 | 9 | 3 | 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 | 0 | 0 | 1 | 9 | 3 | 1 | 0 |
| Cos | 0 | 0 | 1 | 3 | 2 | 1 | 0 |

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




NatureServe Conservation Status in United States

None queried.

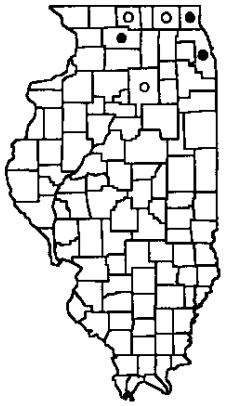
Star-flower, Trientalis borealis (Illinois endangered)

Listed as IL T, 5/20/1980; Listed as IL E 09/01/2004
Reason for listing: restricted habitats or low pops in IL;

## *Trientalis borealis* Raf.

**STAR-FLOWER** **PRIMULACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial rhizomatous herb, stems 10-20 cm tall.
**Range:** Boreal Canada, south into eastern United States.



*Trientalis borealis* reaches the southern margin of its range in northern Illinois, where it occurs in bogs, mesic sand forests, and along Lake Michigan ravine bluffs. Presently five Illinois populations are known to be extant, including three in state nature preserves.
**References:** Waterman (1923), Fell and Fell (1957), Iltis and Shaughnessy (1960), Sheviak and Haney (1973), Anderson and Loucks (1973), Moran (1978), Anderson and Beare (1983), Taft and Solecki (1990).

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Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
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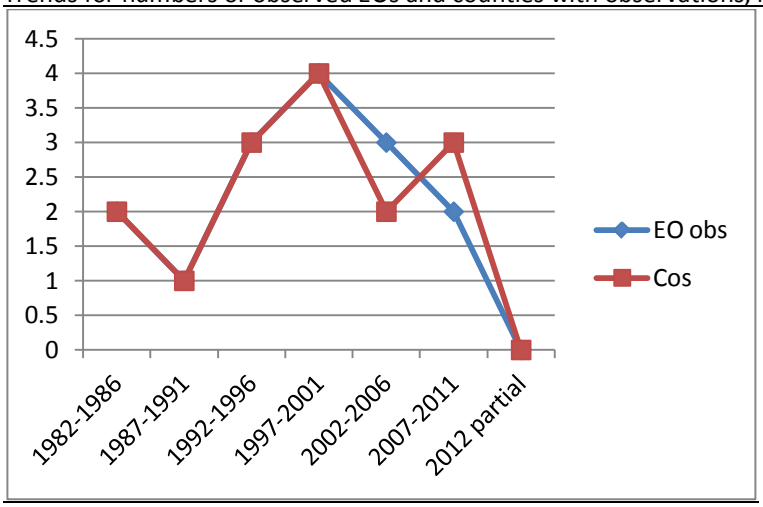
| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 06/23/2009 | 6 | 3 | 4 | 7 | 4 | 3 |

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 | 2 | 1 | 3 | 4 | 3 | 2 | 0 |
| Cos | 2 | 1 | 3 | 4 | 2 | 3 | 0 |

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




NatureServe Conservation Status in United States

None queried.

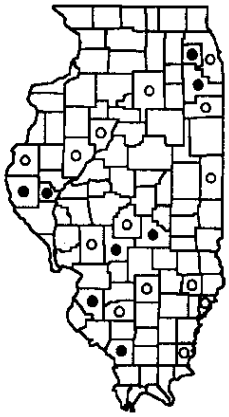
Buffalo Clover, Trifolium reflexum (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T 09/01/2004
Reason for listing: formerly widespread, but nearly extirpated from IL due to habitat destruction, collecting, or other development pressures

## *Trifolium reflexum* L.

**BUFFALO CLOVER** **FABACEAE**

**Status:** Endangered in Illinois.
**Habit:** Annual or biennial herb, stems 20-50 cm tall.
**Range:** Eastern and central United States and adjacent Canada.



A plant of dry-mesic savannas, flatwoods, and prairies, *Trifolium reflexum* has been nearly extirpated from Illinois. This species appears to be disturbance-adapted and has been found to occur in sites that are burned or regularly affected by minor disturbances such as mowing, flooding, or erosion. It is presently known from more than ten sites in Illinois, one from a state natural area, one from a state park, two from state conservation areas, and three from county forest preserves. This species has had a precipitous decline, now occurring in less than half of the counties from which there are historical records.

**References:** Vasey (1870), Jones (1952), Campbell *et al.* (1988), Schwegman (1990).

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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)

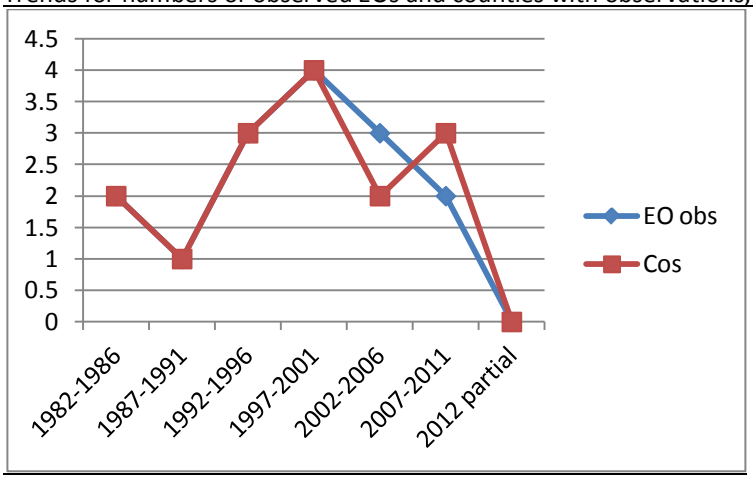
| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2012 | 21 | 12 | 2 | 21 | 13 | 8 |

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 | 0 | 6 (3) | 4 | 5 | 9 | 6 | 0 |
| Cos | 0 | 6 (1) | 4 | 6 | 6 | 4 | 0 |

(#) = unsuccessful planting, no subsequent obs

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 two records in two counties established as EOs. One of those records was from a museum/collection record of 1884 that was not verified for observation at the time of listing and for which there are no reports (observed or "surveyed w/ no observation") since. Following listing, 19 EOs in 11 counties were added; 1 EO was added in the 1980s; 11 EOs were added in the 1990s; 6 EOs were added in the 2000s; and, 1 EO was added since 2010. Of the 11 EOs added in the 1990s, 3 were plantings that were not successful and each had at least two "surveyed w/ no observation" reports over separate 5-year intervals since planted. The addition of the 11 wild EOs from the time of listing through 2003, led to the species' status upgrade to threatened in 2004. Of the 17 wild EOs known to be extant at the time of listing or added since, 12 EOs (70%) have had reported observations since 2002. Two EOs are protected in Nature Preserves.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

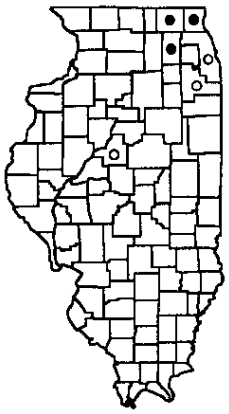
Common Bog Arrow Grass, Triglochin maritima (Illinois threatened)

Listed as IL E, 05/20/1980; Listed as IL T, 12/03/1998
Reason for listing: restricted habitats or low pops in IL;

## *Triglochin maritima* L.

**COMMON BOG ARROWGRASS JUNCAGINACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial herb, scapes to 80 cm tall.
**Range:** Circumboreal, south into the northern United States and the Rocky Mountains.



*Triglochin maritima* reaches the southern margin of its eastern range in Illinois where it occupies fens and interdunal swales near Lake Michigan. Presently it is known from at least ten locations in the state, including six state nature preserves, two adjacent state parks, and other tracts on private land.
**References:** Gates (1912), Love and Love (1958), Moran (1981), Haynes and Hellquist (2000c).

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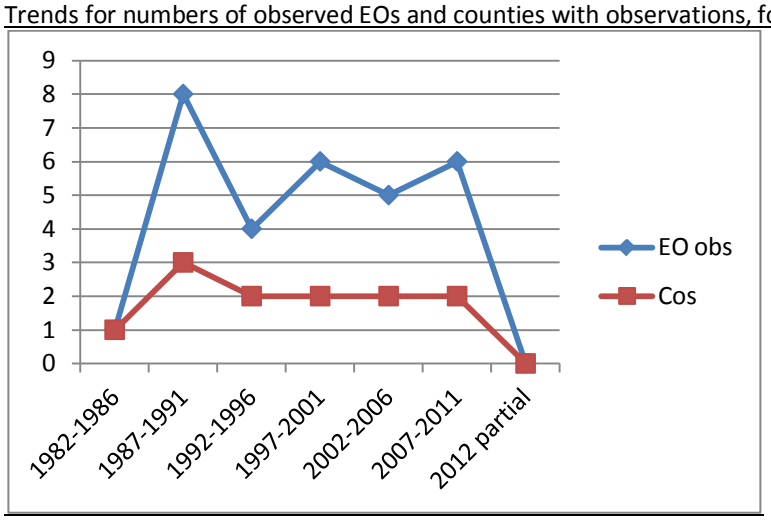
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 06/29/2011 | 18 | 9 | 7 | 13 | 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 | 8 | 4 | 6 | 5 | 6 | 0 |
| Cos | 1 | 3 | 2 | 2 | 2 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

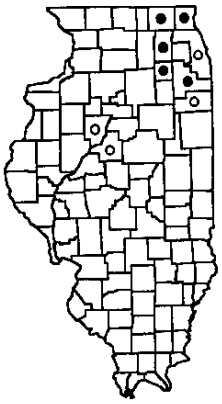
Slender Bog Arrow Grass, Triglochin palustris (Illinois threatened)

Listed as IL E, 05/20/1980; Listed as IL T, 12/03/1998
Reason for listing: restricted habitats or low pops in IL;

## *Triglochin palustris* L.

**SLENDER BOG ARROWGRASS JUNCAGINACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial herb, scapes to 40 cm tall.
**Range:** Circumpolar, south into the northern United States and the Rocky Mountains.



*Triglochin palustris* reaches its southeastern range limit in Illinois where it is restricted to spring runs in fens and interdunal swales next to Lake Michigan. It is presently known from eleven localities, including six state nature preserves. Due to its narrow habitat restrictions, populations of this species are small and highly sensitive to habitat manipulations.
**References:** Gates (1912), Evers and Page (1977), Moran (1981), Hess and Stoynoff (1989), Bowles and Apfelbaum (1989), Bowles (1991b), Haynes and Hellquist (2000c).

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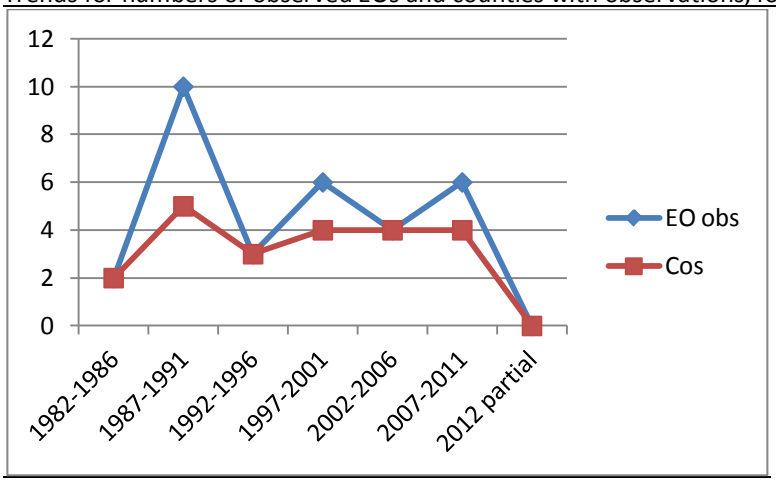
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 09/11/2009 | 16 | 7 | 12 | 14 | 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 |
|---|---|---|---|---|---|---|---|
| 2 | 10 | 3 | 6 | 4 | 6 | 0 | 2 |
| 2 | 5 | 3 | 4 | 4 | 4 | 0 | 2 |

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




NatureServe Conservation Status in United States

None queried.

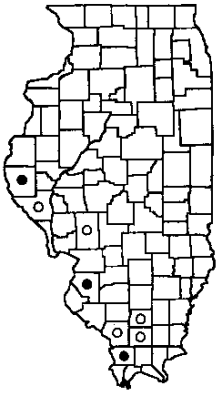
Green Trillium, Trillium viride (Illinois endangered)

Listed as IL T, 05/20/1980; Listed as IL E, 12/03/1998
Reason for listing: restricted habitats or low pops in IL;

## *Trillium viride* Beck

**GREEN TRILLIUM** **LILIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial rhizomatous herb, stems to 45 cm tall.
**Range:** Southwestern Illinois and east-central Missouri.



*Trillium viride* is restricted in Illinois to the extreme western and southern counties, where it occurs in a wide range of habitats. It has been collected in Illinois from forested bottomlands, talus slopes, blufftops, and prairies. Presently, populations are known from a state park, and a few sites on private land.
**References:** Mohlenbrock (1961b), Mohlenbrock and Voigt (1965), Freeman (1975), Thompson and Heineke (1977), Case and Case (1997).

## KEY

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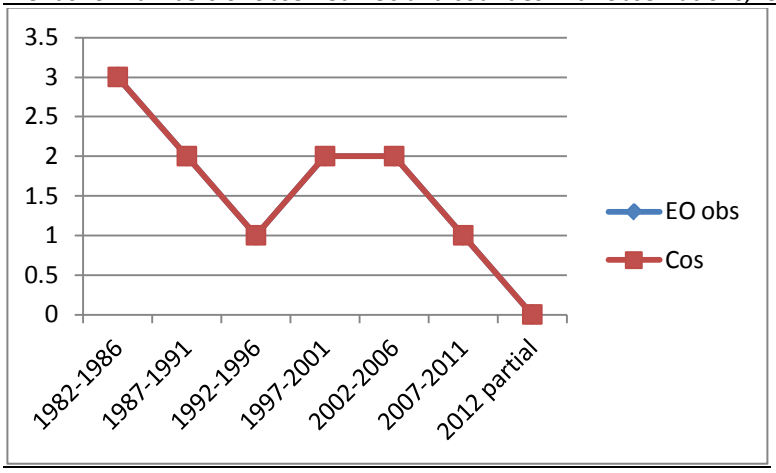
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 5/15/2008 | 6 | 2 | 1 | 7 | 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 | 3 | 2 | 1 | 2 | 2 | 1 | 0 |
| Cos | 3 | 2 | 1 | 2 | 2 | 1 | 0 |

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




NatureServe Conservation Status in United States

None queried.

Nettle, Urtica chamaedryoides (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T, 01/18/1994
Reason for listing: restricted habitats or low pops in IL;

## *Urtica chamaedryoides* Pursh

**NETTLE** **URTICACEAE**

**Status:** Threatened in Illinois.
**Habit:** Annual herb, stems 20-80 cm tall.
**Range:** Southeastern United States and Mexico.

*Urtica chamaedryoides* reaches its northern range limit in floodplain forests in extreme southern Illinois. The few Illinois collections are from the floodplains of the Mississippi and Ohio rivers, made primarily during the late 1940s to the 1970s. The species has not been reported recently from Illinois, but considering its annual habit and the extensive habitat available, it undoubtably still persists.
**References:** Bailey and Swayne (1951), Mohlenbrock *et al.* (1961), Boufford (1997).

## KEY

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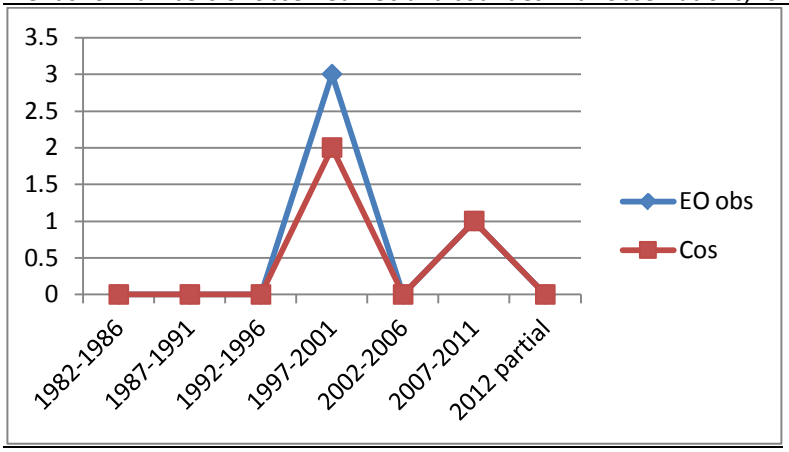
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 5/24/2007 | 5 | 1 | 0 | 3 | 2 | 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 | 0 | 0 | 0 | 3 | 0 | 1 | 0 |
| Cos | 0 | 0 | 0 | 2 | 0 | 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 one record in one county established as EOs. Since the time of listing, four EOs and one county were added; two EOs and one county were added in the 1980s and two EOs were added in the 2000s. It appears the addition of two EOs during the 1980s led to the species' status upgrade to threatened in 1998, athough there had been no reported observations since at least 1981 for any of the three EOs. No EOs are protected in Nature Preserves. While only one EO (20% of total) has had reported observation since 2002, four EOs (80% of total) have had reported observation since 2001. Relative to the number of occurrences and recentness of observations when the species' status was upgraded to threatened (three EOs not observed for at least 17 years), staff does not recommend a change back to endangered at this time.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

Flat-leaved Bladderwort, Utricularia intermedia (Illinois threatened)

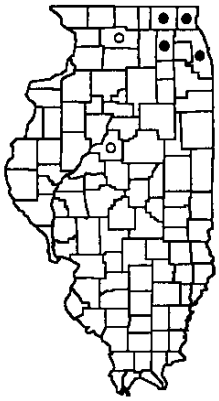
Listed as IL E, 5/20/1980; Listed as IL T 09/01/2004
Reason for listing: restricted habitats or low pops in IL;

## *Utricularia intermedia* Hayne

**FLAT-LEAVED BLADDERWORT**

**LENTIBULARIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Submersed insectivorous aquatic herb, scapes 6-20 cm long.
**Range:** Circumboreal, south into northern United States.



*Utricularia intermedia* is scattered and rare in northern Illinois, where it occurs in shallow water of bogs, fens, and interdunal swales. Presently seven populations are known in the state, five in state nature preserves.
**References:** Rossbach (1939), Tans (1987), Hess and Stoynoff (1989).

## KEY

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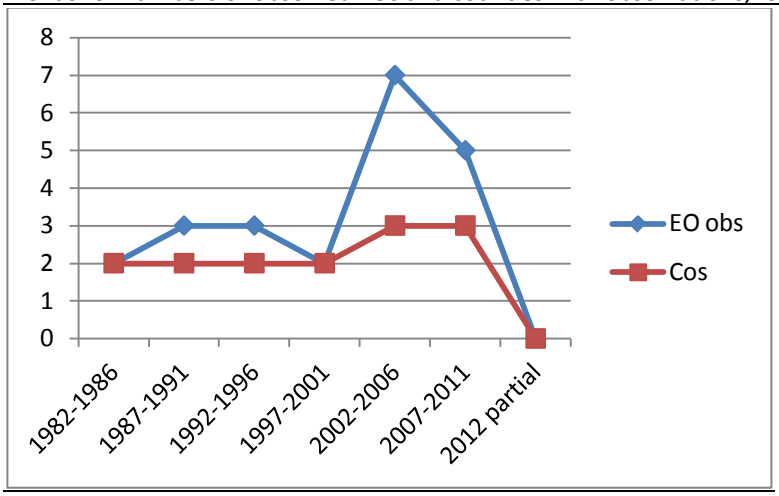
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 09/18/2009 | 12 | 9 | 7 | 9 | 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 | 2 | 3 | 3 | 2 | 7 | 5 | 0 |
| Cos | 2 | 2 | 2 | 2 | 3 | 3 | 0 |

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




NatureServe Conservation Status in United States

None queried.

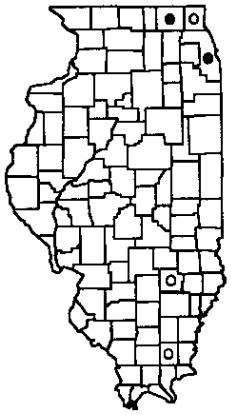
Small Bladderwort, Utricularia minor (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Utricularia minor* L.

**SMALL BLADDERWORT** **LENTIBULARIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Submersed insectivorous aquatic herb, scapes 4-15 cm long.
**Range:** Circumboreal, south into northern United States.



*Utricularia minor* occurs in shallow water of bogs, calcareous floating mats, fens, and interdunal swales. Until the 1960s, this species was known in the state from less than six localities, all in the extreme northeastern counties. In 1964 and 1965 it was collected from two ponds in Saline and Clay counties. Whether these stations represent established populations or waifs is unknown. Presently the species occurs in two state nature preserves in Cook and McHenry counties.
**References:** Rossbach (1939), Dolbeare and Ebinger (1974), Tans (1987).

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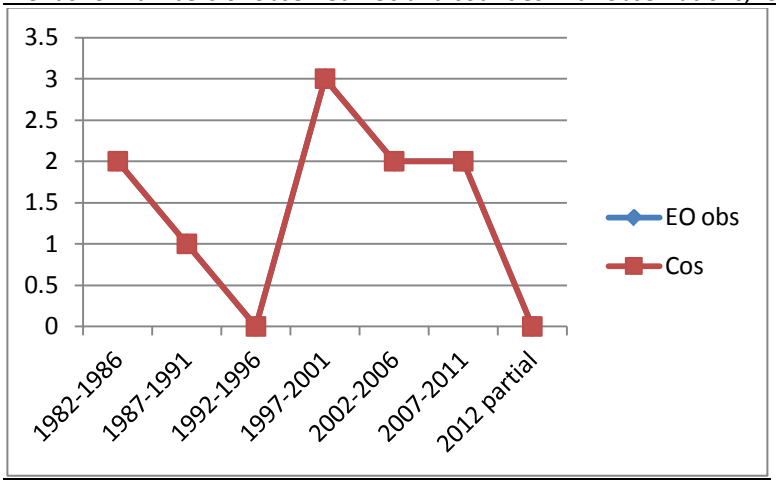
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 09/09/2009 | 5 | 3 | 3 | 5 | 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 | 2 | 1 | 0 | 3 | 2 | 2 | 0 |
| Cos | 2 | 1 | 0 | 3 | 2 | 2 | 0 |

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




NatureServe Conservation Status in United States

None queried.

Large Cranberry, Vaccinium macrocarpon (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Vaccinium macrocarpon* Ait.

**LARGE CRANBERRY** **ERICACEAE**

**Status:** Endangered in Illinois.
**Habit:** Evergreen, trailing shrub.
**Range:** Northeastern United States and adjacent Canada.

*Vaccinium macrocarpon* reaches its southern range limit in acidic bogs of the Northeastern Morainal Natural Division of Illinois. Presently this species is known from three state sites, two in state nature preserves. It probably still persists at five other state nature preserves where it was observed in the 1970s and 1980s.
**References:** Emerson (1921), Tehon (1942), Sheviak and Haney (1973), Evert (1988), Taft and Solecki (1990).

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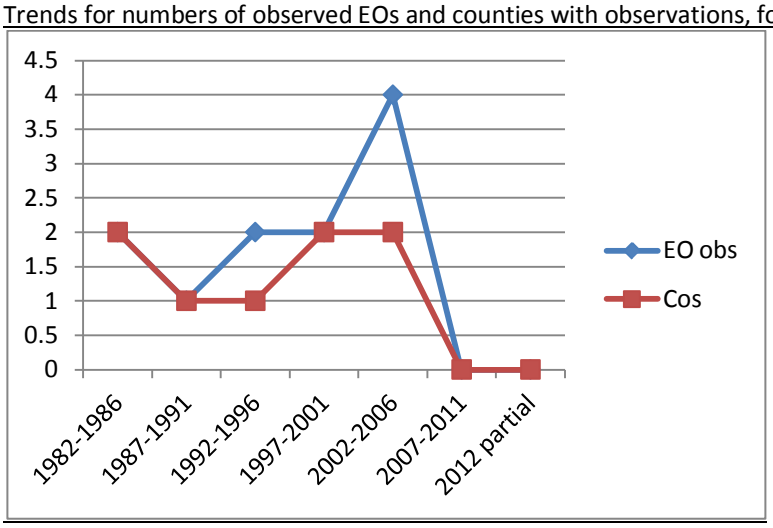
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 11/13/2005 | 9 | 4 | 8 | 8 | 4 | 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 | 1 | 2 | 2 | 4 | 0 | 0 |
| Cos | 2 | 1 | 1 | 2 | 2 | 0 | 0 |

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




NatureServe Conservation Status in United States

None queried.

American Brooklime, Veronica americana (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Veronica americana* (Raf.) Schwein.

**AMERICAN BROOKLIME** **SCROPHULARIACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial rhizomatous herb, prostrate stems to 1 m long.
**Range:** Boreal Canada and Alaska, south through northern United States.

A plant of wet ground around springs, seeps, streams, marshes, and fens, *Veronica americana* is rare and locally distributed in Illinois. It is presently known to occur in a state park in LaSalle County, and from private land in Kane and Kendall counties. The state population is threatened by trampling from excessive trail use next to their habitat. There are unverified reports of this species from DuPage, and Vermilion counties.
**References:** Pennell (1935), Bowles *et al.* (1991).

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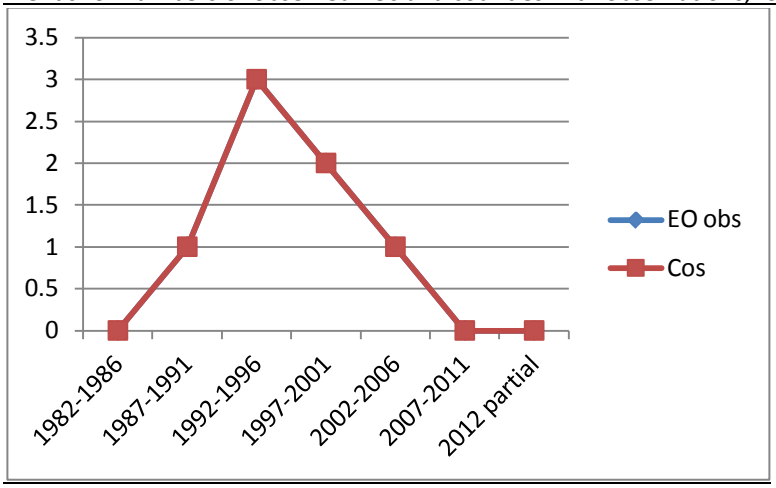
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 6/23/2005 | 5 | 1 | 1 | 5 | 3 | 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 | 0 | 1 | 3 | 2 | 1 | 0 | 0 |
| Cos | 0 | 1 | 3 | 2 | 1 | 0 | 0 |

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




NatureServe Conservation Status in United States

None queried.

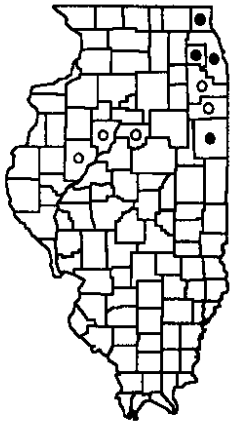
Marsh Speedwell, Veronica scutellata (Illinois threatened)

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 pressure

## *Veronica scutellata* L.

**MARSH SPEEDWELL** **SCROPHULARIACEAE**

**Status:** Threatened in Illinois.
**Habit:** Perennial rhizomatous herb, stems 10-60 cm tall.
**Range:** Circumboreal, south into northeastern United States and the Rocky Mountains.



*Veronica scutellata* has been found in marshes, graminoid fens, and other wetlands in northeastern Illinois and in the Illinois River valley. It is presently known from fourteen stations, including two state nature preserves, eight county forest preserves, a state conservation area, and private land.
**References:** Salamun (1951), Taft and Solecki (1990).

## KEY

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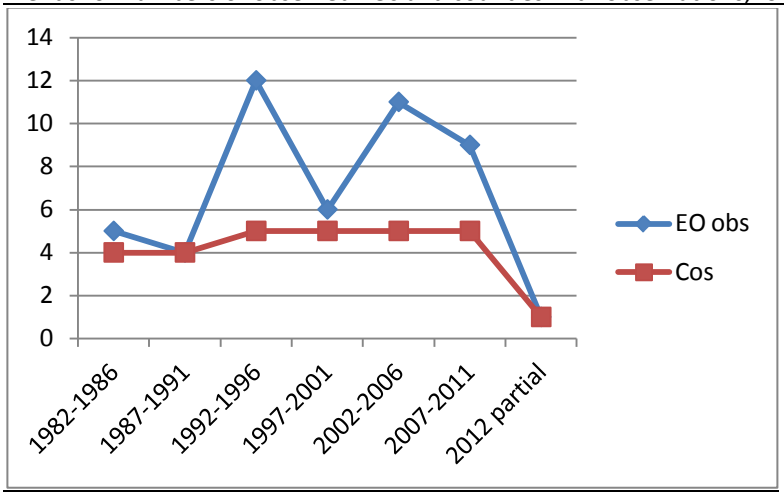
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 08/25/2009 | 25 | 14 | 14 | 18 | 7 | 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 | 4 | 12 | 6 | 11 | 9 | 1 |
| Cos | 4 | 4 | 5 | 5 | 5 | 5 | 1 |

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




NatureServe Conservation Status in United States

None queried.

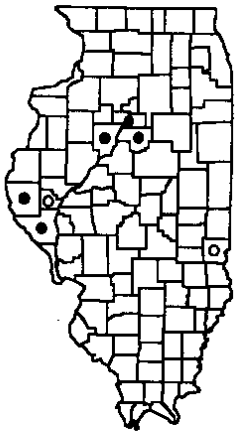
Arrowwood, Viburnum molle (Illinois threatened)

Listed as IL E, 5/20/1980; Listed as IL T, 12/03/1998
Reason for listing: restricted habitats or low pops in IL;

## *Viburnum molle* Michx.

**ARROWWOOD** **CAPRIFOLIACEAE**

**Status:** Threatened in Illinois.
**Habit:** Shrub, to 4 m tall.
**Range:** Pennsylvania to Iowa, south to Kentucky and Arkansas.



In Illinois, *Viburnum molle* is limited primarily to forested slopes and limestone bluffs in the western part of the state. It has been collected at eleven localities in the state and is known to persist at eight of these. Six populations are on private land, one is in a state nature preserve, and another protected in a private preserve.
**Reference:** Tehon (1942).

## KEY

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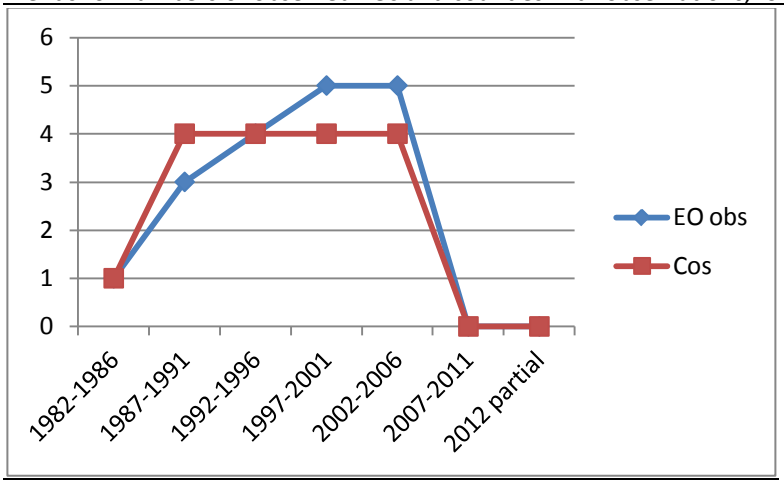
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 11/6/2004 | 10 | 5 | 2 | 10 | 6 | 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 | 1 | 3 | 4 | 5 | 5 | 0 | 0 |
| Cos | 1 | 4 | 4 | 4 | 4 | 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 two records in one county established as EOs. Since the time of listing, eight EOs and six counties were added; four EOs and three counties were added in the 1980s; two EOs and two counties were added in the 1990s; and, 2 EOs and one county were added in the 2000s. The addition of six EOs in the 1980s and 1990s, with six total EOs having recent observations, led to the species' status change from endangered to threatened in 1998. Five EOs (50% of total) have had reported observations since 2002. Relative to the number of EOs with recent observations that led to the status upgrade to threatened (6 EOs), staff does not recommend a change back to endangered at this time.

**Mankowski recommendation** – no change in status.

NatureServe Conservation Status in United States

None queried.

Hairy White Violet, Viola blanda (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Viola incognita* Brainerd

**HAIRY WHITE VIOLET** **VIOLACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial rhizomatous acaulescent herb, to 25 cm tall.
**Range:** Boreal eastern Canada and adjacent northeastern United States.

*Viola incognita* reaches its southern range limit in northern Illinois, where it occurs in flatwoods, forested fens and mesic forests along river bluffs. Only a few collections of this species have been made in the state, and there are two known extant populations, one in a state nature preserve in Lake County, and another on private land in Kane County.
**Note:** According to Kartez (1994) and Gleason and Cronquist (1991), this taxon may be a part of *Viola blanda* Willd.
**References:** Russell (1955, 1956, 1965), Waller (1981), Evert (1988).

## KEY

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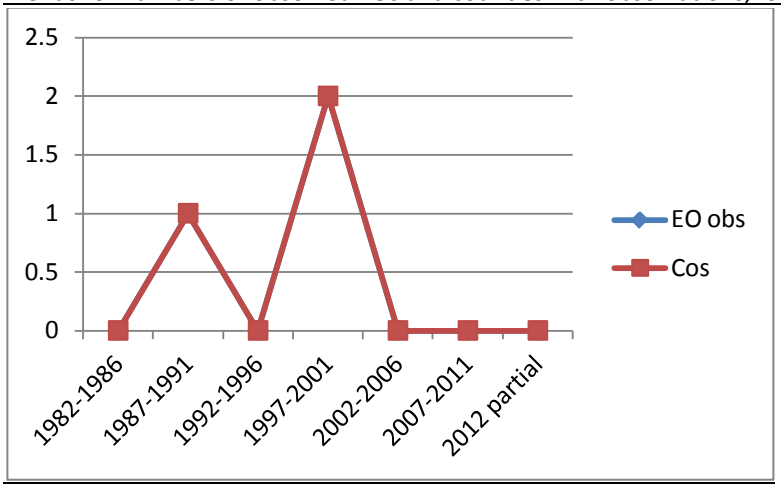
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 2000 | 5 | 0 | 2 | 5 | 4 | 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 | 2 | 0 | 0 | 0 |
| Cos | 0 | 1 | 0 | 2 | 0 | 0 | 0 |

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




NatureServe Conservation Status in United States

None queried.

Canada Violet, Viola canadensis (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Viola canadensis* L.

**CANADA VIOLET** **VIOLACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial rhizomatous herb, stems to 60 cm tall.
**Range:** Northern United States and adjacent Canada, south into the Appalachians and the Rocky Mountains.

Although *Viola canadensis* has been collected at a few sites across northern Illinois, most records from northeastern Illinois are considered escapes from cultivation. It appears likely that indigenous populations of this species are limited to the Wisconsin Driftless Natural Division in northwestern Illinois. Presently native populations are known on the bluffs of the Mississippi River in a state park in Carroll County and a natural heritage landmark in Jo Daviess County.
**Note:** This taxon is represented in Illinois by variety *rugulosa* (Greene) C. L. Hitchcock.
**References:** Russell (1955, 1956, 1965).

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Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
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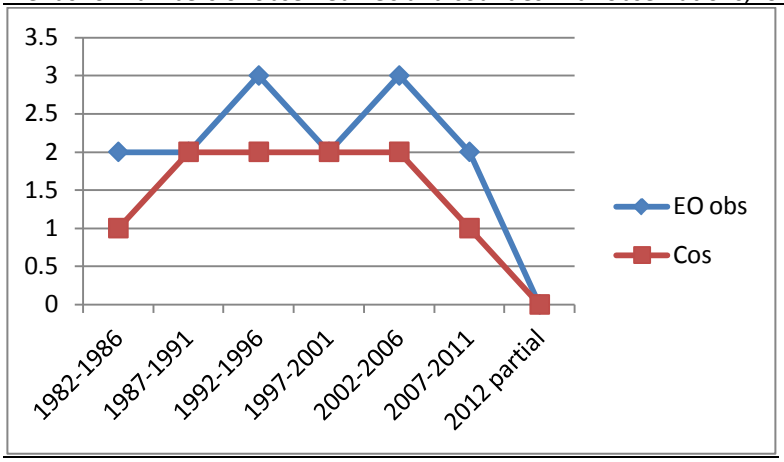
| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 10/9/2008 | 7 | 4 | 2 | 6 | 5 | 3 |

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 | 2 | 2 | 3 | 2 | 3 | 2 | 0 |
| Cos | 1 | 2 | 2 | 2 | 2 | 1 | 0 |

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




NatureServe Conservation Status in United States

None queried.

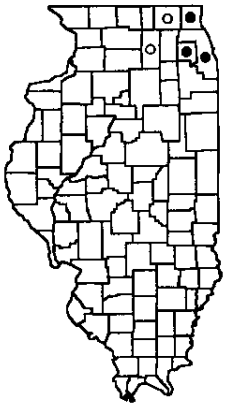
Dog Violet, Viola conspersa (Illinois threatened)

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 (1965), Moran (1978), Evert (1988), Ballard (1990).

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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)

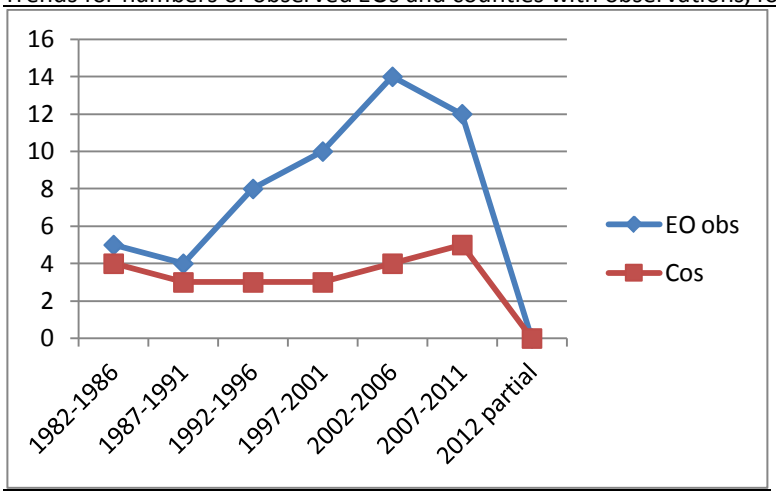
| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 05/05/2010 | 19 | 16 | 6 | 10 | 6 | 5 |

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) |

| |
|---|
| 50 rosettes (2008) |
| >3,485 rosettes and 92 flowering clumps across 2 nested sites (2009) |
| 35 flowering clumps across 2 nested sites (2009) |
| 12-15 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.

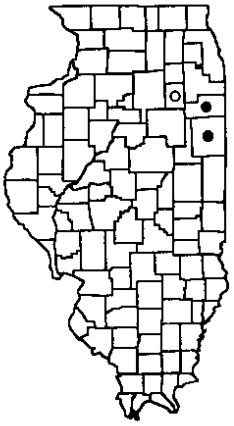
Primrose Violet, Viola primulifolia (Illinois endangered)

Listed as IL E, 5/20/1980
Reason for listing: restricted habitats or low pops in IL;

## *Viola primulifolia* L.

**PRIMROSE VIOLET** **VIOLACEAE**

**Status:** Endangered in Illinois.
**Habit:** Perennial rhizomatous acaulescent herb, to 15 cm tall.
**Range:** Eastern United States and adjacent Canada.



*Viola primulifolia* is restricted in Illinois to wet-mesic sand prairies in the Kankakee Sand Area Section of the Grand Prairie Natural Division. Presently it is known from three stations in two Illinois counties, including a state nature preserve and a state conservation area.
**References:** Russell (1955, 1956, 1965).

## KEY

The narrative for each species is accompanied by a map of Illinois with county outlines shown. Counties from which the species in 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.

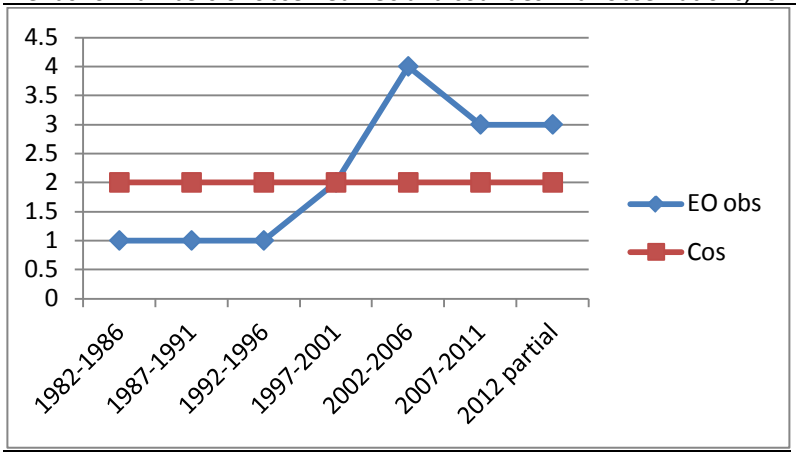
Illinois – Natural Heritage (Biotics 4) Database – last updated, July 2013
(EO = element occurrence and is roughly equivalent to one or more local individuals)

| Last Observation | Total # Eos | Total seen since Jan 2002 | # protected occurrences | # topo quads | # Counties | # Counties since 2002 |
|---|---|---|---|---|---|---|
| 09/18/2012 | 5 | 5 | 2 | 3 | 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 | 1 | 1 | 2 | 4 | 3 | 3 |
| Cos | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

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




NatureServe Conservation Status in United States

None queried.