



The Harbinger

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Newsletter of the
Illinois Native Plant Society

“...dedicated to the study, appreciation, and conservation of the native flora and natural communities of Illinois.”



Photo by Vanessa Voelker

Editorial

A flush of cardinal flower (*Lobelia cardinalis*) adorns the landscape like blush. The color red is in the minority when it comes to wildflowers. But the deep red color is not lost on hummingbirds, who frequently visit these flowers and reap a nectar reward. Photo taken this year at Spring Bay Fen Nature Preserve near Peoria by INPS member Vanessa Voelker.

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Message from the President



It is mid-October as I write this President's message. The leaves are starting to fall and we are finally seeing the rain that missed us during much of the droughty summer. Although the growing season and the year are winding down, our outdoor activity does not have to. There is still a lot to see and do with regards to plant sleuthing. Spend this time expanding your horizons by learning plants in a new season. Get to know them by their fruit rather than flowers. Study the bark and buds of our woody species. Enjoy and admire the colorful fall display as our green friends start to senesce.

Unlike our plant friends, the Illinois Native Plant Society will remain active as we head into winter. There are numerous hikes and seminars planned throughout the state that provide members the opportunity to better learn the native plants and plant communities of Illinois while hopefully making a few new friends and acquaintances. Attend Chapter events throughout the state and remember that as an INPS member you are not limited to the events of your home chapter, but have available to you the events of all seven Illinois chapters (Northeast, Kankakee Torrent, Quad Cities, Grand Prairie, Central, Forest Glen, and Southern).

Use this time to catch up on identifying photos of all those amazing plants you saw this past year. Seek help from botanists on the [Illinois Botany Facebook group](#) and don't forget to share them on iNaturalist as part of our [Botanist Big Year Challenge](#) with fellow native plant groups in Wisconsin and Minnesota. As it stands now, Illinois has recorded 16,113 observations of 1,347 species, trailing our Wisconsin neighbors by 927 observations and 191 species.

This past year was a busy one for the Illinois Native Plant Society. We organized a book sale for the new *Flora of the Chicago Region*, held multiple native plant sales, hosted a multi-day plant symposium, came together in Rock Island for our 36th Annual Gathering, met for wildflower hikes to natural areas throughout the state, partnered with the Native Plant Conservation Campaign, and shared information and spread the word when we were alerted to threats to Illinois native plants and plant communities.

Thanks to the continued support of our membership, for this coming year, we are pleased to announce the reinstatement of the INPS grants program. Details will be publicized soon. Stay tuned to the [INPS website](#) and [Facebook page](#) for more information.

This is also the time of year to renew memberships for the coming year. Please consider renewing your support for the Illinois Native Plant Society and spread the word to your friends and neighbors. INPS is an all-volunteer organization with zero paid employees. The INPS Board is currently calling for nominations for the positions of Vice-president, Secretary, and At-Large. If you are interested, [contact the Board](#). And as you renew your membership also please check a box on the online form to let us know where you can help (public speaking, media/communications, leading field trips and tours, fundraising/grant writing, website assistance, photography, etc.).

Happy botanizing,
Paul B. Marcum, President

INPS CHAPTER NEWS

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Check out the [Illinois Native Plant Society Events webpage](#) for Chapter meetings and workshops.

CHAPTER REPORTS

NORTHEAST CHAPTER – Daniel Lopez, President

The Illinois Native Plant Society-Northeast Chapter has visited many interesting natural areas this year. We started off this spring by visiting Ryerson Woods, Bliss Woods, and Gensburg Markham Prairie with plant highlights being: blue-eyed Mary (*Collinsia verna*), skunk cabbage (*Symplocarpus foetidus*), large-flowered trilliums (*Trillium grandiflorum*), bluets (*Houstonia spp.*), and Indian paintbrush (*Castilleja coccinea*). We had a tour of Sagawau Canyon where we learned about the history, geology, and flora of the site. We later visited Hinsdale Prairie and after a brief background of the site did an informal inventory including looking for prairie bush clover (*Lespedeza leptostachya*) and Mead's milkweed (*Asclepias meadii*). Mary Harroun gave us a tour of her unique woodland rain garden where she set up natural and artificial barricades to capture rain water and prevent it from running down slope into the lake behind her home. In the summer we visited Illinois Beach State Park, Montrose Beach Dunes, and Gensburg Markham Prairie again with grass-of-Parnassus (*Parnassia glauca*), ladies tresses orchids (*Spiranthes spp.*), sea rocket (*Cakile edentula lacustris*), and royal fern (*Osmunda regalis spectabilis*) as some of the plant highlights. We are currently working with Hinsdale Prairie to continue to inventory plants and manage invasive species by holding volunteer workdays. More event info is available on our [webpage](#).

FOREST GLEN CHAPTER – Connie Cunningham, President

The Oak workshop we had scheduled has been postponed to next year. Forest Glen will be holding some fall hikes and an end-of-the-year pizza party, but no dates for anything have been set yet. The hikes will be fairly short notice at this stage and they will be announced as soon as anything is set.

QUAD CITIES CHAPTER – Bo Dziadyk, President

After hosting the Annual Gathering last June, it seemed evident that there is interest in this chapter by local members. The Quad Cities Chapter is looking for new leadership and would like to request that interested individuals come forward and [contact Bo](#).

GRAND PRAIRIE CHAPTER – Joe Armstrong, President

The Citizen Science Flora of Comlara County Park Project is an ongoing citizen science project in McLean County Park including Lake Evergreen located 11 miles north of Normal, IL in northeastern McLean County ([map](#)). Roughly speaking, the northern half of the park is designated for recreation, and the southern half for conservation, 2,250 acres in all. Our project is an attempt to document the flora of the southern/conservation portion of the park because how else will you know whether you are conserving anything or not? This area includes some restored prairie plots, woodlands, old fields, and marshy areas around the inlet stream, all accessible via trails. This project is making use of iNaturalist software (free) using smartphones to record and pinpoint (GPS) observations of species. You may access the project by simply searching for the Flora of Comlara Park or visiting [this webpage](#). So far, 134 species have been recorded by the team of master naturalists. At present, contributors are limited and to get put on the team you must contact either [Joe Armstrong](#) or Sherrie Snyder; also feel free to contact Joe if you have any questions. Eventually we may open the project to the general public after we evaluate the pros and cons.

CENTRAL CHAPTER – Trish Quintenz, President

We have had a great line up of programs this summer, starting off with Paul Diezman of IDNR presenting on the state of ginseng (*Panax quinquefolius*) in Illinois, then Dr. Larry Zettler discussing his work with the North American Orchid Conservation Center and an invitation for INPS member involvement. Members Jeff and Don Augustine have recently been contacted by one of Dr. Zettler's colleagues regarding orchids on their family property. In July, we welcomed Dr. Tom Kimmerer who shared his work preserving trees in the Kentucky Bluegrass region, followed by speakers Stephanie Dobbs and Sue Dees-Hargrove presenting on a hot topic—the Illinois Department of Transportation's pollinator efforts—and finally a presentation from Erin Holmes of Pheasants Forever sharing valuable information about the pollinator programs offered by her organization.

Several field trips were organized early in the summer, first a visit to the Augustine family farm where one of the highlights was seeing the large population of spider milkweed (*Asclepias viridis*) in bloom, followed by a trip to Horn Prairie, which is always a member favorite. A visit to the diverse landscapes of Rocky Glen, a natural area acquired by the Peoria Park District, was the next field trip followed a few weeks later by a trip to the St. Louis area to tour the native plant projects at the Bellefontaine Cemetery and the Missouri ReLeaf nursery. We received plant donations for next year's sale from Fromm's Nursery and Missouri ReLeaf. Plants were divided up among members to maintain and grow for next year. Seed collection and other preparations for the sale are well underway.

In September, the Central Chapter hosted a gathering to share knowledge of raising monarch caterpillars. The event was well attended by 20+ butterfly enthusiasts.

KANKAKEE TORRENT CHAPTER – Trevor Edmonson, President

Kankakee Torrent Chapter is deep into planning their first symposium on native plants to be held Saturday, February 24 at the Joliet Junior College. We are also trying to arrange a field trip on Friday, February 23 to Midewin National Tallgrass Prairie, to be confirmed, to look at the seeding machinery they use in their large restoration projects. Sunday, February 25, we are planning a field trip to look for the harbinger-of-spring (*Erigenia bulbosa*) and other very early blooming plants and to do some late winter woody plant identification lessons, weather permitting.

We are also working on details for the 2018 Annual Gathering which will focus on the southern sections of the Morainal and Lake Plain Natural Divisions in Illinois and Indiana. Save the dates: June 8-10. Gerould Wilhelm has agreed to be our keynote speaker. The event will also include a sedge workshop with Paul Marcum and a Sunday floristic blitz of Limestone Park near Limestone, Illinois, Kankakee County. The site has remnant areas and members are working to see natural resource management begin.

Georgeanne, one of our chapter members, was told by Kankakee County Health Department that her prairie planting was a weed patch and should be mowed. KT members provided support and advice on how to deal with the complaint. We hope it will be soon be resolved in her favor. This issue seems to be an ongoing problem with municipalities that lack the trained personnel to analyze such gardens.

Chapter meeting programs are also getting set for the winter months. Many of the chapter members are scheduling volunteer workdays at various sites in Kankakee and Will Counties. We will put details on our [INPS webpage](#) and [Facebook page](#) as they develop.

SOUTHERN CHAPTER – Chris Benda, President

Our goal is offer an event each month and to switch it up between presentations, workshops, and hikes. We are working on planning the programming for 2018 and ask members to submit ideas. We are also working on planning the next Indigenous Plants Symposium. Save the dates: April 6-8.

Our programs for 2017 are on our [INPS webpage](#) and [Facebook page](#). In October we welcomed Dr. Sedonia Sipes to talk about a huge project to inventory pollinators on federal lands in southern Illinois. In November we will hear about managing forests for bats by biologists Matt Mangan and Kevin Rohling. December will be the annual holiday dinner, to be held at The Haven, a beautiful setting on Crab Orchard Lake. We will honor retired IDNR Site Superintendent Jim Waycuilis with our newly developed annual Conservation Leader Award. Jim worked at the Cache River State Natural Area for over 20 years and was directly responsible for many efforts that helped preserve this gem.

We also added a new member to our board, Marisa Szubryt. Marisa is a graduate student at Southern Illinois University and will be our programming coordinator. We also were selected as the recipients of the Neighborhood Co-op wooden nickel program, where each shopper gets a wooden nickel for each cloth bag they bring in and can donate their nickels to 2 different non-profit groups each quarter.

Welcome New Members

Central Chapter

Mike Lemke
Louis Nelms
Dave Varel / Tree Little
Acres Nursery

Forest Glen Chapter

Andrew Dahl

Quad Cities Chapter

Scott Figdore
Denise Oberle

Kankakee Torrent

Jessica Quinn

Southern Chapter

Jennifer Henderson
Travis Neal
Kristi Nowels

Northeast Chapter

David Bravos
Elizabeth Crewe
Cindy Crosby

Suzanne Davenport

Kelly DeMoll

Cecil Hynds-Riddle

Kari Jager

Eric Meyers

Katie Miler

Fayette Aurelia Nichols

Ricardo Rosa

Lorinda Sorensen

Michael Swierz

Kathleen Thomas / Friends of
Hindsdale Prairie

Gianna Wensel

Field Trip Reports From the 2017 INPS Annual Gathering

The [2017 Annual Gathering of the Illinois Native Plant Society](#) was held in early June at Augustana College, Rock Island, Illinois. Below are reports from some of the several field trips offered.

Annual INPS Meeting Field Trip to Northwest Illinois Sand Prairies Was True Grit!

By Randy Nyboer.

The day-long field trip to Thomson-Fulton and Ayers Sand Prairie Nature Preserves was well attended by 23 members attending the annual meeting on Saturday, June 3rd. The weather for early June was rather warm and humid and the threat of afternoon thunderstorms did not dampen the enthusiasm of the botanists willing to forego the desert-like preserves. Led by Randy Nyboer, the group also made a surprise stop for lunch at Mississippi Palisades State Park and a short tour of the Sentinel Nature Preserve. INPS President Paul Marcum and Past-President Chris Benda assisted on this field trip giving all the botanists a thorough vetting of the flora.



L to R: Hairy puccoon, (*Lithospermum croceum*); large-flowered penstemon (*Penstemon grandiflorus*). Photos: Chris Benda.

The first stop was to Thomson-Fulton Nature Preserve in Whiteside County along the Mississippi River. This site was acquired by the Illinois Department of Natural Resources (IDNR) in the 1970s not for a high quality dry sand prairie community, but because of the active sand dune and blowouts occurring here. Sand prairie was present at the time but just prior to the purchase of the site, two areas were plowed, disked, and planted to watermelons for a year! We walked through these old pepo patches that are now mid-successional sand prairie and saw evidence of what disking the

common prickly pear (*Opuntia humifusa*) could do to increase this species. The group saw many of the characteristic sand prairie species found here including sand cress (*Arabis lyrata*), sand and green milkweeds (*Asclepias amplexicaulis* and *viridiflora*), poppy mallow (*Callirhoe triangulata*), hairy puccoon (*Lithospermum croceum*), blue flax (*Nuttallanthus canadensis*), purple milkwort (*Polygala polygama*), jointweed (*Polygonella articulata*), sweet everlasting (*Pseudognaphalium obtusifolium*), goat's rue (*Tephrosia virginiana*), shaved sedge (*Carex tonsa*), and sand cherry (*Prunus susquehanae*). The large-flowered beardtongue (*Penstemon grandiflorus*) was still in bloom providing a striking floral display. We also discovered some the clustered broomrape (*Orobanche ludoviciana*) along the railroad right-of-way next to the preserve.

After a quick lunch and a short jaunt up the Sentinel Trail at the Palisades, the group was treated to the remnants of the spring ephemerals of this rich mesic forest. Just a few of the many unique plants observed here included jeweled shooting-stars (*Dodecatheon amethystinum*), purple and large white trilliums (*Trillium erectum* and *grandiflorum*), American bugbane (*Cimicifuga americana*), and a number of ferns.

As we arrived at the Ayers Preserve just south of Savanna in Carroll County, the storm clouds were beginning to build. A beeline up the center of the preserve found some of the same dry prairie species observed at Thomson-Fulton but with the prairie being of higher quality. The first thing noticed was the lack of common prickly pear that was so abundant at T-F! It didn't take long for the group to find some characteristic plants of this preserve. The false heather (*Hudsonia tomentosa*) was nearly finished blooming where just the week before, extensive yellow patches of this plant were common. Bird's-foot violet (*Viola pedata*) was very common in many of the blowouts. The wrinkle-seeded flower-of-an-hour (*Phemeranthus rugospermus*) was found in some of the open sand areas but not flowering. A few other plants of interest that were observed included Bicknell's sedge (*Carex bicknellii*), porcupine grass (*Heterostipa spartea*), junegrass (*Koeleria macrantha*), Bicknell's frostweed (*Helianthemum bicknellii*), western sunflower (*Helianthus occidentalis*),

flax-leaved aster (*Ionactis linariifolius*), sand evening primrose (*Oenothera clelandii*), rock spikemoss (*Selaginella rupestris*), and silky aster (*Symphotrichum sericeus*). We made a quick exit of the prairie just as thunder began to rumble and scattered raindrops began to fall!

One other nice aspect of this field trip was that we were able to see some of the sand prairie wildlife that occurs in these preserves. Nesting grasshopper (*Ammodramus savannarum*) and lark sparrows (*Chondestes grammacus*) were seen. Small lizards called six-line racerunners (*Aspidoscelis sexlineata*) and ornate box turtles (*Terrapene ornata ornata*) were also observed. Overall the field trip was a success on this muggy, early summer day.

Nahant Marsh and Fern Workshop

By Brian Ritter and Bob Bryant.

The Mississippi River was flooding at the time of the Annual Gathering and limited planned activities. Brian Ritter, Nahant Marsh Education Center Director, started the day off with a presentation on Nahant Marsh's natural and cultural history. Located in the southwest corner of Davenport, Iowa, Nahant Marsh is part of a 500-acre wetland complex that is one of the largest urban wetlands on the upper Mississippi River. Prior to the 1970s, the area was predominately a sedge meadow with a drainage ditch through it. From 1969-1994, a skeet and trap club owned 78 acres of the sedge meadow. Construction of Interstate 280 (completed 1973) divided the wetland complex in half, which affected the hydrology of the area. The sedge meadow rapidly evolved into a cattail-dominated hemi-marsh. In 1993, the U.S. Fish & Wildlife Service found dead and sick waterfowl on the part of the marsh owned by the Quad City Skeet and Trap Club. Thirteen acres of lead contaminated area were classified as a Brownfield site and cleanup was funded by the EPA Superfund. Nahant Marsh was the first Superfund site in the United States to become an environmental education center.



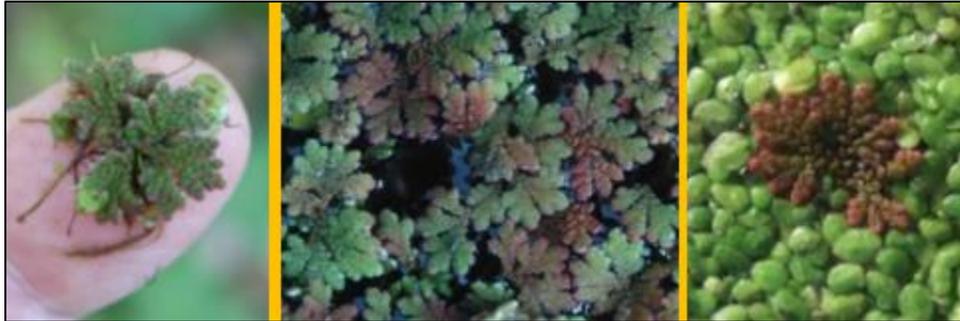
Deformed cattails spikes caused by lead contamination.

The Nahant Marsh center currently owns 265 acres and will be expanding in the near future. The center serves around 18,000 visitors annually and is recognized statewide (Iowa) for excellence in environmental education programming. The preserve is now comprised of bottom forests, sedge meadows, small sand prairie and dry/mesic prairie restorations (on former crop-ground and lead-contaminated areas), and a former sand pit. Nahant staff works with researchers to guide restoration and preservation efforts. Biologists and volunteers have documented 431 plant species, 175 birds, 62 mushrooms, 41 mammals, 14 reptiles, and 7 amphibians. Following Brian's presentation, those signed up for the Nahant field trip toured the nearby areas

of the marsh not flooded. Major management issues and topics presented were: flooding (by Mississippi River and beavers), invasive species (especially reed canary grass (*Phalaris arundinacea*)), siltation, use of goats, and rare species management, including Blanding's turtle (*Emydoidea blandingii*), ear-leaved false foxglove

(*Tomanthera auriculata*), prothonotary warbler (*Protonotaria citrea*), red-shouldered hawk (*Buteo lineatus*), and sandhill cranes (*Grus canadensis*).

Those signed up for the Fern Workshop remained at the interpretive center with Bob Bryant, INPS Quad City Chapter Vice President and retired director of the Wapsi River Environmental Education Center. Fern morphology, life cycles, field guides, books, identification, distribution, uses, folklore, and photography were briefly covered. Referring to his presentation “Ferns of the Quad-City Region” and pressed fronds, participants had the opportunity to use a simple key to see and identify some of the region’s ferns that would not be seen at Nahant or at Wildcat Den State Park.



Mosquito fern (*Azolla mexicana*).

Of the 37 Quad City Regional ferns, the mosquito fern (*Azolla mexicana*) is unique because of its small size and its color change. Young plants are generally green, becoming pink, red, or dark brown as they mature and when exposed to strong sunlight. It is a free-floating fern that is found in backwater sloughs and marshes, especially along the Mississippi River. It can form dense mats, be invasive, and survive on moist mudflats.

Wildcat Den State Park Field Trip

By Bob Bryant and Brian Ritter.

Wildcat Den State Park (423 acres) is located north of Muscatine, Iowa. Pennsylvanian sandstone outcrops and high shear ledges can be found along Pine Creek and in adjoining ravines, and Devonian limestone along Pine Creek. The park’s diverse landforms are covered by upland oak-hickory forest and bottomland forest along Pine Creek, supporting over 300 plant species. The sandstone ravine, known as the “Devil’s Punch Bowl,” shows many of the geological and floral features of the park.

Most of the spring wildflowers were past blooming. Some of the wildflowers observed were wild columbine (*Aquilegia canadensis*), Jack-in-the-pulpit (*Arisaema triphyllum*), Dutchman’s breeches (*Dicentra cucullaria*), wild geranium (*Geranium maculatum*), wild ginger (*Asarum canadense*), liverleaf (*Hepatica sp.*), Virginia waterleaf (*Hydrophyllum virginianum*), pale touch-me-not (*Impatiens pallida*), Bishop’s cap (*Mitella diphylla*), sweet William (*Dianthus barbatus*), mayapple (*Podophyllum peltatum*), bloodroot (*Sanguinaria canadensis*), greater bellwort (*Uvularia grandiflora*), spikenard (*Aralia racemosa*), wild sarsaparilla (*Aralia nudicaulis*), goat’s beard (*Aruncus dioicus*) and zigzag goldenrod (*Solidago flexicaulis*), plus a nice variety of ferns: Christmas (*Polystichum acrostichoides*), fragile fern (*Cystopteris protrusa*), common polypody (*Polypodium virginianum*), rattlesnake (*Botrychium virginianum*), Goldie’s (*Dryopteris goldiana*), silvery spleenwort (*Deparia acrostichoides*), northern lady (*Athyrium filix-femina*



Silvery spleenwort (*Deparia acrostichoides*).



Blunt lobed woodsia (*Woodsia obtusa*).

angustum), lady in red (lady fern cultivar, *Athyrium filix-femina*), spinulose (*Dryopteris carthusiana*), blunt-lobed woodsia (*Woodsia obtusa*), crested wood (*Dryopteris cristata*), interrupted (*Osmunda claytoniana*), walking (*Asplenium rhizophyllum*), and northern maidenhair (*Adiantum pedatum*). Time didn't permit hiking to see the long-beech fern (*Phegopteris connectilis*, endangered in Iowa; recorded at Wildcat Den in 1897, it was re-discovered in 2008) and nine other ferns found in the park. Iowa's most southern native stand of glacial relic white pine (*Pinus strobus*) is located on the upper rim of the Devil's Punchbowl and some blue beech (*Carpinus caroliniana*) on the lower slopes. We also toured the park's Pine Creek Grist Mill. Built in 1848, it is one of the finest examples of mid-nineteenth century mills.

Sherman Park Field Trip

By Bob Bryant.

Sherman Park (232 acres) is located in the southwest part of Clinton County, Iowa. Managed by the Clinton County Conservation Board, the park has 368 plants (320 native, 47 non-native). Eleven plants are on the Iowa Threatened (T), Endangered (E), and Special Concern (SC) lists. The following were observed: bristly dewberry (*Rubus hispidus*, SC), watershield (*Brasenia schreberi*, SC), and royal fern (*Osmunda regalis*, T). The following were *not* found: meadow beauty (*Rhexia virginica*, T), crowfoot clubmoss (*Lycopodium digitatum*, SC), black huckleberry (*Gaylussacia baccata*, T), and lance-leaved violet (*Viola lanceolata*, SC). We did not have time to look for flax-leaved aster (*Aster linariifolius*, T), soft rush (*Juncus effusus*, SC), slender fimbry (*Fimbristylis autumnalis*) and one of Iowa's and Illinois' rarest ferns, daisy-leaved moonwort (*Botrychium matricariifolium*, E). I was the Conservation Board's Executive Director (1975-1990) and lived in Sherman Park. Soft rush was the only plant that I did not know of its location and the new species for the park. We found 18 Iowa endangered, pale green orchids (*Plantanthera flava*). The park is rapidly changing and being taken over by invasive species and it appears that Sherman Park is losing its rare plants.

Landscaping with Native Prairie Plants

By Dan Mays.

Our contingent was the smallest group of all the field trips, consisting of four individuals. The thought behind this topic offering was to present an example of how native plants can be successfully utilized in an aesthetic manner in urban residential landscapes. A secondary consideration was to offer something less physically demanding than a major field hike. Since this was to be a low-impact affair, I made a command decision to abandon the additional scheduled Brockhouse Wet Prairie visit, located only ½ mile from my home. While this location is certainly an interesting few acres of virgin prairie, the site requires tall boots and a LOT of physical effort to adequately explore.

Since our group was small, everyone just hopped onto my crewcab truck and we were off to my average-sized home, in an average Midwest neighborhood with an average-sized ¼-acre lot. Everything is average except the landscaping and choice of plant materials. (*It is not what you have, but rather what you do with what you have.*) Although small, there are so many features and native plants sprinkled throughout the landscape that the tour takes several hours. Rather than just pointing at plants and saying, "And this is ...," we discussed why a particular plant was chosen, why it was sited in that particular location, and what landscape design principles were being addressed. We broke for lunch and sat around the island in my kitchen engaged in fascinating discussion.

We again all hopped into my truck and headed a little over 20 miles west to one of the Midwestern native plant crown jewels: [Rochester Cemetery](#):

"Rochester Cemetery is a sand prairie/savanna remnant located near the village of Rochester, along the Cedar River in Cedar County, Iowa. This remnant is also an active cemetery, managed by the Rochester Township Trustees. This cemetery is known across the US for its colorful springtime display of wildflowers, in particular its display of thousands of shooting stars, and massive, spreading White Oaks. It has often been called one of the best examples of Oak Savanna in the Midwest."

None of the others had ever been here before, but everyone had heard of it. They were certainly not disappointed. The virgin settler cemetery is richly diverse and features many plants in-situ as they would have been seen well over a century ago.

Gardening, Nurturing, and Restoration

By Paul Swanson, Nachusa Grasslands Volunteer Steward

Decades ago, across a patch of land where cattle grazed, two students of Aldo Leopold recognized the call of the upland sandpiper. That eerie sound helped Doug and Dot Wade to recognize a highly degraded remnant prairie. Against all odds, a process started that would save this piece of ground for nature. Over the next few years a small group of people would demonstrate that given the right conditions, mainly the exclusion of cattle and return of fire, rare prairie plants would once again thrive. In *One Man's Endeavor to Save the Prairie*, Kim W. Johnsen writes:



A small remnant patch and a tiny wet area are seen at the top of the photo; they will eventually include some different plants. The rest of this 103 acres was planted with 156 different prairie species. Over time, the expectation is plant diversity will increase.
Photo: Ryan Blackburn.

"In the early 1970s Tim worked with Doug Wade (Oregon) to see if an area called "Schafer's Knob," later established as Nachusa Grasslands, could be brought back to prairie.... After one burn the federally threatened prairie bush clover appeared and the upland sandpiper appeared soon after the prairie began to recover."

This group of listeners, thinkers, and activists led The Nature Conservancy to purchase the land that would become Nachusa Grasslands. On August 26, 1986 the first 130 acres were purchased (*Prairie Smoke 2016 Annual Stewardship Report*; pp. 4-5). Over time, more and more land containing degraded remnants was purchased, followed by farm fields of row crops that connected the remnants. These farm fields would need to be planted with native plant seeds and nurtured to bring back a prairie with a diversity of grasses and flowers.

Some area ecologist observed the restoration work in progress at Nachusa, and in small areas within the Cook County Forest

Preserve District, and labeled it gardening. After all, he thought, the succession of plants and trees from an area, to be followed by others, is a normal ecologic function. When weather conditions change, or fire is absent, or a river changes course, or a natural barrier creating a dam breaks to expose the lake bottom to sunshine and air, plants and animals that are better suited to the changed conditions move into those areas and nature heals itself. Normally this happens over very long periods of time, but it happens. So, when groups of people began to step in and remove some plants in favor of others and began harvesting nearby seeds and planting them, it appeared to that ecological purist, to be gardening.

People doing ecological restoration start with the premise that the natural environment has been altered by humans to a degree that normal processes of succession no longer work. A restoration starts by researching the plants and animals that have historically been present. This is done by studying old diaries, maps, land surveys, and any other document that can be obtained. Museum collections are reviewed to see what was collected or recorded in the area. An effort is made to return the land to pre-settlement conditions. When seeds are selected, with a few exceptions, great effort is made that they are locally sourced and the species are historically part of the landscape. Once the plant community is restored, it is hoped that the insects, birds, and mammals will return.

The gardener and the person doing ecosystem healing share many common procedures that some think have similar results. Both sow seed into the ground, use cuttings and plants grown in containers, pollinate plants by

hand, and use herbicides to eliminate unwanted plants. Each prepare the ground to maximize chances for success. Many of the tools and methods used in the healing process were first used by gardeners. The result of all the effort in both cases, is a landscape beautified with flowers, grasses, shrubs, and trees. So why is ecological restoration not gardening?

The gardener is looking for maximum visual impact and will select plants originating from distant lands to accent a garden. A gardener will place plants to offer coordinating and contrasting, colors, heights, shapes, and varied bloom times. A gardener may crossbreed plants, often pollinating plants by hand to maximize and enhance desired qualities, allowing only the plants with those qualities to propagate. A neighbor, who loved to garden, would hand pollinate his snapdragons and then isolate the flower so only the pollen he provided could become seed. Every year, his snapdragons had robust and colorful blooms. The efforts of the gardener are directed to provide a display pleasing to the human eye.

Restoration efforts promote plants that are native to the area—plants that need special habitat to thrive and that are now rare. Habitat, once abundant, has been converted to roads, parking lots, buildings, and farms. Neglect has degraded other natural areas where native plants find it difficult to survive and reproduce. The suppression of fire has allowed honeysuckle, multi-flora rose, and other invasive species to crowd out fire adapted plants. A friend, who loved native plants, would hand pollinate an endangered plant whose population was no longer large enough to reproduce; the insect most likely to pollinate the plant was no longer present or the plants too far apart for insect pollination to be effective. This plant, the federally endangered eastern prairie fringed orchid, painstakingly hand pollinated, and caged to prevent deer browse, began to thrive on a few new sites where seeds were scattered. In time, seeds of this orchid from a population in Lake County were spread in many places at Nachusa Grasslands. For years no orchids were found, but in one wetland, it now thrives at Nachusa, uncaged and once again pollinated by insects. Nachusa's population is now one of the largest in the state and among the largest in the world (*Prairie Smoke 2015 Stewardship Report*; p. 6). To a person doing ecosystem healing, placement of a plant in conditions it will thrive is important, thus matching the seeds or young plants to the environment best suited to its needs. Conditions such as whether an area is naturally wet or dry, sunny or shaded by trees, or even a north-facing or south-facing slope, may determine a native plant's success in growing and reproducing. Ultimately it will be nature that decides whether a plant succeeds or fails in any given location, just as it did before Europeans arrived.

When gardening, the gene pool for the next generation is selected by the gardener for qualities that please people. It might be size, color, shape, or some other unique feature that people choose to pass forward to the next generation. In ecosystem healing, the goal is to let nature do the work of selecting the next generation. A diverse plant mix, matched to the right ecological conditions, will self-assemble over time, to fit back into its native environment. As the insects, birds, and mammals return, they select the gene pool for the next generation; thus, providing an opportunity for the normal processes of change and succession to be restored.



The greatest compliment for the work done at Nachusa won't come from people visiting to admire the view, although the views at Nachusa are spectacular. Every visit offers something different in bloom, often changing the color and look of the landscape from one week to the next. Many of the flowers and plants were once abundant and covered vast tracts of land as far as the eye could see, but now they only survive in small isolated patches and have become rare. Many require special conditions of associate plants or companion soil microbes to thrive, conditions that are slowly being restored at Nachusa. The greatest compliment comes from the variety of insects, birds, and mammals that find their way to Nachusa and begin to thrive. Recently the upland

sandpiper not seen in the area since 1988, returned to Nachusa to add its voice to the prairie remnants; when it nests and raises its young this will be viewed as the greatest compliment of all.

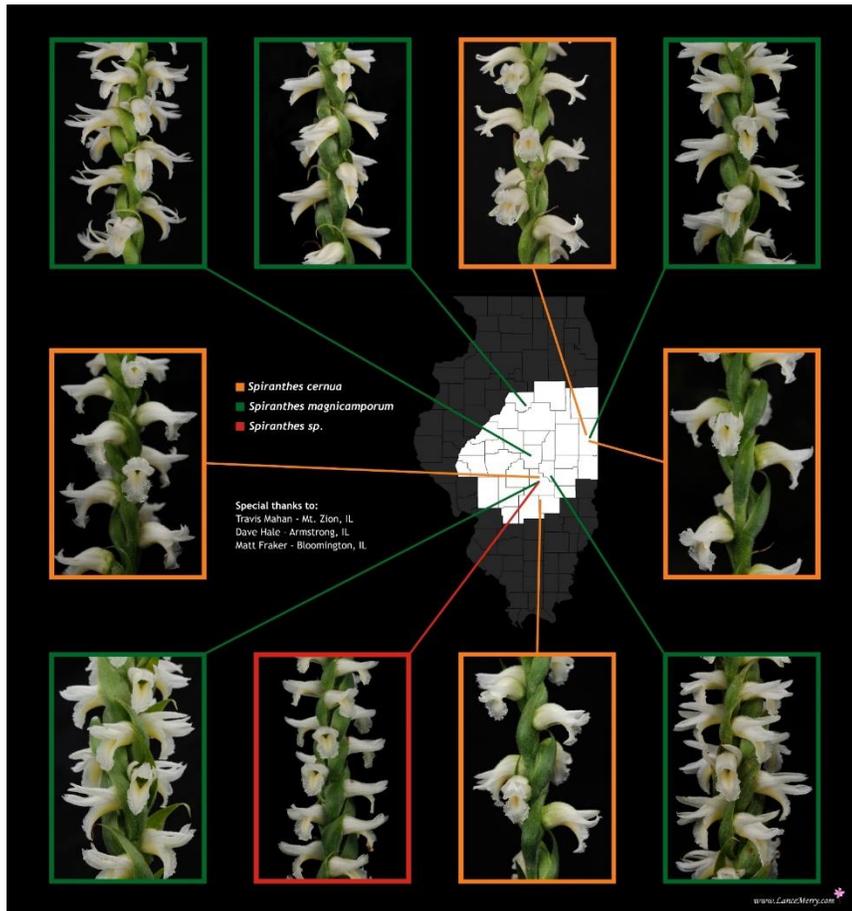
See the complete article published on the [Nachusa Grasslands Blog](#), 8/21/17.

Spiranthes Are Worth Seeking Out

By Matt Candeias, author of the blog *In Defense of Plants*.

Late summer is bitter sweet. The growing season is coming to a close and soon we will dive deep into dreary winter. There is still plenty to be seen throughout fall and most of us avid botanizers are still hitting the trails looking for botanical treasures both new and old.

Some of my favorite plants to find this time of year are the lady's tress orchids in the genus *Spiranthes*. Here in Illinois you can find eight species. They are charming little plants with their spirally-arranged inflorescences but you need to keep your eyes open in order to see them. Most often they are dwarfed by surrounding vegetation, no doubt relying heavily on their mycorrhizal partners for their energy needs.



Spiranthes collage. Credit: Lance Merry.

Each species has its own unique look but their overall form is roughly the same. Small but showy white flowers emerge in a spiral fashion (hence the generic name) at the top of a long flowering spike. In some species, the direction of this spiral seems to occur at random. Some individuals spiral clockwise whereas others spiral counterclockwise. Regardless of the direction, the spiraling has evolved in response to pollinator behavior. Small bees visit the inflorescence from the bottom up, spiraling as they go. Research has shown that at least for a few species, the denser and more spiraled the inflorescence, the more attention it is given by bees. The fact that they start at the bottom also seems to have influenced the reproductive biology of this group. Although orchid flowers are perfect (containing a column of fused male and female reproductive organs), each of these respective parts mature at different rates. The stigma matures first on the lower flowers so that a bee visiting with a pollinia from another flower will deposit that pollen first. The upper flowers will

generally mature their pollinia first so that as the bee finishes its visit, the last thing it does is pick up pollen. In this way, the chances of cross pollination are increased.

As with any small plants with sparse populations, pollination is no guarantee. Bees, after all, tend to cue in on the most abundant floral displays. As such, many *Spiranthes* have evolved a backup plan for reproduction called agamospermy. This is a process in which seeds are produced without fertilization. In this way, individual *Spiranthes* are still able to reproduce even without pollinators. The resulting offspring in this case

are clones of the mother but if her genes were enough to survive in that habitat, so too will be their copies. Though they are not large and showy like many of their cousins, the *Spiranthes* nonetheless possess plenty of character and are really worth seeking out. Remember, they do not do well in your average garden. Also, their populations can be slow to increase following disturbance. Because of this, *Spiranthes* are best left in the wild. Enjoy them with your eyes and your camera so that others can enjoy them as well.

For more articles like this, please check out [In Defense of Plants](#) on all forms of social media: [Facebook](#), [YouTube](#), and on [Twitter](#) @indfnsofplnts

Gentianaceae

By Marisa Szubryt, author of the blog *Monoecious: All Things Botanical*

Gentianaceae refers to a cosmopolitan but primarily temperate family of eudicots whose largely glabrous members range from small rhizomatous shrubs to small trees containing bitter monoterpenoids. The bisexual, actinomorphic flowers have fused perianth parts and stamens adnate to the campanulate corolla. The gynoecium bears a superior ovary with a basal nectary ring, which surrounds the seeds which develop usually in a capsule with parietal placentation. The flowers and fruits are typically held in cymes but are occasionally singular. Leaves tend to be opposite, entire, and estipulate, although they may be reduced in mycoheterotrophic members. Six major clades (deemed tribes) are currently recognized, and about 80 genera and about 1,100 species are currently recognized. See an [extensive family tree](#) on the *Monoecious* blog.



Tribe Exaceae (unfortunately named) includes the genera *Sabaea* s.l. and *Exacum*. Both grow natively in the middle latitudes of Africa, the Middle East regions in and around Yemen, and India/Asia/New Zealand. They are small herbs often with annual, biennial, or short-lived perennial life cycles. *Sabaea* was paraphyletic and split into *Klackenbergia*, *Exochaenium*, and the monotypic *Lagenias*.

Tribe Potalieae includes *Fagraea* and *Anthocleista* which total 120 species. Epiphytic herbs, vines, lianas, and trees grow in wet Old World regions, principally swamps and forests. Their wood has been used in tiki production, and the flowers are used for ornamental purposes since they are often large, crepuscular, fragrant, and bat pollinated.

Tribe Gentianeae consists of approximately 950 species and includes *Swertia*, which have a wide variety of secondary metabolites that have been used medicinally (one such, swerilactones, to combat hepatitis B). *Gentiana* is the largest genus and occurs on every continent except Antarctica. Groups include the *Crawfurdia/Ripterospermium* clade groups with *Gentiana*; the *Obolaria/Bartonia/Pterospermum/Gentianopsis/Chionogentias* and others taxa are more related with *Swertia*. Mycoheterotrophic herbs are common within this tribe, often as subterranean temperate understory parasites. Floral morphology is more diverse in this tribe (some solitary, zygomorphic, or funnel-shaped), although vegetative morphology of basal rosettes is quite common and representative here.

Tribe Helieae includes *Macrocarpaea* and *Chelonanthus*. Leaves may be atypically petiolate and leathery for Gentianaceae. Some epiphytes and trees reside in *Macrocarpaea* while *Chelonanthus* are primarily annual New World herbs with 4-angled stems. *Calolisanthus* and *Tetrapollinia* are other New World tropical herbs with terminal inflorescences.

Tribe Chironieae is a small tribe of approximately 180 species that includes two clades: one comprised of *Symphyllophyton*, *Coutoubea*, *Microrphium*, and *Canscora*, while the other includes *Ixanthus*, *Blackstonia*, *Cicendia*, *Centaurium* (not to be confused with *Centaurea*), *Chironia*, *Eustoma*, *Gyrandra*, *Sabatia*, *Schenkia*, and *Zeltnera*. Many genera are herbs with 5-merous floral parts that (generally) are endemic to regions of the Old World. Each genus tends to have only a few species and is relatively geographically specific.

Additional photos and references are available in this article published on the [Monoecious Blog](#).

News

Call for Nominations

The INPS Board is calling for nominations for three positions: Vice-president, Secretary, and At-Large. If you are interested, [contact the Board](#).

INPS 2018 Research Grants Program

The Illinois Native Plant Society is announcing its 2018 research grants program. These one-year grants for up to \$1,500 are open to persons (students, citizen scientists) or groups conducting research on Illinois native plants such as life history, reproductive biology, demography, genetics, site inventories, community ecology, as well as on threats to native plants and the effectiveness of restoration practices. Priority is given to projects conducted on public property, and permit applications will be required.

Full information and application materials will be available in early December on the [INPS](#) and Chapter websites. Application deadline will be in late January, 2018.

Save the Dates:

- Kankakee Torrent Chapter native plant symposium on February 24, 2018.
- Indigenous Plants Symposium (April 6-8, 2018) hosted by the Southern Chapter. Events will be held at John A. Logan College in Carterville, IL and will include a native plant sale with Green Earth.
- INPS Annual Gathering (June 8-10, 2018) hosted by the Kankakee Torrent Chapter, with field trips to sites in Illinois and Indiana.

Success Story: Kankakee Mallow Returns to Langham Island

INPS Kankakee Torrent Chapter President Trevor Edmonson is leading the effort to restore the wild population of native Kankakee mallow (*Iliamna remota*), found only on Langham Island on the Kankakee River at Kankakee River State Park. Working with volunteers and partners, restoration work required battling invasive plants and hungry deer. Read all about it at <https://chicago.suntimes.com/sports/flowering-change-the-comeback-of-kankakee-mallow-on-langham-island/>.

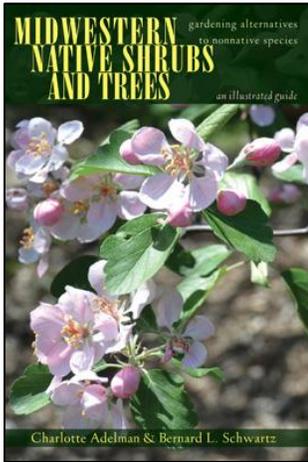
Pioneer Cemeteries: Fragile Islands of Untouched Prairie

INPS Board Member Chris Benda hosted a Chicago Tribune reporter to research and write a feature article about the status and value of Illinois' 29 pioneer cemetery prairies. These cemeteries were left undisturbed by agricultural development because they were burial grounds. Today, their continued protection varies according to the understanding and commitment of each owner. Read more about the history of these prairie gems and the

people who discovered and care for them at <http://www.chicagotribune.com/entertainment/columnists/ct-ent-pioneer-cemeteries-0806-20170803-column.html>.

New Midwestern Native Shrubs and Trees Book

Ohio University Press has just published *Midwestern Native Shrubs and Trees: Gardening Alternatives to Nonnative Species*, a companion book to *The Midwestern Native Garden: Native Alternatives to Nonnative Flowers and Plants*, published in 2011. Both illustrated guides were co-authored by Charlotte Adelman (an INPS Life Member) and her husband, Bernard L. Schwartz.



Openlands [blogged](#) "Charlotte Adelman, a longtime partner of Openlands, has recently published a new visual guide to the native shrubs and plants of the Midwest. This superb new book is a follow-up to her 2011 guide to the Midwestern Native Garden. You can read additional praise and order *Midwestern Native Shrubs and Trees* at [Ohio University Press](#). Congratulations, Charlotte!"

Review from *USA Today*: "This Midwest guide assists gardeners and landscapers with planning or updating their property.... This companion to *The Midwestern Native Garden* offers suggestions to those seeking native woody alternatives to non-native ornamental shrubs and trees. Adelman and Schwartz divided the book into four seasons; each lists non-native plants but following each entry, at least one native woody species is listed that resembles the non-native plant in height, features, and cultivation needs. Photos and illustrations are included on every page, which provide a necessary visual for the native plants suggested by the authors."

Illinois Newsletter Archive Now Available Online

Illinoisensis is a newsletter published by the Illinois Native Plant Conservation Program at the Illinois Department of Conservation from 1985 to 1996. It was edited by John Schwegman, the Botany Program Manager and INPS Life Member. All issues are now available on the INPS website at <https://ill-inps.org/illinoisensis-archive/>

Illustrated Flora Now Available Online

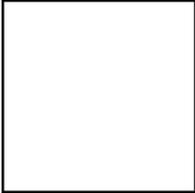
The 14 volumes of the *Illustrated Flora of Illinois* by Robert Mohlenbrock is now available for download on the [Southern Illinois University \(SIU\) Press website](#).

Dr. Mohlenbrock's distinguished career at SIU spanned 33 years (1957-1990), including 12 years as Chair of Botany. His achievements and contributions were acknowledged with many awards over the years, including the awarding of the Audubon Society's Conservationist of the Year in 1979. His special research interests focused primarily on the illustrated flora of Illinois, monographic studies of selected plant families, documentation of rare and endangered species, and plants of the national parks of the United States. His multivolume *Illustrated Flora of Illinois* (begun in 1963) aims to describe and illustrate every plant known to occur in the state of Illinois.

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Ear-leaved false foxglove
(*Tomanthera auriculata*).
Photo: Bob Bryant.

The Harbinger Fall 2017

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- Dodecatheon* (life).....\$2,000.00
- Erigenia* (life).....\$3,000.00

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Erigenia, our scientific journal, is now available
digitally as well as in print.
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Chapter Affiliation

- Central (Springfield)
- Forest Glen (Westville)
- Grand Prairie (Bloomington)
- Kankakee Torrent
- Northeast (Chicago)
- Quad Cities (Rock Island)
- Southern (Carbondale)
- Other/Uncertain _____

I would like to help with:

- Leadership & Organization (serving on board at State or Chapter level)
- Leading Field Trips & Tours
- Organizing Workshops &/or Seminars
- Giving Workshops &/or Seminars
- Public Speaking
- Fund Raising
- Website Assistance/Management
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- Photography
- Other: _____

My area of expertise: _____