The Harbinger

Newsletter *of the*
Illinois Native Plant Society

SUMMER 2016
Vol. 33, No.2

"…dedicated to the preservation, conservation, and study of native plants and vegetation in Illinois."

Ohio Spiderwort *(Tradescantia ohiensis)* at Palatine Prairie Nature Preserve

EDITORIAL

HARBINGER is late because I was in France when I should have been doing my job! France's rural landscape is quite different from ours. Farm fields are noticeably smaller and trees grow on the borders or in corners of almost every one. Most of these are planted in rows for harvest. Locals explain that a farmer can cut his trees and sell them, but that he must plant seedlings for the next generation. Some farmers harvest oaks that their grandfathers planted, but others raise locusts that can turn a profit in a lifetime. This is a system that makes economic sense as it protects the land.

Victor M. Cassidy, Editor

In This Issue

Governing Board
President
Chris Benda
Past President
Janine Catchpole
President-Elect
Paul Marcum
Secretary
Rachel Goad
Treasurer
Keri Shimp
Erigenia Editor
Jean Sellar (interim)
Harbinger Editor
Victor M. Cassidy
Membership
Amanda Pankau
Webmaster
Cassi Saari

At-Large Board
Connie Cunningham
Susanne Masi
Jean Sellar
Jason Zylka

Message from the President

As I write this address, I am still beaming from the success of the 2016 Illinois Native Plant Society's Annual Gathering. I was pleased to have my home chapter (Southern) host this year's event since I am in the 2nd year of my 2-year term as President of the Illinois Native Plant Society. About 65 people attended the event at Touch of Nature in Makanda, Illinois, including 15 new members! Things got started Friday night with an introduction to the sites of the field trips for the weekend and a nice bonfire with drinks and socializing.

On Saturday, the five field trips managed to mostly avoid the rain. Experts took participants to Cave Creek Glade, Heron Pond, LaRue Pine Hills, Little Grand Canyon, Rothrock Prairie, Panther Den, and one group took a canoe trip in the Cache River swamps.

That night, Jody Shimp, IDNR Biologist for Region 5, was the keynote speaker and he gave a truthful, yet inspiring account of the state of plant conservation in Illinois. Preceding his talk was an award ceremony in which Southern Illinois University professor emeritus Stanley Harris was recognized for his long career in conservation. Stan is almost 100 years old and he has championed many causes and made huge contributions during his life. Several new INPS life members in 2016 were also recognized.

Sunday's field trips went to Brown Barrens, Berryville Shale Glade, Giant City State Park, and Piney Creek Ravine. Paul Marcum led a great sedge identification workshop at Touch of Nature. One field trip leader reported that some participants did not want the weekend to end and stayed longer than the 2:00pm end time! Overall, it was a terrific weekend and thanks to everyone who helped make it an outstanding event. See photos from the weekend at this link, https://goo.gl/photos/FyvQVP4cvqrRq92P8.

In other society news, we are getting close to launching our new listserv and the next Erigenia is getting close to press. At the state board level, we are looking for individuals to volunteer in some key roles. Our success as a society depends on those willing to step up and take a leadership role. Please let me know if you are interested in helping out.

One of the things I enjoy most about being president of INPS is meeting all the members across the state. I recently gave a program for the Quad Cities chapter and it looks like they will be organizing the 2017 Annual Gathering. In looking over the membership roles this month, I think I have met about half of the over 500 members statewide. As always, thanks for your continued support!

Christopher David Benda

Welcome New INPS Members!

Northeast
Evan Barker
Gayle Booth
Linda Bragg
John and Sharon Brauer
Kimberly Elsenbroek
Kimberly Haag
Jennifer Hoffman
June and Steve Keibler
Lynette Kleisner
William and Leslie Levinson
Ed Max
Myles Nugent
Sarah Nugent
Susan Voigt
June Webb

At Large
Robb Roos

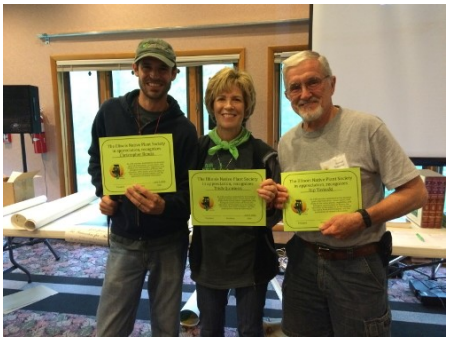
Central
Katherine Betz
Roger and Sue Carter
Gayla Garner
John Goldsmith
Wes Kitner
Terri Mackey
Tammy Miller
Jacqueline Peeler

Forest Glen
Stephen Tillman

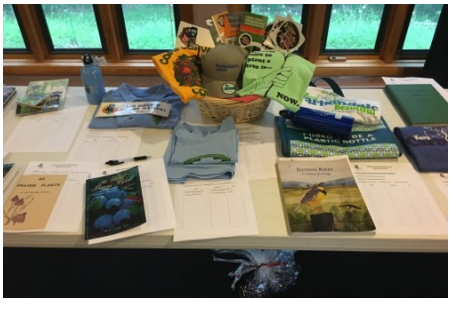
Kankakee Torrent
Michael Matthews

Quad Cities
Kathy and Jim Phelan

Southern
Sierra Beckwith
Mike Chervinko
Thomas Goodin
Molly Hacker
Marvin King
Abel Kinser
Kim Lovelace-Young
Brent Masiero
Lucia Meijer
Bob Stamps
Loretta Satterthusait
David Stein
Linda Suess



2016 INPS Annual Gathering Banquet, Award Ceremony, Keynote Address, and Silent Auction



ANNUAL GATHERING TRIP REPORTS

Panther Den Wilderness Area By Abel Kinser

Panther Den Wilderness Area is an Illinois botanical gem located in northeast Union County. Within the 1,195 acres of wilderness there is a great trail system to allow visitors easy access to explore part of the Shawnee National Forest. The main attraction for most hikers and equestrians is the "den" composed of large sandstone blocks that have broken away from 70-ft. sandstone cliffs creating a network of "alleys".

Our group of ten plant enthusiasts had two goals: stay dry and learn some non-flowering plants. The first mosses we encountered, *Atrichum angustifolium* and *Thuidium*, were on soil along the first leg of the trail which takes hikers along a wooded slope to a valley with a rocky creek that flows north through the wilderness area into Devil's Kitchen Lake. The bases of the trees along this section of trail were covered with a green mat of the moss *Anomodon attenuatus*. Submerged in the creek and attached to rocks was the aquatic moss *Fontinalis*.

We were meeting one of the goals, but the rain had begun as we continued our hike to the "den" area. Most of the rocks of the "den" were covered with ferns, mosses, and liverworts. One large rock was covered with mats of the thalloid liverworts *Conocephalum conicum* and *Reboulia hemisphaerica* and ferns such as *Asplenium rhizophyllum* and *A. trichomanes*. Large fern fronds from *Dryopteris intermedia*, *D. marginalis*, *Deparia acrostichoides*, and *Diplasium pycnocarpon* were breathtaking as we explored the "alleys". It was also exciting to see flowering plants such as French's shooting star (*Dodecatheon frenchii*), Forbes' saxifrage (*Micranthes forbesii)*, and goat's beard (*Aruncus dioicus*), but *Bazzania trilobata* and *Trichocolea tomentella*, uncommon leafy liverworts, were also just as thrilling. If you have never seen *Trichocolea* through a field lens, you need to add this to your 'to do' list.

The group was soaked from the steady rain, but the diverse plant life kept our spirits high. On our way out of the wilderness area we stopped at an exposed bluff top community. There we saw farkleberry (*Vaccinium arboreum*), thread-leaved sundrops (*Oenothera linifolia)*, and field milkwort (*Polygala sanguinea*), all blooming. You could feel a buzz within our group that this was a spot to explore more thoroughly. We also saw the sedge *Bulbostylis capillaris,* poikilohydric mosses such as *Grimmia* and *Hedwigia* on the lichen covered sandstone, the fern *Woodsia obtusa*, and the uncommon black quillwort (*Isoetes melanopoda*).

Dozens of quillwort plants, possibly the discovery of the day, were confined to small moist depressions in the sandstone. The rain was starting to let up as we hiked back to the cars. Overall, on our trip to Panther Den, we identified 15 ferns and their allies, 12 mosses, 6 liverworts, and many flowering plants. None of us stayed dry, but we saw lots of great plant life.

Cave Creek Glade, Heron Pond By Jody Shimp

Fourteen of us gathered to explore Cave Creek Glade Nature Preserve and Heron Pond Nature Preserve. We began the day at Cave Creek Glade. The light rain made the footing precarious as we hiked up the narrow footpath through the prairie plants to the top of the glade. The hike was well worth it! Once on top, the view gave you a sense of taking a trip back to pre-settlement times. Not many places in Illinois allow you to glance through prairie with a backdrop of unbroken expansive forest. Purple coneflower (*Echinacea simulata*) was in full bloom on the glade.

The abundant blooms were the striking feature of the glade on this day. It appeared to be a good bloom year for the yellow pimpernel (*Taenidia integerrima*) which was past bloom but many plants were found containing seed. Other plants seen flowering were: Indian pink (*Spigelia marilandica*), Prairie Phlox (*Phlox pilosa*), wild petunia (*Ruellia humilis*), New Jersey tea (*Ceanothus americanus*), and marbleseed (*Onosmodium hispidissimum*). Adder's-tongue (*Ophioglossum engelmanii*) was likely the discovery of the day. This unusual fern is mostly found on limestone soils and is considered by some to be a strict calciphile. One person in the group commented that it was one of the best examples of limestone glades in Illinois.

After a wonderful lunch hosted by the Cache River Winery, we hiked to the boardwalk at Heron Pond. While walking along the trail, someone spotted crossvine, (*Bignonia capreolata*) in fruit high in the tree canopy. The native giant cane (*Arundinaria gigantea*) was observed and one person pointed out a cane flower. Giant cane rarely produces seeds and it flowers irregularly so it was a nice find! We smelled the citrusy aroma of the spice bush (Lindera benzoin) leaves and glad to see the flowers of the pawpaw (*Asimina triloba*).

The highlight of this trip was the boardwalk that takes you out into the cypress (*Taxodium distichum*)/tupelo (*Nyssa aquatic*a) swamp…a magnificent wetland. As we approached the boardwalk, a downpour began. Normally, that would put a damper on a field trip but in this case, it inspired a few bird-voiced tree frogs to call. Breeding occurs in late spring and early summer, usually after heavy rains. If not for the rain, we might never have heard the bird-like call of this arboreal, nocturnal frog.

Extreme southern Illinois represents the northern limit of their range in the U.S. Another notable herp seen on the boardwalk was the Western Cottonmouth, one of the few venomous snakes native to Illinois. Like the bird-voice tree frog, the Western Cottonmouth is found in southern Illinois and is associated with cypress/tupelo swamps.

Cache River – Buttonland Swamp Canoe Trip By Chris Evans

Buttonland swamp is a true southern deep water swamp ecosystem. The area is dominated by bald cypress (*Taxodium distichum*) and water tupelo (*Nyssa aquatica*) trees, but has many other tree species that are more indicative of the deep south and just barely range into Illinois, such as water locust

(*Gleditsia aquatica*), water elm (*Planera aquatica*), Drummond maple (*Acer drummondii*), and swamp privet (*Forestiera acuminata*). The group got to see all of these trees, including the state champion bald cypress, and other plants native to the swamps. Swamp rose (*Rosa palustris*) was in full bloom. Duckweed (*Lemna* and *Spirodela* spp.), mosquito fern (*Azolla mexicana*), watermeal (*Wolffia* sp.) and frogbit (*Limnobium spongia*) were all abundant floating in the swamp.

The trip ended with a hike on the Section 8 woods boardwalk to see the state champion water tupelo. There we observed other bottomland tree species including Overcup oak (*Quercus lyrata*), Water hickory (*Carya aquatica*), and silky dogwood (*Cornus amomum*). While plants were the focus of the trip, we also saw some great wildlife, including two black rat snakes 20 feet up in a cypress tree, a diamondback water snake lounging in the button bush, many turtles sunning on logs, and a Mississippi Kite perched over the swamp.

Piney Creek Ravine Nature Preserve By Debbie Scott Newman

Despite concerns about crossing the large creek after recent rains in Piney Creek Ravine Nature Preserve, our field trip to the site was a huge success! The group saw a variety of habitats/natural communities from a planted prairie in the buffer to barrens, dry upland forest, and wet-mesic upland forest along the creek. Some of the highlights included adding two species to the already robust plant list for the preserve, the variegated milkweed *Asclepias variegata* and a species of adder's tongue, *Ophioglossum* sp. The group saw two species of blueberry side by side...farkleberry, *Vaccinium aboreum*, and low-bush blueberry, *Vaccinium pallidum*. Other southern Illinois plants that delighted northerners on the trip included stonemint/oregano plant *Cunila origanoides*, and Sampson's snakeroot, *Orbexilum pedunculatum*. Goat's rue, *Tephrosia virginiana* was in bloom. The endangered shortleaf pine, *Pinus echinata*, for which Piney Creek is one of only two sites in the state, was a highlight of the trip.

Little Grand Canyon By Chris Benda

On Saturday, about ten people accompanied me out to the Little Grand Canyon near Pomona in Jackson County. When we reached the parking lot, the radar showed that a thunderstorm was on its way and it started raining, so I revised the schedule and we headed up the road to Rob and Rhonda Rothrocks. They have converted their pasture ground to prairie plants and have over 400 species of natives in the property. The spiderworts (*Tradescantia ohiensis*) were in bloom, along with milkweeds (*Asclepias purpurascens* and *A. syriaca*) and indian pinks (*Spigelia marilandica*). There was even an orchid (*Platanthera lacera*) in bloom! We waited out the rain in their house, but at least there were tasty beverages!

Once the rain subsided, we drove back to the Little Grand Canyon parking lot. The weather was still questionable, but we decided to go for it. The trail down to the base of the canyon was rocky and slick and after the rains--and filled with flowing water. We all got wet feet, but eventually we made it down to the bottom.

We observed Forbe's saxifrage (*Saxifraga forbesii*) along a rock face and lots of bishop's cap (*Mitella diphylla*) on the cliffs. Walking fern (Asplenium rhizophyllum) and clubmoss (Huperzia lucidula) were other highlights along the trail. Toward the end, we saw an unusual skullcap (Scutellaria ovata). We were glad to complete the hike in safety.

Brown Barrens and Berryville Shale Glade By Chris Benda

On Sunday, about a dozen people joined me to hike to some of the more hard to reach natural areas in Union County. Near Jonesboro, there are a few ridges where shale is at the surface. These shale barrens and glade communities are unique in this area and it was special for me to be able to show them to Illinois Native Plant Society members.

Brown Barrens was a steep climb up the hill, but we were rewarded with beautiful grassy openings among the oak trees. We saw flowering farkleberry (*Vaccinium arboreum*), wild petunia (*Ruellia pedunculata*), variegated milkweed (*Asclepias variegata*), Samson's snakeroot (*Orbexilum pedunculatum*), and a large clump of indian pink (*Spigelia marilandica*). Next we travelled to Berryville Shale Glade Nature Preserve. We had to hike through a large field to get to the glade, but it was worth the effort.

ADAPTING SAMPLE HEDGEROW DESIGN TEMPLATES TO IMPROVE BIODIVERSITY IN URBAN LANDSCAPES

By Dave Coulter, Osage, Inc., Oak Park, IL.

Hedgerows are man-made constructions of trees, shrubs, and herbaceous plants that have been used by humans for thousands of years. Historically, they were often employed in agricultural landscapes, primarily as living fences to hold livestock or to show property boundaries. In one well known study of British hedges, Moore, Hooper & Davis (1967) noted that many of these farm hedges had been growing in England for at least a thousand years. The use of hedgerows also came to the New World, but as agricultural practices evolved, their use diminished. In the modern era they have often been removed to maximize the productive space and value of the land (Zuria and Gates, 2013) and (Morelli, 2013).

As cities have grown, remnant hedgerows that were found on the thresholds of urbanization may have been removed, or absorbed into the contemporary landscape – their former purpose lost to memory. The use of hedgerow plantings may have continued to dwindle were it not for the recent concern surrounding losses in pollinator populations, and rising amounts of atmospheric carbon. However, with the decline in interest for their agricultural purposes there has been an increase in interest by ecologists who, examined the value of hedgerows more closely, as it was seen that such plantings had become refuges for many creatures in rural areas whose ecology had been greatly changed by farming practices (Zuria and Gates, 2013). In recent years there has been research that demonstrates the positive role that hedgerows can play in mitigating these problems (Kremen & M'Gonigle, 2015 and Schoeneberger, 2009). Despite these advances, there seems to be a gap between these hopeful research results and the development and installation of new hedgerows in either rural or urban landscapes.

There exists a possibility that similar biodiversity benefits of such plantings could also be gained in urban and suburban landscapes. This essay suggests that land managers and practitioners working in more developed areas may be willing to employ hedgerow plantings for supporting biodiversity if there were more designs and cases studies that could be examined and adapted for local use.

Modern Hedgerows

In an era of widespread habitat loss, the potential conservation benefits that hedgerows may offer have recently been getting greater attention by researchers. Numerous examples show that existing hedgerow plantings have evolved into habitat for innumerable insects, birds, and mammals in the contemporary landscape (Staley *et al*., 2013).

In addition, there is interest in the installation of new hedgerows to provide habitat for wildlife (Encarnacão and Becker, 2015) and pollinators (Kremen & M'Gonigle, 2015), and to provide food and sequester carbon for human benefit as well (Schoeneberger *et al*., 2012).

Much of this research has demonstrated the potential values that such new hedgerows might offer, particularly when constructed of native woody plant materials (Kremen & M'Gonigle, 2015). However, much of this work and research was done by those working in unique ecosystems scattered around the world. As a result, the values gleaned by such efforts may not easily translate into local use by those who may have an interest in improving the conservation potential of marginal and underutilized spaces in their stewardship.

Possible reasons for this may include the need for increased adaptation of land management practices across disparate regions. In addition, some of the ideas of promoting conservation and biodiversity - that are perhaps better known within the disciplines of agroforestry, permaculture, and conservation plantings - simply have not found their way into wider usage in urban areas. One design scheme (Fig. 1) shows an edible forest edge that is based in agroforestry and permaculture concepts.

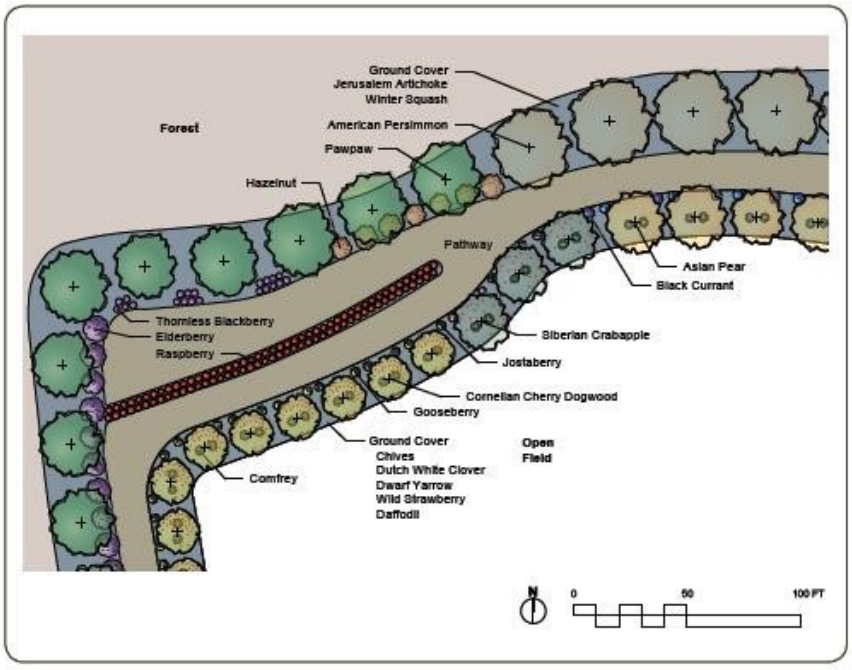


Fig 1. From Backyard Abundance. (2015);
Edible Agroforestry Design Templates, Figure 33, pg 32.

Linear landscape features can be called by many names. Along with hedgerows, these installations could be known as buffers, margins, or edges. The utility of linear plantings can be found in their malleability and the ease in which they can be adapted to otherwise marginal urban and suburban spaces. The purpose of adapting design templates is to help inspire new installations in urbanized areas and to help bridge the gap between some of the current research and the practices in the modern landscape.

Potential Hedgerow Adaptations.

There are many different possibilities and combinations of plant materials that can be employed to help work towards defined benefits and outcomes. Hedgerow type plantings that provide habitat and cover for wildlife are often promoted by local conservation agencies. An important element that is often used in such plantings is native plant materials. The inclusion of trees and shrubs that are native to a region has the potential to improve biodiversity for both local animals and plants. Authors such as Hightshoe (1987) have identified numerous native woody plants that can be employed in such plantings to provide habitat for birds and wildlife.

Concern over the health of pollinators has driven much of the latest research on the potential for new hedgerow plantings. Such installations, consisting entirely of native plants, have been designed and studied for their potential benefits in California agricultural fields (Kremen & M'Gonigle, 2015).

Hedgerows (Continued)

According to the USDA National Agroforestry Center, many species of woody native plants (i.e. willow, oak, black cherry) have been shown to provide resources for hundreds of pollinators (Working Trees Brochures, n.d.). Along with these woody plants, consideration should be made for the inclusion of native perennial flowers to provide additional resources for pollinators later in growing season (The Xerces Society, Pollinator-Friendly Plant Lists, n.d).

Using natives could be combined with the renewed interest in local food production that has already helped to inspire a hedgerow design template (Fig. 1) that could easily be adapted to existing linear or other marginal spaces. These plant selections borrow from the disciplines of agroforestry and permaculture, and can be appropriately scaled to many suburban and urban situations.

These design templates could be particularly attractive to those who wish to see a nutritional and possible economic return on their plantings. In these situations native plants as well as selected hybrid varieties can be selected (Fig 2). In addition to the aforementioned benefits, these woody plants can also help provide added ecosystem benefits such as carbon sequestration and storm water absorption mitigation (Schoeneberger, 2009) and (Schoeneberger et al. 2012).

Fig 2. Sketch of native fruit and nut tree planting design. From How to Plan for and Plant Streamside Conservation Buffers with Native Fruit and Nut Trees and Woody Floral Shrubs. (2013); Figure 5, pg 6.

Conclusion

Loss of habitat due to changes in land usage is thought to be the main culprit in worldwide loss in biodiversity (Jantz *et al*., 2015), and recently the eminent biologist E.O. Wilson argued that humanity must set aside half the surface of the planet in order to preserve what is left of biodiversity (Wilson, 2016). There are an almost unlimited number of marginal spaces in urban and suburban landscapes, and many could be adapted for conservation purposes in configurations that need not conflict with more productive areas (Dennis *et al*., 2013).

Hedgerows (Continued)

The use of hedgerows in the landscape is an old idea that dates at least to the Bronze Age (Johnston, 2005). This essay suggests that there are many possible roles for new hedgerow plantings that can help address a variety of contemporary environmental problems in rural, suburban and urban settings. Existing simple hedgerow design templates can be adapted to include elements from the arenas of conservation planting, agroforestry, and permaculture.

Kaboudarahangi, Tahir, & Kamal (2012) write that important relationships with the natural world can be enhanced and expressed through the garden and landscape installations that a society creates. And authors including Felson & Pickett (2005) are among those that have advocated for creative, interdisciplinary approaches that expand the role of ecological studies in urban areas.

This essay suggests that hedgerow type installations (also known as buffers, edges, etc.) represent an opportunity to use familiar plants in new ways in spaces that may be waiting in the margins outside of our normal field of view.

REFERENCES

Backyard Abundance. (2015). [Brochure]. Backyard Abundance. Retrieved from http://www.backyardabundance.org/Portals/0/p/EdibleAgroforestryTemplates.pdf. License: Creative Commons Attribution 4.0 International

Dennis, R. L., Dapporto, L., Dover, J. W., & Shreeve, T. G. (2013). Corridors and barriers in biodiversity conservation: a novel resource-based habitat perspective for butterflies. *Biodiversity and conservation, 22*(12), 2709-2734.

Encarnacão, J. A., & Becker, N. I. (2015). Stealthy at the roadside: Connecting role of roadside hedges and copse for silvicolous, small mammal populations. *Journal for Nature Conservation, 27*, 37-43.

Felson, A. J., & Pickett, S. T. (2005). Designed experiments: new approaches to studying urban ecosystems. Frontiers in Ecology and the Environment, 3(10), 549-556.

Hightshoe, G. L. (1987). Native Trees Shrubs, and Vines for Urban and Rural America: A Planting Design Manual for Environmental Designers. John Wiley & Sons.

Jantz, S. M., Barker, B., Brooks, T. M., Chini, L. P., Huang, Q., Moore, R. M., & Hurtt, G. C. (2015). Future habitat loss and extinctions driven by land-use change in biodiversity hotspots under four scenarios of climate-change mitigation. *Conservation Biology, 29*(4), 1122-1131.

Johnston, R. (2005). A social archaeology of garden plots in the Bronze Age of northern and western Britain. World Archaeology, 37(2), 211-223.

Kaboudarahangi, M., Tahir, O. M., & Kamal, M. (2012). A framework for developing new garden identities. Journal of Design+ Built,5(1).

Kremen, C., & M'Gonigle, L. K. (2015). Small-scale restoration in intensive agricultural landscapes supports more specialized and less mobile pollinator species. Journal of Applied Ecology, 52: 602–610.

Moore, N. W., Hooper, M. D., & Davis, B. N. K. (1967). Hedges. I. Introduction and reconnaissance studies. Journal of applied ecology, 201-220.

Morelli, F. (2013). Relative importance of marginal vegetation (shrubs, hedgerows, isolated trees) surrogate of HNV farmland for bird species distribution in Central Italy. Ecological Engineering, 57, 261-266.

Hedgerows (Concluded)

Schoeneberger, M. M. (2009). Agroforestry: working trees for sequestering carbon on agricultural lands. Agroforestry Systems, 75(1), 27-37.

Schoeneberger, M., Bentrup, G., de Gooijer, H., Soolanayakanahally, R., Sauer, T., Brandle, J., ... & Current, D. (2012). Branching out: agroforestry as a climate change mitigation and adaptation tool for agriculture. Journal of Soil and Water Conservation, 67(5), 128A-136A.

Staley, J. T., Bullock, J. M., Baldock, K. C., Redhead, J. W., Hooftman, D. A., Button, N., & Pywell, R. F. (2013). Changes in hedgerow floral diversity over 70 years in an English rural landscape, and the impacts of management. *Biological Conservation, 167*, 97-105.

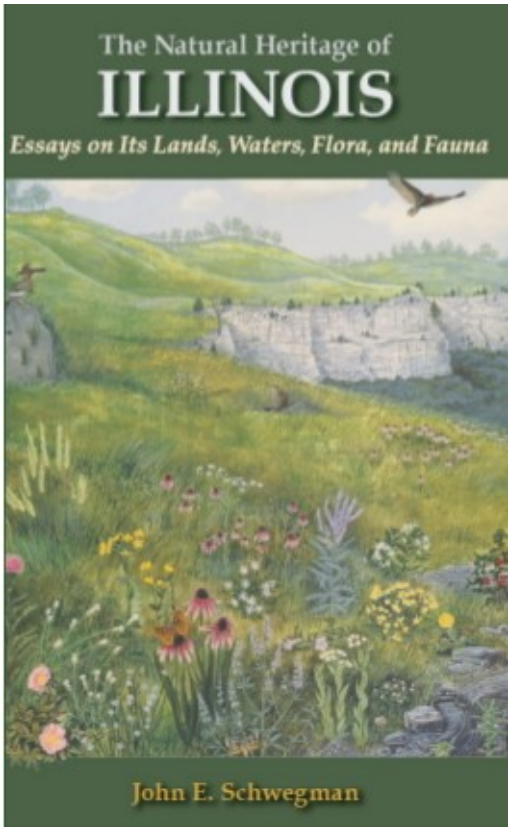
The Xerces Society » Pollinator-Friendly Plant Lists. (n.d.). Retrieved February 17, 2016, from http://www.xerces.org/pollinator-conservation/plant-lists/

Trozzo, K. E., Munsell, J. F., & Chamberlain, J. L. (2013, September 4). How to Plan for and Plant Streamside Conservation Buffers with Native Fruit and Nut Trees and Woody Floral Shrubs. Retrieved April 28, 2016, from http://pubs.ext.vt.edu/ANR/ANR-69/ANR-69.html Publication ANR-69P. Virginia Cooperative Extension materials are available for public use, reprint, or citation without further permission, provided the use includes credit to the author and to Virginia Cooperative Extension, Virginia Tech, and Virginia State University.

Wilson, E. O. (2016). Half-earth : our planet's fight for life. New York : Liveright Publishing Corporation, a division of W.W. Norton & Company, [2016].

Working Trees Brochures. (n.d.). Retrieved February 17, 2016, from http://nac.unl.edu/Working_Trees/brochures.htm

Zuria, I., & Gates, J. E. (2013). Community composition, species richness, and abundance of birds in field margins of central Mexico: local and landscape-scale effects. Agroforestry systems, 87(2), 377-393.



Written in lively, accessible prose and illustrated with color photographs, “The Natural Heritage of Illinois” discusses how wind, water glaciers, earthquakes, fire, and people have shaped Illinois’ landforms, natural habitats, rivers and streams, and the ways in which native plants and animals from individual species to entire ecosystems, have thrived, survived, or died out.

Essays look at issues of species decline, ecosystem preservation, Illinois; animal and plans species and their conservation, invasive species, the way species have responded to climate change and dwindling habitats, and the state’s early natural history, including the vegetation and wildlife that greeted its first European settlers. Full of fascinating information and expert knowledge, this book will prove invaluable to scholars, students, teachers, and casual nature lovers.

John Schwegman is the principal author of The Natural Divisions of Illinois, established the Natural Areas Program (now Division of Natural Heritage) for IDNR, as served as a commissioner of the Illinois Nature Preserves Commission. He currently serves as a consultant for the Illinois Nature Preserves Commission

NEWS

The University of Washington publishes ***Conservation,*** *a monthly e-newsletter (http://conservationmagazine.org) that's chock-full of interesting news you cannot get elsewhere. Here are three plant stories that I have condensed from* ***Conservation.***

Spruce Cones: Cheap Way to Cut Carbon

Many believe that the most effective way to reduce atmosphere carbon dioxide is to trap it at the source (e.g., auto exhaust pipes, industrial smokestacks) and store it underground. Technology exists for doing this, but it involves costly chemicals. Researchers at the University College London collected Norway spruce cones, peeled and washed the cone scales, incinerated them at 600 deg. C, ground up the carbon residue, treated it with potassium, hydrogen, and nitrogen to produce tiny, extremely porous carbon particles. The result: a very effective low-cost way to cut atmospheric carbon.

City Living: Good for Plants?

Researchers used satellite images to analyze land cover for 32 cities in China and found that there are fewer plants in urban areas because buildings and pavement replace surfaces covered by plants. Oddly, they also found that city plants, even including trees, grow faster and are more productive than their country counterparts. The jury's still out, but the researchers speculate that higher temperatures due to the urban heat-island effect, intensive management of cultivated plants in cities, and even nitrogen dioxide and sulfur dioxide pollution helps promote photosynthesis by scattering sunlight.

Insect Outbreaks Help Forests Survive Wildfires

According to conventional knowledge, insect outbreaks kill trees and increase the amount of fuel available for wildfires. But recent studies "indicate that insect outbreaks do not generally increase wildfire likelihood, [and] key uncertainties remain regarding the influence of insect outbreaks on subsequent wildfire severity," Garrett W. Meigs of Oregon State University's College of Forestry. Meigs studied 81 major fires in the Pacific Northwest between 1987 and 2011, concluding that insect outbreaks reduce fire damage. The researchers speculate that in killing or defoliating trees, the insects move the fuel along both horizontal and vertical gradients, both by thinning the forest and by moving biomass from the canopies to the ground. This movement can make it harder for fires to spread.

COMING EVENTS: JULY THROUGH SEPTEMBER

The In-Crowd recommends THE OUTSIDE CALENDAR (cassisaari.com/outsidecal/), an enterprise of our own Cassi Saari!

July 17-20 24th North American Prairie Conference Illinois State University (www.nap2016.illinoisstate.edu/)

July 29-30 Forest Communities of Southeastern Wisconsin (Workshop led by Dr. Gretchen Meyer) University of Wisconsin, Saukville Starts 9:00 AM both days (www.chicagowilderness.org/m/event_details.asp?id=811883)

August 6 Creating Wetlands for Wildlife and Pollinators at Central chapter member Mary Lou Lael's farm (2055 Gray Road, Ashland, IL). Saturday 10:00 AM to Noon.

August 16 The Politics of Conservation Southern chapter hosts Jen Walling, Executive Director of the Illinois Environmental Council, program starts at 6:30 PM.

September 10 Wildflower Walk at Fults Hill Prairie. Southern chapter members Chris Benda & Chris Evans will lead the walk at 10:00 AM. Co-sponsored with Clifftop.

ILLINOIS NATIVE PLANT SOCIETY
P.O. Box 271
Carbondale, IL 62903

illinoisplants@gmail.com
www.ill-inps.org

Dodecatheon frenchii –
French's Shooting Star

2016 Summer Harbinger July 2016

You can renew/join by filling out the form below or online at our website, www.ill-inps.org/member

Join us!

☐ New Member ☐ Address Change only
☐ Renewal ☐ Additional Donation

Name _____
Street _____
City _____ State _____ Zip _____
Phone Number _____ Membership Year _____
Email _____

Membership Categories

☐ Student	$15.00
☐ Individual	$25.00
☐ Family	$35.00
☐ Institutional (nonvoting)	$20.00
☐ Supporting	$50.00
☐ Patron	$100.00
☐ Business	$125.00
☐ Life	$500.00
☐ *Iliamna* (life)	$1,000.00
☐ *Dodecatheon* (life)	$2,000.00
☐ *Erigenia* (life)	$3,000.00

PLEASE MAKE CHECKS PAYABLE TO:
Illinois Native Plant Society, P.O. Box 271, Carbondale, IL 62903

The Harbinger Newsletter is sent electronically by email.
☐ Check here to receive the newsletter BY MAIL

Erigenia, our scientific journal, is now available digitally as well as in print.
Please indicate your preference for receiving the journal.
☐ Email only ☐ Postal Mail only ☐ Both

Chapter Affiliation

☐ Central (Springfield)
☐ Forest Glen (Westville)
☐ Grand Prairie (Bloomington)
☐ Irene Cull (Peoria)
☐ 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/Managment
☐ Public Media/Communications
☐ Writing/Submitting articles
☐ Photography
☐ Other: _____