



inpaws journal

Indiana Native Plant and Wildflower Society

Winter 2014

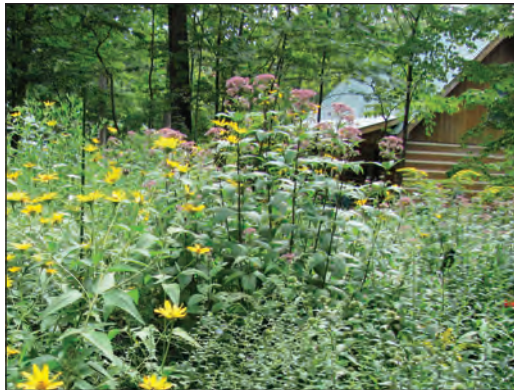
Resurrecting Meadows

By David Savage

Early settlers of the lower Midwest wrote glowingly of beautiful, flowering meadows and of prairies filled with a blaze of color. There is a yearning today to try to recreate these visions on a smaller scale. The words prairie and meadow are being heard more often when talking with gardeners and in everyday conversation.

from spring into fall, wonderful wildlife and lovely butterflies, a meadow may be just the thing. Other important benefits of meadows include carbon sequestration and filtering of pollutants.

Meadows – continued on page 4



David Savage

Thinking of a prairie calls up a vision of miles and miles of tall, waving native grasses and forbs. Meadows bring to mind a large area of unmown land in a rural setting with grasses and flowers that may be cut for hay. A prairie is usually much larger, with a higher percentage of grasses. A meadow is typically smaller and dominated by flowers.

Over the past 20 or 30 years, smaller prairie and meadow gardens have increased in popularity as people become more aware of the advantages of this type of landscaping. Meadows offer strong practical advantages. If you would like to mow less grass and enjoy savings on fertilizer and lawnmower fuel, a meadow may be appropriate. (Be sure to check on your local ordinances before turning your front yard into a meadow.) If you would like to cover a bothersome, unsightly area, a small meadow may do the job. If you want beautiful flowers

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Speak out!

Statehouse Conservation Day January 28

Meet your legislators at the Indiana Conservation Alliance (INCA) reception and tell them how important conservation and preservation of natural resources are to you and to all. Past Lt. Governor Becky Skillman will speak and INCA will present "Conservationist of the Year" awards to two legislators.

- 8:30 Registration, IN Gov't Center
- 9:00 Info session on state budget process and INCA priorities
- 11:00 Reception in Statehouse Atrium

The event is FREE but registration is requested at <http://conservationday.eventbrite.com>. For more on how to impact legislation see page 3 and 12.

What Nature Does in Spring

By Michael A. Homoya

It's mid-February, you're on a hiking trail in Turkey Run State Park, and the dripping you hear ahead is more than falling drops of water. It's a death knell. Even though the temperature is quite cold, one of those magnificent icicles that drape Rocky Hollow's cliffs is dying. Not a typical death, where stillness pervades, but one of movement and change.



Icicles cling to rock faces at Turkey Run State Park. A celandine poppy flower emerges.



Richard Fields

Such drama is the work of the sun, which, being positioned higher in the sky after each day's passing, is directly illuminating and melting our sparkling trident of ice. Although ice will reform after sunset, rebuilding the remaining icicle to near its former glory, a chink in winter's armor has nevertheless been made.

Even though the early signs of winter's waning may seem unimpressive to us, to the wild things they provide notice that the big dance is about to begin. Soon birds will pour forth song, salamanders and frogs will seek out vernal pools, and swarms of midge flies will take to the air.

Those that have waited the longest for spring's arrival are poised to explode into a flurry of riotous

living. And a riot it will be, albeit a silent one, as this is an explosion not of dynamite, but of plant growth. Responding to just a few days of warm temperatures and rain, a multitude of plant shoots and buds will pierce upward through the soil's surface, transforming a drab gray landscape into an ocean of green. Don't tell these plants there is still almost a calendar month of winter remaining. More cold days ahead or not, there is no going back.

These plants are on a mission, reaching into the atmosphere to capture the energy of the sun. Light from the sun is sustenance for plants; without it they could not exist. Although not obvious to us, the plants of Turkey Run's forest floor struggle and compete for this precious commodity. It's not only a competition with each other, but a race against the clock, because the available light will quickly diminish.

Early rising wildflowers are what botanists call spring ephemerals. Simply put, these are plants that are present in the spring and evident for only a short period. Emerging in late winter and early spring, they flower, fruit and disperse seed in a matter of a few weeks. During this short time, the ephemeral wildflowers bask in the sunlight that passes unimpeded through the naked tree limbs above. When the forest trees have fully leafed out, the ephemerals turn in for an extended period of dormancy. It will be almost a full year before their return.

The mass blooming of spring ephemerals provides one of the most spectacular wildflower displays anywhere. Thousands, if not millions of flowers of several species carpet the forest floor, creating a scene unparalleled in even the most well-tended gardens. Spring beauty, Dutchman's breeches, harbinger of spring, toothwort, trout-lily, blue-eyed Mary, purple cress and bluebells are a few of the classic spring wildflowers.

The most common ephemeral is spring beauty. A member of the purslane (rose moss) family, spring beauty occurs in every county of the state. Although growing mostly in forests, it is especially tolerant of disturbance, and even can be found in some lawns (but not highly fertilized ones). Being a spring ephemeral, it often can "do its thing" before Lawnmower Man comes around.

Another well-known spring ephemeral is the bluebell. This magnificently beautiful wildflower is most at home in floodplain forests, but will grow in much drier sites. Where bluebells and blue-eyed Mary

Spring – continued next page

Track and Support

Conservation Legislation

By Jane Savage

It has been our experience when moving to a new area that it often takes time to find organizations aligned with our interests. Before David and I moved to Zionsville from New Jersey a decade ago, we were already members of INPAWS. It was a perfect fit because, as avid gardeners, we were becoming tuned in to the importance of native plants and habitat preservation.

A few years ago we became INPAWS' co-chairs of conservation and are its representatives to the Indiana Conservation Alliance (INCA), a group of more than 25 organizations sharing a common interest in the protection, stewardship, and sustainable use of Indiana's natural resources.

As INPAWS' representatives to INCA, our awareness of the environmental issues facing Indiana and our interest in tracking conservation legislation has grown. We have come to appreciate the goals and efforts of many other non-profit conservation organizations. One such organization is the Hoosier Environmental Council (HEC).

The HEC is celebrating 30 years of cooperation among local and statewide environmental groups with professional staff who work to expand advocacy and grassroots organizing efforts to help make Indiana an attractive place to live and work. The Council's goal is to act as a watchdog of Indiana's environmental regulatory agencies. HEC remains a constant voice in the legislature.

The HEC Website www.hecweb.org, provides a wealth of information about HEC's mission, partners, events and action alerts, and ways to "green" your community. HEC's proposed legislation can be tracked on their Website under "Bill Watch 2014" and on Facebook and Twitter.

Prior to the Indiana General Assembly, which will be in session January 13 to March 14, check the HEC Website's "Bill Watch 2014" to follow the progress of HEC-sponsored bills. If the issues are something you feel strongly about call, text, or write your House and Senate representatives. Become part of the grassroots movement!

Jane Savage is co-chair of conservation on the INPAWS board, a member of the board of the Brown County Native Woodlands Project, and a Boone County Master Gardener.

Spring – from page 4

grow together in great masses, the sight is unforgettable.

Not all early blooming wildflowers are spring ephemerals. One of the earliest to bloom in the state is skunk cabbage. This is a plant of seepage swamps, and its cluster of small flowers can be found as early as late January in southern Indiana and mid-February in the north. Skunk cabbage is remarkable in that it can generate minute amounts of metabolic heat, apparently to keep its flowers warm during the remaining cold temperatures of the season. Even snow can be melted by the heat they produce. After flowering, huge cabbage-like leaves unfold that persist well in to summer.

Another early bloomer is snow trillium. This attractive wildflower is the first of Indiana's trillium species to bloom, flowering as early as late February some years. Typically found on steep forested slopes, it blooms so early that it often gets sprinkled with late season snow, hence the name "snow" trillium. The plant, like so many of the very early bloomers, has flowers for only a very short time, so observing them requires a watchful eye on the weather. Many a person has visited a population of snow trillium in early spring, only to arrive too late to see peak blooming.

As spring progresses and ephemeral wildflowers disappear, the pace is more casual. The next wildflowers coming up are not under the time constraints of their early-rising neighbors, as they have all of the remaining growing season to prosper. Since the ephemerals have already received their needs from the environment, there is more room, moisture and nutrients for the later ones.

It will be a long time before icicles appear again at Rocky Hollow. A full growing season and autumn will come first. Gradually, daylight hours shorten, temperatures drop, and winter will again take its hold. Spring will seem ever so far away. But take heart – the vernal renewal of life is a tradition since the beginning of time, and nothing will get in its way, not even Rocky Hollow ice.

Michael Homoya, a botanist for the Indiana Division of Nature Preserves since 1982, is the author of Wildflowers and Ferns of Indiana Forests: A Field Guide, and Orchids of Indiana, both from IU Press.

Reprinted from Outdoor Indiana, March/April, 1996, with permission from the Indiana DNR



Richard Fields



Possessing the remarkable ability to generate some of its own heat, skunk cabbage often appears even before the snow is gone (top). Virginia bluebells in bloom along the Wabash Heritage Trail in Tippecanoe County.

Small Meadows:

Creating a meadow takes much patience and determination but the results can be incredibly rewarding. Sophisticated horticulturalists and gardeners have come to grief in their initial attempts to start a meadow. At River Farm, home of the American Horticultural Society in Virginia, two acres that once had been a field and subsequently a lawn were disc-harrowed and seeded with a wildflower mix. Quickly the entire two

acres produced a bumper crop of pokeweed, probably because the harrowing brought to the surface pokeweed seeds that had lain dormant for over 40 years.

A well-known gardener and writer learned the hard way that it is not easy to have the meadow of your dreams. She simply let the pasture grass grow, mowing it only once a year in late fall. For the first few years, tall wavy grasses dominated and slowly a few asters and goldenrods moved in. But soon vetches and bindweed, followed by alfalfa, began to take over large swathes, pushing out grasses and flowers.

She realized she needed help and called in a professional designer of native meadows.

By following some tried and true steps when establishing a meadow, most pitfalls can be avoided. Recent books give detailed step-by-step instructions for meadow development and maintenance. It is generally agreed that a four-step process should be followed: (1) eliminate weeds, (2) sow seed and plant plugs and/or potted plants, (3) water and weed, (4) mow or burn periodically. However, there are many ways of carrying out each of these steps.

In September, 2012, the Brown County Native Woodlands Project, at its annual field day "Nature Daze," arranged a discussion of small meadows

with panelists who could offer practical, hands-on advice from their own experiences in developing and maintaining small meadows ranging in size from one-eighth of an acre to three acres. Here are highlights from their comments.

Site Preparation

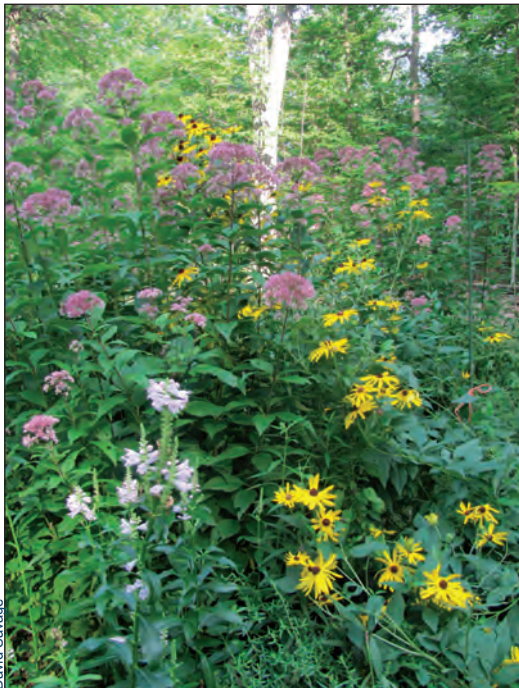
The first step in making a meadow is eradication of the existing vegetation, with minimal soil disturbance. This may be done by smothering the vegetation with plastic sheeting, by stripping out the vegetation with a sod cutter, by spraying with an organic herbicide, or by singeing the vegetation with a flamethrower. Based on experience in south-central Indiana, it is recommended to use at least two applications of glyphosate several months apart. Plugs may then be planted with an auger or by hand a month or two after the last application of the herbicide.

Lawson Ridge Meadow

Ruth Ann Ingraham developed this Brown County meadow in 1991 on an eighth of an acre. The gently sloping plot had been a traditional lawn on both sides of a driveway. Several false starts were overcome before a beautiful meadow was finally obtained. The let-it-be / wait-and-see approach was tried first with addition of seeds from native plants found in an old cemetery in Indiana. Second, sheets of black plastic were used to smother the area, but they were removed too soon and the result was mainly weeds. Third, after spraying with herbicide, a truly beautiful meadow of butterfly milkweed, black-eyed Susan, coneflower, goldenrods, cup plant, bee balm, false indigo, phlox, ironweed, false sunflower, liatris, grasses, sedges and many other native plants were in bloom after four years. Maintenance is by burning one-third of the meadow each year. This allows wildlife to move from the area being burned to the undisturbed part of the meadow.

Butler University Prairie

This prairie was started from seed in 1987 on a three-acre level field along the western side of the canal near Butler University in Indianapolis. The prairie combines elements of several different prairie types in its planting design, taking



David Savate

Practical & Beautiful

advantage of wetter and drier zones of the land. Originally the western half of the field was planted with tall grass prairie mix, the eastern half with short grasses. A mature meadow of colorful flowers spread across the entire three acres after about five years. Maintenance is by prescribed burning of the entire prairie every three to five years, supplemented by work with loppers and herbicide to keep down woody growth. The prairie is used by the university mainly as an outdoor laboratory for ecology studies (e.g., demonstration of different habitat types), a public education resource and as a natural area for birds and wildlife. Information and photos of native prairie plants are online at www.butler.edu/herbarium/prairie.

Bluebird Trail Meadow

In 2004 a sloping, 100-by-50-foot area over a septic field was cleared in a wooded region in Brown County by Jane and David Savage. Starter grass seed had been put down the year before to stabilize the soil. The area was cleared of vegetation by skimming off grass with a shovel; herbicide was used in areas containing a thick growth of fescue. Potted plants with well-developed roots were planted rather than seeds or plugs.

About 20 species of native flowers were originally installed with some grasses. Holes were dug 12 to 18 inches apart, wide enough to allow plants to bush out or spread but close enough to keep down weeds. Most plants of the same species were planted in clusters of three to six. By 2007 an attractive meadow of colorful native flowers was attracting birds, butterflies, bees and other pollinators. Flowers bloom from the first warm days of spring until hard frost. In the spring, golden ragwort, Eastern bluestar, false indigo, then beardtongue, meadow rue, and Culver's root are first to flower. The meadow then seems to pause, perhaps waiting for the ground to warm. At the very end of June and into early July, black-eyed Susan, phlox and common milkweed appear. By the middle of July to the end of August, the meadow is a profusion of color with Joe-Pye weed, black-eyed Susan, purple and grey-headed coneflowers, mountain mint, hyssop, spiderwort, bee balm, false sunflower. In August come the early goldenrods, downy

sunflower, ironweed, and white turtlehead. Asters and goldenrods bloom through September into October, depending on the weather.

For maintenance, flower and grass stalks were cut back with clippers each February and in 2011 the entire meadow was burned. This meadow has survived three consecutive years of summer drought (2011-2013). Occasionally native plants are added and seed thrown down in bare areas. Some weeding is needed periodically, especially



David Savage

to deal with invasive plants such as Japanese stilt grass which will grow in the smallest area of open soil.

Undoubtedly the interest in incorporating small meadows into garden designs will increase as the benefits of this type of landscaping are more widely recognized.

David Savage is co-chair of conservation on the INPAWS board, a member of the board of the Brown County Native Woodlands Project, and a member of the steering committee of Southern Indiana Cooperative Invasives Management.

Contributors include Rebecca Dolan, Ruth Ann Ingraham, Dan McGuckin and Jane Savage. References to works cited are at inpaws.org.

INPAWS' Deer Stand

By Patricia Happel Cornwell

On Nov. 12 the INPAWS council passed a resolution adopting this position statement on deer overpopulation:

Due to the negative impact on native vegetation of an unnaturally large deer herd in Indiana, the Indiana Native Plant and Wildflower Society supports a reduction in the number of deer in this state. This reduction in numbers should be based on sound science and game management principles, as determined by the Indiana Department of Natural Resources.

The move is a response to discussions generated by public meetings held last fall by the Indiana Department of Natural Resources to gain input into the State Wildlife Action Plan.

INPAWS members Tom Hohman and Jane and David Savage attended the DNR session in Indianapolis. North chapter president Steve Sass attended the Lakeville meeting, as did member Linda Byer in her capacity as biologist for the Division of Fish and Wildlife.

During the INPAWS council's discussion, Glenn Lange, formerly of the Division of Fish and Wildlife, said most biologists in the division believe there are too many white-tailed deer in some parks, but opinions differ on the optimum number.

Speaking from The Nature Conservancy perspective, Ellen Jacquart said deer are destroying every nature preserve. She told of visiting a certain preserve and seeing a large colony of puccoon, every specimen with its blossoms bitten off.

Tom Hohman described hiking Brown County Park in the early 1990s and thinking it was boring because nothing grew under the trees. Hiking the same area after a deer hunt, he was struck by the return of varied vegetation.

INPAWS historian Ruth Ann Ingraham pointed out that there was precedent for INPAWS support of reducing the deer population. In March, 1995, the council approved a

resolution to "enable and enhance the ability of the Indiana Department of Natural Resources to protect native flora in Indiana's state parks" by allowing managed deer culls.

Deer were hunted to extirpation in Indiana by the end of the 19th century. The last deer then reported in the state was in Knox County in 1893 (Mumford and Whitaker, *Mammals of Indiana*, 2010). The DNR's Division of Fish and Game (now Division of Fish and Wildlife) restocked the state in 1934 with about 400 animals from neighboring states. By 1943, they had more than doubled in number, and by 1946 crop damage by deer was becoming frequent.


Indiana instituted a deer hunting season in 1951, when the population had reached between 5,000 and 20,000, according to dif-

ferent estimates. One estimate places the state's current population of white-tailed deer at approximately 50 million (*Indiansportsman.com*).

Overpopulation contributes to disease and starvation among

deer whose habitat is continually dwindling. Destruction of crops, orchards, and native understory in forests is an undeniable indicator of deer overpopulation. Collisions with vehicles are another.

INPAWS webmaster Wendy Ford hopes to soon have information on this topic, with links to relevant Websites, on *inpaws.org*.

Ford said, "It seems we have a job to do to educate the public about the downside of deer, especially their threat to Indiana flora." 

"It seems we have a job to do to educate the public about the downside of deer, especially their threat to Indiana flora."

-Wendy Ford

"To a person uninstructed in natural history, his country or seaside stroll is a walk through a gallery filled with wonderful works of art, nine-tenths of which have their faces turned to the wall. "

~ Thomas Huxley (1825-1895)

The Highbush Cranberry Problem

By Barbara Plampin

Most people who plant American highbush cranberry (here, I'll call it AHBC; in botany, it's *Viburnum opulus* var. *americanum*, formerly *V. trilobum*) are unwittingly planting the European species (EHBC, *V. opulus* var. *opulus*, formerly *V. opulus*).

AHBC is state-endangered (only one to five sites in Indiana) and EHBC is invasive, introduced from Europe. Though botanists have lumped the two species, Swink and Wilhelm (1994), Voss and Reznicek (2012), and the USDA have split them. *Flora of North America* has not yet published on viburnums.

The two species differ in habitat and appearance. Swink and Wilhelm place AHBC in rich woods and in bogs. Writing about Michigan, Voss and Reznicek give six habitats, all damp.

EHBC is an ornamental whose fruits birds distribute to often degraded woods and thickets after they've eaten all the other fruits they prefer. Distribution has been going on at least since 1785, when, says Ann Leighton (1976), George Mason gave George Washington "English guelder rose" (EHBC) plants.

In Moerman's *Native American Ethnobotany* (1998), I counted 10 Native American tribes using EHBC versus seven using AHBC. No wonder people think EHBC is native!

Both species have tri-lobed leaves, flat plates of larger white sterile flowers surrounding small fertile white ones, and translucent vermilion cranberry-like fruits.

The differences are subtle, so it helps to use a hand lens to examine leaf hairs and glands and a ruler to measure the central lobes of the leaves. Flat hairs scattered over the leaf top indicate AHBC. Leaves of EHCB are generally smooth with hairs, if any, confined to leaf edges.

In AHBC, the glands just below the leaf are somewhat stalked and flat at the apex; in EHBC, glands are sessile and somewhat concave or pitted at the apex.

To see these differences, says Scott Namestnik, a botanist at Cardno JF New, glands must be examined from the side or underneath the leaf stalk, as they are often turned outward.

Voss and Reznicek state that leaves of AHBC, especially the youngest ones on longer shoots, have middle lobes "definitely longer than wide." Here a ruler might be useful.

Namestnik writes, "You wouldn't believe how many times people have told me they have the native, only for me to check their plants and determine that, in fact, they have the non-native ... It's very frustrating. I can guarantee that native plant nurseries are selling the invasive as the native, and part of the problem results from the nomenclature. Many nurseries think because they're selling *Viburnum opulus*, they're selling the



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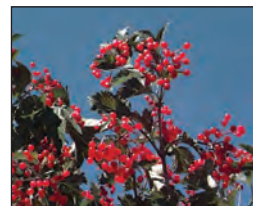
native; they don't even realize there are native and non-native varieties. In addition, the gland distinction causes a lot of problems."

So, in good faith, EHBC gets planted in the mass at such places as Striebel Pond in Michigan City, a deed Steve Sass of INPAWS North Chapter has noted. Heather Holm warns Minnesota readers about the confusion at nativeplantwildlifegarden.com.

AHBC suppliers appear limited. Missouri Botanic Garden lists only American Native Nursery, Quakertown, PA, and Namestnik says that Alpha Nurseries, Holland, MI, has a couple of AHBC shrubs in production and should have AHBC in stock very soon.

Because AHBC is endangered in Indiana, Namestnik says, "It probably doesn't belong in the places people are trying to plant it."

Barbara Plampin is a life director of the Shirley Heinze Land Trust and a field botanist. She has a PhD in English and lives in the Indiana Dunes.



UConn.edu

The American variety of the highbush cranberry, shown in bloom (top) is endangered in Indiana, and not to be confused with the European variety. Fruit of the European variety (above) is distributed by birds.

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Please submit text and high resolution photos (300 ppi) via e-mail to journal@inpaws.org.

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Please direct information of interest to webmaster@inpaws.org.

Annual Conference

Flora, fauna and fun

By Patricia Happel Cornwell

A crowd of 230 native plant lovers packed Monon Community Center in Carmel's Central Park Nov. 9 for INPAWS' 20th annual conference. The theme, "Saving Indiana's Native Plants and Wild Places," was reflected in speakers' topics and lively table discussions.

Conference chair Karen LaMere emceed the program, which featured keynote speaker Dr. Peter Raven's presentation on "Conserving Biodiversity in a Rapidly Changing World."

Dr. Raven, president emeritus of Missouri Botanical Garden, placed the efforts of groups such as INPAWS in a global context, citing the importance of resource and species conservation for sustainability and social justice.

Dr. Michael Jenkins, of Purdue University's department of forestry and natural resources, spoke on "Threats to Native Plant Diversity in Indiana Forests." He cited habitat destruction, climate change, exotic plant species, and disturbance by fire, wind, humans, deer, non-native insects and diseases.

The team of Jeffrey and Sandy Belth addressed the inter-dependence of native plants and butterflies. Jeffrey, author of *Butterflies of Indiana: A Field Guide*, spoke on "Butterflies and Indiana's Natural Regions" and Sandy presented practical tips on "Gardening for Butterflies."

A light-hearted interlude arrived when Mike Homoya entered the room dressed as a hippie and whistling "Where Have All the Flowers Gone?", the topic of his presentation. He discussed species that have become rare or been extirpated and efforts to reestablish populations of the most fragile species. He is the author of *Wildflowers and Ferns of Indiana* and *Orchids of Indiana*.

"Think Outside the Box – Add Native Plants to Your Garden" was Carolyn Harstad's challenge to conference-goers. The author of *Go Native!*, *Got Shade?* and *Got Sun?* showed photos of wildflower landscaping suitable for urban residential neighborhoods.

Lee Casebere, retiring assistant director of the Department of Natural Resources Division of Nature Preserves, reviewed the history of the state's efforts to preserve native habitats since

the division's inception in 1938. There are now 256 dedicated nature preserves in Indiana, protecting over 46,000 acres in 68 counties.

At the conference's business meeting, the following slate of officers was elected for 2014-15.

President: Jeff Pitts, vice-president: Karen Bird, treasurer: Marilyn Froberg (continuing from 2012-2013), corresponding secretary:



Michael Huff

Sharon Patterson, recording secretary: Amy Perry (continuing from 2012-2013).

Ann Foster presented a synopsis of a new INPAWS youth education effort, the Native Plant Wizard program, in which children in 4th and 5th grades can complete 12 of 20 activities to earn a patch. Details are at inpaws.org under Education. The spring issue of INPAWS Journal will carry a full description of the program.

Next year's conference will be at the Bloomington Conference Center Nov. 1.

Patricia Happel Cornwell is an Indiana Master Naturalist and editor of the INPAWS journal.

Mike Homoya presented a copy of The Natural Heritage of Indiana from IU Press to Dr. Peter Raven as token of appreciation for his keynote address at INPAWS' 2013 annual conference.

Feb. 1 is Small Grants Deadline

INPAWS In Action

By Jackie Luzar

The deadline for 2014 INPAWS small grants applications is fast approaching – Feb. 1! INPAWS encourages members and non-members to seek funding for projects that promote appreciation, preservation, conservation, utilization and scientific study of flora native to Indiana. Each year, proposals from all corners of Indiana are considered, from urban to rural settings.



Representatives of several organizations celebrated the Nov. 13 opening of a new Central Indiana Land Trust property, the 109-acre Laura Hare Preserve at Blossom Hollow, located in Johnson County near Trafalgar. Immediately left of the sign is the Land Trust's interim executive director Cliff Chapman. Fourth from the sign at right is Tom Hohman, INPAWS past president. INPAWS contributed \$2,000 to the acquisition costs in 2011, and its Central Chapter gave another \$500.

The small grants program funds diverse projects that clearly communicate how they correspond with the mission of INPAWS. Applicants are advised to connect with the mission in their descriptions and focus on the INPAWS-related connection, especially if it is to be a portion of a larger project.

In 2013, funded projects associated with graduate student research included exploration of prairie establishment, pollinators, and invasive garlic mustard. Some projects that involved actual planting included establishment of prairie grass, woodland restoration, demonstration rain gardens, and native gardens for the education of children.

The small grants program may fund an individual project up to \$1,000 in a single year, and INPAWS support may be used in conjunction with other funding sources. Requests that exceed \$1,000 are considered large grants and do not go through the small grants program.

Financial support for larger grants may be obtained by presenting a project for consid-

eration to the INPAWS council at a quarterly meeting. Examples of large grants include production of a video based on Marion Jackson's *Natural Heritage of Indiana* and support for land trusts to purchase and preserve ecologically significant land.

Funding for school and youth programs to enable children to experience nature in an educational context may be requested through INPAWS' Letha's Youth Outdoors Fund.

Applicants who propose plantings as part of a project must submit a plant list showing native and non-invasive species. Any project containing known invasive species will not receive INPAWS funding.

A detailed list of application requirements is in the "Small Grants Program" listing at the About Us link of the INPAWS Website. Questions may be directed at any time to smallgrants@inpaws.org.

Jackie Luzar chairs the INPAWS grants and awards committee.

**"O Earth! O Earth!
When will we hear you sing,
arising from our grassy hills?"**

~ From the poem "Earth" by Thomas Merton

Win for Natives – from page 14

participate in the careful stewardship, wise planning, and artful design of our cultural and natural environments." This mission is almost a restatement of the INPAWS mission. Sustainability is a frequent goal of landscape architecture projects: in the other awards that were presented, green aspects and sustainability were mentioned often. I felt I was with kindred spirits.

So if you meet a landscape architect, even if he or she isn't an INPAWS member, you'll know their professional values are compatible with ours.

Amy Perry is a retired technical writer, an Advanced Master Gardener, a Master Naturalist, and a Wildlife Habitat Steward.

Many Firsts for Equinox Tour

By Ann Foster

The day of the autumnal equinox, September 22, was a beautiful sunny day for the INPAWS fall garden tour. The six garden sites (four residences, one church, one community park and pond) and four “drive-by points of interest” (two parks, one municipal property, one nature preserve) were in full fall glory.

The theme of the tour was learning more about native plants and wildlife environments. Featured plant, shrub and tree names, years the gardens were begun, and wildlife attracted were indicated on labels throughout the sites.

Nearly 200 people registered at Geist Christian Church in Fishers, where 20 acres are dedicated to native plants and wildlife (“Wildlife Corridor: Connecting Church and Community”). Cheryl Shearer, INPAWS member and church member, arranged for the tour to begin at the church, where gardens include a butterfly garden (partially financed by an INPAWS grant), a rain garden (one of six on the property), and an outdoor classroom by a stream, accessed through a three-acre prairie.

Dan McCord, a passionate native plant gardener, was responsible for helping his community save \$8,000 a year in mowing costs by establishing entry way and pond-edge plantings and a nature park in the community area (“Community Savings”) of his neighborhood. The McCord backyard (“Evolving Habitat”) is a wildlife habitat filled with native plants. Numerous bird and rare butterfly sightings have been made there.

“Prairie Plus,” the gardens of Amy Perry, offered two lovely prairie areas, a butterfly/bird garden, two wooded areas, a rain garden and a bio-swale which keeps water rolling down a slope from flooding into the cul-de-sac. Amy and her husband are avid birdwatchers who have identified more than 20 species in their yard as well as many four-legged creatures.

Going beyond labeling plants, George Peregrim provided photographs of the blooming of many plants that were not in autumn bloom; he also provided plant seeds to people

interested in starting native plantings. His property (“100+ Natives”) contains two rain gardens, a woodland and a 2,000-square-foot “native island” on one side of the property, at the corner of two streets, which provides a biological screen for the house.

Suzanne Stevens (“Going Native”) offered a view of many gardens planted over time since the mid-1990s. As she learned more about natives and pollinators, her gardens became more focused on natives. The woodland area in the back of the property is over 90 percent native. The property contains many native shrubs and trees that form a bio-hedge to reduce traffic sounds. A prairie sampler combined with a rain garden handles water issues on the property.

The four “Drive By Points of Interest” included West and Central Parks in Carmel, Wapihani Nature Preserve, and Fishers Town Hall Pond-Edge Enhancement. These sites offered opportunities to view environments in which native plants, shrubs and trees enhance public properties.

An Excel spreadsheet with plant information (sunlight, water, dimensions, bloom color and month) was developed for the tour and is available on the INPAWS Website in the 2013 tour information.

Ann Foster chaired the 2013 Garden Tour committee.

“Seen closely, the snow is a tangle of mirrored stars, each one flashing as its surface aligns with the sun and my eye. ... Hundreds of these exquisite ice flakes crowd onto one fingertip. How is such beauty born?”

~ The Forest Unseen,
David G. Haskell



During the equinox tour, in Amy Perry's “Prairie Plus” gardens, signs identified plants and were coded by color with red signifying sun lovers, yellow for part sun, and blue for shade.

Land Buys to Open Areas to Hoosiers

Efforts by the Indiana Wildlife Federation (IWF) have yielded a half-million dollars to invest in land acquisitions as part of a modified consent decree with Indiana Michigan Power (I&M).

"This will not only protect and open new lands for outdoor enthusiasts of all kinds, but will also result in improvements in our air quality over time," said IWF executive director Barbara Simpson. "We're working with a lot of folks to leverage these settlement dollars with other sources of funding to purchase strategic properties to increase wildlife habitat in permanently protected areas that will be available to the public."

Properties currently identified for purchase under the I&M grant include:

- Two tracts totaling 287 acres in the Patoka River National Wildlife Refuge and Management Area that will be open to hunting, fishing, hiking, photography and wildlife viewing

- A 343-acre addition to the Sugar Creek Healthy Rivers Initiative. The Initiative is the state's largest land conservation effort seeking to protect over 43,000 acres along the Wabash River and Sugar Creek, and over 26,000 acres along the Muscatatuck River bottomlands. Its mix of forested, open, and riparian lands provides opportunities for hunting, fishing, trapping, boating, canoeing, photography and hiking.

- A 178-acre land parcel that is part of the recently announced Bicentennial Legacy Conservation Area, a signature project of the Bicentennial Nature Trust created to preserve and protect important conservation and recreational areas in preparation for the 200th anniversary of statehood in 2016. The conservation area extends from the Cope Environmental Center in Centerville to the DNR-managed Brookville Reservoir and will operate as an alliance of public and private landowners sharing a multi-disciplined resource management approach. Outdoor opportunities will be available as the project develops, including bird watching, photography, hiking, and fishing. The Indiana Natural Resources Foundation (INRF) has been granted the funds and will administer their distribution.

NRF executive director Bourke Patton said, "We're pleased to work with the Indiana

Wildlife Federation and a long list of generous, conservation-minded organizations to acquire these critical natural resources with the help of I&M, and to make them available for all Hoosiers to enjoy."

The funds come from I&M under a legal settlement with the U.S. Environmental Protection Agency, eight states, and 13 citizen groups. The settlement included an agreement by I&M to invest \$2.5 million to improve air quality in Indiana. The monies are being overseen by a committee that includes Citizens Action Coalition, Hoosier Environmental Council, and Indiana Wildlife Federation, with the Sierra Club as a non-voting member and Environmental Law and Policy Center as a non-voting legal advisor and facilitator. 🌱

Conservation Alliance Expands Communication

By Jane Savage

INPAWS members have an opportunity to tap new resources regarding conservation legislation efforts this year, thanks to the expansion of communication methods by the Indiana Conservation Alliance (INCA).

INCA is a statewide network of over 25 non-profit environmental, wildlife, outdoors, and land preservation organizations. It provides a voice for the protection, stewardship, and sustainable use of Indiana's natural resources. INCA's goals are to foster and promote a greater environmental awareness in Indiana and advocate for conservation issues with the general public and state legislators.

Representatives from INPAWS and other INCA organizations meet annually in November to determine priorities for the coming legislative session. The Indiana General Assembly will be in session Jan. 13 to Mar. 14. In preparation, INCA is improving its communication system to keep Hoosiers better informed.

John Ulmer, member of the INCA steering committee says, "Indiana Conservation Alliance is revamping its communication

Peine Farm

methods. We will use new email (indianaconservationalliance@gmail.com) and Twitter (@INConservation) and Facebook accounts and are constructing a Website (INConservation.org).

"There will be running updates on the Website in blog format of what's what at the Statehouse as far as INCA's priorities are concerned. The Website will also have 'how to' pages to help you find who your legislators are, how to contact them, and other pertinent information."

Lynn Dennis, director of government relations at The Nature Conservancy, Tim Maloney, senior policy director at the Hoosier Environmental Council, and Barbara Simpson, executive director of the Indiana Wildlife Federation, who are frequently at the Statehouse during the legislative session, will post Tweets about what is happening as it happens.

"Our goal," Ulmer says, "is to be the source of information regarding the Alliance's efforts in the legislature throughout the entire session, not just on Conservation Day at the Statehouse Jan. 28.

"Any member of INPAWS may be added to INCA's contact list for emails that INCA will send out with updates on bills, calls for action, committee hearings and other items that pertain to INCA priorities."

On Conservation Day, Jan. 28, INPAWS members are urged to join other conservation-minded Hoosiers in networking and lobbying legislators for the legislative priorities set by the Indiana Conservation Alliance. Individuals can coordinate a time to meet their legislators at the INCA reception. The Hoosier Environmental Council Website (hecweb.org) will have details.

Jane Savage is co-chair of conservation on the INPAWS board, a member of the board of the Brown County Native Woodlands Project, and a Boone County Master Gardener.

John Ulmer is a member of the INCA steering committee and chair of the Eagle Creek Watershed Alliance. He works with Hoosier Heartland Resource Conservation and Development Council.

By Sue Arnold

My Google Map lady was shouting "un-navigable road" as I went deeper into Morgan County and onto smaller and smaller roads, headed for the Peine farm. On Sept. 21, Dee Ann and Rich Peine shared a beautiful day with a dozen of us at the 200-acre property that has been in Rich's family since 1969.

Hike



Katherine Newkirk

Where cows once grazed and gold miners ravaged the land, nature has restored a successional forest. Rich named the trees, many of them oak and beech, and Dee Ann and others pointed out native plants in the understory. We saw beautiful ladies' tresses (*Spiranthes ovalis*), endangered golden seal (*Hydrastis canadensis*), and the drupes of spicebush (*Lindera benzoin*).

The group split and Dee Ann led the more adventurous folks (with better boots) along a creek and into wet areas. The more open areas of the land were glorious in blooming Joe Pye weed, golden-rods and asters.

A bonus of the hike into the woods was standing on top of Jack's Butte, the highest point in Morgan County. After the hike, we enjoyed hospitality, cider, local apples, and conversation in the Peine cabin.

"Big Sue" Arnold, standing at right in the photo above, is a longtime birder and Master Gardener.

During a recent INPAWS outing, hikers wearing good boots and layered clothes, carrying field guides, cameras, and hand lenses, and accompanied by well-mannered canines were rewarded with an abundance of natural beauty at the Peine Farm in Morgan County.

Dateline Speedway

Quintuple Win for Natives

By Amy Perry

When nearly 19,000 native plants were installed at a Speedway school many people, as well as the INPAWS cause, benefitted.

- The town experienced a dramatic drop in the amount of raw sewage entering its streams after rainstorms.
- The town received two financial benefits.
- Residents and elementary students can enjoy the beauty of native plants.
- Residents and students were educated about the benefits of native species.

Plugs of recently installed native plants



Remenschneider Associates

In a bioswale in Speedway, water pools and infiltrates in the landscaped basin (right side), which is lower than the left side, where the overflow drain receives excess runoff. The resident exemplifies the power of outreach. He has taken ownership of the plants installed in the right-of-way in his yard.

Not only does he tend the plants, but he even painted the steel drain black so it will not rust.

- The landscape architects who planned the project won the INPAWS award at the annual luncheon of the Indiana Chapter of the American Society of Landscape Architects.

Remenschneider Associates, Inc., won the INPAWS award at the INASLA awards banquet September 20 at the Monon Center East in Carmel. INPAWS gives the award annually for the best use of native plants in a landscaping project.

The architects planned and oversaw the planting of native plants in a historic neighborhood near Carl G. Fisher Elementary School in the town of Speedway in a sewer separation project. The goal was to prevent raw sewage from entering local streams for 85 to 90 percent of annual storms by capturing and returning storm water to

local ground water supplies via infiltration basins and swales.

This reduction in storm water volumes decreased pollutant loads on local streams and dramatically reduced combined sewer overflows within the town's local streams – overflows went from 44 in 2011 to three in 2012. The project also reduced the size of storm water pipes required, thereby decreasing construction costs.

The town benefited financially in that it received a one-half percent reduction in its State Revolving Loan rate for implementing green infrastructure. Monitoring has confirmed that all basins and swales are free of standing water in less than 72 hours after a two-inch rain. Infiltration rates will improve over time as native plant roots dig deeper into the soil.

Ken Remenschneider stated, "The use of nearly 19,000 native plants throughout the 1.5-acre project area is a truly public demonstration of a sustainable landscape aesthetic within a functional application. The project was installed at the beginning of the 2012 drought, which as the drought continued, was cause for plant loss concerns. The native plants, however, resolutely proved their mettle by flushing out with incredible growth and bloom in spring and early summer.

"Without question, the public education and outreach with local residents was necessary and critical for gaining the acceptance necessary to achieve our goals. The Town of Speedway has embraced native plant communities to achieve their storm water management goals, while gracing one of their neighborhoods with a seasonally evolving array of textures and colors animated by the foraging of birds and butterflies."

I had the pleasure of representing INPAWS at the INASLA awards luncheon, where I learned a lot about landscape architecture. Many landscape architects use the INPAWS Website to select plants appropriate to various conditions and purposes. When I introduced myself to my tablemates, they already were familiar with INPAWS.

The ASLA mission is almost synonymous with the INPAWS mission. Their Website states, "The mission of ASLA is to lead, to educate, and to

Win for Natives – continued on page 10

Deploying Beetles to Battle Invasives

**By Alexandra Wardwell
and Dona Bergman**

Is it possible to win the battle against invasive plant species? For several years, non-profit groups in Southern Indiana had seen the growing need to create a Cooperative Weed Management Area. Southern Indiana Cooperative Invasives Management (SICIM) was incorporated in 2008 and designated as non-profit in 2009. It is the oldest and largest CWMA in Indiana, covering 35 counties.

A Cooperative Weed Management Area (CWMA) is a coalition of private and public organizations in a given geographic area – landowners, private groups and government agencies who share knowledge, personnel and resources to educate the public and support invasive species prevention and eradication.

In 2013, SICIM, its partner organizations and volunteers participated in surveys of purple loosestrife (*Lythrum salicaria*) and hydrilla (*Hydrilla verticillata*) across Southern Indiana, spending 70.5 hours and covering an amazing 458.8 miles of roads, ditches, and water bodies.

The surveys were part of a grant working with the Ohio River Basin Fish Habitat Partnership, U.S. Fish and Wildlife Service, Hoosier and Wayne National Forests, Appalachian Ohio Weed Control Partnership and the River to River Cooperative Weed Management Area in southern Illinois.

The grant focused on hydrilla and purple loosestrife public outreach and education materials, mapping and control. Funding was provided by the U.S. Fish and Wildlife Service under the National Fish Habitat Action Plan.

Purple loosestrife was targeted because it is an aggressive invader in moist soil and wetland areas which can quickly dominate native vegetation and form dense colonies. It is a branching, erect perennial that can grow up to eight feet tall, but more typically four to five feet tall. It has a large, tough root crown which is difficult to pull. The showy magenta flowers are noticeable from July to September along roadsides and waterways. It is now illegal to buy, sell or move purple loosestrife and its cultivars in Indiana – even supposedly “sterile” plants can produce viable seeds.

SICIM and partner organizations have also been involved in a purple loosestrife biological control project over the last couple of years. Bio-control is a component of integrated pest management, defined by Cornell University as the reduction of pest populations by natural enemies. Typically, an active human role is required.

In May, 2013, about 15 people met at a boat landing at Yellowwood Lake in Yellowwood State Forest, where over 25,000 leaf-eating beetles

(*Galerucella* sp.) had been released as a bio-control for purple loosestrife during the last decade. With advice from Rich Dunbar, regional ecologist for DNR Nature Preserves, and Susan Knowles, private land biologist for U.S. Fish and Wildlife Service, the group collected over 1,000 of the leaf-eating purple loosestrife beetles from plants along the shoreline.

The beetles were transported in coolers (so they wouldn't overheat) to be released on Duke Energy property near the Ohio River and the I-65 median outside Seymour.

In the future, SICIM hopes to do further purple loosestrife beetle collections, releasing them at new sites where they are most needed. INPAWS members are encouraged to help SICIM next year with this and other invasives-related projects.

For information on how to help, contact Alex Wardwell at edrr@sicim.info or (812) 653-5563 or visit SICIM's Website at www.sicim.info. For information about the beetles, see www.entomology.wisc.edu/mbcn/kyf501 and www.biocontrol.entomology.cornell.edu/weedfeed/Galerucella.

Alexandra Wardwell is coordinator of Southern Indiana Cooperative Invasives Management (SICIM).

Dona Bergman is director of the Evansville Department of Sustainability, Energy and Environmental Quality and president of the Southwest Chapter of INPAWS.



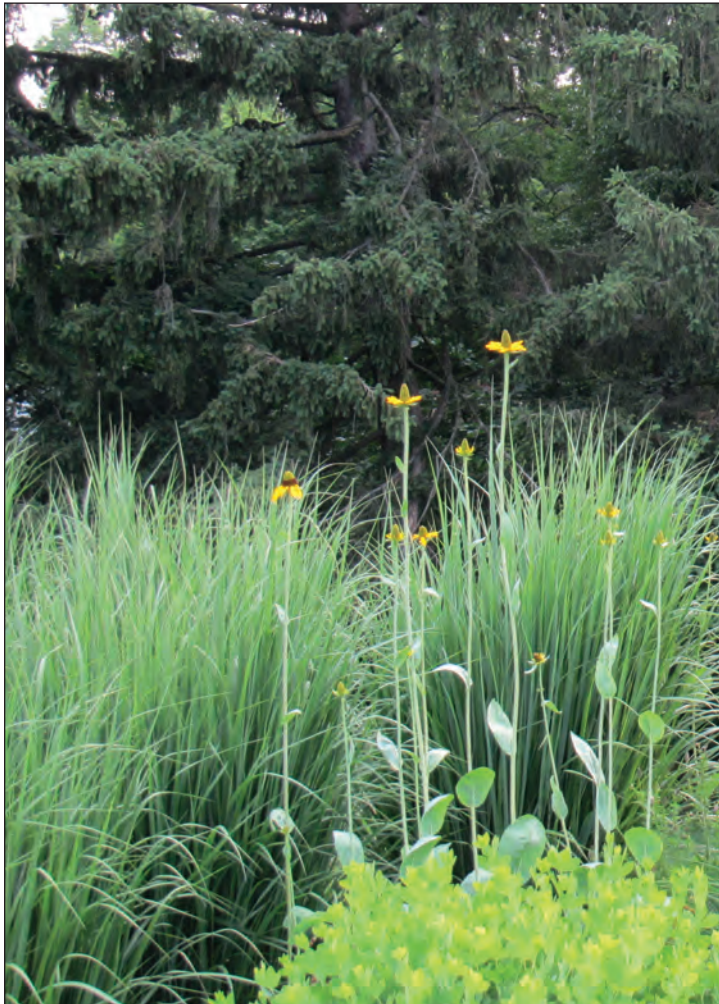
Volunteers collected more than 1,000 beetles in Yellowwood State Forest and transported them to a site infested with purple loosestrife to chew the invaders.



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Sue Nord Peiffer

**Garden
Great**

Sensational Switchgrass

By Sue Nord Peiffer

Saving for another time the debate over whether cultivars are truly native, I've opted to write about a fantastic switchgrass selection for Hoosier gardens. The species *Panicum virgatum* is an important component of the tall grass prairie and is easily grown in a garden setting.

The clone 'Northwind' was found as a seedling in Illinois by Wisconsin nurseryman Roy Diblik. The striking feature that set this plant apart from other switchgrasses is its upright growth habit. Other *Panicum* tend to be open and airy, often floppy in a garden setting. 'Northwind' is green with a tinge of blue during the growing season and turns straw-colored in the fall. The seed heads are attractive and held tightly in the center of the clump.

Though tidy and showy enough to use as a specimen in a sunny garden, this five-foot cultivar works well as a screen. It has been used to advantage at the back of a rain garden at the Indianapolis Museum of Art for several years. Additionally, professional growers have taken notice. The Perennial Plant Association has selected 'Northwind' as "2014 Perennial Plant of the Year" for its excellent performance over a wide range of the US, only the third grass to earn this distinction.

Sue Nord Peiffer is a horticulturist, manager of the Greenhouse at the Indianapolis Museum of Art and a charter member of INPAWS.