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Indiana Native Plant and Wildflower Society Fall 2016

Children of Indiana Nature Park

By Melissa Moran and Laura Sertic

Several years ago Mary McConnell, state director at The Nature Conservancy (TNC) Indiana chapter, found herself wondering about the future of conservation in the state. With kids more interested in technology and gadgets than in the outdoors, where would the next generation of conservationists come from?

Never one to shy away from a daunting project, McConnell set in motion one of the most out-of-the-box projects in the chapter's history. She shared her vision of "a world where the next big global environmental movement is led by children" in a presentation at TedX Indianapolis in fall, 2015.

Displaying the first "Nature IN-Deed" are representatives of the Cope Environmental Center, Girl Scouts,The Nature Conservancy, DNR Division of Nature Preserves, Indiana First Lady Karen Pence and the Indiana Department of Education.

McConnell asked, "What can we do to get kids excited about nature?" The answer is the first-of-its-kind Children of Indiana Nature Park in Centerville in Wayne County.

With Indiana's first lady Karen Pence, other officials and scores of children in attendance, the Children of Indiana Nature Park opened June 18. The park is a partnership between The Nature Conservancy, Cope Environmental Center, DNR and Indiana Department of Education. The goal is for young Hoosiers to build a personal connection with nature.

Each K-12 student in Indiana may now visit *www.ilovemyland.org* and claim his/her personal "Nature IN-Deed" with a unique geographic coordinate for their very own spot in the Children of Indiana Nature Park. Children can visit the park in person or visit their spot in the park virtually on the web site, using geographic coordinates and information from their deed.

The Bicentennial Nature Center Network, a network of 20 nature centers around Indiana, is using the "Nature IN-Deeds" as an invitation to children and families to learn about nature in their local communities. Every Hoosier child lives about an hour's drive from a participating nature center.

Children who hold "Nature IN-Deeds" will be invited by Cope Environmental Center to participate in activities such as tree planting and invasive removal. Over the next several years, TNC will lead efforts to reestablish hardwood forest at the park in Centerville with a diverse understory of native plants.

"Studies show that kids need nature," said McConnell. "Children who spend time in nature are more creative, healthier, more confident and better problem solvers. The Children of Indiana Nature Park can serve as a springboard, inviting kids to reconnect to nature."

Melissa Moran is community outreach coordinator for The Nature Conservancy and an an INPAWS Central Chapter member. Laura Sertic is a GLOBE intern at TNC, supporting the Children of Indiana Nature Park project.

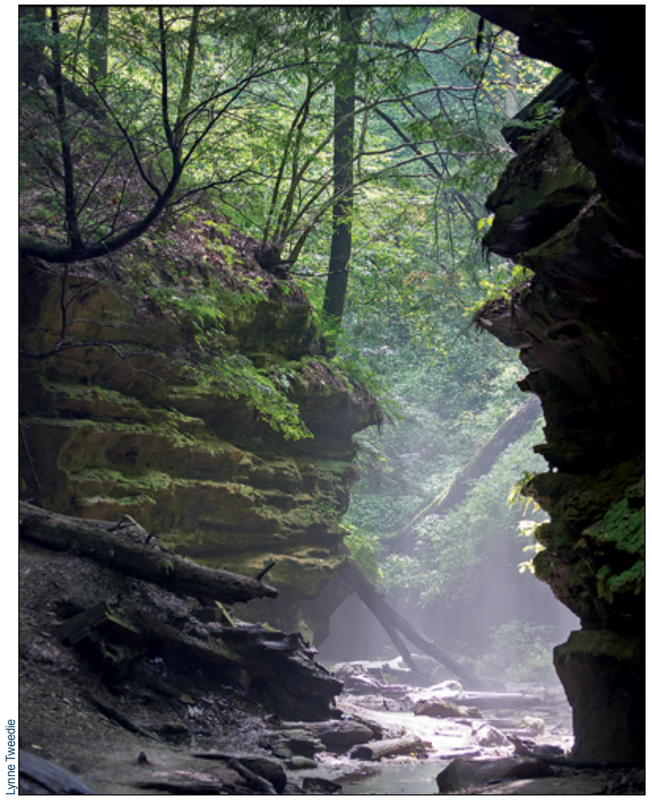
Inside

"An executive with the imagination of a poet"

Richard Lieber, father of Indiana State Parks

By Bill McCleery

This is an abridged version of an article that appeared in the January-February, 2016, issue of Outdoor Indiana *magazine* (OutdoorIndiana.org). *It is used with DNR's permission.*



Lynne Tweedie

Mist fills the Rocky Hollow Falls Canyon at Turkey Run State Park.

The man who spearheaded the creation of Indiana's state parks lived his first three decades showing little interest, at least professionally, in nature or outdoor recreation. Richard Lieber, however, did show a penchant for leadership long before he became a champion of conservation.

"In a sense, every Indiana state park is a Lieber memorial," wrote Robert Allen Frederick in his 1960 doctoral dissertation on the Indiana luminary, which is the source of much of this information.

It's no coincidence that the achievement of statehood in 1816 and the opening of the first state parks in 1916 occurred 100 years apart. Lieber and his supporters saw fitting timing in the prospect of purchasing spectacular parcels of unspoiled land for Indiana's centennial.

An Indianapolis resident after emigrating from Germany as a young man, Lieber helped start a chemical company, worked as a journalist, helped manage a bottling company and was involved in city government. After being made a military secretary to the governor during World War I and given the rank of colonel, he was known the rest of his life as Col. Lieber.

His wife, Emma Lieber, recalled that a 45-day hunting trip to the western United States at age 35 in 1904 helped spark her husband's interest in the outdoors. He later declared that his own state contained natural beauty to rival that of any region in the nation. He became particularly smitten with Brown County in September, 1910. In 1911, Lieber bought land in that county and built a bungalow home he called Whip-poor-will Hollow. He spent as much time as possible there for his remaining 33 years.

By that time, he was thinking about how Indiana should celebrate its centennial. He wrote an article on the subject for *The Indianapolis News* in December, 1908. It focused mostly on a need to preserve history.

The parks movement, which included calls for both state and national parks, was well underway across the country, and Lieber helped lead the movement in Indiana.

He supported a plea made by Rockville writer Juliet V. Strauss in April, 1915, to Gov. Samuel W. Ralston to save from development land that would later become Turkey Run State Park. In response to Strauss' plea, Ralston created the Turkey Run Commission.

The drive to save that land was the first official effort by the State to create a state park. At a meeting with the governor in November that year, Lieber advocated creating an entire system of state parks. The Indiana Historical Commission – with Lieber a newly appointed member – passed a resolution in January, 1916, supporting the concept.

A few months later, the historical commission formed the State Park Memorial Committee, which absorbed the Turkey Run Commission. Lieber became the committee's first chair, a precursor to his becoming the first director of the Indiana Department of Conservation in 1919.

During 1916, Lieber emphasized the permanence of the park committee's mission. In the far-distant year of 2016, he wrote in a report, state parks would endure as a lasting testament, still "proclaiming to the people of that generation the wisdom, culture and character of our own time."

Rather than use taxpayer funds from the State's general budget, Lieber and his allies proposed to buy land for parks with money raised from donations. After much negotiating, McCormick's Creek and Turkey Run, in that order, were purchased, then presented as state parks on Dec. 16, 1916.

Lieber remained focused on conserving Indiana's natural heritage. He was less interested in promoting purely recreational pursuits than some other parks pioneers, according to Jim Ridenour, who served as director of the Indiana Department of Natural Resources in the 1980s and later as director of the National Park Service (NPS).

"He had a strong environmental sense about him that led him in the direction of being very interested in a nature preserve approach," Ridenour said. "Some other states took a little more commercial approach focused on golf courses and things like that."

Lieber provided evidence for this distinction when he said, "Our parks and preserves are not mere picnicking places. They are rich storehouses of memories and reveries. They are guides and counsels to the weary and faltering in spirit. They are bearers of wonderful tales to him who will listen; a solace to the aged and an inspiration to the young."

Lieber blended his appreciation of history into his efforts to conserve natural habitats. Thanks to Lieber, state officials worked with private entities to acquire land and preserve the area's historical character.

"Lieber definitely would be among the early leaders in taking into consideration cultural as well as natural resources," Ridenour said.

Many of Lieber's ideas, Ridenour added, were shared by a leader in the development of national parks, Stephen Mather, the first NPS director. Congress authorized the NPS the same year Indiana acquired its first state parks. In the 1930s, Lieber served the NPS as a consultant and member of its advisory board.

Lieber died in 1944 at age 74, while staying at one of the places he loved, the Canyon Inn at McCormick's Creek. Over his lifetime, he witnessed the opening of a dozen state parks. Today, Indiana has 24 state parks, seven U.S. Army Corps of Engineers reservoirs and one State reservoir operating as its Division of State Parks.

Wikimedia

Richard Lieber (front right) with NPS director Stephen Mather at what would become Indiana Dunes State Park in 1916.

A journalist once called Lieber "an executive with the imagination of a poet."

Lieber himself made clear that he considered the establishment and maintenance of state parks to be nobler than other everyday affairs of state government.

Today, one state property bears his name; Lieber State Recreation Area borders Cagles Mill Lake. The property, which contains Cataract Falls, originally was dedicated as Lieber State Park.

Bill McCleery is deputy communications director for the state office of technology and a former writer for the Indianapolis Star.

Laughter in the oak woods

Natural areas

By Tommy Gunn

While I take a drink of water, my work in the woods is interrupted by a new sound, the sound of children playing at the camp pool across the valley. Today's work takes me to Camp Rancho Framasa, a Catholic Youth Organization property enrolled in The Nature Conservancy's (TNC) Forest Bank program.

Located in the hills of Brown County near Nashville in south central Indiana, the camp lies in a TNC priority forest conservation area. Through the Forest Bank program, a partnership with the camp is formalized to help achieve the camp's goal of being good stewards of the land and the Conservancy's goals of conserving large blocks of forest to ensure healthy forest communities and provide vital habitat for migrating songbirds such as cerulean warbler (*Setophaga cerulea*). The Forest Bank provides the camp an annual payment and the comfort of knowing their woods are managed by professional foresters.

Wikimedia

Cerulean warblers are among the migratory songbirds served by professional foresters in The Nature Conservancy's (TNC) Forest Bank program.

As I get back to my work of hunting down non-native invasive plants, I am pleased to see the early results of some of the forest understory restoration work done on many chilly days last winter. The work performed with chainsaws aims to steer the forest in the direction that the forest would have taken naturally. Brown County, as with most of the Midwest, is dominated by oak and hickory forest that is dependent on a natural cycle of disturbance. Historically, these disturbances have been from tornadoes, windstorms, wildfires from lightning strikes and fires set by Native Americans. As early Brown County settlers moved in, livestock grazing and logging were added to the disturbance cycle. With time and intervention, these disturbances have been greatly reduced.

Part of the current forest management plan for the camp calls for replication of this natural disturbance cycle to ensure the continued presence of oak and hickory trees that many wildlife species depend on. Since uncontrolled wildfires and livestock grazing have been eliminated, sustainable harvesting, forest stand improvement and prescribed fire are the tools foresters now use to simulate the natural disturbance cycle that these forest types have evolved with and depend on for their viability.

An easy analogy is how the leaves of xeric (dry) species such as chestnut oak (*Quercus montana*) and white oak (*Q. alba*) dry out, curl and get crunchy in the autumn. In contrast, mesic (cooler and wetter) species such as red maple (*Acer rubrum*) and American beech (*Fagus grandifolia*) have leaves that lie flat and trap moisture. With this in mind, it is remarkable to connect the ecology with the fire history to understand how the fire disturbances that the oak and hickory forest type evolved with actually helped the fire burn better due to the dry, crunchy leaves of the oaks. With the absence of these disturbances, xeric south-facing hillsides are transitioning towards a mesic species type. The understory – that would typically consist of a varied mix of oak and hickory advanced regeneration, greenbriar (*Smilax* species), painted sedge (*Carex picta*) and other species – is being shaded out and replaced by species such as red maple, American beech and hophornbeam (*Ostrya virginiana*).

By restoring the understory, we are working to mimic the natural cycles of disturbance to achieve our goals of forest conservation. By removing undesirable species, especially non-native invasive ones, leaving den trees for wildlife and allowing more light to reach the forest floor, we can influence the species composition of the stand while providing good wildlife habitat and increased forest value.

As I continue my day's work, I can still hear the children laughing and playing at the pool. I know that the many hours spent working in the woods will pay off for future generations. As some say, "The forester works for the harvest he will never live to see."

Tommy Gunn is a stewardship forester with The Nature Conservancy, based in Brown County.

Cedar Bluffs: "the" tree

By Ellen Jacquart

The Nature Conservancy has a lot of preserves in the state, but my favorite? Cedar Bluffs Nature Preserve in Monroe County. Now, you're probably thinking it's because of the wildflowers. This site is well-known for its incredible spring ephemeral show, heightened by the display they make on a steep slope with rock outcroppings along Clear Creek. It's like looking at a wall full of flowers, starting with snow trillium and harbinger-of-spring in February, yellow pale corydalis, pink spring beauty, wild columbine and lavender fern-leaved phacelia in March and April, and ending with brilliant red fire pinks, bright yellow golden ragwort, white shooting stars lining the rock ledges, and American valerian along the creek. And that's just spring! The flower show continues through summer and fall. But no, that's not my favorite part.

"a timelessness to that tree... calms me, an assurance that no matter what changes, some things will remain the same."

My favorite thing is the tree, and if you've ever been to Cedar Bluffs you know which one I mean. Once you climb up to the bluff top and gaze out over southern Monroe County, your eyes are drawn to a particular red cedar tree. It hangs out over the edge of the bluff, gnarled and bent by time and the kind of adversity you'd expect if your roots were growing in nothing but rock. It's dead and has been since I first visited the site nearly 20 years ago. But there it stands, its dramatic architecture splayed proudly across the sky. Not surprisingly, it's a photo of this tree that graces the Cedar Bluffs Nature Preserve web page.

The red cedar trees that grow on the bluff top are what give the preserve its name. At the time of Indiana's settlement, red cedar was found just along the Ohio River and a few limestone bluffs like those found at Cedar Bluffs in the southern part of the state. After settlement, red cedar took advantage of all the agricultural clearing of forests and is now a common early successional tree in much of southern Indiana.

About 10 years ago, I got a call from Dick Adams, an anthropologist who retired from Indiana University in 2002, who explained that he had taken pictures at Cedar Bluffs as a young man in the 1920s and 1930s. He wanted to know if I wanted the album of photos. Of course! When the album arrived, I paged through it – the pictures were all taken at a time of extremely high water, higher than I have ever seen in Clear Creek, which runs through Cedar Bluffs Nature Preserve (and I saw the creek in June, 2008, the year of the most severe flooding I've seen). If these were taken in the Twenties and Thirties, that means these pictures were probably taken between August, 1926, and summer, 1927, which saw unprecedented rain and flooding throughout the Midwest, resulting in what's known as the Great 1927 Mississippi River Flood. And there, on the last page of the album – was the tree. Almost 100 years ago, there is that same tree, though it had a few live branches back then.

Ellen Jacquart

Dick Adams

A recent photograph of "the" red cedar tree (top) and a photo taken by IU anthropologist Dick Adams during the mid-1920s.

There's a timelessness to that tree that calms me, an assurance that no matter what changes, some things will remain the same. Given how this tree has maneuvered its roots under a boulder on the bluff top, I think it's going to be around for many more years to enjoy. Have you taken a photo of this tree that you'd like to share? Send it to me at *ejacquart@tnc.org*.

Ellen Jacquart is director of northern Indiana stewardship for The Nature Conservancy.

Creating a structured native home landscape

By David Gorden, ASLA

Adapted from his presentation at the INPAWS plant sale May 7, 2016

My message: Not every property is conducive to the creation of a prairie or natural woodland. There either isn't the space, the appropriate setting or the aesthetic inclination to have plantings that look too "natural" or in some cases "wild."

David Gordon

(Top) Large waves of native species grace an open area on a property in Culver, IN.

*(Below) Honeylocust trees (*Gleditsia triacanthos*) form an allee at the Miller House in Columbus, IN.*

Native plantings can be structured and even formal in design which is often the appropriate thing to do in what is otherwise a very "unnatural" location.

Anyone who has an appreciation for and understanding of the value of native plants faces the challenge of how to best incorporate them into their home landscape. Taking clues from nature, the most appropriate strategy is to use plants as they occur in the wild — mixing species as they would be found in natural communities in their natural settings. Essentially, recreating nature. We have all seen prairie restorations with their summer show of swaying grasses and blooming forbs. Or, the woodland floor of spring ephemerals, sedges and glades of ferns. These scenes are beautiful and inspiring to all who appreciate natural settings, manmade or otherwise.

However, "recreating nature" is not always realistic or desired for many typical residential properties, for functional or aesthetic reasons. Most urban and suburban homes are in decidedly unnatural settings. Space is often limited. Cultural conditions may not be ideal. Despite a desire to be as "natural" as possible, there is often pressure to not deviate too much from the neighborhood landscape "norm." *(Often the "norm" is not something to emulate and one can certainly exhibit better landscape quality and taste than neighbors, while not deviating drastically from expected standards.)* There is often a desire to have a tidy landscape and avoid the perceived messiness of natural plantings. Just as personal taste and functional needs dictate the appearance of a home's interior, the same is true for its exterior. And despite a great appreciation for native plants and even a desire to have nothing but native plants in your landscape, you just might not want recreated nature with its randomness and unpredictability right at your doorstep.

Native plants can be utilized in any landscape or garden style you desire. Do not feel obligated to recreate nature. Create the garden you want - just fill it with native plants.

However, be aware that all plants (native and non-) have cultural requirements for success. Just because a plant is "native" doesn't mean it is appropriate for all conditions. You can't just put it in with the notion that "it's native, it will do great." As always, the right plant needs to be selected for the right place. Every plant has its desired natural habitat and it's not typically your standard residential property. Instead, we need to be mindful more of what conditions a plant will *tolerate*. You may not be providing a natural setting for the plant but are instead offering a setting that the plant will be tolerant of. As we partake of life's never-ending educational process, we should be continually observing and learning and determining what conditions plants are tolerant of and how far the envelope can be pushed in having them not only survive, but thrive in unnatural settings.

Whether your property is in a new suburban subdivision, a dense urban neighborhood, or is a rural acreage ... whether you have nothing more than a small courtyard or vast openness or dense woods to care for ... whether your garden style of choice is formal, contemporary, minimalist, cottage, natural, Asian or whatever, you can utilize native plants.

Establishing garden structure is of utmost importance. Define hardscapes (non-plants) and planting areas and determine how they relate. Plants may be your passion, but they are made more interesting and attractive within a setting enhanced by structural items. These could be paths, walls, fences, arbors, sculpture, water features, edging and more. Design planting areas without specifying plants. Begin by identifying the areas themselves and general planting concepts. Then, once garden structure is defined, get detailed about the types of plants to feature.

I promote four design approaches when laying out a garden in which one is trying to incorporate native plants.

1. Natural plantings but within very defined/ confined areas. A planting area is very well defined, perhaps bounded by walls or paving. It could be a raised bed. Within the planting area, plants are installed informally with a mix of species placed somewhat randomly. An example can be found across the front of our company's office where we installed a six-foot deep bed stretching for approximately 120 feet. It contains a mix of 10 prairie species, grasses and forbs, planted in a random manner. It is admittedly a wild look, but within the confines of a very rigid and well defined area. The planting is much tidier than if it was an irregularly defined or vaguely defined area.

2. Structured plantings within very defined/ confined areas. The difference between this and #1 is that the plantings are more defined and less random. The planting area is very defined but plants are placed in larger groupings with fewer species used. I've seen effective plantings of just single species, a parking lot island of only little bluestem (*Schizachyrium scoparium*), for example. Masses are also a relief to whoever is weeding the bed. Determining what is a desired plant is made easier in more defined plantings. A mix I like utilizes prairie dropseed (*Sporobolus heterolepsis*) as the primary ground covering plant with purple coneflower (*Echinacea purpurea*) and gayfeather (*Liatris spicata*) interspersed as colorful accents. Other species with a vertical disposition could be incorporated as well.

3. Structured plantings in more open areas. The planting area may be more expansive but the plantings are very defined, with a few species arranged in larger masses.

4. Natural plantings in open areas. This is what you would do if you were converting most of your backyard to prairie.

The Morton Arboretum in Lisle, IL, is home to a hedge garden displaying numerous examples of trimmed hedges. Some of the native species used can be surprising and include sweetshrub (*Calycanthus floridus*), shingle oak (*Quercus imbricaria*), bald cypress (*Taxodium distichum*) and blackhaw (*Viburnum prunifolium*). Even within the formality of a trimmed hedge, a native plant can be used.

One of the most prominent landscape features of the iconic Miller House in Columbus, IN, designed by landscape architect Dan Kiley, is its honey locust (*Gleditsia triacanthos*) allee. The two rows of evenly spaced trees, planted within a gravel corridor, are the epitome of formality. Yet, within a setting that is far from natural, a native tree species was selected.

Within a well-defined bed, purple coneflower, white gayfeather, baptisia and asters bloom above a bed of prairie dropseed.

Trimmed hedges, formal rows of trees – you might find these elements desirable in your landscape. Don't be intimidated by thinking you have to create a natural meadow or wild woodland floor to incorporate native plantings into your world. Create the style you want, the attitude you want to evoke, the randomness or simplicity of the plant mixture you prefer, the vastness or intimacy of your plantings. It's all good! Just plug in native plants and enjoy.

David Gorden, ASLA is a landscape architect with Mark M. Holeman, Inc., in Indianapolis, where he has been designing landscapes for over 25 years. He is a past chair of the INPAWS annual conference and is actively involved with invasive plant issues. He currently serves on the Indiana Invasive Plants Advisory Committee and the board of the Midwest Invasive Plant Network (MIPN). He is immediate past president of the Horticultural Society of the Indianapolis Museum of Art.

The hickory and the luna: a forest relationship

By Holly Faust and Carrie Tauscher

Host plant spotlight

When folks think of hickory trees (*Carya* species), one characteristic that comes to mind is their hard, dense, shock-resistant wood, but they may not know that hickories are also host plants for many insect species. One of these is the spectacular luna moth (*Actias luna*).

Wikimedia

These nocturnal moths are part of the *Saturniidae* family, giant silkworm moths identified by large ringed eyespots reminiscent of the planet Saturn. The luna is a large moth with a white body, pink legs and large pale green wings that measure four and one-half inches across. The hindwings have eyespots and long tails – longer than any other species of Lepidoptera. Males have large feathery antennae, larger than those of females. The adults do not feed, as they have no mouthparts; as a result they do not live much more than a week. They fly in late spring and early summer.

Female lunas lay hundreds of eggs in small batches under hickory leaves. Depending on the weather, the pale eggs take about 10 days to hatch and darken as they age. The green to yellow caterpillars start eating immediately after hatching.

Luna caterpillars have an observed preference for hickory species, but will eat other tree and shrub species based on what is available. These species include sweetgum, American beech, red maple, white oak, black cherry, willows, American chestnut and smooth sumac.

A luna caterpillar sheds its skin five times (five "instars") before it starts spinning a cocoon (pupates). When it is two and a half inches long, it "gut dumps," getting rid of excess feces, water and food, before spinning a silk cocoon from special mouthparts near the lower lip. This single silk thread is about 3,000 feet long and comes from modified salivary glands through a tube to the spinnerets. The silk dries on contact with the air. The caterpillar attaches its cocoon to a leaf that it has wrapped itself in. In two to three weeks, the adult moth emerges, typically in morning, and takes several minutes to pump fluids into its wings to expand them so it can fly. Luna caterpillars overwinter as pupae. There are two to three generations of luna moths in Indiana before winter sets in each year.

Luna moths have become well-known. In 1987 the U.S. Post Office issued a First Class stamp with a luna moth image. In 2007 the luna moth appeared in television commercials for the sleep aid "Lunesta." Many novice insect lovers propagate moths from the *Saturniidae* family, feeding them leaves from sweetgum and hickory. More avid enthusiasts raise the caterpillars on live hickory trees.

To support large silk moths like the luna requires really only one of the preferred host species on site. Multiple generations can occur on one tree over the course of a season depending on the size of the tree and how adventurous the caterpillars are.

Hickories have proved useful to humans, too. Native Americans used the wood for making bows, handles for tools, baskets, lacrosse sticks (which are still made of hickory today), rattles and snowshoe rims. The hickory tree was so important to the Native Americans that each tribe had its own individual name for hickory trees. European settlers also used hickory for tool handles, wagon wheel spokes, hoops for casks and boxes, paddles, baseball bats, golf club handles ("hickory sticks") and paddles. The nuts were used extensively as food, drink, oil and medicines.

Andrew Jackson was nicknamed "Old Hickory" because he was tough like the tree. His supporters planted hickory trees on street corners (it would be great to see this again), swept with hickory brooms, carried hickory canes, wore hickory leaves in their caps and even formed Hickory Clubs.

Today we use hickory wood mainly for flooring, smoking meat and barbecuing.

Carya, the genus name for hickory, appropriately means "nut," as all 12 species in North America produce large nut fruits with outer husks. The palatable nuts, especially those of shagbark hickory (*C. ovata*) and mockernut hickory (*C. tomentosa*), are enjoyed each fall by humans and animals alike. Hickory nuts are considered some of the finest tree nuts, but those from the bitternut hickory (*C. cordiformis*) are less desirable, hence the common name. Hickories are in the same Juglandaceae family as black walnut (*Juglans nigra*) and pecan (*C. illinoinensis*).

Hickory trees are slow-growing and can be long lived – over 350 years. They can grow well over 100 feet tall, providing much needed shade on hot summer days.

Because of their relatively slow growth, hickory trees are often lost to development in urban areas, which also means fewer moths. Our obsession to rake and dispense with fall leaf bounty inevitably leads to the demise, or at minimum relocation, of many overwintering pupae.

Unlike successional forest trees, hickory is not prevalent in the nursery industries due to its poor performance as balled and burlapped stock. All hickory and pecan are sold potted and have a fairly short shelf life. They are often overlooked by the consumer due to their relatively high price compared to their size.

While stem counts of oak and hickory are increasing overall in forests managed for hardwood, we are seeing fewer and fewer hickories in the state of Indiana. Initiatives to plant and replenish the oak/hickory complex and add diversity to urban and backyard forests has led to a meaningful increase in the planting of oak species, but the hickories, all 12 species of them, have been left out.

Wikimedia

*Mature luna moth (*Actias luna*) and fifth instar caterpillar*

If you are planning a planting and are considering the requirements of supporting wildlife, hickory is an easy win. Nuts and husks aside, the beauty and diversity of wildlife they support are well worth the debris.

Holly Faust is an interpreter with Hamilton County Parks and Recreation at Cool Creek Park in Carmel. Carrie Tauscher is an urban forestry specialist with the DNR Division of Forestry.

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Check out INPAWS' great blog at inpaws.org

Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana.

To educate the public about the value, beauty, diversity and environmental importance of indigenous vegetation.

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Northeast volunteers battle garlic mustard

INPAWS in action

By Kimberly Miser

On a late May morning, nine members of the newly formed Northeast INPAWS Chapter (NEINPAWS) met to eliminate an enemy. The site: Metea County Park in northern Allen County. The target: garlic mustard *(Alliaria petiolate)*.

The chapter, which serves Adams, Allen, DeKalb, Huntington, Noble, Steuben, Wabash, Wells and Whitley counties, became official in May.

Before the ink was dry on the chapter bylaws, the group started forming committees and making plans. Kate Sanders, whose background is in headwater stream ecology, was nominated to chair the stewardship and plant rescue committee. When the chapter was looking for a partner to trade a programming event for a stewardship activity, Sanders called Metea County Park.

"Like many natural areas, Metea has been affected by invasives," Sanders said. "I asked park management, 'What can we do?' The answer came back: garlic mustard."

On Memorial Day weekend Sanders issued the rallying cry and Bob Dispenza, park and education manager for Metea County Park, led the march onto the "battlefield," a forested area overlooking Cedar Creek, a designated Indiana Scenic River.

The NEINPAWS group attacked not only second-year growth of garlic mustard, but first-year basal rosettes, too.

Dispenza knows first-hand what volunteers can accomplish. "Metea has had areas covered in garlic mustard that are now clear. Wildflowers are coming back."

Betsy Yankowiak, president of NEINPAWS, is director of preserves and programs for Little River Wetlands Project (LRWP). She knows invasives are a struggle, but sees opportunity in the fight.

"We're at a moment where we're learning how past land management decisions have become detrimental to the Indiana plant community," Yankowiak said. "The INPAWS name carries credibility. Now we can approach land managers and ask, 'What are your projects? Can we bring in some people to help?'"

Future chapter projects include a partnership with Save Maumee to assist riverbank restoration efforts, brush control with Allen County Parks and seed collection at Duff Lake Fen in LaGrange County.

Martha Ferguson, owner of Riverview Native Nursery, was the catalyst for formation of the new chapter. "Northeast Indiana is special," she said. "We have marvelous wetlands and unique plants that thrive here. Homeowners become empowered to create corridors of habitat once they learn about invasives. It's what makes a local chapter so valuable."

Sanders believes removing invasives is a crucial form of plant rescue. "In just two hours we stopped the future spread of hundreds of thousands of garlic mustard seeds," she said. "Every bit we pull is a victory for native plants."

Kimberly Miser is an Advanced Indiana Master Naturalist and NEINPAWS volunteer.

A volunteer pulls invasive garlic mustard at Matea Park in Allen County.

Member blogs about natives

INPAWS Southwest Chapter member Dona Bergman is writing a "Perennials Forever" blog approximately weekly on the web site *PlantersPlace.com*.

"Most of my blogs deal with natives, nativars or invasives, because that's what I'm most interested in," Bergman says. "I consider this another method of educating gardeners."

The web site is operated from Kelly School of Business at Indiana University.

Jacquart co-authors invasives paper

South Central INPAWS member Ellen Jacquart has co-authored a paper comparing the invasive plant assessment protocols of six Midwestern states (IN, IL, MN, WI, MI, OH). The document was published in the journal *Invasive Plant Science and Management*. An Adobe PDF file of "Risk Assessments for Invasive Plants: A Midwestern Comparison" is available at *www.bioone.org,* a nonprofit online platform for research in the biological, ecological and environmental sciences. Jacquart is director of northern stewardship for The Nature Conservancy.

What are wasps good for?

By Patricia Happel Cornwell

I will never forget those uncomfortable moments that followed my child's first questions about "the birds and the bees," but at least I knew the answers. Recently, when a 10-year-old friend asked me, "What are wasps good for?" I had no ready reply. I fell back to the naturalist's default credo: everything in nature has a purpose, a job to do.

That didn't satisfy either of us. I thought of the arborist who was viciously stung on the head by yellowjackets in our field last summer. I thought of the unidentified black wasps that nest behind the shutters on our porch and buzz me when I'm trying to meditate or watch birds. So I sat down to do my homework. What I wanted to know was: what services do wasps perform in the ecosystem, besides stinging people and frightening children? What do they contribute to the balance of nature?

Wikimedia

A tiny, newly discovered wasp, Spathius galinae, *can sniff out and attack the larvae of the emerald ash borer.*

When I saw "pollen wasps" in Kenn Kaufmann's *Field Guide to Insects of North America* (Houghton Mifflin, 2007), I thought, *Aha!* To my surprise, pollen wasps (*Pseudomasaris* species) – found only in the western US and Canada – do not pollinate plants. They store pollen and nectar (curiously, only from violet-colored flowers) to feed their larvae.

However, I read that the bald-faced hornet (*Dolichovespula maculata*) kills many flies and even other wasps, and this clued me to the fact that predation is the key to the usefulness of many wasp species, at least from a human perspective.

According to *Pollinators of Native Plants* (Heather Holm, Pollination Press, Minnesota, 2014), ground-nesting yellowjacket adults (*Vespula* spp.) are predators of beetles, flies, true bugs (*Hemiptera* spp.) and other wasps.

Paper wasps (*Polistes* spp.) prey on caterpillars and beetle larvae and have been used as a biological control for tobacco hornworms (*Manduca sexta*) in agricultural areas. The larvae of the tobacco hornworm, whose adult is the Carolina sphinx moth, can develop on any plant, but their preferred hosts are tobacco and tomato plants. Braconid wasp larvae (*Cotesia congregata*) also parasitize tobacco hornworms.

The *National Audubon Society Field Guide to North American Insects & Spiders* (Alfred A. Knopf, 1996) calls the five-banded tiphiid wasp (*Myzinum quinquecinctum*) "highly beneficial" because it lays eggs on May beetle larvae (genus Phyllophaga), which its own larvae then eat. May beetles, a.k.a. "Junebugs," and their relatives feed on the roots of grasses and trees.

Other wasps, such as the 290 species of the Pompilidae family, feed on spiders, first paralyzing them with their sting. One such species found in the eastern US, including Indiana, is the aptly named spider wasp (*Auplopus mellipes*), which often pulls off the legs of its prey to make transporting it easier. It constructs mud cells and places an immobile spider in each as sustenance for one wasp larva. The oblong cells are arranged end-to-end.

A web site called *insectidentification.org/insects-by-state* lists 19 types of wasps in Indiana, among 303 species of insects. Among them, the blue-winged wasp (*Scolia dubia*) does many a good deed for humans. The female burrows into the ground to find grubs, especially those of the green June bug (*Cotinis nitida*) and the destructive Japanese beetle (*Popillia japonica*). The wasp stings the grub, then constructs a cell in which to lay an egg on the host.

Green June bugs damage many types of fruit, including berries, grapes, peaches, nectarines, apples, pears and figs. Japanese beetles are major pests in North America, feeding on fruit and "skeletonizing" the foliage of roses, grapes, hops, canna, crape myrtle, and even trees such as birch and linden.

The big news is that a new species of tiny wasp has been discovered that parasitizes the emerald ash borer (*Agrilys planipennis*) that has killed millions of native ash trees. *Spathius galinae* (so newly found it has no common name) is native to the Russian Far East and South Korea. It can smell whether a tree has been infected with the borer and can feel the larvae's vibrations under the bark. It drills through the bark with its ovipositor and lays eggs on the borer larvae. When the wasp larvae hatch, they feed on, thereby killing, the borer larvae.

This new wasp is tiny, the size of a gnat, and it does not – cannot – sting. Tests by the University of Delaware and the US Department of Agriculture's (USDA) Agricultural Research Service have deter-

Wasps – continued on page 15

INPAWS plant sale has good year

By Deb Bonte

INPAWS had another good year helping native plants find homes and allowing it to fund grants for important native plant programs around the state. Our sale is INPAWS' largest fundraiser, grossing around $10,000 in one morning, and a vital resource in its own right. It provides the public with a source for native plants still not widely available in retail stores.

The sale is always supported by generous INPAWS members and several nurseries that donate plants.

Deb Bonte and Melissa Moran were 2016 plant sale co-chairs, and up to 50 volunteers were involved. This included folks driving to pick up plants at nurseries and from members' homes, helping with plant rescue digs in parks and yards, and experts who came in the day before or the morning of the sale to identify and label plants. Our plant rescue committee co-chairs, Jeannine Mattingly and Dee Ann Peine, organized several digs, which truly impacted the success of the sale.

A special thanks goes to INPAWS member Dave Gorden, ASLA, of Holeman Landscape, who was our morning speaker. His article on the same topic, "Structured Native Landscapes," begins on page six of this issue of the journal. Thanks, too, to our longtime volunteer auctioneer Mike Stelts and to experts Dawn Stelts and Kevin Tungesvick, who introduced each plant up for auction with anecdotes and helpful tips. Some say our auction is like a mini-botany lesson.

Finally, a huge thanks to our contributing nurseries who generously gave of their time and plant material. Please think of these nurseries next time you shop for natives.

We are pleased to announce that Kelly Spiegel and Tammy Stephens have agreed to co-chair the 2017 sale. Please email *plantsale@inpaws.org* if you want to help next year.

Deb Bonte has co-chaired the plant sale for three years and is a member of INPAWS Central Chapter.

Contributing nurseries

Holeman Landscaping, Indianapolis
www.holemanlandscape.com/plantsale
317-849-3120, call Richard Blankenship for tour/pricing

Native Plants Unlimited, Geist Nursery, Fishers
www.nativeplantsunlimited.com/plantsale

Spence Restoration Nursery, Muncie
www.spencenursery.com
Wholesale only, call Kevin, 765-286-7154

Woody Warehouse Nursery, Inc., Lizton
www.woodywarehouse.com
317-994-5487, Pete Berg, trees, shrubs

Save an ash – *from back page*

and the cost to adopt it. If you hover over an adopted tree, you'll see an acknowledgement or message.

Mike Love and Bruce Johnson of the Beach Boys have each adopted a tree by the Ohio River on Veterans' Memorial Parkway. One of the stars of "A League of Their Own," Lori Petty, adopted a tree in Garvin Park, next to Bosse Field, where the movie was partially filmed.

My father loved to golf, so I will adopt one at Helfrich Hills Golf Course in his memory.

Someone should adopt a tree to honor Dr. Seuss. As the Lorax said:

> Unless someone like you cares a whole awful lot,
> nothing is going to get better. It's not.

To view Evansville's interactive map and adopt an ash tree: *www.evansville.adoptanash.org*

For a video: *www.tristatehomepage.com/news/local-news/notable-movie-rock-stars-adopt-evansville-ash-trees*

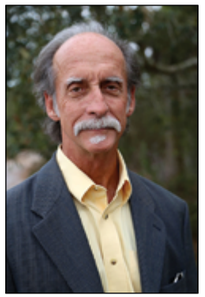
To learn about TruGreen Commercial's Adopt-An-Ash program: *www.adoptanash.org*

For information about emerald ash borer: *extension.entm.purdue.edu/EAB*
www.evansville.in.gov/index.aspx?page=517 (Urban Forestry)

Dona Bergman is sustainability director for the city of Evansville and a member of SWINPAWS.

November 5

Conference to highlight preservation



Keynote speakers for the 2016 INPAWS annual conference will be nationally and internationally recognized experts, Dr. Reed Noss (top) and Dr. Robbin Moran.

By Tom Hohman

The theme for the 2016 INPAWS conference is "Preservation: Keeping What We Have, Restoring What We've Lost." The conference will be Nov. 5 at the 502 East Event Centre, 502 East Carmel Dr., Carmel. (Note: this is a different location than originally announced.) This facility has plenty of space and free street-level parking.

The conference will run from 8:45 a.m. to 4:30 p.m. Early registration deadline is Oct. 22. Final deadline for advance registration is Oct. 29.

Registration fees	Before/after Oct. 22
INPAWS member	$65/$75
Non-member	$80/$90
Student	$35/$40

If interested in having a display, see the INPAWS web site at *www.inpaws.org* for sponsorship and non-profit exhibitor options.

KEYNOTE SPEAKERS

Dr. Reed Noss is the Provost's Distinguished Research Professor at University of Central Florida and president of the Florida Institute for Conservation Science. He has authored over 300 publications, including seven books. His most recent research includes studies of climate adaptation strategies, disturbance ecology (e.g, from fire), conservation and restoration. He will discuss the changing values of conservation and choices that must be made between competing values.

Dr. Robbin Moran is the Nathaniel Lord Britton Curator of Botany at the New York Botanical Garden. He has published over 120 scientific papers and four books on ferns, including *A Natural History of Ferns,* winner of the Garden Writers Association Award for best writing. Dr. Moran will talk about "The Extraordinary Biology of Some Indiana Ferns."

OTHER SPEAKERS

Cliff Chapman and John Bacone will team up to provide an update on preservation of natural areas in Indiana. Cliff is executive director of the Central Indiana Land Trust and president of the Natural Areas Association and the Indiana Land Protection Alliance. John has been director of the DNR Division of Nature Preserves since 1980. They will look back at the groundbreaking book, *Natural Areas in Indiana and Their Preservation.* After its 1969 publication, this book became the guide for much of the ensuing land protection in Indiana.

Many of us are familiar with the efforts of The Nature Conservancy to restore large tracts of prairie at their Kankakee Sands property, where **Alyssa Nyberg** has been nursery manager since 1999. Kankakee Sands Nursery is an 80-acre outdoor nursery and greenhouse which provides seed for the 8,000-acre prairie restoration. Alyssa will provide another retrospective in "Kankakee Sands, the Marvels and Mistakes of a Prairie 19 Years in the Making."

While several of our presentations echo the conference theme of preservation, we don't want to ignore the gardeners among our members. **Bill McKnight** will provide gardening insights gleaned from years of experience and expose common "myths." He is well-known for his work with the Indiana Academy of Science and his publications on non-flowering plants (ferns, bryophytes and lichens). He recently released a book entitled *Rantings of a Mad Botanist: Comprehensive Guide to Gardening and Land Use Practices Emphasizing Central Indiana.*

INDIANA PLANT ATLAS

Butler University's Friesner Herbarium will launch its new Indiana Plant Atlas with a reception at our conference venue on Friday evening, Nov. 4 (See article on opposite page). A photo display will remain available for viewing during the conference.

BOOK SALE AND FREE TIME

Many attendees like to have time to visit with friends whom they may see only at this annual event. We also have an abundance of exhibits, the book sale and silent auction, plus this year the Friesner photo exhibit. We have decreased the presentations from six to five to allow more time to peruse these attractions, a more relaxed lunch time, and an earlier departure for those who need to travel.

Tom Hohman is conference team leader, chairman of the Central Chapter Invasives SWAT Team and a member of the INPAWS board of directors.

Special conference event

Friesner Herbarium to launch Indiana Plant Atlas

By Rebecca Dolan

A launch reception and photography show for the new Indiana Plant Atlas will be held Friday, Nov. 4, from 7 to 9 p.m., the evening before the INPAWS annual conference, at the conference venue, 502 East Event Centre, Carmel. The photos will remain on display during the conference.

The Indiana Plant Atlas (IPA) is an online resource that documents Indiana's wild plants. It can be found *at www.indiana.plantatlas.org*. Based initially on data from more than 40,000 specimens housed in the Friesner Herbarium at Butler University in Indianapolis, the site is growing to include records from other herbaria. IPA data is uploaded to national and international biodiversity web sites so the valuable natural history data housed in the Friesner Herbarium is now discoverable by anyone anywhere.

The project was jump-started by a Butler Innovation Fund grant, with additional support from INPAWS and the Indiana Academy of Science.

The IPA, based on vouchered (documented) herbarium records, presents county-level distribution maps for all Indiana plants growing outside of cultivation. Our nomenclature is based on Kay Yatskievych's *Indiana Vascular Plant Catalogue* (soon to be published by IU Press). Images of the herbarium specimens are included when available. Other information includes rarity, invasive status, coefficient of conservatism (degree of fidelity to a particular natural community), wetness classification values, physiognomy and common name. County-level checklists can be downloaded.

Search options are based on categories of information traditionally found on an herbarium sheet label: date of collection, collector, location and habitat. In addition, users can search by family or traditional family name. The IPA also has wonderful photographs of live plants taken *in situ* in Indiana by local photographers.

We hope to eventually host data from all of Indiana's herbaria and other herbaria with Indiana collections. We are building a Consortium of Indiana Herbaria to further that mission. In addition to the Friesner Herbarium, the IPA contains data from the Daniel M. Fisk Herbarium of Hillsdale College, Indiana University Southeast Herbarium and the Greene-Nieuwland Herbarium of Notre Dame. Indiana records from *V-Plants* (online "virtual" herbarium of plants of the Chicago Region), Huntington University and Earlham College are in the IPA or will be soon.

For more information on Friesner Herbarium, see *www.butler.edu/herbarium*.

Marcia Moore, herbarium technology specialist, manages our web pages and led work on the IPA.

Rebecca Dolan is director of the Friesner Herbarium at Butler University in Indianapolis.

Wasps – *from page 12*

mined that this host-specific wasp can help save beleaguered ash trees. The USDA estimates that eight billion commercial timber trees in danger from emerald ash borer are worth $280 billion, and that it would cost another $25 billion if cities were to replace the ash trees they have already lost to the borer.

Approved by the USDA in 2015 as a biological control, *S. galinae* is now being reared by the tens of thousands at the USDA Animal and Plant Health Inspection Service lab in Michigan. The wasps will be sent to 24 northeastern US states for release into affected forests.

It will always be disconcerting to find a wasp in my wine glass, but I must concede that many species "earn their keep" by controlling populations of flies and other pests. I would not like to live in an environment infested with out-of-control disease-carrying flies, defoliating worms, crop-destroying beetles and sweater-eating moths.

I can now tell my young friend that wasps do indeed serve a purpose in the balance of nature and that without them, we humans would be pretty miserable.

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

E. Z. schiedrich

M.Huft

R. Barber

R. Barber

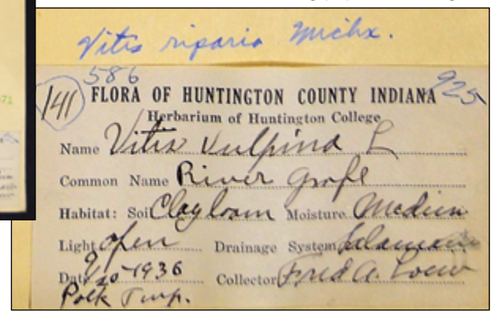
P. Grube

The launch of the Indiana Plant Atlas will include an exhibit of plant photographs taken in situ *in Indiana by local photographers. At right from top to bottom are Jack-in-the-pulpit* (Arisaema triphyllum), *trout lily* (Erythronium americanum), *white panicle aster* (Symphyotrichum lanceolatum), *great white trillium* (Trillium grandiflorum) *and showy lady's-slipper* (Cyprepedium reginae).

Herbaria: more than mementos

By Adrienne Funderburg

Plant pressing is a familiar concept to many botanical hobbyists. When I was younger, I sometimes stored flowers in a dictionary to keep them nice. I've seen flattened flowers used as home décor and bookmarks, but up until this past year of college, I had no idea how scientifically significant plant pressing is.



It is so significant that universities, museums and botanical gardens often curate entire libraries of pressed plant samples, with some specimens dating back hundreds of years. A library of this kind is called an herbarium (plural: herbaria). The plant specimens kept in these botanical museums are useful for a number of different kinds of research, including systematics (the study of evolutionary relationships between organisms over time), taxonomy (the description of species, as well as assigning and adjusting scientific names) and genetics. The samples are also downright fascinating and may be useful for plant enthusiasts as well.

Botanists have pressed plants and contributed to herbaria since the 18th century. This form of collection was heavily utilized by famous natural historians such as Carl Linnaeus of Sweden (18th century) and Asa Gray in the US (19th century). Linnaeus, regarded by many as the father of modern taxonomy, collected over 14,000 samples during his lifetime. It was beneficial for these talented scientists to hold onto all of their new botanical discoveries and store them long-term. Due to the preservative capabilities of proper pressing and mounting of samples, their collections have lasted much longer than they may have originally imagined and they are still used for research today. These early collections have laid the foundation for modern scientific nomenclature.

The process of creating herbarium samples is more technical than my attempts to press flowers as a child. For example, herbarium samples have to include more than just the "pretty" parts of the plant. As beautiful as flowers are, a useful herbarium sample usually contains the maximum amount of descriptive plant material that can be collected and still fit comfortably on the mounting paper, including leaves, stems and roots of the specimen. Herbarium samples are also collected year-round to capture plants at different points in their life cycle. The date of collection, as well as scientific and common names, location, site description and name of the collector are recorded and included on the sample.

The information contained in the specimen and its label is invaluable to researchers. An ecologist can use species location and distribution data to track changes in a local environment over long periods of time. A taxonomist can compare the morphology of individuals of the same species found around the world and consider naming new subspecies or variations of the plant. And from these old dried plant samples, geneticists can obtain viable DNA, which can be replicated and sequenced, providing genetic profiles for common species as well as extinct ones. This helps systematists decipher often-unseen relationships between groups of plants.

Herbarium-based research is becoming more and more accessible as many herbaria have undertaken the ambitious project of digitization. Digitization allows each sample to be called up at a moment's notice rather than carefully rifling through individual samples in person. The process itself is not particularly complicated, but it is time-consuming. A high-resolution photograph is taken of each sample and the information on the label is typed. The digital sample is then placed in a comprehensive database for the herbarium along with thousands of other samples in the collection. Some of these databases are free to access online, such as those of New York Botanical Garden's C. V. Starr Virtual Herbarium or Butler University's Friesner Herbarium.

Digital herbaria are a great resource for botanists and hobbyists alike, offering helpful data for identifying plants visually, by common name or scientific name, or for learning local species. Even if you aren't looking for anything specific, the collections are lovely to browse through online. However, some herbaria are open to the public if you'd prefer to make a trip out of it. Check with the herbarium ahead of time, as some are open exclusively to researchers.

Indiana has twelve registered herbaria, all of which can be found on the New York Botanical Garden's Index Herbarium, along with thousands of others worldwide.

Thanks to pressed plant specimens and the herbaria that hold them, valuable botanical information can be stored long-term and used for any number of scientific or educational purposes. And thanks to digitization, this information is becoming increasingly available to plant lovers across the globe.

Adrienne Funderburg is a biology major at Huntington University. She is working with Dr. Colin Hobbs to digitize the university's herbarium collection.

Behind the scenes: Unsung heros

By Wendy Ford

A volunteer-led organization depends upon loyal, reliable, hardworking individuals, and INPAWS has plenty of them working behind the scenes. Here are a few unsung heros. We'll introduce more in coming issues.

Jeff Pitts

You've seen INPAWS president Jeff Pitts do standup comedy at our annual conferences, but I'll bet you didn't know he trained for the ministry before finding his calling as a landscape architect. Oklahoma-born and Doug Tallamy-inspired, Jeff has pushed to spread our message of building healthy ecosystems. He rides his bike to work at Ratio Architects in downtown Indianapolis. The firm has helped give our web site a professional look and has hosted monthly board meetings. We are grateful that Jeff has stayed on for a third year as president to see us through the governance transition.

Ruth Ann Ingraham

As a cofounder of INPAWS, Ruth Ann is our official historian, but she has long served in the unofficial function of keeping us on task and making sure things don't fall through the cracks. She is a published author, accomplished native plant gardener and cofounder of Brown County Native Woodlands Project. Helping solve problems and recruiting leadership are among her gifts to us, and she now sits on our board of directors.

Don Gorney

A recent recruit to INPAWS, Don kindly stepped in as treasurer when we lost our friend Marilyn Frohberg. He has done yeoman's duty keeping our finances in order, a role to which he is well-suited as a former bank examiner. An avid birder and committed environmental educator, Don is executive director of Earth Day Indiana. When he's not knee-deep in event planning or in the field with his binoculars, you may find him teaching kids at Cold Spring Environmental Studies Magnet School about birds and bugs.

Top to bottom: Jeff Pitts, Ruth Ann Ingraham, Don Gorney

Thinking strategically

Can INPAWS be more effective?

By Wendy Ford

This is the question we asked at our leadership retreat in February: can INPAWS be more effective? The result is a brand-new Strategic Plan ratified by the council in May.

The plan outlines three action priorities for now through 2020:

Piedmont Gardens

A. Position INPAWS for visionary leadership.

B. Establish INPAWS as a highly visible champion for native plants and biodiversity.

C. Nurture the next generation of ambassadors for biodiversity.

This is a tall order, for sure, but our vision demands that we pursue all three avenues effectively. (See "Visioning: It could happen!" in the Summer, 2016 *INPAWS Journal*.) We'll lay out strategic goals and implementation plans in future issues of the journal, but first let's look at how we've been working on Priority A to "position INPAWS for visionary leadership."

The Strategic Plan outlines two areas of focus:

A1. *Complete the transition to a board/council/chapter structure, clarifying respective roles, limitations and leeway.*

Getting our governance structure set up to work effectively is "job one." After almost a year of study spearheaded by president Jeff Pitts, we have begun reorganizing into a structure that we think will enable us to act more strategically, support our statewide programs properly and expand the role of chapters where regional efforts make more sense. There will be some confusion as we transition, hence the push to clarify roles and expectations. To that end:

A board of directors has been established (required for nonprofit status) that will establish policies and keep our eyes on the prize of realizing our vision.

Our by-laws have been updated and shared with the council for input. Tom Hohman led this effort, with the help of North Chapter president Steve Sass and West Central Chapter president Greg Shaner.

A "cookbook" style chapter leader handbook has been drafted to empower our regional chapters to initiate programs that they have the person-power and interest to implement.

Our vice president Davie Sue Wallace, who helped found the Southwest Chapter, is tasked with keeping in touch with chapter leaders and encouraging them to share ideas and experiences.

To sustain this volunteer-led organization it is clear that we need to cultivate INPAWS' future leadership. We expect to put specific programs in place to make this happen.

A2. *Engage INPAWS members more fully in the vision.*

We've started on this with our membership survey, which is helping us get to know you better. We intend to make crystal clear the reason INPAWS exists so that you can rally to the vision. We'll also clarify the perks of membership, find ways to attract and hold new members, provide ready opportunities for engagement, capture the attention and energy of the millennials among us and reach out to underrepresented groups to build a more diverse membership.

We're dreaming big and we want you to get excited with us! We're going to need everybody to get involved.

In the next issue of *INPAWS Journal*, we'll look at our second priority of becoming a "highly visible champion for native plants and biodiversity."

Note: If you wish to delve into the whys and wherefores of our priorities, the Strategic Plan introduction reviews the context for our thinking. Find the full document at *www.inpaws.org/aboutus/leadership*.

Wendy Ford is INPAWS webmaster and communications guru.

Letha's Fund needs donations

INPAWS' Letha's Youth Outdoors Fund has had a busy year! In the first half of 2016, we awarded over $7,300 in grants to 18 schools and youth organizations, more than the total of $6,450 awarded in all of 2015. This year we've provided funding to over 2,000 students, an all-time high.

One of those grants was $518 to Sycamore Land Trust for native seeds and potting soil for their work with students. Sycamore's environmental education director Shane Gibson reported:

"More than a field trip, the Native Plant Project was a continuation of already established nature-based programming that included literature, technology, writing and math. Thanks to Letha's Fund, the goal of getting seed and soil into the hands of as many students as possible was accomplished. This project led one kindergarten class to write a grant through their school foundation to purchase plants to place in a bird viewing area. … One teacher said that … the students when at recess were now exploring nature more and the playground less."

However, chairperson Angela Sturdevant says Letha's Fund coffers are now low and no further grants can be made until funds are replenished. "This kind of outreach to the next generation is only possible because of generous contributions," she said. "We hope people will donate to INPAWS and designate their contributions for Letha's Fund."

Information about Letha's Fund is available at *www.inpaws.org/education/letha*.

NE Chapter offers workshop Nov. 12

The Northeast Chapter of INPAWS and Little River Wetlands Project will offer a half-day native plant workshop Nov. 12 from 11 a.m. to 2 p.m. at Foellinger-Freimann Botanical Conservatory, 1100 S. Calhoun Street, Fort Wayne.

Participants will learn why native plants are critical to a healthy ecology; how to recognize, remove and replace invasives; and how to create habitat-friendly corridors by landscaping with natives.

The cost is a $5 admission to the conservatory, but registration is required. Lunch and a native seed packet are included. Register by calling 260-427-6440.

DNP guided hike to be Oct. 15 in Allen County

DNR Division of Nature Preserves will offer the final guided hike of the year Oct. 15 from 10 a.m. to 12 p.m. at Blue Cast Springs Nature Preserve, 21412 Bluecast Rd., Woodburn, 46797, in Allen County. ACRES Land Trust, which owns the property, is co-sponsor. This field day is free but registration is required at *www.in.gov/dnr/naturepreserve*.

SWINPAWS annual seed swap to be held Nov. 19

INPAWS Southwest Chapter will host its annual native seed swap Nov. 19 at Wesselman Woods Nature Center, 551 N. Boeke Rd., Evansville, 47711, in Vanderburgh County, beginning at 9:30 a.m. Members will have the opportunity to share native seeds from their own gardens, along with tips on how best to grow them. The public is welcome to this free event.

Hendricks Master Gardeners' annual seminar is Oct. 15

Hendricks County Master Gardeners will hold their annual "Adventures in Gardening" seminar Oct.15 from 9 a.m. to 3:30 p.m. at Hendricks County 4-H Fairgrounds & Conference Complex, 1900 E. Main St., Danville.

The seminar is open to the public, but pre-registration and a $45 fee are required. The fee includes continental breakfast and lunch.

Keynote speaker is Benjamin Vogt of Lincoln, NE, where he owns Monarch Gardens, a prairie garden design firm. He will present two sessions: "21st Century Garden Ethics" and "Designing for Winter Wildlife and Beauty." Other programs are "Botanical Workhorses: Heavy-Hitter Native Plants" by Jim McCormac of the Division of Wildlife, Ohio Department of Natural Resources, "The Amazing Honey Bee" by Terry Plank, beekeeper and pollinator educator, and "101 Landscaping Ideas: Adding Style & Fun to Your Outdoor Spaces" by Colletta Kosiba, 2500 Level Gold Master Gardener and Advanced Master Naturalist.

To register, go to *www.hendricksgardeners.com or call* the Extension Service at (317) 745-9260.

Events

Nature Surrounds

Indiana Native Plant
& Wildflower Society
P.O. Box 501528
Indianapolis, IN 46250-6528
Address Service Requested

Non-Profit
Organization
U.S. Postage
PAID
Indianapolis, IN
Permit No. 229

"Adopt–An–Ash" in Evansville

By Dona Bergman

Remember *The Lorax* by Dr. Seuss? "I am the Lorax. I speak for the trees." It was my children's favorite story book. All the Truffala trees were cut down, gone extinct.

In about two generations, we have seen American chestnut, American elm and butternut trees succumb, nearly to extinction, after being attacked by exotic fungal diseases. Today, it's not a fungal disease but an exotic insect – the emerald ash borer (EAB) (*Agrilus planipennis*) – threatening green ash (*Fraxinus pennsylvanica*), white ash (*F. americana*), black ash (*F. nigra*), and blue ash trees (*F. quadrangulata*). Skeletons of dying, dead and barren ash trees are painfully visible in areas where the emerald ash borer has decimated forests, parks and cemeteries.

In Evansville, we are fighting back. Evansville's city arborist Shawn Dickerson and Purdue Extension horticulture educator Larry Caplan have tirelessly educated the public and elected officials since EAB was recognized as a threat. In addition, Shawn has chosen other native species to plant in place of ash trees and has proactively removed ash trees on city properties which were structurally weak or already dying from other causes.

Extremely tight city budgets meant there were no funds to treat the over 400 ash trees on city properties with insecticides. What to do?

Anthony Moffat, commercial manager of TruGreen in Evansville, and Dickerson developed the "Adopt-An-Ash" program to fund applications of a protective insecticide. Cost is dependent upon the size of the tree and ranges from $30 to $500. Evansville Parks Foundation is handling donations.

The insecticide TREEageSS4 is injected into the tree trunk. Although TREEageSS4 is labeled for insect pests, it does not affect pollinators. Trees will need additional treatments every two years for a decade or longer. Treatment can be discontinued when the EAB has destroyed all untreated trees and moves out of the area.

A new web site, *www.evansville.adoptanash.org*, has information about EAB and an interactive map which can be used to locate all city-owned ash trees up for adoption. Trees indicated by red dots are adoptable; trees with green dots have been adopted. As you hover over an adoptable tree, a window will pop up with the tree's numeric ID

Wikimedia

Save an ash – continued on page 13