



Designing the “Type A” Native Plant Garden



INPAWS Journal (in the guise of Jeff Pitts) caught up with Karen Bird Hartlep recently to talk about one of the stops on the 2010 INPAWS Garden Tour—the Frank Hatcher residence.

Karen, a landscape architect at a multidisciplinary firm in Indianapolis, designed Frank’s backyard landscape about seven years ago. She graduated from Purdue University and is a long-time member and past president of INPAWS.

So Karen, how did this project get underway?

Frank worked as an electrical engineer at the same firm I did. We worked together for a number of years and became friends, talked every day, and shared a lot of lunches. I knew he was building a new house, and I’d been telling him for a long time about native plants and about how they’re the only way to go. I pretty much hounded him all the way through the construction process, told him I would design the landscape *pro bono* but it had to be natives.

Start us out by describing the context. What kinds of issues were you dealing with?

Frank’s house was in a new subdivision; their lot was about a quarter-acre. There appeared to be no topsoil, which was probably true of every lot in the addition. It’s not unheard of in residential development that before the subdivision is graded or infrastructure goes in, the topsoil is stripped off and sold. It should be stockpiled for redistribution later, but often it isn’t. So unsuspecting homeowners are left with only subsoil to plant in—and they wonder why they have so much trouble with their landscapes! It’s criminal.

So right away you’ve got no topsoil to work with.

Right. And you could see that what was developing in this subdivision was little more than a turfgrass wasteland. The landscape package you got from the developer included a Bradford pear in the front yard and a few spireas. That was it.

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INPAWS JOURNAL is published quarterly for members of the Indiana Native Plant and Wildflower Society. Material may be reprinted with the permission of the editor.

All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

Please submit text and photos via e-mail to wwford@comcast.net or via land mail to INPAWS JOURNAL, 6911 Cabernet Way, Indianapolis IN 46278.

Submission deadlines for specific issues are as follows:

Spring
February 23 for April 1 mailing

Summer
May 23 for July 1 mailing

Autumn
August 23 for October 1 mailing

Winter
November 23 for January 1 mailing

INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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INPAWS JOURNAL is printed on 100% post-consumer recycled paper.

PRESIDENT'S MESSAGE

A New Chapter!

I just got back from an organizational meeting of INPAWS' new Southwest Chapter, SWINPAWS. Davie Sue Wallace and several others in the Evansville area have been working since last year to find enough members and interest to form a local chapter. Besides notifying area INPAWS members, she contacted people who might be interested, primarily Master Naturalists and Master Gardeners. She even ran a small notice in the local newspaper. There were finally enough members that we thought we could try it.

I arrived at the Oaklyn Branch Library in Evansville about 9:00 a.m, when the meeting was supposed to start, and immediately noticed that the library parking lot was almost full. That surprised me, because the library did not open until 9:00 a.m. I figured there must be another meeting going on.

When I went inside, I was amazed to find an enthusiastic crowd that I later learned numbered at least 75, all there to learn about INPAWS' new chapter.

They started off the day with no bylaws or officers, and ended the day with both. (A special committee had previously developed bylaws for presentation to the meeting.)

As many of those in attendance were not yet INPAWS members, we gained 13 new memberships during the meeting. I suspect we now have about 40 family memberships in the area, representing about 60 individual members. We don't yet have an exact count.

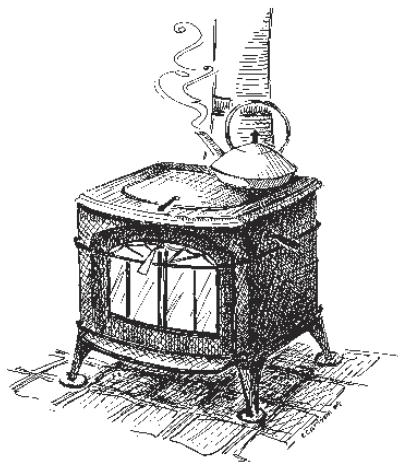
I congratulate Evansville area members for this amazing start. The new officers are: Davie Sue Wallace, President; Dona Bergman, Vice President; Pam Locker, Treasurer; Harlan Michelle Gorman, Secretary. Others who helped with the meeting preparations were Kathy Eicher, Chuck Price, Rhonda Schenk, and Tom Virgin.

As the meeting drew to a close, the new chapter members were already talking excitedly about which projects they were going to tackle first.

—Tom Hohman

Note: The new chapter comprises these counties: Dubois, Gibson, Knox, Perry, Pike, Posey, Spencer, Vanderburgh, and Warrick.

Drawing by Chris Carlsen in R.A. Ingraham, *Swimming with Frogs*.



INPAWS PARTNERS

INCA Legislative Priorities 2011

Indiana Conservation Alliance's seventh annual Conservation Day at the Indiana Statehouse once again engaged Indiana legislators in conversation about conservation. Governor Daniels was on the agenda to talk about the importance of DNR's new initiative focusing on the Wabash River.

Each year almost 30 organizations that make up the Alliance zero in on areas where they hope to influence legislation during the current session. INCA's 2011 legislative priorities include:

1. \$1 million per year funding for the **Indiana Heritage Trust**, the state's only dedicated land acquisition program for conservation. This visionary program sets aside important lands for state and local parks, Fish and Wildlife Areas, Nature Preserves, State Recreation Areas, and Historic Sites.
2. \$500,000 per year funding for **Clean Water Indiana**, created to protect and enhance the quality of Indiana's lakes, rivers, and streams by reducing the amount of polluted stormwater runoff entering surface and ground water. The program provides technical expertise to help urban and rural property owners complete projects that conserve soil and water.
3. Passage of legislation to create a **Sustainable Natural Resources Task Force**. The Task Force will complete a programmatic and funding needs assessment of natural resources and will report to the Natural Resources Study Committee.
4. Passage of legislation to **restrict the use of phosphorus in lawn fertilizers**. Phosphorus, a nutrient necessary for plant growth, causes a number of ecological problems at excessively high concentrations. Phosphorus-polluted runoff into waterways and reservoirs throughout the state greatly contributes to the spread of blue-green algae blooms, which can produce toxins and make water unsafe.
5. Passage of legislation to **authorize local governments to issue PACE bonds**, an innovative mechanism for financing energy efficiency and renewable energy projects. With PACE financing, no up-front costs are incurred and the property owners' annual energy savings typically exceed the annual property tax add-on for the bonds.

INPAWS members are urged to call, write, and visit their state senators and representatives to underscore their support for conservation, with particular emphasis in these five areas. For more information, contact INCA Coordinator Angela Hughes at The Nature Conservancy, www.tnc.org.

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Yikes! So, what about the homeowners; what kinds of goals did they have?

Well first of all, they just wanted to focus on the back yard. This was the space they intended to use, so their energy and money were going there. Frank's primary goal—he was very clear about this—was privacy.

He wanted to screen off the back yard so that he could...

Run naked through the... No, seriously, they wanted to turn their back yard into a sort of private outdoor room—an extension of the house into the outdoors—where they could have cookouts and a place to just hang out. Frank's an architect by training; he'd designed a deck out the back door and was building it himself. He wanted some patio space too where there would be room enough for a big grill and a couple of tables.

There was also a desire to create a separation from the park next door. They had selected a lot adjacent to the park, which effectively multiplied their yard by several times: their kids could play there and practically be at home. But that park has a basketball half-court and gets pretty busy, so they wanted a screen between it and them.

So privacy was numero uno. What else?

Frank wanted his landscape to be neat, well-kept. He's a very tidy sort. He was skeptical that we could achieve this with natives because he'd seen my yard, which is pretty wild-looking. He also wanted something more or less immediate; he wanted it to happen fast.

Interesting. So Frank wasn't convinced he could get a well-kept landscape with natives. How did you persuade him to give it a go?

Part of it was that he trusted me. We've known each other for a long time. When they lived in Sheridan, periodically he would ask me landscape-related questions. It wasn't that he cared so much about his landscape in those days. But maybe he'd buy a rose, for example, because they decided they needed a shrub in a certain spot, and it would die; so I'd teach him a little bit about soil amendments. Or he'd ask for a recommendation for a good shrub for another application, and I'd recommend a versatile native shrub, like *Viburnum dentatum*, and it would be just perfect for that application; he'd take note of that. So I had some credibility with him.

I also think he believed he needed help with this project and was willing to take a gamble on the native thing. He really wanted to create this private outdoor space, but knew he didn't have any experience with a large planting installation or with planting design. I assured him that we could do it—with natives—and that it would feel well-kept. And after all, my services were free.

Free is good. Talk us through the design process.

We started with the privacy priority—how to create this live screen around the back yard outdoor room. Frank really like the idea of a tall, layered vegetated screen, with lots of color. So we sort of worked from the outside in, with canopy trees near the property line, then smaller, ornamental trees, then shrubs and finally herbaceous perennials. At the same time,



◀The newly planted garden. ▲The mature look. ▶The reward.

we were careful not to create something contrived: we didn't want a uniform or regimented layer of stepped planting that followed the property line.

Frank's deck created some geometry for the interior of the space; it came off of the house at an angle. We were also intent on minimizing maintenance concerns, one of which was how to accommodate mowing the lawn portion. Because of the park next door, there was no real concern about giving up lawn space, which allowed more freedom in creating deep layered planting beds.

What we came up with were these large sweeping curves with lawn to the interior and native planting on the exterior. The curves were established with brick borders installed flush with the grade so that the mower wheels could ride on top of the brick pavers. The pavers were laid perpendicular to the bed edge to provide an 8" border—substantial enough to create a visual edge and a comfortable maintenance border. This clear delineation between lawn and planting provided the neatness factor that I had assured Frank we could achieve.

So you focused on and achieved the homeowners' first two goals, privacy and a well-kept appearance. What about Frank's desire for immediate results? And how about the color piece?

Well, frankly (no pun intended), it was amazing how fast this landscape developed. The trees and shrubs grew at a rate you might expect. The perennials, though, just took off.

How do you account for that?

Two things: soil prep and good plant material. At my recommendation, Frank tilled about four inches of spent mushroom compost into the soil layer, into the top foot or so. He effectively turned his mineral soil—his subsoil—into some decent topsoil which continued to improve due to the increasing native herbaceous perennial root mass. Normally we would expect native plants to thrive in native topsoil—without soil amendments—but as Frank's topsoil had been completely removed from the site, we had to create a substitute.

As for good plant material, the perennials came from an excellent source in Muncie. They were grown in open-bottom pots, which meant they started out at installation with a huge rooting advantage. They had also been inoculated with mycorrhizal fungi, which form a mutually beneficial relationship with plant roots.

Cool. And about the seasonal color?

I focused mainly on variety. In addition to trying to get color into the landscape throughout the seasons, I also wanted to create variations in texture, areas of particular interest, and a solid base of food sources for wildlife. We created a back yard oasis that pulled from a broad palette of native woodies and perennials. For canopy trees we planted tuliptree, red maple, white ash, sweetgum, and baldcypress; we also included persimmon and pawpaw. For ornamentals we used gray dogwood, serviceberry, pagoda dogwood, and one flowering dogwood. The shrub layer included arrowwood, blackhaw, and chokeberry. These woodies created screening, cover for wildlife, and structure for the space.

When it came to the perennials, our calculation of what it would take to fill the beds yielded hundreds and hundreds of plants, close to a thousand I'm sure. With the substantial number of woodies and now this massive proposed perennial installation, I thought Frank might have second thoughts—he was used to spending a very modest annual sum on plants. But he was fine with it. I think they intended to stay in this new house awhile, so it was a reasonable investment. Plus, I think he knew that to realize the desired result he needed the depth of the beds and the correct plant spacing.



So the final layer, at the ground plane, was a fairly heavy planting that included prairie dock, cup plant, foxglove penstemon, northern sea oats, nodding wild onion, blue false indigo, prairie dropseed, yellow coneflower, purple coneflower, black-eyed susan, beebalm, allium, and queen-of-the-prairie.

Between the woodies and perennials, he had something blooming from spring through late summer, and some fabulous fall color. And I have to say that we were both amazed at the number of insects, butterflies, and birds that found their way—through the barren turf wasteland—to Frank's garden. It was truly amazing, a miracle!

That's fascinating—and encouraging. Plant it, and they will come... Any other design considerations that come to mind?

One sort of subtle component we incorporated was a grass path that draws company straight into the back yard from the driveway, so for cookouts folks can go right to the party without going through the house. It also provided a means of tying the front and back together in a logical way.

One other component formed a central part of the aesthetic: we planted separate rows of black-eyed susan and purple coneflower that appeared to alternate around each other in sort of a double helix pattern that proceeded from the east side of the space west "through" the deck and into an ever-tightening spiral, like a Fibonacci spiral. In the centers we planted baptisia; the triangle outside the helix on the forward edge is nodding wild onion, and the outside triangle on the outer edge is monarda.

Sounds really cool.

It was! You could see this distinct pattern...for about three years. Then all of a sudden, with the aggressiveness of the monarda and the other self-sowing that had been going on, it all blended together. I was afraid Frank would object—he liked the idea of an organized planting scheme. But he didn't. He was fine with the plants doing what they wanted to do. In fact, he really loves the space we've created; they spend a lot of time there.

So, did you install the landscape, or help with it?

No, Frank pretty much did it all himself; I stopped by just once during installation just to see how it was going. He's very handy, plus he knows AutoCAD. We collaborated on laying out the plan in CAD, and he laid it out in the field, very precisely. He built the deck, and installed the patio and brick borders. He also installed the plant material. I coached him on the paver and planting installations, but he did the work himself. The end product was pretty much perfect.

Clearly, working with Frank was an ideal situation from a landscape architect's point of view. Is there anything you would do differently if you could do it over?

I would probably do more ecological research before finalizing the planting design. After hearing [Doug] Tallamy speak, I would probably put more thought into trying to provide specific food sources in a balanced way for a given local ecosystem.

One last question: any big-picture lessons that can be shared from your experience with this project?

One of the biggest obstacles to a wider acceptance of native planting is the perception that it is unkempt, out of control, and weedy. Historically our culture has preferred outdoor urban and suburban spaces that are controlled, sometimes to the extreme. A well-maintained appearance is a strongly held value. We can accommodate that value by using the same strategy that we employed at Frank's: create a clean, well-delineated edge to separate the natives from the rest of the world.

A hardscape edge—bricks for example—works very well; it's labor-intensive on the front end but needs little maintenance long-term. A spade edge is a good alternative, although you will need to restore it at least once a year. A fine-textured plant can also be used to create a relatively crisp border to edge your native installation. Grassy plants like prairie dropseed and sedges work well for this application. Some native ground-cover varieties also work well but may require an associated spade edge to keep them from spreading; Canadian ginger, northern sea oats and nodding wild onion are a few possibilities.

So the key word is "Edges."

Edges, yes.

From Jellybeans

Cheryl Shearer, Youth Outreach Committee

More than 20 years ago, avid wildflower fan Letha Queisser began taking neighborhood children on “nature walks” to a nearby Indianapolis park. Together they skipped rocks in the creek, picked up sticks, checked under rocks, and searched for beautiful wildflowers. With jelly beans as incentives, eager children began to identify the plants, matching their colors with those of the sought-after jelly beans.

Letha’s walks gained momentum, and soon she was taking Scout troops and nearby school classes to the park. Her deep interest in botany and native plants led her to volunteer for a local florist as a means to learn more about her passion.

With those fond memories in mind, Letha’s family and friends honored her love of the plant world by contributing to INPAWS following her death in 2007. Remembering how she tried to connect children with the natural world, INPAWS used the donations to establish Letha’s Youth Outdoors Fund, which supports trips for school and youth groups to experience nature in an educational context. The Fund also supports youth-initiated activities that bring them in closer contact with nature. Preferred groups are those with the least access to wholesome experiences in the natural environment.

To date, Letha’s Fund has enabled 1,542 youth to visit environmental education centers, nature preserves, and parks under the guidance of trained specialists and enthusiastic volunteers who can spark a respect for the natural world. The Fund also supported a Carmel, Indiana, Girl Scout troop’s garlic mustard eradication project and an overnight experience in the woods for handicapped youth.

Letha’s husband Dave is pleased with what the Fund has accomplished so far. Their eldest granddaughter, Lee Anne Tetrick, says, “I’m sure [Letha] is smiling down from heaven at the thought of these children being given a chance to experience some of the things that she loved most.” The Quiessers’ daughter Kristi Cohee adds, “I know she wanted underprivileged or inner city children to experience the parks and woods...she would have loved that the children were able to spend a night at Bradford Woods.”

INPAWS co-founder Ruth Ann Ingraham attributes her own appreciation of spring ephemerals and native plants to Letha’s guided walks along with plant rescues conducted by fellow members of Trailing Arbutus Garden Club. “I clearly recall her pointing out the differences between Dutchmen’s breeches and squirrel corn more than 30 years ago. Letha started my wildflower education.”

As the Youth Outreach Committee begins its third year, we have plans to increase the number of youth served. With school funding for field trips drastically reduced, this goal is now doubly important. Under the guidance and tireless effort of former chair Donovan Miller, the contributions that launched the Fund have been wisely used. As the new chair, I hope to see the Fund continue to grow so that more children can experience the wonder of nature.

Please consider a generous donation to Letha’s Fund to help spark the love of the natural world in our youth. Or, pick one of the other ways to support our mission: volunteer as a naturalist guide, help spread the word about the easy access to the Fund (a downloadable brochure is available online), and/or serve on the Youth Outreach Committee.

Then give yourself a jelly bean for helping to keep Letha’s passion for nature and wildflowers alive!



to Field Trips

Letha's Youth Outdoors Fund Annual Report

	<u>2009</u>	<u>2010</u>
Youth served	848	877
Cost per student per hour	\$4.49	\$6.24
Total awarded	\$3,810	\$5,469

Awards made to 24 schools/groups: Grantees have been public, parochial, alternative, and community schools as well as a Girl Scout troop and an organization supporting handicapped youth.

Sites visited: Merry Lea Environmental Education Center, Sycamore Land Trust, Marian College EcoLab, Holliday Park, Bradford Woods, Eagle Creek Environmental Education Center, Bean Blossom Creek and Bottoms, Lake Monroe Dam, Leonard Springs Nature Park, Turkey Run State Park, Southeastway Park.

Counties served: Marion, Hendricks, Hamilton, Morgan, Rush, Fulton, Hancock, Vigo, Clay, Boone, St. Joseph, Monroe, Ripley, Park, Elkhart.

Past and Present Committee

Members: David Quiesser, Karen Hartlep, David Benson, Ann Niednagel, Sonok Deutscher, Dan and Sophia Anderson, Chris Plews, Ruth Ann Ingraham, Tom Hohman, Julie Kempf, Donovan Miller (Founding Chair), Beth Young, Cheryl Shearer (Current Chair)

Kudos: Special thanks to Sonok Deutscher, who monitored and tracked applications for the first years of the Fund; new member Julie Kempf has taken over the grant tracking responsibilities. Special thanks to Donovan Miller for his tireless efforts in leading, launching, and nurturing Letha's Fund.

To make a donation, please contact INPAWS Treasurer Clare Oskay at oskays2@iquest.net.

Old growth forest photo by Cole Burrell.



Children's Butterfly Garden & Woodland Restoration

This project of Zion Nature Center, Zionsville, Indiana, was funded in part by the INPAWS Small Grants Program. The grant was written by Lauren Smith. The project included creating a butterfly garden with interpretive labels and replacing invasive groundcover with donated wild ginger in a restored woodland garden.



Young volunteers (kindergarten and pre-K) finish the Children's Butterfly Garden with a row of annual zinnias. Although not native, the zinnias prove more resilient to handling by youngsters than the delicate native plants.



Children pull weeds around native plantings during a public program.



Nature campers learn the benefits of native plants to wildlife in the Native Woodland Garden funded by INPAWS.

INPAWS Small Grants History

Compiled by Ruth Ann Ingraham

1995

\$50 to the Brown County Wildflower Foray

1997

Endowment established for grants and awards, funded by individual contributions and additions from the operating budget at the board's discretion

1998

\$100 to the Brown County Wildflower Foray

\$125 to purchase a brick with INPAWS name at Cool Creek Park

1999

\$500 to the Shelby County Soil and Water Conservation District

\$150 to the Brown County Wildflower Foray

\$200 for the U.S. Fish and Wildlife Integrated Environmental Curriculum development project

2000

\$100 to Brown County Wildflower Foray

\$500 toward the publication of Field Guide to Indiana Wildflowers by Kay Yatskievych

\$400 to Dee Terrell for Fall Creek Nature Center, Martinsville

\$100 to Kurt Springer for Lawrence Twp. KIND Alternative School

\$400 to John Jackson, ASLA, for Indiana School for the Blind, Monon Trail stop

2001

\$500 to Avon Outdoor Learning Center to purchase native plants for the center

\$200 to the Brown County Wildflower Foray

\$500 to IU Press to underwrite Marion Jackson's *Field Guide to Indiana Trees*

2002

\$500 to IU School of Public and Environmental Affairs student service group to purchase native plants for urban wildlife habitat to surround SPEA building

\$200 to Brown County Wildflower Foray

\$500 to Muscatatuck Wildlife Society, Seymour

2003

\$500 for two hillside plantings by the NICHES land trust near the I-65 and SR-43 interchange



>Welcome SWINPAWS! Pictured with INPAWS president Tom Hohman are our new Southwest Chapter officers (left to right): Secretary Harlan Michelle Gorman, Treasurer Pam Locker, Vice President Dona Bergman, and President Davie Sue Wallace

\$100 to Redtail Conservancy Land Trust
 \$500 to St. Thomas Aquinas School

2004

\$472 to Mary Damm, IU graduate student, for her research on the role of mycorrhizal fungi in the sand prairie and savanna communities of Northwest Indiana
 \$300 to Friends of the Sands for native plant landscaping at Newton County Fairgrounds
 \$500 to the Indianapolis Zoo for 13 species of native trees and shrubs to be planted at Fort Harrison State Park (project Indiana Habitat)

2005

\$400 to Tina Meeks and the Eagle Creek Gardening Committee to fund native plants and tags for their "Trickling Stream" project
 \$320 to Mickey Penrod of McCutcheon High School, Lafayette, for native plants and identification markers in the school's Certified Schoolyard Habitat
 \$300 to Betty Heffelfinger of Huntington County Master Gardeners for native plants in the "Historic Forks of the Wabash" demonstration garden on Miami Treaty Grounds

2006

\$500 to David Welch and Lisa Weisner, Sycamore Land Trust, to seed a half-acre at Touch the Earth Preserve in Bartholomew County
 \$200 to Gus Nyberg, Friends of the Sands, for mulch, potting soil, and hard-to-germinate or slow growing native plants to landscape the Roselawn, Lake Village, and Morocco Libraries in Newton County
 \$430 to Nina Evans, Indianapolis Zoo, for native plants, rocks, and compost to create a rain garden near the dining plaza

2007

\$500 to Jane Lommel for BRAG and the Binford Blvd. Native Prairie Habitat Project, Indianapolis
 \$315 to Elizabeth Middleton, IU Bloomington, to purchase Baptisia leucantha seed for her doctoral research on the role of prairie soil in converting from row crops to prairie plantings
 \$500 to Cathy Meyer, Monroe County Parks and Recreation Department, to purchase prairie seed mix for 1-1/4 acres to replace mowed areas in a public park
 \$185 to Nancy Mattson to purchase reusable laminated plant identification sheets describing the plants in the butterfly garden at Turkey Run State Park Nature Center in Parke County

2008

\$500 to Hendricks County Soil and Water Conservation District to purchase native plants for two demonstration rain gardens at public locations in Hendricks County
 \$400 to Southern Indiana Botanical Society to purchase educational materials for a native woodland wildflower garden in Floyds Knobs

2009

\$497 to Jonathan Bauer, Department of Biology, IU Bloomington, to study the effect on the native plant community of planting paw paw and spicebush after removing amur honeysuckle in Cascades Park, Bloomington
 \$500 to Pat Brown, Irvington Terrace CrimeWatch, Indianapolis, to beautify the Washington Street entrance to the Irvington neighborhood by planting native shrubs and grasses
 \$500 to Roy Johnson, Agricultural Science Instructor, East Central High School, Saint Leon, for high school Landscape Management students to design, install, and maintain a planting bed using native plants

\$500 to Michael Phelps, Town of Brookston, to plant an acre of native prairie grasses and forbs in the Heart-to-Heart Walking Park

2010

\$750 to Little River Wetlands Project, Fort Wayne to fund an Education Garden at Arrowhead Prairie
 \$750 to Middlebury Parks Department for two rain gardens demonstrating stormwater management
 \$500 to Southern Indiana Cooperative Weed Management Area to produce a landowner's invasive species toolkit
 \$300 to Zion Nature Center, Zionsville, to fund children's butterfly garden and woodland garden restoration
 \$400 to Monroe County Courthouse for native plant demonstration garden and signage
For Small Grant Guidelines, see INPAWS.org or the autumn issue of INPAWS Journal.



A Pear by Any Other Name...

You've probably heard of Bradford pear. How about Aristocrat pear? Or Cleveland Select, or Chanticleer? These are all cultivars of an Asian species called callery pear, which is probably the most popular ornamental tree in the U.S. Visit any subdivision or strip mall in mid-April, and you'll see rows of callery pear covered in large, loose clusters of white flowers. Those flowers are one of the reasons it's so popular; other reasons include its small size, symmetrical lollipop shape, and resistance to disease. And, once upon a time, they were also popular because the trees were sterile, so no messy fruits covered the ground.

Unfortunately, things have changed. Over the last decade, callery pear has become invasive over much of the eastern U.S., and reports of callery pear moving out of cultivation are coming in from all around Indiana. How did this formerly sterile species become a fruit-laden invader?

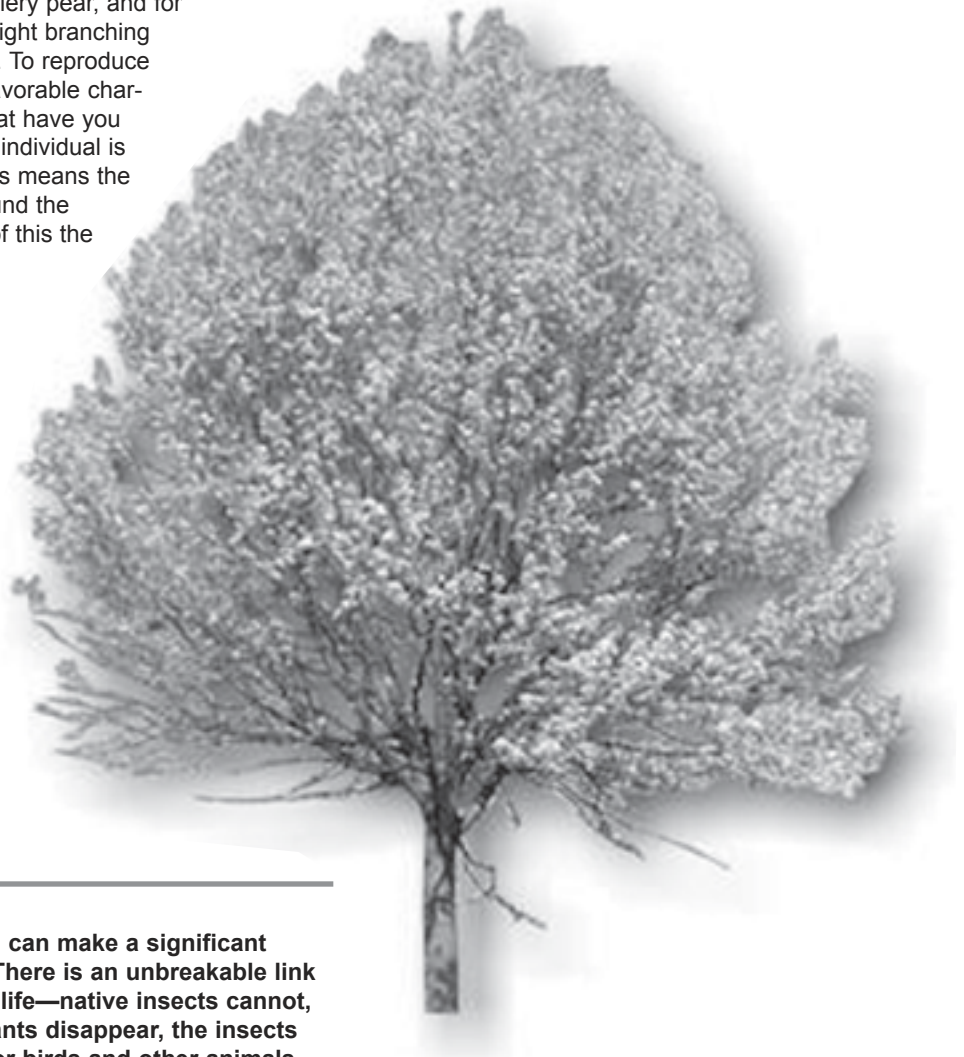
Bradford pear was the first popular cultivar of callery pear, and for many years it was the *only* cultivar. It had an upright branching form that was very popular in urban landscaping. To reproduce exactly the same genotype that resulted in the favorable characteristic—branching pattern, flower color, or what have you—cultivars are propagated vegetatively, so each individual is genetically identical to every other individual. This means the millions of Bradford pears that were planted around the country were all clones of each other. Because of this the trees were sterile, unable to produce fruits.

Fast forward a few years...it becomes apparent Bradford pear has some bad traits. Specifically, the branching pattern and weak wood almost guarantees that, given heavy snow or high winds, the tree will split and die. In response, plant breeders worked to come up with new, better cultivars that didn't have that weakness. Dozens of cultivars flooded the market and were planted across the landscape. Once these genetically different cultivars were planted next to the Bradford pears, boom! They were able to produce fruits. Lots and lots of small, brown, round fruits that cover sidewalks and allow these pears to move out of cultivation.

As Keith Clay of Indiana University once put it, the interspersed planting of all these different cultivars in urban areas has created an "orgy of reproduction" in callery pear. Perhaps the worst affected area in Indiana is Crane Naval Reserve. A nearby nursery that once grew different callery pear cultivars has resulted in a huge influx of fruits into this forested area, and it is estimated that 80% of the wooded acres are infested with callery pear.

Please do our forests a favor and don't plant callery pear! Fortunately, Indiana has plenty of other species to plant that are not invasive.

To see a list of native species for landscaping, go to INPAWS.org and click on Gardening with Native Plants.



Everyone with access to a patch of earth can make a significant contribution toward sustaining biodiversity. There is an unbreakable link between native plant species and native wildlife—native insects cannot, or will not, eat alien plants. When native plants disappear, the insects disappear, impoverishing the food source for birds and other animals.

—Timber Press promoting Doug Tallamy's *Bringing Nature Home*

GOT SOMETHING TO SAY?

Why not say it in *INPAWS Journal*? This publication reaches 500+ member households, 100+ affiliated organizations (e.g., other native plant societies, Indiana land trusts, libraries, cooperative extension offices), and occasionally 100 Indiana legislators (through additional printing funded by The Nature Conservancy).

We welcome articles on native plants, restoration projects, conservation issues, outreach efforts, botanizing expeditions, gardening with natives—anything likely to interest *Journal* readers.

Please contact the editor with your ideas at wwford@comcast.net or 317-334-1932. Article development assistance and editing are provided.

AC2010 Retrospective

Thank you for the opportunity to chair the 2010 INPAWS Annual Conference. I joined INPAWS the day after the Doug Tallamy lecture in November 2009, and my long-time colleague and friend Karen Hartlep recruited me for two projects straight away, one of which was the annual conference (my first!). So I appreciate the faith you placed in her judgment and in me.

We had about 180 registrants and over 200 people present including presenters, exhibitors, and conference staff. Interesting to note that 24 of those who filled out evaluations said it was their first INPAWS annual conference (make that 25, including me).

Here's a snapshot of the participant evaluations:

- Jim McCormac's presentations were the most popular; the Q&A time after Carole Brown's presentation, for those who could hear it, was also a hit.
- Most attendees liked the way the day was structured, but some who had to drive a ways to get there would've preferred a later start. Others indicated that the inclusion of some activity would've been welcome.
- A lot of folks liked the bookstore, and a ton of good suggestions were offered regarding speakers and topics for future conferences.
- Almost everyone who turned in an evaluation form said they would likely attend another INPAWS conference.

Organizing a conference proved to be no walk in the woods—luckily I had a lot of help! Besides Karen's indispensable help throughout the past year, a whole slew of other wonderful folks donated their time and expertise: Wendy Ford, George Peregrin, Clare Oskay, Tom Hohman, Suzanne Stevens, Mark Outcalt, Fritz Nerding, Nancy Ayers, Terry Bowen, Sharon Bowman, Kelsey Pitts, Hanna Spiegel, Marcia Moore, George and Betsy Wilson, Betty Randall, Hilary Cox, Dee Ann Peine, Sue Arnold, Nancy Zennie, Kristy Stultz, Jackie Luzar, and Reni Winter. I'm sure I've left out someone; my apologies for that. THANKS to everyone who helped make the annual conference a success.

—Jeff Pitts, *Chair*

This just in: Treasurer Clare Oskay reports that AC2010 turned a profit, possibly a first in INPAWS conference history! Thanks to robust registration numbers, additional sponsorships, and a favorable deal on food and facilities, INPAWS netted \$3,513.

INCA-hoots

Wondering what INCA is? They're our ally in promoting conservation of Indiana's precious natural areas. The Indiana Conservation Alliance provides a unified voice for the protection and wise use of natural resources to enhance our quality of life. The main event of this loosely organized consortium is their annual Conservation Day at the Statehouse, which falls in late January or early February. Our representatives are Jane and David Savage, co-chairs of INPAWS' Conservation Committee.

INCA members include:

Amos W. Butler Audubon Society • Central Indiana Land Trust • Central Indiana Wilderness Club • Eagle Creek Park Foundation – Citizens Advisory Committee • Hoosier Chapter of the Soil and Water Conservation Society • Hoosier Environmental Council • Hoosier Heartland RC&D • Hoosier Hikers Council • Indiana Association of Soil and Water Conservation Districts • Indiana Chapter of the American Fisheries Society • Indiana Chapter of The Wildlife Society • Indiana Forest and Woodland Owners Association • Indiana Lakes Management Society • Indiana Land Protection Alliance • Indiana Native Plant and Wildflower Society • Indiana Organic Gardeners Association • Indiana Park and Recreation Association • Indiana Recycling Coalition • Indiana Society of American Foresters • Indiana State Council of Pheasants Forever • Indiana Urban Forest Council • Indiana Wildlife Federation • Izaak Walton League • National Audubon Society • Oxbow, Inc. • Save the Dunes Conservation Fund • Sierra Club • Sycamore Land Trust • Sycamore Trails RC&D • The Nature Conservancy

Wildflowers and Ferns of Indiana Forests – A Field Guide

By Mike Homoya, Indiana University Press (forthcoming)

Several years ago I started gathering information for a book on the plants of Indiana's most prevalent ecosystem – the Eastern Deciduous Forest. My primary objective: to create a field guide that botanists and non-botanists alike could use to identify the majority of plant species at any forested site in the state. Although the guide would emphasize herbaceous wildflowers (i.e., the usual showy ones), I also wanted to cover common species of all the vascular plant groups found in our forests, including ferns, shrubs, trees, grasses, and sedges. (Yes, except for the ferns, all of these are true wildflowers – the flowers of some just aren't of the typical size, shape, and color that we associate with the term.)

The field guide highlights almost 300 of Indiana's forest wildflowers and ferns. Most of them have statewide distribution, occurring in forest types found on landscapes ranging from wet to dry, flat to rugged. Provided for each species, in order of presentation, are common name, scientific name, plant family, general description, ecology (including habitat and companion plants), flowering date, and discussion. There is at least one photo per species.

I strove to make the guide as user-friendly as possible, thus the introductory material and species accounts use English measurements and common, non-technical language. Consider fern leaf structure, for example. The term "leaflet" is used in place of pinna, and subleaflet substitutes for pinnule. In another example I use "seed scale" instead of lemma (a part of a grass flower). I hope this word style, along with the instructional diagrams, will encourage non-botanists to learn the more structurally complicated species. For those aiming for botanical literacy, I couple the every-

day terms with the botanical ones in diagram labels and the glossary.

Color photographs are the main identification tool of the field guide. The species and their photos are grouped according to flower color or structure. Thus an unknown plant having blue flowers should be searched for amongst those photos in the section devoted to flowers of the same color. A match of the plant in hand and the photo should lead to a correct determination. As an additional aid to identification, the plants within a particular color group are arranged by order of blooming, starting with the earliest spring blooming plant and proceeding sequentially through the growing season to the latest bloomer.

I tried to include photos showing both a close-up of the flowers and as much as possible of the full plant growing in its habitat. There are also photos of things usually not included in field guides, such as the "seals" of golden seal, the "peanut" of hog peanut, and the "yam" of wild yam. In the same vein, there are photos of "sticktight" fruits from the dozen or so forest species that have the trait of hitchhiking on your clothing. (Don't you want to know what those cursed things are that cover your socks and pant legs after a hike?) Included with my own photos are contributions by some of the best nature photographers in the state and region, including an especially ample selection by Keith Board, Ron Rathfon, and Paul Rothrock.

In the discussion section of each species is a mix of information about the plant, with topics such as life history, name derivations (both scientific and common name), family relatives, similar species, and what I call the "Indiana connection," the plant's ties to Indiana people and/or places. Here's a sample of the kinds of information provided:

Prickly ash isn't an ash at all, but a member of the citrus family (its fruits even have a citrus smell).



In Memoriam

INPAWS mourns the passing of Frederick W. Case, who spoke on American pitcher plants at our 2007 Annual Conference. Case was a Saginaw, Michigan, high school teacher recognized as an outstanding authority on orchids in North America and the genus *Trillium*. The American Association of Plant Taxonomists awarded him the 2003 Peter Raven Award, given to a deserving individual recognized for their outreach to non-scientists.

A Magic Wand?

Alfred Kinsey, the famed Indiana University professor best known for his Kinsey Report, coauthored an authoritative book on edible wild plants that includes his wife's recipe for persimmon pudding.

The name of the Salamonie River located in northeastern Indiana is derived from the Miami-Illinois Indian word *oonsalamooni siippiwi*, meaning "bloodroot river," likely for the abundance or quality of bloodroot growing in the area.

In addition to the species treatments, there are chapters devoted to landscaping with native forest plants; conservation and threats; and a discussion of Indiana's natural regions and general forest types. In the latter, species lists that match the community type are provided, as well as names of specific nature preserves in the state where examples of the communities and plants can be seen.

Wildflowers and Ferns of Indiana Forests – A Field Guide is expected to be in print by this summer. All royalties from the sale of the book go to the Indiana Department of Natural Resources for the purchase of land for state nature preserves.

Barbara E. Plampin, PhD, Shirley Heinze Land Trust

"Walk softly and carry a big stick," counseled Teddy Roosevelt regarding foreign policy. His advice also applies to plant detection. Not only does a big stick prevent stumbles, ease dune climbing, and keep one's footing in wetlands, it has several functions beyond these and a pointer for hike leaders. A plant detective can't easily carry a rake, but a stick, along with one's fingers, makes a good substitute.

With a stick, one can push back green (cat)brier (*Smilax* sp.) to prospect for well-hidden and well-protected populations of shinleaf (*Pyrola* sp.) or trailing ground pine (*Lycopodium complanatum flabelliforme*), or thrust aside New York fern (*Dryopteris noveboracensis*) fronds to reveal other club mosses (*Lycopodium* spp.).

When Dr. Gerould Wilhelm told me to scrape away leaf litter from a dried-up seasonal pond to look for sundews (*Drosera* spp.), I didn't discover any, but I did turn up adder's tongue fern (*Ophioglossum vulgatum pseudopodium*) with its single, spoon-shaped sterile frond surmounted by a narrow fertile blade. By using my stick to scrape away leaf litter in dried-up marshes with blue flag iris (*Iris virginica shrevei*), I've located new colonies of this ancient fern. (It's often discussed along with the earliest ferns in floras of NE North America because it's seen as one of the earliest of our ferns to evolve.)

The DNR's Tom Post taught me to remove leaf litter in fens to detect the little green, zipper-like ground-hugger, marsh club moss (*Selaginella apoda*), miniscule *Thismia americana* (no common name), family Burmanniaceae, which neighbors the orchids in evolutionary development. *Thismia* may be our most mysterious plant: it was found in North America only between 1912 and 1916 by University of Chicago graduate student Norma Pfeiffer in Cook County, Illinois. It has never been seen anywhere else in the world. Its habitat also occurs in Northwest Indiana. The "Thismia Hunt" planned for August 13, 2011, will surely include Northwest Indiana sites. Norma Pfeiffer did write her Ph.D. thesis on the plant, and both the Missouri Botanical Garden and the Field Museum in Chicago have specimens. I have seen the dried, mouse-colored, one-fourth inch specimens at the Field Museum. In real life, they lacked chlorophyll; petals number six, three of them coniving (touching) in the center of the other three, like a basket handle. Probably we won't use sticks much in our hunt for *Thismia*: we'll be down on our knees or even stomachs.

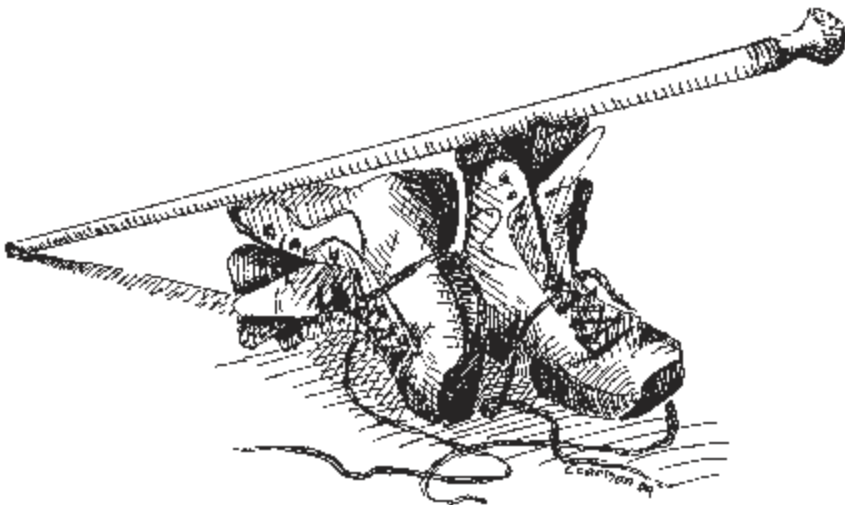
Last November, we tried to re-locate an already mapped colony of sand club moss (*Selaginella rupestris*) on a wooded dune. Removing oak leaves with sticks revealed no plants: too many hikers had left behind too many beer bottles. However, Dr. Noel Pavlovic of our local U.S. Geological Survey found this ground-hugging, somewhat resurrection-plant-like "fern ally" on a dune ridge about a mile away underneath wild lupine (*Lupinus perennis occidentalis*) when measuring young lupine plants for a study.

Next time: More about *Thismia* and earlier *Thismia* Hunts.

Book

Swink, F. & G. Wilhelm. *Plants of the Chicago Region. Fourth Edition.* Indianapolis: Indiana Academy of Science, 1994.

Drawing by Chris Carlsen in R.A. Ingraham, *Swimming with Frogs.*



INPAWS Award at INASLA

An INPAWS award was presented at November's annual conference of the Indiana Chapter of the American Society of Landscape Architects. The recipient was Kevin Parsons & Associates, in partnership with The Etica Group, which provided civil engineering for the project. The award was for designing the Eli Lilly and Company Sustainable Gardens just south of downtown Indianapolis.

INPAWS Council Considers Alternative Conference Venues

As its fall 2010 meeting, INPAWS Council discussed the pros and cons of holding the INPAWS Annual Conference in Indianapolis versus other locations throughout the state. It was decided that, for logistical reasons, especially access to an airport for out-of-state speakers and a larger pool of volunteers in Central Indiana, the conference should be held in the Indianapolis area. To better accommodate members in other regions of the state, at least every other year INPAWS will host an overnight trip outside Central Indiana but within the state, possibly at a state park.

IWF Promotes P-free Lawns

Before fertilizing this spring, Indiana Wildlife Federation asks you to consider Indiana's streams and lakes. Phosphorus should be used only on newly established lawns or those deficient in phosphorus as determined by a soil test.

Phosphorus, a nutrient plants use to develop a strong root system and store energy, can be a nuisance in excess quantities. Described as *cultural eutrophication*, too much phosphorus causes undesired algal blooms and oxygen depletion, disrupting the ecosystems in lakes and streams.

Phosphorus enters Indiana water via several pathways including urban storm water, sewage treatment plants, and agricultural run-off, but the easiest to address is residential storm water run-off containing phosphorus from lawn fertilizer.

Most lawns in Indiana do not require yearly phosphorus applications, because they are currently saturated with the nutrient. Unused phosphorus leaves lawns and travels into rivers, streams, and lakes causing algae growth. Algae deprive native aquatic species of oxygen, food, and sunlight. By managing nutrient use, we can restore Indiana's biodiversity in aquatic habitats and improve water quality.

IWF has met with and received input from the professional lawn fertilizer association, the Indiana Corn and Soybean Growers, Engledow, Farm Bureau, IDEM, NRCS, Scotts Miracle-Gro Company, and the State Chemist. A bill restricting phosphorus use in lawn fertilizer will be introduced in Indiana's House by Representatives Dick Dodge and Nancy Dembowski and sponsored in the Senate by Senator Beverly Gard.

Already, a positive change in the consumer market has begun. Scotts is advising consumers to incorporate sustainable lawn maintenance practices, and by 2012, their Turf Builder line will be phosphorus-free. An increasing number of professional applicators such as Tru-Green and Engledow Group are also going phosphorus-free.

The proposed legislation will apply to all property owners. Agricultural land and garden food production are exempt from the policy.

INPAWS members can sign a pledge to be phosphorus-free at <http://www.indianawildlife.org/phosphorus.htm>

Doug Tallamy Now on Video

Thanks to a recording shared with us (with permission!) by the Florida Native Plant Society, we have an opportunity to distribute DVDs of a Doug Tallamy's talk similar to the one delivered at the 2008 INPAWS Annual Conference and at Butler University in November 2009.

The DVDs are available for \$3 shipping and handling by request to info@inpaws.org. Please spread the word to your local garden clubs, extension offices, and gardening friends.

Speak!

INPAWS is receiving quite a few requests for speakers, which is great for us. It's a chance to get the word out about native plants, alert people to the dangers of exotic invasive plants, and recruit members for INPAWS. Trouble is, we don't have enough speakers to meet the demand.

We have a pretty good number of speakers in Marion County, but only a scattering of loyal speakers in some other parts of Indiana. We need members all over the state who are willing and able to speak to interested groups such as garden clubs, libraries, and professional organizations. INPAWS has several good transparent-slide sets, which we're working to digitize; or, you could show your own slides if you prefer.

If you think you might enjoy telling people about Indiana's beautiful native plants, we could sure use your help.

If you're interested, or even just curious, please contact Art Hopkins at plant4art@yahoo.com, or 812-372-2862.

Ticks Linked to Asian Bush Honeysuckle

Tick expert Brian F. Allan, PhD, gives us another reason not to like invasive bush honeysuckle. "I've spent a lot of time in honeysuckle," Allan says, "and I can tell you there are deer tunnels through it. So if you get down low, you can actually move through honeysuckle pretty efficiently. And you pick up a lot of ticks while you're back in there." An interdisciplinary team of ecologists, molecular biologists, and physicians tested Allan's suspicions by setting up four experimental plots invaded with Amur honeysuckle (*Lonicera maackii*) in a conservation area near St. Louis; measurements consisted of surveying deer poops and counting ticks trapped on double-sided carpet tape.

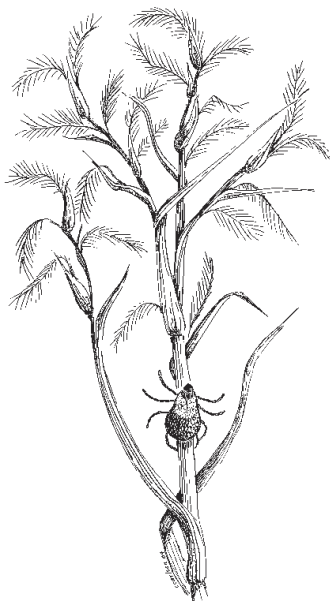
As reported in the *Proceedings of the National Academy of Sciences*, the researchers found the density of white-tailed deer in honeysuckle-invaded areas to be roughly five times that in areas without honeysuckle. The density of nymph life-stage ticks infected with bacteria that cause human disease was roughly 10

times higher. Says Allan, “[The deer] like to bed in it because it’s the densest thing out there, the best structure in town. No native species comes close to achieving the same density.” Allan is encouraged that these study results set up a potential case of win-win ecology. Controlling honeysuckle would benefit native species, but it would also benefit human health. (Excerpted from an article in *Science Daily*, Oct. 12, 2010.)

Great Lakes Early Detection Network

The University of Wisconsin-Madison, in partnership with the National Park Service and the Midwest Invasive Plant Network, is developing an invasive species early detection/rapid response system specific to the Great Lakes region. The website will use resources currently available through the National Institute of Invasive Species Science cyberinfrastructure (www.niiss.org; www.citsci.org) tailored specifically to the needs of stakeholders in the region. The project seeks input from scientists, natural resource managers, private landowners, and citizen scientists on what they would look for in such a system.

To participate in focus groups or be added to the project contact list, contact Alycia Crall at crall@wisc.edu or 970-227-3310.



Invasives Effort Moving Forward

The Invasive Plant Advisory Committee, created by Indiana’s new Invasive Species Council a few months ago, has embarked on the creation of a science-based, transparent invasive plant list for Indiana and the development of best management practices for government agencies’ response to invasives.

Ellen Jacquart is leading the invasive plant list project, and has outlined different processes according to four categories of plants:

- (1) obligate wetland species that have already been assessed through Doug Keller’s Aquatic Invasive Advisory Committee (4 species);
- (2) plant species previously assessed through the Invasive Plant Species Assessment Working Group (32 species);
- (3) plants in trade that have not yet been assessed through the IPSAWG process (22 species); and
- (4) plants not in trade that have not yet been assessed through the IPSAWG process (38 species).

Tom Tremain is leading the best management practices effort, possibly simplifying a template developed in Wisconsin. A draft will be shared with relevant agencies to help refine the BMPs.

New Resource from an Ohio Ally

Gordon Mitchell of Columbus, Ohio, has kindly offered to let us post his articles written for the Ohio Native Plant Society. His exhaustive research has provided detailed plant descriptions as well as information about toxicity/edibility, medicinal uses, and legends/folklore. Find the complete list of resources at INPAWS.org under About Native Plants.

◀ Drawing by Chris Carlsen in R.A. Ingham, *Swimming with Frogs*.

Mark Your Calendar

Saturday, April 9 INPAWS Hike University of Southern Indiana forest land, Vanderburgh County. Led by Dr. Edith Hardcastle.

Saturday, May 7 INPAWS Plant Sale & Auction

Saturday, May 14 INPAWS Hike Pennywort Cliffs, Jefferson County. Led by Bill & Maggie Adams.

Saturday, June 25 INPAWS Hike Potato Creek State Park, St. Joseph County. Led by Scott Namestnik.

Saturday, July 16 INPAWS Hike Henderson Park, Washington County. Led by Allen Pursell.

August hike date and place TBA.

Saturday, September 17 INPAWS Hike Kankakee Sands, Newton County. Led by Stephanie Frischie & Alyssa Nyberg.

Saturday, October 15 INPAWS Hike Morgan-Monroe State Forest nature preserve, Monroe County. Led by John Bacone.

Saturday, November 12 AC2011 INPAWS Annual Conference

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at INPAWS.org.



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THE LAST WORD

Tom Hohman, Amateur Naturalist

Observations

We all know 2010 was a dry year—we've seen the effect on lawns and gardens. Even native plants were affected, although we anticipate they will be back next year. I wonder, though, about a delayed effect on wildlife.

With the scorching weather all summer and early fall I wonder what impact that had on production of fruits and seeds. My prairie plants seemed to be unaffected, flowering as if everything was normal. But I've seen some disturbing signs that trees may not have produced their normal crop of seeds. My silver maples produced their usual bumper crop (more than I would like) in June when it was wet. But I didn't notice the normal late summer crop of sugar maple seeds.

As I'm sitting here thinking about this, I realize that I've also not seen any ash seeds. I recall one winter when there was a particularly abundant crop, and it seemed to me the neighborhood squirrels



survived the winter primarily because of them. I remember seeing the furry critters day after day scrounging through the piles of seeds that had collected in the yard.

I have an ornamental crabapple tree in the front yard that always produces a large crop of fruit. Typically the fruits remain on the tree until late winter, when the birds finally eat them. Crabapples do not seem to be their favorite food, but the bitter morsels certainly come in handy when other foods have vanished. This year the birds were already gobbling them up in December.

My observations are based on a small area and hopefully are not true throughout the state. But if you notice the same thing in your backyard, you may want to make doubly sure your bird feeder remains full. And you may also want to think about your neighborhood squirrels.

That new squirrel-proof bird feeder I bought is working. I think I'll go put out some corn for the squirrels. Maybe I'll throw in a few peanuts too.