



inpawsjournal

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News and Views from the Indiana Native Plant and Wildflower Society • Autumn 2006

A YEAR OF...

Blissful Botanizing

Hilary Cox
Leescapes Garden
Designs

I feel so lucky!

Whether in Arizona or Wisconsin, Virginia or Indiana, I had always gone with family and friends when looking for plants in their natural habitats. But family and friends just didn't tolerate stopping every five seconds to try to identify yet another inconspicuous plant of no interest to anyone, and they certainly didn't want to lug along a pile of dusty old botany tomes. So I left my books at home, and for the longest time all I did was look, maybe take a photograph or two, and hope to get enough time somewhen in my life to identify what I had seen. I harbored a dream, though, that one day I would be able to take all my books with me, sit in the middle of the "great wide open" and botanize to my heart's content.

I never dreamed I would find someone equally impassioned who would want to accompany me.

Dee Ann Peine had spent several years in solitary "botanizing" around the family farm in Morgan County and the family home near Eagle Creek reservoir in Marion County, and our trillium odyssey together last year proved to be the beginning of a plant-hunting companionship

that continues to grow. After our wonderful experiences in North Carolina/Tennessee/Kentucky/Indiana that spring, it seemed only natural to join forces in our continued search for plants both familiar and unknown.

We started "down at the farm" by borrowing step-son Doug's Rhino. This jeep-like conveyance allowed us to take *all* our books plus our picnic

lunch with us, and we could get to more places on the property in one day than if we were walking. We were accompanied only by the dogs, who are always willing to excuse our aberrant behavior as long as they are allowed to be there. We have named this "luxury botanizing"! From our privileged position we could trundle along

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Passiflora lutea. Photo by Dee Ann Peine.

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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.

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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 values, beauty, diversity, and environmental importance of indigenous vegetation.

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

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Take a [Mini-]Hike!

PRESIDENT'S MESSAGE

Karen Hartlep

A Closer Look

Greetings Native Plant Enthusiasts!

I hope you've all had an enlightening, invigorating, refreshing summer and are looking forward to a slower pace as we ease into fall. I've learned a lot this summer, partly because for the first time in 20+ years(!) I got out my 16x hand lens from my Dendrology class at Purdue. It's absolutely amazing how much there is to look at and try to understand!

While thinking about all I miss on a daily basis because of not really looking deeply at things, I sent the following quote from Louis Agassiz to a friend: "I spent the summer traveling. I got halfway across my backyard." He thought it was a joke! But I actually have spent the summer "traveling" in my yard.

Lens in hand, I have seen paw paw flowers, persimmon flowers, buds breaking that I hadn't seen before, crazy insects I can't identify, and a plant I am now in love with strictly on the basis of its stem color—it's blue-stemmed goldenrod, with absolutely stunning glaucous periwinkle-to-eggplant purple stems, holding close a contrasting beadwork of bright yellow flowers. I had this plant in my garden for about five years but only glanced at the flowers—until now.

There are so many more undiscovered treasures just waiting for me to notice and appreciate more fully. I hope you've experienced the same joy.

Speaking of treasures! We're looking forward to a great Annual Meeting on November 4th in beautiful southern Indiana. Ellen Jacquart and Gillian Harris have done a remarkable job planning, procuring, organizing, and even obsessing a little over this event along with their team from the South Central Chapter. I hope to see you there. (I'll be the one with the hand lens around my neck!)

Here's to taking a closer look and enjoying the tiny things in life.

Karen

Bobbi Diehl

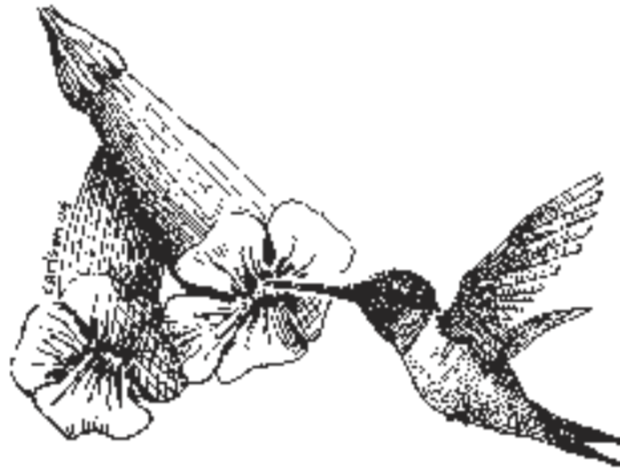
In the last issue of INPAWS Journal, Bobbi Diehl extolled the virtues of mini-hikes to keep body and mind in good shape. As promised, here are more Bloomington mini-hike opportunities. The first two are on private land. The second two are City of Bloomington parks.

Griffy Woods

In 2001, the 185-acre Griffy Woods, along the south shore of Griffy Lake, was established as part of the Indiana University Research and Teaching Preserve. It is not to be confused with the city's extensive system of trails on the north side of the lake. Three newer trails lead to University Lake, and I hope to check

them out one day. But the original Griffy Woods site consists of five trails passing through beautiful wooded terrain. The trails feature steep dropoffs, creeks, ravines, rock formations, and of course wonderful trees, ferns, and other vegetation, including the delightful partridgeberry in one spot. Interpretive signs tell about the sights along the way.

The Loop Trail makes for a pleasant and easy 0.3-mile hike. Or start off on the rugged Ravine Trail with its steps and hand rails, and proceed to what was once an old railroad track. Here the easier 0.6-mile Weir Trail begins, following a rushing stream and then looping back to the road. For a more ambitious hike, again take the Ravine Trail from the road to where it intersects with the 1.2-mile Overlook Trail, which follows several ridges before coming back to the Ravine Trail. Standing atop one ridge, you can enjoy a lake view and a breeze—welcome on a hot day.



Drawing by Chris Carlson in Ruth Ann Ingraham, *Swimming with Frogs*.

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Blissful Botanizing

continued from page 1



Putty root (*Aplectrum hyemale*) inhabits moist, deciduous woods. Photo by Hilary Cox.

as slowly as we liked, looking for plants we didn't recognize, stopping to identify them, and taking as long as it took. What bliss! Nobody chomping at the bit to keep on moving, no verbal prods to suggest this was boring, and food available when we needed it. Unlike cats, the dogs were not intent on getting into the precise spaces we were focusing on and most often had their own business to go about anyway, so we had relatively few plants damaged by our enthusiastic tail-wagging companions.

At first Dee Ann introduced me to all the woodland plants with which she is more familiar than I, such as the native orchids, for which she has an uncanny eye. If any of you have gone looking for shy woodland beauties such as puttyroot (*Aplectrum hyemale*), late coral-root (*Corallorhiza odontorhiza*), rattlesnake plantain (*Goodyera pubescens*), crane-fly orchid (*Tipularia discolor*), or nodding pogonia (*Triphora trianthophora*), you will know that it is like looking for a needle in a haystack. Even on unfa-

miliar ground, Dee Ann can spot them while I am still looking at all the other dead twigs around me but missing the orchid itself. I am getting better at it though.

Most of the other woodland plants were easier to find, and we seemed to get along just fine identifying them all, including the ferns and some more unusual plants such as whorled stonecrop (*Sedum ternatum*) and wild chervil (*Chaerophyllum procumbens*). (For those of you who are interested, "Fern Finder" by Anne and Barbara Hallowell is a simple and invaluable dichotomous key pocket guide.)

The one thing we made a determined decision not to even attempt to identify were the fungi in the woods, beautiful as they are! I sincerely think

the woods hold more fungal forms of life than any other creatures (except perhaps the insects), and we could have spent the rest of our lives lost to the world!!

Next we started identifying the plants in the "meadow," where Joe Pye and beebalm, goldenrod and spiderwort abound, and those plants that grow around the edges of the woods such as scutellaria and lobelia, aster and campanula; plus the occasional ladies' tresses (*Spiranthes*) and all kinds of other goodies you would expect in those habitats. Oh yes, we did also decide not to investigate the world of sedges too closely yet; that may take a few years. As for grasses, well, we'd stick with the familiar warm-season and easily recognizable woodland species for now.



Above: Indiana's native *Sedum ternatum*. Below: Sassy, also an Indiana native. Photos by Dee Ann Peine.



For a year these sites satisfied us. Then we began to get greedy and wanted to expand our horizons. It started (this is our excuse, and we're sticking to it!) with our trip to Munchkin Nursery to pick up plants for the INPAWS sale and auction. Having spent a pleasant few hours with Gene Bush in his garden and duly filled the car with plants, off we set on an adventure.



Cross-vine (*Bignonia capreolata*), a denizen of the Ohio River Valley. Photo by Hilary Cox.

We ended up on River Road, down by the Ohio River, dawdling along the (mostly) dirt road and stopping if we saw something unusual. And we did. At first it was swathes of firepinks (*Silene virginica*) growing through groves of garlic mustard. Then it was a tropical-looking flower clinging to a vine at the wood's edge which had us backing up, nearly front-ending the only other vehicle on the road, which just happened to be traveling too closely behind us! Neither of us had ever seen this plant. It was too early for trumpet creeper and anyway the flower color was wrong! We took photographs but were unable to identify the flower until later. Called cross-vine (*Bignonia capreolata*), it is listed in Deam's as occurring along the Ohio River Valley...exactly where we were! Now we are hoping that we can persuade Kevin Tungesvick at Spence Nursery to grow this plant on for us, or for me (at least!) to use in my "natural landscaping."

Next we went to a property near Indianapolis International Airport where earlier Dee Ann had conducted an INPAWS plant rescue. She wanted to check out some of the plants she had seen then. Although we didn't find

the specific plants she was seeking, we did see two plants new to us: one we had looked for earlier in the year, our native prairie crabapple, *Malus ioensis*, and one we had never seen before, although one of my clients had planted one this spring, the hop tree, *Ptelea trifoliata*. It is always a thrill to see a plant for the first time in its natural habitat, even if it is a fairly common one. We also dug a plant out of the tarmac that neither of us could name, although we both knew we knew it, and took it home to see what the flower was like when it opened...it turned out to be bouncing bet (*Saponaria officinalis*), a common roadside weed which had, in this case, decided to travel *through* the road, not on it! We were glad we had stopped it in its tracks!

In between these jaunts, I gave two tours of Burnett Woods State Nature Preserve, a near-pristine deciduous forest near Avon in Hendricks County, when it was in full bloom (mid-April); and Dee Ann and I re-visited Yuhaw Woods with Kevin Tungesvick and INPAWS.

With all of this, wouldn't you think we had had enough botanizing to last a lifetime? It's not as if we both

don't lead very full lives outside this new hobby—I still run my business, which actually benefits from my new perspective as my plant knowledge grows; Dee Ann works and runs a family and does most of the documentary work on our plant lists, sorting pictures, recording where seen, what time of year, stage of growth, etc.; and both of us also spend an inordinate amount of time on the PLANTS Database (<http://plants.usda.gov/>) and with our field guides, trying to identify the plants we couldn't in the field.

Enough botanizing? The answer was a resounding NO!! And as it turned out, our most exciting find was yet to come.

Hearing of our adventures in the wild through Dee Ann's husband Rich Peine, a mutual friend, Andy Roller, told us of an ex-hayfield on his sister's farm near Elizabethtown in Kentucky which, left unmowed for seven or eight years, had turned into...a treasure trove in the making!

The "rest of the story" to follow....

Watch for more Blissful Botanizing in the next issue of *INPAWS Journal*.

Cyperaceae = Sedge Family

Rebecca Dolan, PhD
Friesner Herbarium, Butler University

Worldwide, the sedge family has about 100 genera and 5000 species. Indiana has about 16 genera and 180 species.

Characteristics

Monocots. Perennial or annual herbs, often of damp places. Stems often triangular (“sedges have edges”), solid, 3-ranked. Leaves grass-like, clustered at the base. Inflorescence composed of one to many small spikes of flowers. Flowers subtended by a single bract, inflorescence subtended by one or more bracts. Calyx and corolla bristly or scaly (or lacking!). Unique-looking flowers encased in perigynia in the genus *Carex*. Wind-pollinated.

Economic Importance

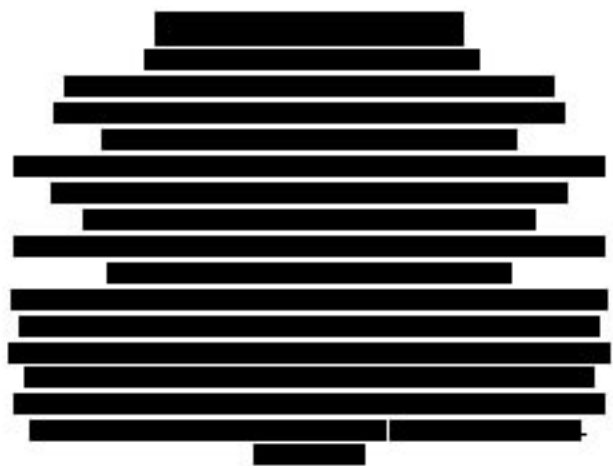
Egyptians made paper from *Cyperus papyrus*. Some sedges, such as yellow nut-grass, are nasty weeds in farm fields and gardens. Some are used for weaving baskets. Chinese water chestnuts are edible tubers of a member of this family. Sedge family members are also commonly used as pond ornamentals. The needle spikerush (*Eleocharis aciculais*) is used as an aquarium plant.

My favorite sedge is *Carex grayi*, Gray’s sedge. Not only is it easy to identify, its inflorescences look like medieval maces. It grows in damp woods.

Dr. Paul Rothrock of Taylor University in Upland has a wonderful web site to help with identification of non-*Carex* sedges. It can be found at www.taylor.edu/academics/acadDepts/ees/sedges/.



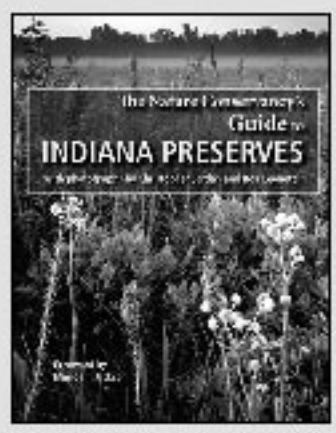
Carex grayi. USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. Illustrated flora of the northern states and Canada. Vol. 1: 439.



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Paperback original The Nature Conservancy's Guide to Indiana Preserves

With photographs by
Christopher Jordan
and Ron Leonetti
Foreword by
Marion T. Jackson
From the majestic dunes
of northwest Indiana to the
lush cypress sloughs at the
convergence of the Ohio and
Wabash Rivers—and all places in
between—Indiana boasts a remarkable
variety of natural areas. This
collaborative photographic
masterpiece will take you to
the Cedar Bluffs, the Kankakee
Sands Project, Pennywort Cliff,
among other wonders. Directions
to each site are also included,
so you can start your journey
now.
paper \$27.95



Not Your Ordinary Flower

Dan McDowell

Even when plant lovers are in areas they perceive as unpromising, they often still feel compelled, whether from force of habit or unconscious optimism, to keep looking for...anything! Until the outing is done and over, there is always hope of finding something.

I was in this situation this past July on a privately owned tract in northwest Lake County. I'm walking through a small nondescript flatwoods of young swamp white oak, sassafras, and wild cherry. The closed canopy is not showing much, only an occasional bracken fern, tick trefoil, or an old Solomon's seal. Continuously scanning the ground, I really don't know what I'm expecting to find. Suddenly, something noticeably different stands out. I have come upon a small population of pinesap (*Monotropa hypopithys*). This pleasant, unexpected discovery is enough to make me botanically happy for the next few minutes, despite the heat and mosquitoes.

Many of us are probably more familiar with the pinesap's better known and more often seen close relative, the ghostly Indian pipe (*Monotropa uniflora*). They share many of the same characteristics—non-photosynthetic, saprophytic, and a preference for similar habitats. Pinesap occurs throughout most of the United States but, depending on the area, is considered as an uncommon to rare plant. It is on the watch list in Indiana.

Pinesap is not your ordinary flower. This herbaceous perennial is a saprophyte that takes its nourishment from decaying organic matter such as leaf mold. It prefers acid soils and subdued light situations. Some research sources discuss its dependent associations with fungi and mycorrhiza. Since pinesap doesn't photosynthesize, it lacks chlorophyll, and the colors of stems and flowers can vary from light yellow to orange to shades of red. Most plant guides list a June-to-October blooming period. Plants blooming in summer are yellow; those in the fall are orange or occasionally red.

In a four-foot area I count seventeen stems, most as singles or pairs, and one group of four. They are 2.5 to 4.5 inches tall; stems and flowers are light yellow in color, and waxy in appearance. The nodding aspect of the inflorescence looks like a compact cluster but it is actually a raceme. Most plants have five to ten half-inch long tubular flowers composed of four or five petals. Lower stem flowers have four petals; terminal flowers have five. The stems have several small pointed scale-type leaves.

When I make a follow-up visit ten days later, the flowers show marked changes. The stems have become more



Pinesap (*Monotropa hypopithes*) flower. Photo ©2001 by Eleanor Saulys.

upright, making the plants another inch or more taller. The flower clusters are losing their compact appearance and now reveal spacing along the stems. Individual flowers are also becoming more open, some even looking bell-like, showing their stamens. Overall coloration is starting to change, and the tiny leaf bracts are turning black. Before long, the rest of the plant will turn completely black.

This is the fourth site where I have seen pinesap over the past several years. At one site, I saw it return the following year in the same area. The other finds have been random occurrences that I did not follow up on. I will be looking forward to its appearance again in this area in the future.

Monotropa is derived from the Greek words *mono*, meaning "one," and *tropos*, meaning "turn" or "turning," which refers to the nodding or downturn of the flower stem.

Continued on page 9

Stowaway

Barbara E. Plampin, PhD
Shirley Heinze Land Trust

Plants get found in the strangest places. This is the story of accession number 1926 of the Indiana Dunes National Lakeshore Herbarium, INDU 1926 for short.

It happened in the context of a conundrum: When, why, and by whom were 37 dried, unmounted specimens of mostly Duneland plants collected in 1927 and 1928 deposited in the Toledo, Ohio, Zoo Herbarium? Sixty years after collection, the Zoo turned them over to University of Michigan sedge expert A.A. Reznicek, who then transmitted them to Indiana Dunes National Lakeshore Herbarium curator Noel Pavlovic. In 1995, Noel supervised my mounting, labeling, and accessioning the specimens into the Herbarium.

Problems: Customarily, for every plant collected, the collector's name, date and location of find, and the Latin name appear on the sheet containing the specimen. Here, except for year, information was often sketchy; someone was in a hurry. The probable collectors were Father J.A. Nieuwland (1878-1936) of Notre Dame or an unnamed companion, but nomenclature didn't always match that of Swink and Wilhelm, the Herbarium's "Plant Bible." Sometimes the Kartez and Kartez two-volume synonymy of plant names failed, necessitating further search. Sites like "Northern Indiana" and "Indiana Dunes" were vague. When Noel and a biotech searched Notre Dame's Greene-Nieuwland Herbarium for duplicates of INDU specimens collected on the same day, they found only four. INDU 1926 was not among them.

For mounting, specimens must be dirt-free, but harried collectors don't always clean their finds. I remember teasing the mud from the roots of a labeled false heather (*Hudsonia tomentosa*) with a paint brush when, lo and behold, there appeared roots, leaves, and flower scales of an unlabeled plant. I had discovered a



Brook nut sedge likes it damp; false heather likes it dry. How did these two become enmeshed in the same sample?

mountable plant, brook nut sedge (*Cyperus rivularis*), a fairly common, though usually overlooked member of the sedge family. Our shoes flatten most of these plants when we're looking for more glamorous flowers.

Mounted as INDU 1926, my discovery displays modest charm. The six-inch tuft of curving, thread-like leaves and thin stalks bears umbels of rather narrow spikelets surmounted by thread-like bracts. The spikelets are composed of neatly overlapping scales with reddish-brown pigment chiefly at the base. (Fresh scales are shiny. Older plants look coarser and stiffer.) A mystery: false heather likes it dry, but brook sedge likes it damp. How did these two get together?

The notebook sheet for INDU 1926 reads, "The collector did not provide a label for this specimen. It was found during identification of 1912, 2 of 2, *Hudsonia tomentosa* Nutt., collector J.A. Nieuwland, July 28, 1929. INDU

1912 comes from "Indiana Dunes." Identifications are correct because they were verified by the Morton Arboretum botanist in December 1995. Noel told me he thinks the two plants were growing in a transition zone.

Nieuwland may have collected these two plants at "Baileytown, Porter County," an obliterated site northwest of Porter, Indiana, where he collected goat's rue (*Tephrosia virginiana*) on the same day.

Some Books

Britton and Brown. An Illustrated Flora of the Northern United States and Canada. Dover, 1970 (1913).

Kartez and Kartez. A Synonymized Checklist of the Vascular Flora of the Northern United States, Canada, and Greenland. Timber Press, 1994.

Swink and Wilhelm. Plants of the Chicago Region. 4th edition. Indiana Academy of Science, 1994.

Take a [Mini-]Hike! continued from page 3

Directions: Take the 45/46 Bypass east from Highway 37. Turn left (north) at the stoplight across from the State Police building. Drive a short distance on Matlock Road, and turn left onto Heady Road for about 0.6 mile to the IU parking lot on the left. Trail maps should be available behind the large wooden signboard there. Or, you can download them from the website, www.iub.edu/~preserve/, which also maintains a checklist of flora and fauna. It is not comprehensive; we heard Barred Owls calling and they are not on the list. However, it is helpful.

The Fields

An attractively landscaped 58-acre apartment complex, The Fields was formerly the Rogers Farm. The website, www.thefields.com/story/index.html, has a map of the complex, including the trail that runs between the lakes and Jackson Creek. The two barns on the property still exist. One, with a picturesque weathervane atop, now serves as the Clubhouse. The other barn houses landscaping equipment and gardening supplies.

Directions: From Moore's Pike, turn in at the barn and park somewhere on the east side. The trailhead is east of the barn parking lot. Head east, then turn north along the stream, through the trees. You will pass two large ponds. The Southern Lake, as it's called, is the prettier one. It even

has fish in it, and I was told the water is freezing cold even during heat waves! The shallow Northern Lake is little more than a scum-covered mudhole. A picturesque old log cabin, built in 1870 and moved from the Lake Monroe area, is between the two. The trail ends at Fenwood Drive. Either walk back through the well-landscaped grounds, or retrace your steps along the trail.

Olcott Park

From Rogers Road, turn south into The Stands Road and drive its length (about one mile) to Olcott Park. On your right you'll see a paved walkway heading through a grassy area interspersed with trees, reminiscent of a European park. This walkway leads down into a small but authentic bit of forest, with old trees and shrubs and a ravine with Jackson Creek bubbling below. Where you emerge from the forest, the creek gets more impressive. The walkway crosses over a bridge and continues on through grassland, ending at the Sherwood Oaks Park parking lot. Obviously, you can also access this trail from the maze of the Sherwood Oaks housing development, if you wish.

Lower Cascades

This one is REALLY a mini-hike! Bloomington's oldest park, established in 1924, is really two parks, Lower Cascades (the original portion) and

Upper Cascades with adjoining golf course, developed a few years later. Lower Cascades Park has a beautiful waterfall at the end of a short (0.2 mile) trail that runs alongside a rocky creek. On a hot day you can feel the delicious coolth of the waterfall as you approach. If you feel energetic, climb the rocks up to the old road that runs along above the creek, paralleling the trail, back to the parking lot. If you don't, you can "set a spell" on one of the huge boulders and listen to the rushing water.

Early spring is the best time to visit, but any time of the year can reveal special treasures. On a very warm evening in late May, we enjoyed seeing large-leafed waterleaf, green dragon, black maple, and slippery elm. Other trees include black walnut and Ohio buckeye. And always we were accompanied by the sound of rushing water.

Directions: Take the 45/46 Bypass north to N. Walnut and turn left (south). Turn right (west) at the first intersection, N. Old State Road 37. After driving about one-half mile north on Old Walnut you will see the parking lot across the stream. You must drive through the stream to reach the lot. Then, on foot, approach the South Shelter but instead turn left as you near the hill and proceed in westerly fashion along the trail.

Not Your Ordinary Flower continued from page 7

Hypopithys is said to mean "under Pines," referring to where it is often found.

Pinesap is also an interesting plant to research in various wildflower guides and on the Internet. Today, many sources place *Monotropa hypopithys* in the Monotropaceae, or Indian pipe family. Historically, they have been placed in the Ericaceae (heath family) or the Pyrolaceae (wintergreen family), and some botanists apparently still continue to do so. Nomenclatures

aside, one can still find a wealth of information and some beautiful photography of these intriguing little plants.

For additional information:

Gleason and Cronquist, *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* (1991).

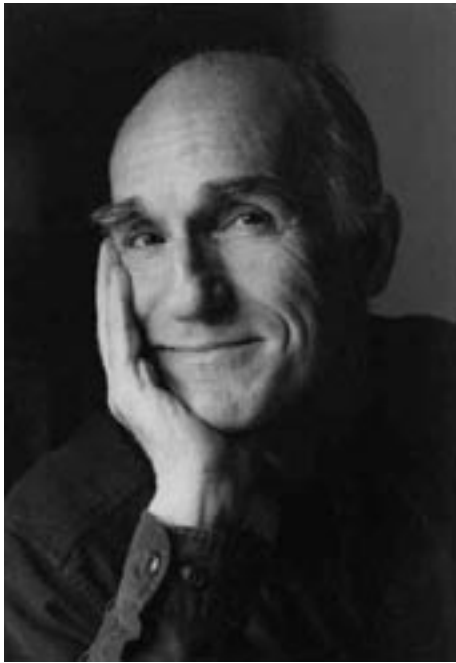
National Audubon Society Field Guide to North American Wildflowers Eastern region (2001).

Enter *Monotropa hypopithys* in your search engine on the Internet.

Dan McDowell is an INPAWS member and retired steelworker from Hobart, Indiana. His favorite pastime is searching the natural areas of the Dunes region for orchids and other interesting plants.

Thirteenth Annual INPAWS Conference

Saturday, November 4
Bradford Woods, Martinsville, IN



Keynote Speaker: Scott Russell Sanders, “Wild and Scenic Indiana”

Scott Russell Sanders is Indiana’s most heralded environmental essayist and novelist. A Distinguished Professor of English at Indiana University, his work is concerned with people’s place in nature and the practice of community. “**The longer you stay in a place out of wholehearted desire, the more likely you are to learn about its human and natural history, to help preserve what’s worthy, restore what’s damaged, and create what’s lacking.**” He will speak on wild and scenic Indiana, a topic on which he coauthored a book with Rich Clark in 2005.

Dr. Sanders has authored twenty books and received the Lannan Literary Award for nonfiction, the PEN Award and Kenyon Review Award for fiction, the Great Lakes Book Award, the Ohioana Book Award, and the Associated Writing Programs Award. His work has appeared in more than two hundred anthologies and fifty magazines. He serves on the national advisory boards of the Orion Society and Trust for Public Land and on the advisory board of south central Indiana’s Sycamore Land Trust.

Conference Schedule

- 8:00 AM Registration
- 8:30 AM INPAWS Business
- 9:00 AM Keynote Speaker
- 10:00 AM Refreshment break, book sale, and book signing by Scott Russell Sanders
- 10:30 AM Concurrent Session I
- 11:30 AM Concurrent Session II
- 12:15 PM Lunch and informal discussions with INPAWS committee chairs or chapter leaders.
- 1:30 PM Concurrent Session III
- 2:30 PM Concurrent Session IV
- 3:30 PM General Session
- 4:30 PM Close
- 5:00 PM Guided hike of Bradford Woods

Concurrent Session I

Sometimes it’s easy to lose sight of the shrubs for the trees. There are many more species of native shrubs than trees in Indiana and they are the unsung stars of the forest. **Dr. Marion Jackson** will introduce you to many of the **native shrubs** that grace southern Indiana’s forests.

You want your yard to be a beautiful leafy glen, but it looks more like an overgrown jungle? Want some help in figuring out how to design the yard of your dreams? **Anita Bracalante**, landscape designer and garden columnist for the Bloomington Herald Times, will speak on **designing your own landscape**, focusing on the use of native trees and shrubs.

Concurrent Session II

Hidden in the hills and hollers of southern Indiana are many species of native orchids. **Mike Homoya**, botanist for the DNR—Division of Nature Preserves, will bring **south central Indiana’s orchids** out of hiding and tell you all about these reclusive plants.

If garlic mustard is marching through your woods and Japanese honeysuckle is threatening to smother your yard, come listen to **Ellen Jacquart**, Stewardship Director for the Indiana Chapter of The Nature Conservancy, speak on **how you can get the upper hand over invasives** on your land.

Concurrent Session III

Barrens are rare and beautiful wildflower-filled openings in the forested hills of southern Indiana. **Dr. Alice Heikens** of Franklin College has studied **barrens** across the Midwest for many years and will share her knowledge on the natural history of these botanical jewels.

A **Plant Rescue Certification workshop** is being offered by **Dave and Dawn Bauman**, INPAWS Plant Rescue co-chairs. This session will teach you the basics of effective plant rescue including a hands-on activity on wildflower propagation, an important method of rescuing native plants.

Concurrent Session IV

South central Indiana has some of the most impressive karst features in the world. **Kriste Lindberg**, karst educator with the City of Bloomington, will give you a virtual tour of the caves, swallowholes, sinks, rises, and underground rivers that make up our **karst resources** and explain their significance.

Are you steamed because deer and rabbits are eating all your flowers? **Wildlife-resistant landscaping** is something many of us are looking for, and **Carolyn Harstad** has lots of tips to share on how to keep wildlife from treating your yard like a salad bar.

REGISTRATION AND DIRECTIONS

Registration materials were mailed in September. If you did not receive a registration form, visit the INPAWS website at www.inpaws.org for a printable registration form.

Bradford Woods is located at 5040 State Road 67 North. Bradford Woods is 4.7 miles north of State Road 39 at Martinsville and approximately 8 miles south of Mooresville.

General Session

Why are adolescent oak trees rare in Indiana's forests, and what does this mean for wildlife in the future? **Allen Pursell**, Interior Low Plateau Director of The Nature Conservancy, will speak on the **secret lives of acorns**. This wide-ranging presentation will explore the sometimes strange and subtle oak forest, the cornerstone of the Central Hardwood Region.

As the number of oak trees appears to be diminishing across the Eastern US we may see an unexpected change in songbirds, bats, and even caterpillars. It's even possible we may be seeing the beginning of the end of the ubiquitous oak forest, a landscape that future generations may rarely experience.

Some unintended consequences of natural resource policy decisions will also be discussed, illustrating how they affect not only oak forests and wildlife, but everything from insurance to epidemiology.



Between sessions, enjoy INPAWS' legendary snacks and patronize the book sale, where many references on native trees, shrubs, flowers, and ferns of Indiana will be available.

Reforesting a Floodplain

The banks of the White River are home to an experiment in restoring native forest on a disturbed riverbank. A project of IUPUI's Center for Earth and Environmental Science, the site serves as a living learning laboratory for university students and others in the community.



Approximately 1,400 trees have been planted in an eight-acre strip of land between 10th Street and New York Street along the White River in downtown Indianapolis as part of an experimental floodplain reforestation program. The one-mile stretch of riverbank is now evolving into a wildflower meadow and shrub/sapling habitat as the trees grow and other species gradually recolonize the area.

The massive experiment will test the best way to restore riverbanks by comparing the three most common methods for planting trees to restore native forests. A minimum of five years of monitoring and assessment will provide valuable data on reforestation strategies.



Planting Styles

The Lilly ARBOR Project tests three methods for floodplain or bottomland forest restoration that are in common use in the Midwest today:

Containerized plants: Mow and herbicide; 310 trees in 3-gallon containers planted on 12-foot centers

Bare root seedlings A: Mow and herbicide; cut turf in random pattern; 400 seedlings planted on 12-foot centers

Bare root seedlings B: Mow and herbicide; cut turf in rows; 400 seedlings planted on 12-foot centers; weed inhibitor mat around trees; native wild rye grass between rows to control competition; fertilize

The site is divided into north and south sections, each with four one-acre plots. Each method is used in two one-acre plots and compared to two unplanted control plots that are simply mowed and herbicided.

Information for this article was adapted from the Lilly ARBOR Project website, www.cees.iupui.edu/Research/Restoration/ARBOR/index.htm. The project is founded on an Indiana University–Purdue University at Indianapolis sponsored partnership with Eli Lilly and Company, the Rotary Club of Indianapolis, and the City of Indianapolis. Photos by IUPUI Center for Earth and Environmental Science.



Tree Species Planted

Twelve tree species were planted in the experimental plots. These were selected from an inclusive riparian (river margin) tree list recommended to the Lilly ARBOR Project Advisory Board, narrowed to include only those species occurring in geographic range of the Tipton Till Plain Natural Region. The Advisory Board further excluded extremely rare or habitat-restricted species (e.g., rock elm and blue ash) and excluded American elm due to Dutch elm disease killing the tree before it gets to canopy height.

Scientific Name	Common Name
<i>Aesculus</i> sp.	Buckeye species
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Celtis occidentalis</i>	Hackberry
<i>Crataegus</i> sp.	Hawthorn
<i>Fraxinus pennsylvanica</i>	Green ash
<i>Gleditsia triacanthos</i>	Honey locust
<i>Platanus occidentalis</i>	Sycamore
<i>Populus deltoides</i>	Cottonwood
<i>Quercus bicolor</i>	Swamp white oak
<i>Quercus muhlenbergii</i>	Chinquapin oak
<i>Salix nigra</i>	Black willow

Ecological Value

Riparian forest corridors are important habitat components of the landscape, especially in urban areas where other habitat is scarce or severely degraded. The restoration of these areas not only brings habitat diversity but can enhance water quality and help curb flooding.

The Lilly ARBOR Project will complete the last key component of a conservation corridor through Marion County. The project will also help to improve the ecological function of the White River floodplain.

Floodplains in their natural form are beneficial for many reasons:

- Floodplains reduce the number and severity of floods. During high water events, some of the water is absorbed by the floodplains, helping to keep the river from overflowing. The absorbed water can then be returned naturally to the stream during times of low water. If a high water event is large enough, water will overflow the channel of the river and spread over the floodplain, which slows the flow of the water and helps prevent severe erosion and flooding downstream.
- Floodplains minimize non-point source water pollution and filter storm water. The resident vegetation helps filter contaminants out of the water flowing into the river.
- Floodplains are home to many types of plants and animals. Adjacent forests and wetlands provide habitat for insects, birds, reptiles, amphibians, and mammals. Vegetated floodplains provide shade for the adjacent rivers and streams, increasing dissolved oxygen levels and consequently improving habitat for aquatic plants and animals.

- Floodplains lend aesthetic beauty and outdoor recreation opportunities to the landscape.

Educational Impact

The Lilly ARBOR Project offers a much-needed outdoor classroom and study area. Through the CEES service learning program, IUPUI faculty and staff from four schools and professional environmental managers work with area high school and middle school students, IUPUI students, other Indianapolis-area university students, and community members to conduct research and maintain the restoration.

The interdisciplinary collaboration and use of the Lilly ARBOR Project has permitted several hundred individuals to contribute to the research and maintenance of the site while educating them about the importance of maintaining biological diversity and participating in environmental stewardship.

We're building a forest—and we're doing it with scientists, students, teachers, civic groups, and corporate and community volunteers.



Sudden Oak Death Arrives in Indiana

In mid-July, bad news showed up in Indiana in the form of Sudden Oak Death. A fungus-like microorganism known as *Phytophthora ramorum* was found in a *Viburnum* shrub in the garden section of a hardware store in Portage. Since its discovery in North America in 1995 in central coastal California, this pathogen has caused widespread dieback of tanoak and several oak species, referred to as Sudden Oak Death, in the central and northern coastal counties of the state. The pathogen has also been found in nurseries in California, Oregon, Washington state, and Canada's British Columbia. Despite attempts to keep infected nursery stock out of Indiana, an Oregon-based supplier sent the infected *Viburnum* to Portage, and these shrubs were sold to the public. It is not known how many infected shrubs were sold or where they went in Indiana.

State Entomologist Bob Waltz said that Indiana has been rated as being at moderate risk for Sudden Oak Death by the U.S. Forest Service. Most of the state's at-risk sites are in the southern region, where oak forests and elevated topographies could potentially support the disease. "Our goal is to keep this disease from becoming established in our Indiana landscapes and forests, and the best way to achieve this goal is to educate the public about this disease," notes Dr. Waltz.

Due to *P. ramorum*'s broad host range and nondescript symptoms, trees and shrubs infected with the pathogen are difficult to distinguish from those with other diseases. In trees, *P. ramorum* causes large, bleeding cankers on the trunk or main stem, accompanied by the wilting and browning of leaves. Tree death may occur within several months to several years after

initial infection. Infected trees may be infested with ambrosia beetles, bark beetles, and sapwood rotting fungus. Symptoms of leaf infection vary with host, but often consist of dark gray-to-brown lesions with indistinct edges. These symptoms can readily be confused with those of other diseases.

The Purdue University Plant and Pest Diagnostic Laboratory maintains a website (www.ppd.l.purdue.edu/PPDL/SOD.html) that includes a checklist to assist growers and homeowners in determining whether they have a sample that should be submitted for further evaluation.

—Ellen Jacquart

Pot Recycling at IMA

Indiana gardeners have a new opportunity to help the environment. The IMA Horticultural Society is recycling plastic pots on Saturday, October 14,

between 10 a.m. and 2 p.m. at the IMA Greenhouse parking lot, 4000 N. Michigan Road, Indianapolis.

The pot-scrubbing volunteers will accept standard, nursery-size pots; for example, one-quart, five-pint, one-gallon, 6-inch round, or 4-1/2-inch square (No. 5) pots. In preparation, please rinse or clap the loose soil out of the pots. Polystyrene cell packs for annuals or most of the flimsy flats or trays that contain them are not useful.

The Missouri Botanic Garden's successful pot recycling program took in over 70,000 pounds on six weekends this past spring. Dr. Steven Cline, who started MoBot's program in 1998, gave a vivid image of the tons of plastic that gardeners typically throw out. "Imagine Busch Stadium [St. Louis] filled one-and-one-half times to the top, and you have a good picture of what is being deposited each year."

Clean out your garage or garden shed and do the right thing this year with your surplus plastic pots. Ask your



Drawing by Ellwood Ross.

neighbors for their extras, too! And please don't drop off your pots until October 14; the Greenhouse staff cannot cope with them on a piecemeal basis.

—Mary Ellen Gadski

Seeking Mini-Hikes

INPAWS Journal seeks your reports on those postage-stamp native habitats embedded in cities and suburbs in your own locale.

If you discover a worthy mini-hike site, tell us when you visited the area, how you accessed it, and what you saw and heard. In the interest of encouraging more mini-hikes to refresh body and soul, we will compile a directory of such sites and publish member reports in future issues (see submission instructions on page 2).

SWCD Tree & Shrub Sale

Fall is for planting, and a good time to embellish your home and enhance your wildlife habitat with native trees and shrubs.

As part of its backyard conservation effort, Marion County Soil and Water Conservation District is supporting tree planting efforts by providing mostly native, midsized container trees and shrubs at a reasonable price.

Order by October 9 for pickup in northwest Marion County on October 21. The pickup site is the Normandy Farms subdivision information center at 7802 Marsh Road, Indianapolis, IN 46278.

Tree species available include red maple, river birch, northern pecan, Norway spruce, swamp white oak,

overcup oak, bur oak, chinquapin oak, red oak, tulip poplar, speckled alder, redbud, bald cypress, sweetgum, and northern catalpa.

Shrub species include American elderberry, serviceberry, buttonbush, red chokeberry, red osier dogwood, nannyberry viburnum, arrowwood viburnum, winterberry, and witch-hazel.

Call the SWCD office at 317-780-1765 or visit their website at www.marionswcd.org to obtain a brochure and order form that includes tree and shrub species facts and selection criteria.

Three-gallon pots are priced at \$24, five-gallon pots at \$28, including sales tax. Home delivery is available at \$8 each for 1-4 plants, or \$7 each for 5 or more plants.

Aerial Maps Available

Now you can plan your home landscape or conservation effort with the aid of birdseye views. Full-color aerial photographs of your yard, neighborhood, or community give a better picture of your environment.

This new natural resource tool, free to the public, is called IndianaMap. It is available online at www.indianamap.org.

The user-friendly site includes layers that can be dropped in over the aerial photographs (2005 and earlier) showing elevations, boundaries, waters, and roads. Most people are able to select and print maps within minutes.

The IndianaMap website is made possible through a partnership with the Indiana Geological Survey and Indiana University UITS (University Information Technology Services).

MARK YOUR CALENDAR

October 9, Deadline for ordering trees and shrubs from Marion County Soil & Water Conservation District.

October 14, Pot recycling at IMA Greenhouse, Indianapolis, 10:00 a.m. to 2:00 p.m. Sponsored by IMA Horticultural Society.

October 14, Volunteer clean-up day in preparation for dedication of new Central Indiana Land Trust property, 9:00 am, Schramm Woods, Hancock County.

October 21, Tree and shrub pickup at Normandy Farms in NW Marion County

November 4, INPAWS Annual Conference at Bradford Woods, Martinsville, 8:00 a.m. to 4:30 p.m. followed by guided hike.

November 11, Tamarack (American larch) community hike in northeast Indiana, led by Lee Casebere, 10:30 a.m., Marsh Lake, Steuben County.

Watch for announcements of INPAWS events and field trips in the mail, via email, and at www.inpaws.org.

Coming Attractions

How can we attract and engage INPAWS members?

That was the subject of a task force convened in August to take stock of INPAWS' outreach to the public and to its own members. Present were president Karen Hartlep and committee chairs Don and Sophia Anderson, Mark Outcalt, Tom Hohman, and me.

Ideas flowed like water, and you will soon see some results.

First up, a new portable display to adorn the INPAWS booth at events like Conservation Day at the Statehouse, The Flower and Patio Show, or Earth Day.

The three-panel fabric-covered display comes in a handy carrying case, and offers the flexibility of changing out photos and text to emphasize different themes for different events. Watch for its debut at the INPAWS Annual Conference. Then think about how you might put such a display to use wherever you live.

Next up, a new, inexpensive brochure with which we can shower the state.

We want people know that INPAWS can be their resource and partner in studying, preserving, and growing native plants. The task force envisions putting this brochure in nature centers and libraries everywhere. Perhaps you'll suggest some other good venues.

We talked about expanding membership around the state and involving members beyond Central Indiana in the activities of INPAWS. Plant sale co-chair Tom Hohman suggested spawning plant sales in other areas as a way to engage existing members, draw the public, and gain new members.

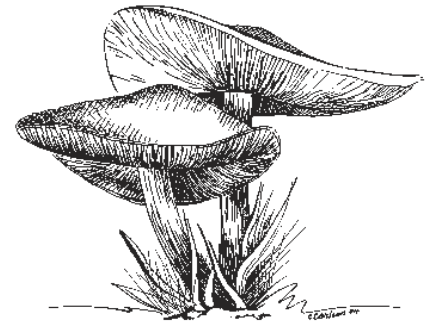
Don't be surprised if committee chairs lean on you at the Annual Conference to consider taking a role in the work they do. We agreed that committees-of-one are no way to sustain an organization. Don't be afraid to say yes. We have strong committee chairs to take the lead, and you'll have fun working with them. It's a great way to develop new friendships too.

And that's not all the task force talked about. To continue the discussion,

we agreed to convene a super-committee consisting of the chairs of Education, Speakers Bureau, Website, Newsletter, Plant Sale, and Membership.

Our task—to coordinate and improve INPAWS outreach to the public and to our membership. Our aim—for people all over the state to know what INPAWS stands for, and for all of our members to get the most out of their relationship with INPAWS.

Stay tuned...our work has just begun.



Drawing by Chris Carlson in Ruth Ann Ingraham, *Swimming with Frogs*.



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