



Spring Day at Pine Hills



Roger L. Hedge, Heritage Ecologist,
Indiana DNR Division of Nature
Preserves

here on Turkey Backbone that you first realize why Pine Hills is worthy of such high praise and designation as a state nature preserve.

Native white pine (*Pinus strobus*), Canada yew (*Taxus canadensis*), and eastern hemlock (*Tsuga canadensis*) thickly line the steep, nearly vertical sides of this ridgetop trail. In their shadows partridgeberry (*Mitchella repens*), a few scattered wildflowers, and lush ferns grow. Long-stalked hummock sedge (*Carex pedunculata*) is common along the trail's edge.

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Scenic vistas, stunning geographical features, winding rocky streams, and boreal plant life: all describe Indiana's first dedicated state nature preserve, the site of INPAWS' spring hike.

On April 12, twenty hardy INPAWS members braved cooler-than-normal temperatures to see this special place, several visiting for their first time.

Established some 40 years ago, Pine Hills Nature Preserve is still arguably one of our finest in a system that today boasts over 200 nature preserves. Part of Shades State Park and upstream of better-known Turkey Run, Pine Hills lies nestled in the scenic Sugar Creek valley.

The entrance to Pine Hills is not all that impressive, containing a relatively

young second-growth hardwood forest that is slowly reclaiming the land from a pine plantation established decades earlier. But as you proceed along the trail the forest gradually improves, as oak replaces tulip poplar (*Liriodendron tulipifera*), cherry (*Prunus serotina*), and pine. Soon, you begin to notice more relief in the landscape, more varied plant life on the forest floor, some stately white oaks. Then suddenly you come upon a sandstone backbone perched high above beautiful Clifty Creek, which carves a shallow, sinuous path far below. It is

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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 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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PRESIDENT'S MESSAGE

In Hot Water

Good thing that summer's here. From April to June, they say, gardeners aren't fit for human contact. In those months, I have days when I wake up busy, full of plans for what needs to be transplanted, watered, deadheaded, or trimmed. I suspect spring is busy for many of us who love to be outdoors—hikers, photographers, botanists, and birders.

I like (and need) the gentle reminder that no matter how frantically I clip and snip my way around my gardens, working to perfect what is already beautiful, nature has its own pace and means for survival.

I went down to our land in Owen County after the June floods. On the way, I saw the sad losses that thousands of people will be dealing with over the coming months. I saw a pretty pond nearly empty because of a great gouge in its dam. I saw golf carts that had floated half a mile into the middle of a corn field, looking like bewildered white mechanical cows.

I rounded the corner and pulled up to our gate. I had fully expected to see a lake of standing water where our low-lying front meadow used to be. At the least, I thought, it would be a sodden mess of flattened plants. Instead, I saw huge drifts of white penstemon—standing tall and perfectly happy. The debris in the trees told me that, only days before, there had been a violent rush of water four feet high and ten acres wide.

It gave me a renewed appreciation for the flexibility and, well, naturalness of nature. We recover, we grow, we shine.

Perhaps the saying is true that we (and native plants) are like tea bags. You never know how strong we are until you put us in hot water.

—Nancy Hill

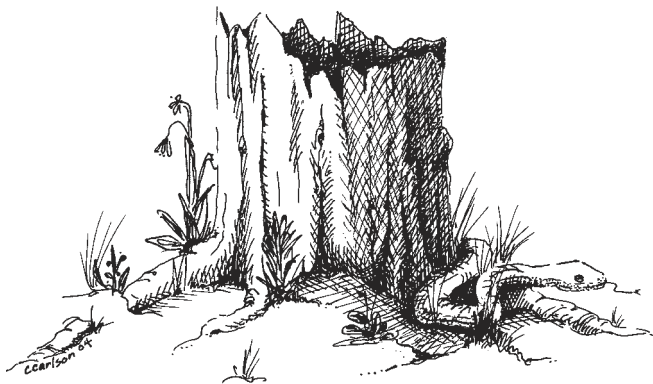


Illustration by Chris Carlson in R.A. Ingraham, *Swimming with Frogs*.

INPAWS PARTNERS

Garden Clubs

National Garden Clubs, Inc. (NGC), recognized as the largest volunteer gardening organization in the world, provides members with educational opportunities in all aspects of gardening and floral design. Indiana's affiliate, The Garden Club of Indiana, Inc., has 106 member clubs boasting 2,500 members in eight districts covering the state.

Since its founding in 1929, NGC has promoted good horticultural practices, civic beautification, and the improvement of roadsides and parks. Their mission has expanded to include the protection and conservation of natural resources. Member clubs assist in the protection of trees, shrubs, wildflowers, and birds and in the preservation and restoration of historic sites. Along with INPAWS and other conservation-minded organizations, The Garden Club of Indiana participates in the Indiana Conservation Alliance (INCA).

The goals of INPAWS and garden clubs came into direct alignment recently when NGC president Barbara May announced the theme "Nurture the Earth, Plant Natives" for 2007 through 2009. INPAWS has much to offer garden clubs in achieving this goal, for example, providing programs through our Speakers Bureau. Garden clubs also share with INPAWS a focus on youth. The NGC's "Seeds of Tomorrow" project works with schools to teach youth the benefits of native plants, wildflowers, and organic gardening.

Garden clubs grant scholarships to young men and women who plan careers in horticulture or related fields. They assist with plantings at Habitat for Humanity home-building projects. A donation program helps the USDA Forest Service plant potentially productive timberlands and replant forests damaged by fire, flood, and other natural catastrophes. Inspired by the New Jersey Council of Garden Clubs' planting of 8,000 dogwood trees as a living memorial to veterans of World War II, since 1945 the NGC has honored service men and women with its Blue Star Memorial highway marker program.

For more information about garden clubs, visit www.gardenclub.org and www.gardenclubofindiana.org.

Pine Hills, continued from page 1

After marveling over the dramatic views and interesting plant life from this vantage, you eventually come to the backbone's east end and descend a long staircase that takes you down in the ravine bottom where a loop trail follows the creek. This area is a riot of wildflowers and ferns in spring. INPAWS members noted the large, leathery fronds of marginal shield fern (*Dryopteris marginalis*) growing from the base to the top of rich slopes here. Also seen in the humus rich soils near the creek were fragile fern (*Cystopteris protrusa*), hepatica (*Anemone acutiloba*), and notably snow trillium (*Trillium nivale*), which was still in bloom. An impressive patch of wild ramp (*Allium burdickii*) is in this area, although flowers would not appear until later in spring. Leaves of waterleaf (*Hydrophyllum* sp.) and small-flowered leafcup (*Polymnia canadensis*) are common along the trail next to the creek.



Hikers spotted state-endangered Canada yew (*Taxus canadensis*) high up a slope above the stream. Courtesy US Forest Service, USDA-NRCS PLANTS Database.

After making this short loop, we continued along the trail and ultimately had to decide where best to cross the swollen creek to ascend Devil's Backbone. We decided to hike this loop in reverse at this point to avoid the creek crossing; but as it turned out, we still had a second crossing to make and couldn't avoid wet feet. Plants of particular interest in the general area were plantain-leaved sedge (*Carex plantaginea*), leaves of puttyroot orchid (*Aplectrum hyemale*), downy rattlesnake plantain (*Goodyera*



Hike leader Roger Hedge expounds on the relict boreal eastern hemlocks (*Tsuga canadensis*) that are a trademark of Pine Hills Nature Preserve. Photos by Wendy Ford.

pubescens), the brittle stalks of last year's beechdrops (*Epifagus virginiana*), and scattered flowering stems of spring cress (*Cardamine douglasii*).

We had a lengthy discussion about the state-endangered evergreen shrub, Canada yew, which has taken a serious hit from deer browse and today can be found only on the steepest slopes of the preserve where the deer can't reach it. We were fortunate, however, to find a fallen branch in the creek that could be closely examined. Individual needles superficially resemble eastern hemlock, but they are longer and a more intense green than those of hemlock.

After ascending the long slope up the west end of Devil's Backbone, we finally reached the top to enjoy the view. Standing on a six-foot-wide slab of sandstone perched about 100 feet above Indian Creek below us to the north, we were at treetop level with the large sycamores (*Platanus occidentalis*) lining the creek. A small colony of polypody fern (*Polypodium virginianum*) grows in what little soil is available along the edge of this narrow backbone. Behind us on the south

side of Devil's Backbone flowed Clifty Creek. The two small streams join one another to the west and eventually empty into Sugar Creek downstream. Coming down the east end of the backbone, we noted a nice clump of stonecrop (*Sedum ternatum*).

We retraced our steps along Clifty Creek, and made the return climb up the staircase to the top of Turkey Backbone following the same trail we'd hiked earlier. Talk along the trail was lively as we returned to the parking lot. Despite the cold weather, the occasional mist of rain, a brief snow shower, and even one blast of hail, I don't think there was a disappointed soul among the group for their experience of spring at Pine Hills. ■

**If you go...
Take only memories.
Leave only footprints.
Kill only time.**

Make Your Own Dried Specimens

Botanists dry and label specimens of living plant material for storage in an herbarium, but there's no reason a plant enthusiast can't make his or her own dried plant specimens to keep for decades at home. Some of the most valuable specimens in herbaria have come from home collectors.

Collecting

1. Obtain permission. If collecting on private property other than your own, you need to obtain the owner's permission. Most public lands require that you obtain a collecting permit. Contact John Bacone at IDNR (317-232-4054) for permit information.

2. Collect sensibly. To conserve the plant population, do not collect an entire plant if it is the only one in the area. If the plant is large enough, you can collect a small part of it to make a specimen, leaving enough so that the plant continues to thrive and set seed, but this should be done with great caution. Many botanists will not collect a plant unless there are at least 20 of them at the location. If you encounter a plant that you suspect is on Indiana's Endangered, Threatened, and Rare (ETR) List, do not collect it. Instead, photograph the plant and contact Heritage Botanist Mike Homoya at IDNR (317-232-0208).

3. Number the specimens as you collect. This can be done in a field notebook, with information about the location, habitat, size of the plant, who's with you when you collect the specimen, etc. This information is essential for labeling the dried specimen later. The numbers on your collections make them unique so that when a specimen is cited, there's no doubt as to just which one is being referred to.

4. Store collected specimens properly. Pressing plants as soon as they're collected yields the best specimens, but storing them in a plastic bag in a cooler works almost as well. Keep them in the cooler or put the bag in the refrigerator when you get home until you're ready to press the plants.

Pressing

5. Position the specimen for best visibility. Inside a folded sheet of newspaper, place the plant material flat in the way that you want it to appear when dried. Turn some leaves up and some down so the character of both sides will be visible. Place flowers so they can be seen and, if possible, open one of the flowers to expose the inside. Arranging the plant while it's fresh may be difficult, but do the best you can. After being pressed for a day, the plant will turn limp and you can rearrange the parts as necessary.



6. Create the plant press. Put the folded newspaper between blotters and corrugated cardboard and place a heavy object of the same size on top. Blotters may be ordered from herbarium suppliers or cut from desk blotters sold at office supply stores.

Small plants can often be pressed successfully in a used telephone book with weights on top but should be checked daily and moved to dry newspaper if not drying well.

If you plan to collect more than just a few specimens, you might want to make your own permanent plant press or purchase one from an herbarium supplier.

To make a press, cut two 12 x 18 inch sheets from half-inch plywood. Use clothesline to tie these firmly together with the specimen and accompanying newspaper and blotters between them. Smaller presses (about 8 x 10 inches) are useful for pressing flowers separately and may be found at hobby stores.

7. Store the press somewhere warm and dry. Check daily and replace the newspapers and blotters if they become damp. This is especially important with fleshy plants that can mold quickly unless you keep them dry enough. Within a few days to a week, the specimen should be dry enough to mount.

Mounting

8. Use the proper mounting materials. It is important to use only acid-free paper. The standard herbarium sheet size, available from herbarium suppliers, is 11.5 by 16.5 inches. Paper with a high cotton or rag content purchased at an office supply store makes an acceptable substitute for making labels. White glue (such as Elmer's) can be used for gluing down both the specimen and the label.

9. Prepare the label. Label sizes and contents vary greatly; a convenient size is one-eighth of an 8-1/2 x 11 inch sheet of paper (4-1/4 inches wide by 2-3/4 inches tall). For specimens not collected on behalf of a specific institution, the title line, centered at the top, is usually something like *Flora of Indiana*, *Plants of Indiana*, or your own private label like "Herbarium of *Caltha P. Lustris*." The label should convey the name of the plant including the plant authorities, the county and location where collected, habitat, the name of the collector(s), the number of the collection, and the date collected (see figure for suggested placement). Be sure to note the color of the flowers, as

this will not be apparent when the specimen has aged. For specimens that are only a part of the whole, note also the size of the entire plant.

10. Mount and label the specimen. Lay the dried plant material on a sheet of herbarium paper and arrange it in a pleasing way. Be sure to leave space at the bottom right-hand corner for your label. Dab white glue on the back of each piece of plant material and place it where you want it. Lay waxed paper over it and apply a light weight (such as telephone books) to keep it in position. Allow the glue to dry thoroughly.

After your labeled specimens have thoroughly dried, store them in a sturdy cardboard or wood box. Check every few months to make sure they're not bug-infested or getting damp.

Adapted from an article by Kay Yatskievych and Rebecca Dolan in the Spring 2001 issue of INPAWS Journal. Illustrative specimen courtesy of University of Florida Herbarium.

Herbarium Suppliers

Acid-free herbarium paper, paper for the labels, glue, presses, and other materials can be ordered from the following sources.

Pacific Papers, www.pacific-papers.com, 800-676-1151

Herbarium Supply Company, www.herbariumsupply.com, 800-348-2338

Suppliers may have a 100-piece minimum order for herbarium paper. If you want just a few sheets to try your hand at mounting, you can obtain them for a nominal fee from Becky Dolan at Friesner Herbarium, Butler University.

Invasion of The

Does the creature from the black lagoon scare you? Be afraid, for hydrilla, an aquatic monster in its own right, is invading lakes and rivers in the U.S.

Silently lurking under the surface, *Hydrilla verticillata* forms dense stands of vegetation impossible to swim or boat through. Hydrilla can grow an inch a day! When hydrilla invades, ecologically important native plants are outcompeted and eliminated.

Native to Africa, Australia, and parts of Asia, hydrilla is considered the nation's most problematic aquatic plant, and recently it has slithered its way into our state! It was found in Lake Manitou near Rochester, Indiana, in August 2006. State agencies are working to control it and hoping that it hasn't spread to other lakes.

The closest known population of hydrilla is in Pennsylvania, so how did it get all the way to Indiana? It probably caught a ride by hitchhiking on a boat that was in an infested lake. Or it might have been dumped into the lake by an aquarium hobbyist tired of their fish tank. These are two ways that many aquatic invaders get moved around.

Hydrilla's adaptive qualities enable it to overpower native aquatic species. It can grow in areas of low light, fresh or brackish water, and standing or flowing water. It also absorbs carbon from the water more efficiently than other plants. Its diverse reproductive abilities are especially threatening; it can reproduce by seed, vegetative cutting, turions (dormant buds that form on the stems and drop to the sediment), and tubers. Just a half-inch sprig of hydrilla transferred to another body of water can form a new population, and both tubers and turions are viable for many years.

Hydrilla greatly disrupts the ecological balance of all the areas where it grows. Large, dense mats of hydrilla inhibit sunlight from reaching native plant species that live in the waters below. They slow the movement of water, enabling sediments to build up and creating breeding grounds for mosquitoes. They disrupt or clog the water supply and impede drainage and irrigation, which adds costs to the agricultural economy and negatively affects real estate values that depend upon attractive nearby waterways. They inhibit boating, skiing, and swimming and provide poor habitat for fish and other wildlife populations.



**STOP AQUATIC
HITCHHIKERS!**

Dreaded Hydrilla

Finding even a small population of hydrilla in Indiana cannot be taken lightly. Within three to four years of invading Maine, Massachusetts, and Connecticut, hydrilla was the dominant plant in infested waters, creating serious recreational problems. In an infested lake in Washington, hydrilla out-competed even the highly invasive Eurasian watermilfoil. Florida has spent more than \$50 million trying to control the plant, and still hydrilla occupies about 40 percent of their public waters.

Only complete removal of the plant keeps hydrilla under control. Viable hydrilla fragments make harvesting the plant with large mechanical harvesters difficult, and herbicides or biological control agents can be used only with extreme care. Thus states are focused on keeping hydrilla out of their waterways through a combination of information, education, monitoring, and using divers to harvest identified hydrilla populations while they are still small.

What You Can Do

You can take positive steps to keep hydrilla out of Indiana lakes and rivers:

- Rinse mud and/or debris from boating/fishing equipment and wading gear, and drain any water from boats before leaving a launch area.
- Remove all plant fragments from the boat, propeller, and boat trailer.
- Do not release aquarium or water garden plants into the wild.
- Consider using plants native to Indiana in aquariums and water gardens.

For more information on how to identify hydrilla and other aquatic menaces, go to invasivespecies.in.gov.

Adapted from fact sheets by Indiana Department of Natural Resources and Michigan Department of Environmental Quality, with input from INPAWS Invasives Committee Chair Ellen Jacquart. Drawings courtesy of University of Florida, Center for Aquatic and Invasive Plants.

Watch for Aquatic Invasives



HYDRILLA (*Hydrilla verticillata*) Hydrilla typically has 5 leaves whorled around the stem, although that number can range from 2 to 8. Leaves have distinctly serrated edges. Individual leaves can range from 1 to 2 cm. If nut-like tubers are found on the roots, the plant is definitely hydrilla.

If hydrilla is discovered, please report immediately to the Aquatic Invasive Species Coordinator at 317-234-3883. Hydrilla is illegal to possess in Indiana!



BRAZILIAN ELODEA (*Egeria densa*): Brazilian elodea is an exotic invasive aquatic plant. This plant has 3 to 5 leaves per whorl although 4 are most common. Serrated leaf edges are not visible. This plant can have leaves up to 4 cm, making it much larger than the other plants described. Tubers do not form on the roots.

If Brazilian elodea is discovered, please report immediately to the Aquatic Invasive Species Coordinator at 317-234-3883.



ELODEA (*Elodea canadensis*): Elodea is a native submersed aquatic plant. Elodea usually has 2 or 3 leaves per whorl. Serrated edges of the leaves are not obvious. Leaves can be up to 1.5 cm although usually they are much smaller. Tubers are not produced on the roots.

Elodea is a beneficial native plant. Reports are not necessary if you discover this plant.



Nine Hundred Miles from Home, Part 1

Nature celebrated July 4, 1976, by painting a broad purple ribbon along the edge of a shallow Duneland lake near me. A friend, Joel Greenberg, says the sight “was reminiscent of a canvas by Monet, if he had abandoned Giverny for the Dunes.” Up close, this ribbon turned out to be a myriad of carnivorous, somewhat orchid-like purple bladderwort (*Utricularia purpurea*), one of Indiana’s seventy or so Atlantic Coastal Plain disjuncts or “CPs.”

Unlike the boreals, our other category of journeying plants, CPs jumped over the intervening miles from their Atlantic and Gulf Coast homes to the borders of the Great Lakes and, with us, to scattered counties away from the Lake.

Experts disagree about how CPs arrived. The late Floyd Swink voted for seeds carried in wildfowl feet. Canadian naturalist E.C. Pielou finds these species the relics of populations once growing along the entire border of the post glacial Champlain Sea, which extended from the Atlantic Coast to Lake Ontario ten to twelve thousand years ago. Others believe the plants traveled north along the Mississippi.

However they arrived, many CPs grow in only a few places in Indiana and are often state listed. (Purple bladderwort is state rare—and, at least temporarily, absent from its Bicentennial habitat.) Most prefer sand near Lake Michigan, or, away from it, blow-outs in oak savanna or sites with varying amounts of damp, often shaded.

Some clues to finding and enjoying CPs:

Foredune-loving marram grass (*Ammophila breviligulata*) is especially beautiful when the wind uses its leaves to inscribe sweeping arcs, segments of perfect circles, in the sand. For extra charm, find arcs decorated with bird or lizard tracks or both. The plant’s long runners make it the great dune stabilizer.

Hidden in marram grass or even flourishing in open sand, find annual, state-rare seaside spurge (*Euphorbia polygonifolia*). It’s a “belly plant”; emerging plants resemble groves of one fourth- to one half-inch palm trees. Mature plants press their polygons flat in the sand to avoid wind damage. Nearby, the annual mustard-family sea rocket

PLANT SALE RECAP

Trinity/St. Richard’s Hospitable to Plant Sale

Trinity Episcopal Church/St. Richard’s School proved a great venue and welcoming hosts for the 2008 INPAWS Plant Sale and Auction. The new location in the school gym provided more space than was available in previous years, plus ample parking convenient to the sale. With improved logistics, the usual great supply of native plants, and increased interest in the merits of native plants, the sale was a huge success.

When the doors opened at 10:00 a.m., the line of customers eagerly descended on the rows of tables filled with wildflowers, ferns, grasses, bushes, and trees. When they had filled their plant needs, they were able to browse tables filled with books on wildflowers, gardening, and other nature-related topics or peruse the plants set up on the stage for the upcoming auction.

Many thanks to the INPAWS members who donated plants or helped with the sale. As those who have volunteered in the past know, a lot of work is involved, but it is enjoy-



Hilary Cox extolled the virtues of many a native plant at auction, assisted by auctioneer Mike Stelts. Bidders rewarded INPAWS with high bids.

able work. Seeing the whole thing take shape in just a few hours on Friday evening and Saturday morning is really amazing.

“Organized chaos” best describes the scene Friday as carload after carload, and sometimes truckload, pulls up

Cakile edentula
(Bigelow) Hook.
American searocket.
USDA-NRCS PLANTS
Database / Britton, N.L.,
and A. Brown. 1913. *An
illustrated flora of the
northern United States,
Canada and the British
Possessions*. Vol. 2: 196.



(*Cakile edentula*) may also inhabit the upper beach or fore-dune, its white to purple flowers lasting from early June to past Thanksgiving. *Edentula* suggests the plant is edible; Peterson says leaves are “fleshy, peppery-pungent” and advises boiling everything except roots and flowers for five to ten minutes for a cooked vegetable. Leaves and young seed pods are good in salad. More important to the plant, the beaked seed pod has two chambers, one to fall to proven growing conditions beneath the parent plant, the other, inflated, to float to a new home.

Some Books

Greenberg, J. *A Natural History of the Chicago Region*. The University of Chicago Press, 2002.

Peterson, L. *A Field Guide to Edible Wild Plants of Eastern and Central North America*. Houghton Mifflin, 1978.

Pielou, E.C. *After the Ice Age: The Return of Life to Glaciated North America*. The University of Chicago Press, paperback edition, 1992.

Swink, F. and G. Wilhelm. *Plants of the Chicago Region*. Fourth edition. Indiana Academy of Science, 1994.

at the door and brings in their plants. While some plants are pre-marked (always appreciated), those that aren't are usually quickly labeled by the knowledgeable volunteers. However, there are always some that cause discussion and debate over their identity, whether or not they are native, and, if not native, whether they are invasive. We do sell the non-natives as long as they are not invasive and are marked as non-native.

While we attempt to keep track of those who volunteer their time, the list is usually incomplete. Because of this I won't attempt to list all who helped. But special thanks are in order for auctioneer Mike Stelts and auction spokespersons Hilary Cox, Sue Nord Peiffer, and Kevin Tungesvick for their help in making the auction such a success. I would also like to recognize first-time volunteers Mike Campbell, Hollyn Hartlep, Laura Hohman, Kay Koch, Christy Krieg, Jackie Luzar, and Ross Nelson. Of particular note in that group are three second-generation volunteers, Karen Hartlep's daughter Hollyn, Ruth Ann Ingraham's daughter Christy, and my daughter Laura. Hopefully they enjoyed their first experience with the sale and will all be back next year.

Finally a special thanks to those who stayed to help with the cleanup. This is always the least enjoyable job, but one of the most important.

As always, next year's sale will be even better. If you have any comments or suggestions, please let me know (hohmantr@aol.com). Because of the success with this year's location, we have already made arrangements for Trinity/St. Richard's to host the sale again next year.

Tom Hohman
Chairperson, 2008 Plant Sale and Auction

INPAWS thanks these Nurseries and Landscape Contractors who donated materials for the sale:

Allisonville Nursery & Landscaping, Fishers
Altum's Horticultural Center & Gardens, Zionsville
Hobbs Nursery/Becker Landscape Contractors,
Indianapolis
Beineke's Nursery, West Lafayette
J.F. New & Associates, Walkerton
Mark M. Holeman, Inc., Indianapolis
Munchkin Nursery & Gardens, Depauw
Native Plants Unlimited, Fishers
Spence Restoration Nursery, Muncie
Winterhaven Wildflowers and Native Plant Preserve, West Point
Woody Warehouse, Lizton

A Day of Superlatives

INPAWS Ventures to Coles County, Illinois

First I must thank Kevin Tungesvick for the above title which suits our excursion to Coles County, Illinois, better than anything I came up with! On our prolonged return trip we had a humorous discussion about writing this article...even though at that point we didn't know that I would actually be writing it! The title is especially apt coming from Kevin when two of his passions were superbly satisfied that day. Some INPAWS members may be aware that, before the plant world engulfed him, Kevin was a meteorologist. And anyone who lives in central and south central Indiana and Illinois will not soon forget the flooding of Saturday, June 7. The meteorologists amongst us seemed as surprised as anyone by the day's weather phenomena and the destruction they wreaked. Thus Kevin was in his (first) element.



Trip leader Mike Homoya had asked me to give him a lift to Illinois that day (he was to meet his wife there), and, not one to pass up an opportunity, I had arranged to turn up at his house a little early so I could take a peek at his cactus garden. A peek is all it turned out to be, mostly from his kitchen window, as the rain just didn't stop. In fact, it continued torrential most of the morning. In one short lull—when it was only raining, not pouring—we squelched around to look at his southwestern cacti, such as *Cholla* (I want one!), bravely defying the odds here in central Indiana. The next downpour soon forced us back inside.

We had also planned enough time for Mike to see my "oasis," as he later

aptly described my antique farmhouse, though he was alluding to the encroaching development all around me, not to the lake it was about to become. Instead of touring my gardens, we stood in the garage doorway and watched the continuing onslaught of water (can't call it rain!) as first Dee Ann Peine then Kevin arrived and made a dash for shelter.

Having checked the National Weather Service (www.nws.noaa.gov) and Google maps to determine our best route—Did we want to aim for an area where they already had a flash flood warning in effect (I-70), or take my preferred route, which was still only under a flood watch (US Hwy 36)?—optimists all, we set off on our adventure.

I drive about 30,000 miles annually, traveling across the country at least twice during times when I have to dodge winter storms: in late November/early December as I head from Indianapolis to Tucson, and then again in late March/early April as I head home. I've met winter storms head on in the form of rain, ice, or snow...yet I think the weather this trip may have been as bad as the worst of these! Road conditions were definitely more challenging than any I have ever seen over such a wide area. We encountered many a flooded road, none yet closed, until we arrived in Illinois where US 36 was flooded out. We detoured slightly (good thing we can all read maps!), stopped at a roadside historic marker to eat our picnic lunches, and arrived at our destination only about ten minutes late.

Professor Wesley Whiteside was sitting on a bench in his somewhat water-logged driveway, looking as if he wasn't really expecting anyone to turn up. He was obviously happy to see us. It was also obvious at first glance that we were in for a treat.

My first stop (I drink coffee on longer road trips) had to be his bathroom, which just happened to be next to a wonderful little conservatory full of beautifully cared-for African violets...a foretaste of things to come.

The first plants to draw oohs and aahs were his magnolias, under some of which he had been seated on our arrival: *Magnolia macrophylla* (bigleaf) and *M. ashei* (Ashe's) having seeded and crossed and seeded

again and grown to maturity all over his property. Just as a sideline: Ashe's magnolia is endemic to Florida and endangered in its own state; yet there in central Illinois they were thriving very happily.

Although we were expecting several other people, no one else had turned up yet. I think Prof. Whiteside was a little anxious at first, as the ground was decidedly squelchy, plus he didn't want to be out of sight if anyone else did arrive, so he led us to the closest section of his gardens where it was slightly drier and where there were a lot of native forbs interplanted with non-invasive perennials; plus, in a shaded area in one of many specially prepared beds, some *Cypripedium reginae* (showy lady slipper) blooming their heads off.

As a few more people joined us, we wandered further into his self-made "jungle," interspersed with unusual "flower" beds. Of the latter, the one that drew most comments (Dee Ann instructed me to take "plenty of pictures") was the bog garden with its bug-eating beasts such as *Saracenia* spp. (pitcher plants), *Dionaea* (Venus flytraps), and *Drosera* spp. (sundews.) I am fortunate to have seen our native pitcher plants and sundews growing in northern Indiana, but have never wanted to go the extra mile required to grow them at home. This decision was reinforced when Prof. Whiteside explained that he takes out the whole bed once every two years to rebuild the soil and



Ashe's magnolia (*M. ashei*), endangered in its home state of Florida, thrives in Whiteside's unique Central Illinois garden. Photos by the author.

maintain the correct requirements (high moisture, low nitrogen/pH) for these unusual plants!

What became more and more surprising as we continued our perambulation was that he could keep up with it all. Here was another "special" bed with *Cypripedium kentuckiense* (Kentucky

lady slipper); there a bed with *Trillium maculatum* just going over. How on earth does he do it? Not to mention his roses, all in beautiful condition, not a black spot nor an aphid on them, no rose slug holes (they used to be my biggest bugbear in the IMA Formal Garden back in the day...). We saw no sign of a daily staff, although someone did turn

Wesley Whiteside Arboretum and Gardens

The beginning of the five-acre garden can be traced back to Wesley Whiteside's undergraduate degrees from Black Hawk College and Augustana College, and his graduate degrees from the University of Illinois and Florida State University. Wes was then employed in 1960 in the Botany Department at Eastern Illinois University at Charleston, Illinois. His purchase of farm land on the east edge of Charleston that became the garden was made in 1962.

The initial plan for the garden was to develop a collection of woody plants, especially those native to the eastern and southeastern United States. Perhaps best represented are the magnolias, not only many of the popular Asiatic representatives, but also all six species and three subspecies native to the southeastern United States, many of which have been neglected horticulturally.

Probably no plant in the garden receives more comment than the native big leaf magnolia with an almost month-long display

of large white flowers in late May and early June. Another noteworthy woody plant is the Ben Franklin Tree with a succession of three-inch white flowers for over two months in late summer and autumn. Discovered in 1760 in only one site in southeastern Georgia, it was last observed growing as a wild plant in 1803.

Other woody plants rarely seen in the Midwest include the silk camellia, the mountain camellia, the Georgia plume, and the Alabama snow-wreath from the southeastern United States. Also included are the Alaska weeping cedar from the Pacific Northeast, the cedar-of-Lebanon from Asia Minor, and the false camellia, Chinese wax shrub, umbrella pine, and orjama magnolia from eastern Asia. Additional components include plantings devoted to roses, hardy cacti, carnivorous plants (including several hundred Venus-flytrap plants), wildflowers, winter-flowering plants, and an extensive collection of daylilies. Several goldfish pools provide planting areas for waterlilies and other aquatic plants.

Description courtesy of Coles County, Illinois, Historical Society.

up to check if he needed help with a chainsaw, the storm having brought down at least one of his magnolias. And then there was his *Franklinia alatamaha* bed. I first encountered this tree at the Bartram house and garden in Philadelphia, so knew the history on this unusual and rare plant (discovered by botanists John and William Bartram in the mid-1760s and named after John's friend, Benjamin Franklin), but they are not the easiest tree to either find or grow.... Well, of course, when we were magnanimously offered some seedlings of this neat little tree, guess who said yes? I am now the proud owner of several seedlings and just hope that I can keep them alive, apparently best attempted in pots for a few years until large enough to be planted in the garden. We'll see.... And whilst we were all gawking at these, Kevin had gone off on an exploration of his own, having noted a specimen of *Taxodium ascendens* (pond cypress) growing in another part of this Illinois wonderland.

Mike's wife, Barb, had joined us in the meantime, and we had by now been walking around for several hours. As our little group had to get back to various flooded areas of Indiana, we needed to take our leave. Suffice it to say, we took much longer getting home than getting there! But that's another story.

However, on one thing we were unanimous, and here I quote Mike directly: "We were in awe of [Wesley Whiteside's] talent and the effort that must go into creating and maintaining such a collection. He is truly remarkable."

Our thanks go to Mike for organizing this trip and to Professor Whiteside for sharing his collection in every sense.... Oh yes, I am also the proud owner of a bigleaf magnolia, which Kevin is convinced has strains of *M. ashei*. But please, don't expect my garden ever to reach the standards of a Whiteside Arboretum and Gardens.... I just don't have that kind of energy! ■

INPAWS INITIATIVE

Youth Outreach Begins, Supported by the Letha Queisser Memorial Fund

Donovan Miller, Chair, INPAWS Youth Outreach Committee

We INPAWS members have knowledge about the out-of-doors that many adults and certainly most children do not. Mixed with a little folklore and your enthusiasm, what may seem common knowledge to you is more than enough to take kids on an exciting hike.

The Youth Outreach Committee was formed in early 2008 to help capture the natural curiosity of children by turning them on to the wonders of nature. The committee is implementing the INPAWS Executive Board's decision to use the Letha Queisser bequest to promote activities that help bring children into contact with nature. This new venture is in harmony with the national "kids to nature" movement à la Richard Louv's *Last Child in the Woods* and the vernacular Nature-Deficit Disorder.

Letha Queisser was a member of INPAWS and known as Indiana's Wildflower Lady. Educated as a botanist, she introduced our own Ruth Ann Ingraham to Indiana native plants. When she died the winter before last, her many friends honored her by giving memorial gifts to the Indiana Native Plant and Wildflower Society. (See Ruth Ann's tribute in the Summer 2007 edition of *INPAWS Journal*.)

Expertise Not Required

Working with youth is an activity that many members of INPAWS can do. It does not require knowledge of all plants and their scientific names. What we are aiming for at this stage of a child's life is to "hook 'em" on nature and wild places by getting them interested in even the simplest things.

Perhaps sharing with you a little of my experience will illustrate. My initial reaction to this idea was self-doubt and worry that I might not be prepared to lead an activity with a group of elementary or middle school children. Would they listen to me? Would they just be rowdy and go running through the woods? What would I say if they brought me a leaf, flower, or seed and I had no idea?

With all these trepidations, on May 5, I "bit the bullet" and led a series of 30-minute walks with elementary school children at Skiles Test Park. Teachers were present to direct attention and manage disciplinary issues, which were few.

Early in the walk we identified poison ivy. I talked about the leaves of three, pointed out the reddish tint of new leaves, and explained that it is a vine creeping on the ground that will climb trees. I discussed how to protect oneself with proper dress and general avoidance. As we walked, I grabbed a sprig of garlic mustard, crushed it and passed it around, and talked about its invasive behavior.

Along the trail were pockets of Solomon's seal, cut-leaved toothwort, bloodroot, and May-apple which gave me opportunity to point out and talk about the impact of the invasive bush honeysuckle and how it shades out the desirable woodland plants. When I came across some bedstraw, I flicked a sprig on the closest kid to his/her delight. Inevitably, a kid would ask "Where do these funny plant names come from?" And that gave an opening to talk a little plant folklore, which the kids loved.

I pulled down a maple branch with its inflorescence still intact and asked for an explanation. Could anyone identify the leaf? What was all this hairy green stuff hanging down? I talked about the flowering of trees and all plant life, whether showy or not to us humans. When a kid gave a correct answer to a plant question, a little recognition from me went a long way.

They did bring me plant parts, point at others, and ply me with questions beyond my knowledge, but instead of feeling inadequate, I was aware that I had been successful—I was getting



Stamping out garlic mustard at Skiles Test Park. Photo by the author.

kids interested in the natural world. At the end of the event, I was tired, slightly hoarse, but deeply satisfied with how the day had gone.

Our Approach

Our committee will start working with youth in Central Indiana, but we hope to spread our efforts statewide. The basic model is two-fold:

- Provide transportation for student groups who have no funds for field trips, and
- Have INPAWS members offer their knowledge and enthusiasm during the visits.

Committee brainstorming and discussion have focused on these priorities:

- (1) Identifying ideal program sites for field trips;
- (2) Identifying student groups who wish to make field trips but cannot because of financial barriers or lack of nature leaders;
- (3) Engaging INPAWS member participation in the field trips.

Initial Sites

As a starting point, the committee has identified two existing Indianapolis area locations whose programs mesh with our aims: Marian College Ecolab, and Skiles Test Park.

The Ecolab program is most developed, with two-hour field trips including an hour of walk-around instruction and a second hour of student hands-on participation. Students can take part in a restoration activity, pull garlic mustard, install plant plugs, collect seeds, etc.

Marian College faculty lead the hikes and instruct the students. We members can participate in several ways: pointing out plants during hikes, helping with a planting activity, assisting with an eradication effort, and generally sharing our enthusiasm and love for nature.

At Skiles Test, the program is in an emerging phase where we can help identify the plant populations, lead nature hikes, and have some role in shaping the program effort.

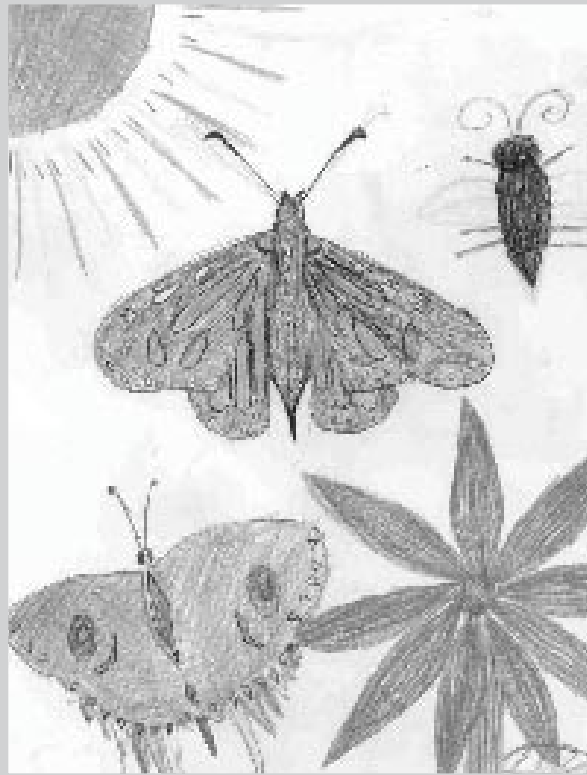
Objectives

Our committee has set a goal to fund 10 field trips in the next year with \$1,000 from the Letha Queisser Memorial Fund. Over the summer, we are getting the

word out to classroom teachers about the availability of these funds. An application process is in place, and teachers' initial responses have been highly favorable and enthusiastic.

The INPAWS Youth Outreach effort has a place for YOU to participate in getting kids interested in nature. We need members to assist in leading the groups, not just those supported by the Queisser Fund, but also other groups at the Ecolab and/or Skiles Test Park who request assistance. Watch for email messages publicizing the time and place of field trips and seeking your participation as coordinated by Donovan Miller.

The typical time commitment is two hours at the site. You can ease into group leadership by teaming up with someone who has previously volunteered. If you worry, like I did, whether you have the necessary skills, I assure you that a sense of empowerment will be yours after that first field trip. I urge you to give it a try. ■



Recent Donations to the Letha Bolles Queisser Memorial Fund

Anonymous
William & Lynn Boatmen
Gwen & Brent Harvey
Dottie & John Heseman
Tom Hohman
David R. Queisser
Pat & John Sieloff
The National Bank of Indianapolis
Trailing Arbutus Garden Club

In Memory of Rolland Kontak

Mildred Kontak
Susan & Ted Ulrich

In Memory of Dr. William F. Fechtman

Carolyn & Dave Queisser

Contributions to the Fund are gratefully accepted. To make a donation, please contact INPAWS Treasurer Kathleen Hartman. Drawing by Carrie for Hampshire School Nature Watch.

Indiana Establishes Invasive Species Task Force

June 2008 was the third annual Invasive Species Awareness Month in Indiana, and Hoosier legislators have heard the call.

During the 2007 legislative session, Representative Clyde Kersey (D-Terre Haute) and Senator Sue Landske (R-Cedar Lake) sponsored a resolution to establish an Invasive Species Task Force in Indiana. Its charge: To “study the economic and environmental impacts of invasive species in Indiana and provide findings and recommendations on strategies for prevention, early detection, control and management of invasive species to minimize these impacts.”

This task force is now writing a report to the Natural Resource Study Committee that will contain their findings on the status of invasive species and their management in Indiana, and what recommendations they have to improve the state’s ability to address this issue.

Information on the task force can be found at www.nature.org/wherewework/northamerica/states/indiana/news/news2618.html, and the final findings and recommendations document will be posted there when it is completed in early July. Ultimately, a package of invasive species legislation based on these recommendations may be developed for the 2009 legislative session. Watch future issues of *INPAWS Journal* for updates and how you can help in this effort.

Task Force Members

Phil Marshall, State Entomologist (co-chair)
Ellen Jacquart, Invasive Plant Species Assessment Working Group and The Nature Conservancy (co-chair)
Doug Keller, DNR-DFW Aquatic Invasive Coordinator
Bob Waltz, State Chemist
Jack Seifert, State Forester
Sandy Norman, Board of Animal Health
Keith Ruble, Vigo County Parks
John Miller, Oak Heritage Conservancy

Steve Yaninek, Purdue University Entomology Department
David Lodge, Notre Dame Center for Aquatic Conservation
Rick Haggard, Indiana Nursery and Landscape Association
Lynn Dennis of The Nature Conservancy is assisting the task force in carrying out its duties and communicating with legislators.

INPAWS Advocates for Feds to Address Invasive Pests

Encouraged by Invasives Committee chair Ellen Jacquart, and with the consent of the Executive Council, INPAWS’ president has written to Hon. Edward T. Schafer, U.S. Secretary of Agriculture, supporting federal rulemaking with the goal of virtually eliminating the introduction of forest pests via imported live plants by 2015. An abbreviated version follows:

Dear Secretary Schafer:

Invasive insects and plant diseases are taking a disastrous toll on the native plants of the United States. Unfortunately, rates of introduction and establishment of new invaders have increased dramatically in recent years, and many of these recent introductions have been associated with imports of live plants.

The Indiana Native Plant and Wildflower Society...[is] greatly concerned that pests and pathogens brought in on imported live plants have the potential to devastate the native vegetation in Indiana, threatening both economic and environmental harm.

In recognition of the importance of the live plant pathway, the USDA Animal and Plant Health Inspection Service (APHIS) has begun revision of the regulations governing most plant imports...(the “Q-37” regulations). ... In hopes of facilitating this important rulemaking, a working group drawn from the Continental Dialogue on Non-Native Forest Insects and Diseases has developed a set of consensus recommendations for addressing these risks....

We are writing to ask that you take personal action to ensure that the Q-37 rulemaking has a high priority within the Department and that it proceeds as rapidly as possible. Furthermore, we hope that you will find the consensus recommendations worthy of your support as the rulemaking proceeds.

Sincerely,

Nancy Hill, President
Indiana Native Plant and Wildflower Society

Eastern Native Grass Symposium Announced

The 6th Eastern Native Grass Symposium will be held in Columbia, SC, October 7–10, sponsored by Clemson University and the South Carolina Native Plant Center. Plenary speakers will delve into many aspects of preserving, restoring, and managing native grassland communities in the Eastern US and Canada. Subject areas include natural grassland communities as well as managing grasslands for wildlife, livestock, and bio-fuel potential.

Field trips are planned to sample South Carolina’s diverse physiography and numerous instances of plant species at their northernmost or southernmost occurrence; tours will include management research, seed source development, and natives-based wildlife enterprises.

Participation is invited by researchers, extension services, government agencies, agriculture, industry, and environmental or gardening groups. Information and a call for papers are available at www.clemson.edu/~bstrngr/E_Native_Grass. Instructions are provided for submitting title/summaries for oral and poster presentations.

2008 Natural Resources Leadership Development Institute

The goal of the Natural Resources Leadership Institute is to develop leaders within the natural resources communities who can build collaborative relationships with others around contentious issues. By applying the skills learned in the program, NRLDI graduates will be more knowledgeable about how to work collaboratively with others, build consensus, and find sustainable

solutions to complex environmental issues.

The program is structured around three 3-day sessions held at various state park lodges. The dates for 2008 are:

- Sept. 10-12, Turkey Run State Park
- October 15-17, Spring Mill State Park
- November 12-14, McCormick's Creek State Park

The program is geared to men and women who represent a geographic cross-section of the state as well as various state and federal agencies and NGOs with a stake in the sustainability of natural resources. The participants also have a commitment to seeking collaborative, consensus-based processes. Participants are expected to complete various readings, activities, homework assignments, and role-playing activities.

Application deadline is August 1. To apply, download an application at www.agriculture.purdue.edu/fnr/nrldi/application.pdf. Fee \$500 excluding travel. For further information, contact Dr. Janet Ayres, Purdue University, Dept. of Agricultural Economics, 765-494-4215 or ayres@purdue.edu.

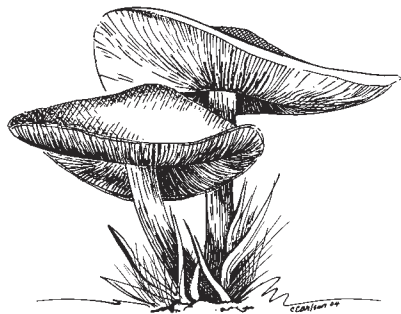


Illustration by Chris Carlson in R.A. Ingraham, *Swimming with Frogs*.

Urban Neighbors Promote Wildlife Habitat

Indianapolis's historic Cottage Home neighborhood, bounded by 10th Street, Michigan Street, I-70, and Oriental Avenue, is making a home for more than its human residents. Neighbors formed a GreenTeam in 2007 to pursue certification for the Cottage Home Neighborhood as a Certified Wildlife Community in partnership with Indiana Wildlife Federation. The GreenTeam is enhancing and preserving the neighborhood's natural environment so as to retain and promote wildlife in the area. A number of Coopers hawks and screech owls, along with a variety of song birds, butterflies, bats, and salamanders, are counted as residents.

In the last year, the team held a bat house making workshop, participated in spring and fall neighborhood and waterway cleanups, conducted educational programs for neighborhood children, planted native plants, and sold native seeds to the neighbors. Three neighbors have graduated from the Indiana Wildlife Federation's Habitat Steward Program. Plans include replacing invasive plants from the nearby Pogue's Run corridor with native plants and working with neighbors and businesses to provide for wildlife.

Central to Cottage Home's goal is to encourage individual neighbors to certify their backyards as wildlife habitats. The four basic components to certification are providing wildlife food, cover, water, and a place to raise their young. For more about the National Wildlife Federation's backyard certification program, visit www.nwf.org/backyard/certify.cfm. Cottage Home Neighborhood Association holds an annual neighborhood tour and maintains a website at www.cottagehome.info.

Coming Up

Saturday, August 9
INPAWS Hike at Green's Bluff Nature Preserve, Owen County. Forested ravines and hemlock forest. Led by Ellen Jacquot.

Saturday, September 6
INPAWS Hike at Tefft Savanna Nature Preserve, Jasper County. Oak savanna and "coastal plain" marsh. Led by Mike Homoya and Tom Post.

Saturday, October 4
INPAWS Hike at Charlestown State Park, Clark County. Limestone glade flora and rocky forested slopes. Led by Dr. Dick Maxwell, Bill Thomas, and Jason Larson.

Saturday, November 22
INPAWS Annual Conference at Fort Benjamin Harrison, Indianapolis. Principal speaker will be Doug Tallamy, author of *Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens*.

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

INPAWS Supports NICHES Land Acquisitions

INPAWS is helping to protect three pieces of Indiana's natural heritage in perpetuity. Our donation of \$3,000 joins sizeable commitments from Indiana Heritage Trust and two land-owners to help NICHES Land Trust purchase three parcels totaling 93 acres valued at \$302,000. NICHES (Northern Indiana Citizens Helping Ecosystems Survive) sets aside a part of its donations for stewardship and is building an endowment that will provide long-term capacity to manage the properties that it protects.

The **Black Rock** parcel protects 45 acres of oak/ hickory woodland, flood-plain forest, two steep-sided shale ravines, and the most prominent sandstone outcrop on the banks of the Wabash River. Black Rock itself sits 110 feet above the water. From Native Americans until today, Black Rock has been an important gathering point for people to share and experience the natural world.

The **Sizemore Tract at Fisher Oak Savanna** adds 20 more acres of wet flatwoods and rolling black oak sand ridges, bringing the Fisher Oak Savanna preserve to a total of 220

protected acres. These encompass white, black, and pin oak savanna that provides habitat for red-headed wood-peckers, bluebirds, hog-nose snakes, legless lizards, and a rich diversity of savanna wildflowers.

To protect **Bachner Nature Reserve**, NICHES is acquiring 40 acres of land that will afford access for fishermen and nonmotorized boaters to Sugar Creek in Montgomery County while enabling NICHES to manage and reforest 28 acres. Reforesting small fields eliminates the amount of edge and increases the total size of the forests in the Sugar Creek valley, both important in the nesting success of forest song birds. Sugar Creek is the one of the most important mid-sized streams in Indiana. Sandstone outcrops and steep-sided ravines have helped to spare this area from total conversion to till agriculture and have protected the largest block of forest left in glaciated Indiana. The cool north-facing ravines hold boreal relicts such as hemlock, canada yew, and white pine.

For more information, visit www.nicheslandtrust.org.

New INPAWS Members

CENTRAL

Lynn Arrowsmith
Hope Baugh
Maxine Berry
Arlene R Bow
Deb Conley
Sonok Y. Deutscher
Pam Duncan
Ris  Friedman
Chris & Ann Gautier
Thomas Graham & Carolyn Hommel
Sue Grizzell
Glenna Haberzette
Brian & Bev Howey
Kathleen Hume
Rita Hupp
Joshua & Emily Jackson
Todd & Sarah Janzen
Pam Knipp
Judith L. Kojetin
Vickie Martin
Judith Mills
John Montgomery
Mary Ann Stewart

EAST CENTRAL

Ann Edwards
Tony Fleming & Victoria Ferguson
Hunter Graves

SOUTH CENTRAL

Laura Hohman
Eleanor Lahr
Vicky Myers
Dick & Barbara Roe

WEST CENTRAL

Stephanie Frischie
Kay & Dale Harris
Mary Kate McKenna

To join INPAWS or renew your membership, visit www.inpaws.org.



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