



## PLANT DETECTIVES

# Windshield Botany

Barbara Plampin, Ph.D.  
Life Director, Shirley Heinze Land Trust



Stiff gentian ©2000 Eleanor S. Saulys

Northwest Indiana plant detectives don't have to beat down miles of cattails or bog-slog to find rarities.

I don't emulate a cousin who bird-watches while driving, but as a passenger I've spotted coastal plain disjunct Virginia chain fern (*Woodwardia virginica*) and state endangered small forget-me-not (*Myosotis laxa*) in roadside ditches. However, a friend did locate the rare yellow wild indigo (*Baptisia tinctoria*) from the driver's seat. Before reconstruction, a cloverleaf on I-65 harbored nodding ladies' tresses (*Spiranthes cernua*) and state

threatened long-beaked bald rush (*Psilocarya scirpoides*).

Sometimes walking just a few feet from the car does the trick. Numerous tiny late coralroots (*Corallorhiza odontorhiza*), possibly the world's ugliest orchid because of its fallow flowers, once appeared on the sandy shoulder of a rarely used Duneland road. Last summer, four state rare shining ladies' tresses (*S. lucida*) bloomed in gravel edging a road more traveled. This orchid population had crashed from the previous summer's 50 because of flooding by beavers.

Last fall, "Dan, Dan, the Orchid Man," a.k.a. Dan McDowell, a retired steel mill worker, thrilled us plant hunters by announcing his discovery of, not yet another orchid, but 60 or more stiff gentians (*Gentiana* or *Gentianella quinquefolia occidentalis*) just 25 feet from a busy Lake County thoroughfare. Stiff gentian isn't state listed (Deam shows it in 20 counties), but, except for reports from St. Joseph County, it was hitherto unknown from the Chicago region's Indiana counties.

Growing on a slight, somewhat clayey slope above a fen, plants were in flower on September 26. Dan's photos show that stiff gentian is indeed stiff. With their slim tubes and five slightly flaring, pointed, bristle-tipped petals, the densely clustered terminal and axillary lavender-blue flowers resemble rockets straining for take-off.

Dan's find is the more remarkable because several of us missed it on an earlier visit. After noting prairie dock, big bluestem grass, and closed (bottle) gentian (*G. andrewsii*), we'd skedaddled, put off by the plenitude of exuberant poison ivy shrubs. How to distinguish vegetative stiff from closed gentian? Stiff is shorter (16–20 inches) and has ridged stems and clasping leaves.

Retired English professor Barbara Plampin is a member of INPAWS and Save the Dunes Council. Botany is her lifelong avocation.

## BOOKS

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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.

**Membership**

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**Officers**

President	Rebecca Dolan	317-940-9413	<a href="mailto:rdolan@butler.edu">rdolan@butler.edu</a>
Vice President	Ellen Jacquart	317-951-8818	<a href="mailto:ejacquart@tnc.org">ejacquart@tnc.org</a>
Recording Secretary	David Savage	317-873-5083	<a href="mailto:jdsavage@sbcglobal.net">jdsavage@sbcglobal.net</a>
Corresponding Secretary	Janice Gustaferro	317-596-0977	<a href="mailto:jan_in@egix.net">jan_in@egix.net</a>
Treasurer	Dawn Stelts	317-867-2906	<a href="mailto:dawn@stelts.com">dawn@stelts.com</a>

**Chapter Leaders**

East Central	Marcia Johnson	765-288-5629	<a href="mailto:marciaj50@aol.com">marciaj50@aol.com</a>
Central	Ron Jackson	317-782-3724	<a href="mailto:ronald.jackson6@worldnet.att.net">ronald.jackson6@worldnet.att.net</a>
South Central	Gillian Harris	812-323-9211	<a href="mailto:gilharris@insightbb.com">gilharris@insightbb.com</a>
West Central	Chris Brewster	765-463-7171	<a href="mailto:jim.chris.brewster@att.net">jim.chris.brewster@att.net</a>

**Committee Chairs**

Annual Conference	Nancy Hill	317-283-8345	<a href="mailto:nanhill86@earthlink.net">nanhill86@earthlink.net</a>
Plant Sale & Auction	Julie Beihold	317-852-8640	<a href="mailto:iepdb@iquest.net">iepdb@iquest.net</a>
	Karen Hartlep	317-253-6164	<a href="mailto:khartlep@interdesign.com">khartlep@interdesign.com</a>
Education	Dan & Sophia Anderson	317-849-3105	<a href="mailto:danjand1@cs.com">danjand1@cs.com</a>
Grants & Awards	Joan Mohr Samuels	765-567-7023	<a href="mailto:mohrsamuels@insightbb.com">mohrsamuels@insightbb.com</a>
Historian	Ruth Ann Ingraham	317-253-3863	<a href="mailto:rai38@aol.com">rai38@aol.com</a>
Invasive Plant Education	Ellen Jacquart	317-951-8818	<a href="mailto:ejacquart@tnc.org">ejacquart@tnc.org</a>
Journal Editor	Wendy Ford	317-334-1932	<a href="mailto:wwford@comcast.net">wwford@comcast.net</a>
Membership	Dawn Stelts	317-867-2906	<a href="mailto:dawn@stelts.com">dawn@stelts.com</a>
Native Plant Rescue	Dawn & David Bauman	317-274-0584	<a href="mailto:dbauman@iupui.edu">dbauman@iupui.edu</a>
Programs & Field Trips	Lynn Dennis	317-951-8818	<a href="mailto:ldennis@tnc.org">ldennis@tnc.org</a>
Speakers Bureau	Kit Newkirk	765-653-5590	<a href="mailto:kit@gamepreserve.com">kit@gamepreserve.com</a>

# A New Beginning

Rebecca Dolan

Hello, friends. By the time this reaches you, spring should be well on its way. Early spring blooming forest trees will have released their wind-vectored pollen, unfortunately triggering hay fever in those who are sensitive. The earliest herbaceous bloomer in the woods here at Butler University, harbinger-of-spring (*Erigenia bulbosa*)—gotta love that name—will be well along.

The study of the timing of significant life-history events in nature is referred to as “phenology.” Active INPAWS member and past president Ruth Ann Ingraham has brought to my attention a nationwide program that is enlisting citizen phenology observers to record flowering times and other information on selected native plants. The program’s originators will use these observations to help monitor changes that may be due to climate change. If you would like to be involved, visit the National Phenology Network at [www.uwm.edu/Dept/Geography/npn/](http://www.uwm.edu/Dept/Geography/npn/). Ruth Ann is a careful observer of nature, as is evident in her insightful book, *Swimming with Frogs: Life in the Brown County Hills*, recently published by Indiana University Press.

This issue of the newsletter is the first for new editor Wendy Ford. Wendy has researched the wonderful information and presentation of past issues and is shaping a vision for the newsletter’s next 10 years. Please let her know what you would like to learn and read about, and please consider contributing yourself.

We would love to know where members’ favorite wildflower viewing areas are, to hear about successes and failures you have had in gardening with natives, and to cover topics of interest to the membership.

Wendy can be reached at [wwford@comcast.net](mailto:wwford@comcast.net) or 317-334-1932.



Spring peeper by Chris Carlson in *Swimming with Frogs* ©2005

## Beetles Making Progress Against Purple Loosestrife

Rich Dunbar, Northeast Regional Ecologist  
Indiana Department of Natural Resources

Purple loosestrife is an invasive weed that spreads across wetlands, displacing native plants and disrupting natural communities. It has been 10 years since IDNR first released the beetle *Galerucella* to control purple loosestrife. Since then, we have released the beetle at 48 different sites.

Purple loosestrife is a long way from disappearing, but each year *Galerucella* noticeably reduces purple loosestrife at more and more of those release sites. And, the beetles are flying from the release sites to nearby wetlands.

The data we have collected confirms our visual observations. As yet the purple loosestrife plants are no fewer, but they are much shorter and/or flowering much less and producing fewer seeds. Shorter loosestrife is less able to crowd out the native plants, allowing the native plants to recover. Pictures of the dramatic decreases that *Galerucella* can cause may be seen at [www.in.gov/dnr/entomolo/programs/purple2.htm](http://www.in.gov/dnr/entomolo/programs/purple2.htm).

Two other insects are helping us control purple loosestrife. We have released a root-mining weevil (*Hylobius*)\* at 14 sites and a flower-feeding weevil (*Nanophyes*) at 5 sites. Neither is likely to produce the dramatic results of *Galerucella*, but they should help over the long haul.

We will keep working to achieve an actual reduction in the number of purple loosestrife plants. So far *Galerucella* has been able to reduce their size and open up space for native plants in a wetland far too big for us to control by spraying. That is an encouraging start.

Adapted from IDNR Natural Area News, Winter 2005.

\*For more about the *Hylobius* weevil, see page 10 of our Autumn 2004 issue.

## Tulip Tree, *Liriodendron tulipifera* L.

# Popular Poplar

Marion T. Jackson, Ph.D.  
Professor of Ecology  
St. Mary-of-the-Woods College

*Large as the marble columns that once supported Grecian temples and nearly as straight and fluted, a pair of massive tulip tree trunks rises from the lowground section of Hemmer Woods Nature Preserve in Gibson County, Indiana.*

Our eyes are drawn upward along the near-perfect boles to green-golden crowns silhouetted against an azure September sky. These forest giants, their topmost branches towering to more than 150 feet, dwarf their associates. On fertile, well-drained soils of the Lower Wabash Valley, and especially in coves and low-elevation ravines of the Southern Appalachians, majestic tulip trees were once the monarchs of eastern forests, some reaching 10 feet in diameter and heights of more than 190 feet.

"How old do you think they are?" comes the inevitable question from one of my graduate students as I tape the largest of the pair at nearly 5 feet dbh (diameter at breast height). At an average growth rate of 10 years per inch of radius, the trees would have begun growing about 100 years before the American Revolution. In their youth, these trees must have heard the howls of wolves and the laughter of Indian children. Their large branches knew the weight of passen-

ger pigeon flocks and felt the drumming of ivory-billed woodpeckers. A hundred generations of raccoons and gray squirrels sunned themselves on their massive limbs.

If individual tulip trees are "old," then the species is ancient. An examination of its beautiful two-inch orange and green tulip-shaped flowers reveals the species' early origin, as do its truncated, simply lobed leaves which in silhouette also resemble a tulip flower. The numerous stamens and many fused carpals of its flowers today resemble closely those of fossils dating from the Tertiary geological period 60–70 million years ago when dinosaurs populated the Earth. At that time, the ancestors of *Liriodendron* (literally "tulip tree") grew all around the world in temperate zone forests. Glaciation during the Pleistocene Ice Age fragmented their circumpolar distribution, forcing the North American popula-

tion southward towards refuges in the Appalachian coves. Other populations survived in southeastern Asia where a sister species, *Liriodendron chinensis*,

evolved after the ice receded, and some still survive in central China.

Surprisingly, only Indiana has the beautiful tulip tree as its State Tree. Tall, stately, fast-growing, and essentially disease-free, this handsome tree is common



in mesic forestlands and is popular for ornamental use in parklands and residential plantings. Although not one of the true poplars, which include the cottonwoods and aspens, the pioneers called it "yellow-poplar" because of its soft, smooth, even-grained yellow-green heartwood.

Yellow-poplar was a favorite wood of the early settlers. Lightweight and easily chopped, split, and hewed, it was the tree most commonly used for cabin logs and fence rails. An added benefit was that the durable heartwood resisted decay and termites. Kept dry, well-founded, and roofed, cabins of huge poplar logs often stood for 150 to 200 years. A few original cabins surviving in Indiana are constructed of logs of incredible proportions—up to 32 inches on the broad faces, 8 to 10 inches thick, and 30–40 feet long.

Pioneers also made much furniture from yellow-poplar because it sawed, planed, and sanded easily with carpenter's hand tools. Other early uses





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included gate lumber, house and barn siding, boat construction, shingles, broom handles, food containers, and pulpwood for making postal cards. Native Americans alternately charred and adzed huge logs into dugout canoes, hence the early name of “canoewood” for the species. Yellow-poplar was virtually the “redwood” of eastern forests. As an added bonus, its showy flowers were an important nectar source for honeybees.

Seeds and seedlings tell the story of the tulip tree’s success. The species has survived for 70 million years by a reproductive strategy adapted to forest disturbance. Veteran tulip trees shower their surrounding acre with thousands of wind-dispersed seeds each year for a century or two before a break in the forest canopy occurs, thereby enabling the species rapidly to invade natural forest openings or cut forestland when the opportunity arises.

Enough seeds are rained onto the land to feed the cardinal, the quail, and the purple finch. The fox squirrel, chipmunk, cottontail, and white-footed mouse dine on them as well. Still enough are left over to germinate into thickets of young seedlings wherever sufficient sunlight is present, only to have the duck-billed buds and tender twigs of many of their population nipped by browsing rabbits and white-tailed deer. Occasional fires sear the cambium of others.

Despite such enormous losses, a family of young trees of varying sizes and ages often stands in close ranks all about the old “mother” seed tree. The fast growth of these survivors in mesic



*Tulip poplar in winter* ©Susan W. Sweeney 2004

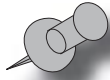
sunlit sites enables them quickly to outrace all competitors. Beautiful, tall, straight young trees grow to saw log size in 50 years on fertile soils, making the species a favorite for forest regeneration.

From the emergence of the tender green spring leaves, through the showy flowers of early summer, until the pyramidal crowns turn into candle flames of yellow-gold in October, the tulip tree is one of the most-loved of American trees. After the leaves fall, the pointed pickle-shaped fruiting

“cones” shed their many seeds into warm fall winds to begin new groves in untended fields.

But only in the winter woods do huge tulip trees reach their true majesty. It is then that the great clear lengths of the fluted trunks lead to lofty spreading crowns topped by the remaining pencil-thin seed cone receptacles—Nature’s own candelabra—that seem to pierce the overcast sky like Nature’s lightning rods.

*Marion Jackson is also Professor Emeritus of Ecology at Indiana State University.*



## INPAWS Sponsored Programs

### Coming Up

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April 9 (Saturday)—Morning hike and afternoon work day at **Turkey Run State Park**. Hike led by Rich Scott who is doing a floristic survey of the park. Meet at 9:00 am at the Nature Center. Please RSVP to Lynn Dennis.

May 7 (Saturday)—**Native Plant Sale and Auction**, St. Pius X School, Indianapolis. Drop off plant donations Friday evening (see announcement on page 8).

June 4 (Saturday)—Visit to **Munchkin Nursery and Gardens**, Depauw, Indiana, followed by lunch at a local restaurant.

### Down the Road

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July 17 (Sunday)—Talk and hike at **Brown County State Park**. Jim Eagleman will discuss the recovery of flora in the park after years of deer culling. Meet at 1:00 pm at the Nature Center.

August 27 (Saturday)—Tour of **Cressmore Prairie**, Lake County, owned by the Shirley Heinze Land Trust. Led by “Plant Detective” Barbara Plampin. Meet at 8:30 am (local time).

September 9–11 (Friday–Sunday)—Bus trip to **Missouri Botanical Garden**.

October 15 (Saturday)—Mosses and lichens at **Plaster Creek Seep**, Martin County. Hike led by Bill McKnight and Harold Allison.

November 5 (Saturday)—**INPAWS Annual Meeting**.

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For further details visit [www.inpaws.org](http://www.inpaws.org) or contact Lynn Dennis at 317.951.8818 or [ldennis@tnc.org](mailto:ldennis@tnc.org).

## INVASIVES

### Japanese Stilt Grass

*Ellen M. Jacquart, Director of Stewardship  
Indiana Chapter of The Nature Conservancy*

Be on the lookout for our fastest-moving plant invader—Japanese stilt grass (*Microstegium vimineum*).

#### Natural History

Japanese stilt grass is an annual grass introduced into the United States as a result of its use as a packing material for porcelain, giving rise to its other common name, Chinese packing grass. First identified in Tennessee in 1919, it has since spread to most of the states east of the Mississippi. The seeds are small and easily transported by boots, tires, and water, allowing it to move very quickly from one site to another.

#### Range and Habitat in Indiana

The species arrived in southern Indiana in the early 1990s and has moved northward at a steady pace. It first appears along roads, trailheads, and trails and then moves into adjacent forest. It is now well-established through portions of south central Indiana and in summer 2004 was found as far north as Turkey Run and Shades State Parks in west central Indiana. At this rate, it will reach northern Indiana in a few years.

#### Identification

Good news! This is one of the few grasses that can be readily identified even without flowers or fruits. Look for a distinctive silvery stripe down the center of each upper leaf surface. The leaves are around 3 inches long, lance-shaped, and a bit asymmetrical. The plant has a sprawling habit and grows slowly through the summer months, ultimately reaching heights of 2 to 4 feet—it reaches the larger heights where the plants receive more light and water. Slender stalks of tiny flowers are produced in late summer (August–September). Soon after flowering, the fruits mature and immediately fall from the plant. The plant dies back completely by late fall, leaving orange-tinged dead plants sprawled over the ground.

#### Reproduction

Stilt grass reproduces exclusively by seed. Individual plants may produce 100 to 1,000 seeds that fall close to the parent plant. Seed may be carried further by water currents during heavy rains or moved in contaminated hay, soil, or potted plants and on footwear. It is no coincidence that this species almost always shows up first on public land at trailheads—hiker’s boots are moving it around! Stilt grass seed remains viable in the soil for five or more years and germinates readily.

## Impacts

Japanese stilt grass is especially well adapted to low light conditions, making it a serious threat to our forest communities. Once introduced along roads, trails, or other disturbed areas, the grass moves into the understory of forests. It forms a complete lawn in the understory, out-competing and displacing native wildflowers, ferns, and tree seedlings. Where white-tail deer are overabundant, they may facilitate its invasion by feeding on native plant species and avoiding stilt grass.

## Control

**PREVENTION** is the best answer! If it is not yet in your area, keep it out by being sure to brush your boots after visiting forested areas in central or southern Indiana. Do not carry this invader into new areas on your boots.

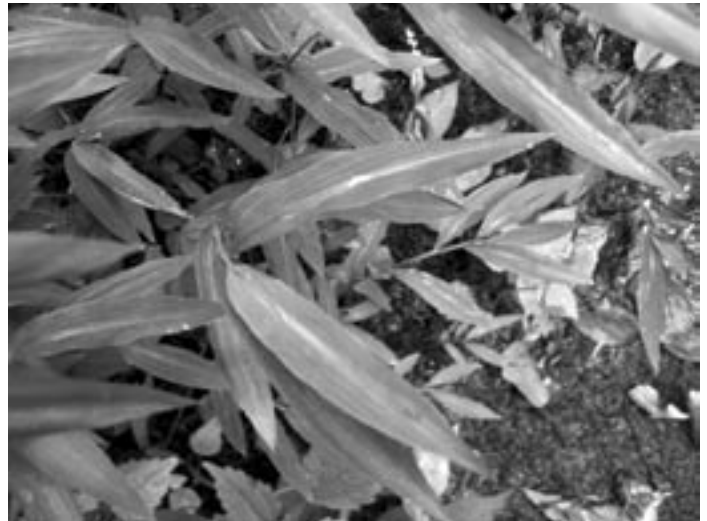
Once it is established in an area, the species can be controlled in a couple of ways:

**Manual/Mechanical**—For very small infestations, simply pull the plants out of the ground before they flower. For larger areas, weed-whack the plants to the ground in September, shortly before they produce seed but too late for them to regrow before the first frost. Since Japanese stilt grass is an annual, preventing the plants from setting seed is all you need to do to eliminate the species from an area. Of course, it will be necessary to pull or mow areas again each year until all the seeds are gone from the site.

**Chemical**—For extensive infestations where mechanical methods are not practical, systemic herbicides such as glyphosate (tradename RoundUp, or Rodeo in wetland sites) or grass-specific herbicides like fluazifop-p-butyl (tradenames Fusilade or Fusion) are effective. Spraying areas with a very dilute solution of Fusion (1/2%) plus a surfactant has been very successful at killing stilt grass without impacting other species, even perennial grasses. Plants should be sprayed between June and August, when the plants are actively growing but before flowering. Spraying is generally more effective earlier in the summer and less effective during droughty periods.

Japanese stilt grass is an example of an invasive plant that is being spread inadvertently by all of us who hike in the outdoors. In the next issue, Ellen will write more about what you can do to stop spreading these species.

# Have you seen this plant?



*Closeup of leaves showing telltale silvery stripe.*



*Hoads of Japanese stilt grass seedlings find the low-light conditions of the forest floor quite cozy.*



FEATURED INPAWS EVENT

# 2005 Native Plant Sale and Auction

Saturday, May 7  
Ross Hall, St. Pius X School, Indianapolis

## Friday, May 6, Plant Drop-Off

5:00 to 8:00 pm—Donors may drop off plants at the school. Enter through the back door and take plants to the cafeteria. We appreciate your donations!

## Saturday, May 7, Main Event

10:00 am—Doors open, plant sale begins.  
11:00 am—Auction begins with auctioneer Michael Stelts.

Volunteers are needed to receive donations Friday night and assist with the Saturday main event. Please contact Julie Beihold at 317.852.8640 or [iepdb@iquest](mailto:iepdb@iquest) or Karen Hartlep at 317.253.6164 or [knartlep@interdesign.com](mailto:knartlep@interdesign.com).



2004 auctioneer Rolland Kontak holds forth, assisted by Kevin Tungesvick and Sue Nord Peiffer.



- 
- Woodland Varieties
  - Prairie Plants and Grasses
  - Ferns
  - Trees and Shrubs
  - Water Plants
- 

### Something for Everyone

If you're new to native plants, the Native Plant Sale and Auction is a great way to learn about plants that may be right for your garden conditions.

If you're already growing natives, this is a chance to share the bounty of your garden and plant the seeds of interest in a fellow Hoosier.

### What to Expect

The most unusual, hard-to-find, or just spectacular items are set aside for the auction. The rest are snapped up by eager shoppers, usually before the auction begins.

Payment is by cash or check only. Refreshments are cheerfully provided by INPAWS volunteers.

### Directions

St. Pius X School is at 7200 Sarto Drive, located north of 71st Street, four blocks east of Keystone Avenue. Enter school parking lot from Sarto Drive north of the church.

### Donations

Plants come primarily from our members, but we also receive generous donations from many nurseries.

Last year's business donors included Spence Restoration Nursery, Muncie; J.F. New, Indianapolis and Walkerton; Woody Warehouse, Lizton; Altum's Horticultural Center & Gardens, Indianapolis; Mark M. Holeman Inc., Indianapolis; Wild Birds Unlimited (Keystone Avenue), Indianapolis; and Munchkin Nursery, Depauw.

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**Thank you to all who bring us native plants to sell or auction. We could not do this without you.**

## Donor Tips

Veteran auctioneer Rolland Kontak offers these tips for plant donors.

***Desirability, eye appeal, cleanliness, rarity—these are the qualities that attract the best prices.***

**DESIRABILITY:** Your donation's ranking relative to others of the same species.

**RARITY:** Unique species, or especially well grown "common" species.

**EYE APPEAL:** The attractiveness of your donation.

**CLEANLINESS:** Pot is not muddy, cracked, weedy.

***Just think of a shopping trip to your favorite nursery store.*** You pick only the best, you pass on wilted, muddy, dirty pots. You delight in finding just a few of a hard-to-get plant. Your eye pops quickly over the display and mentally discards most of them, but that bushy one on the corner just HAS TO go home with you.

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**DO, PLEASE DO!!** Bring your donations the night BEFORE the sale.

**DO:** Pot up about a month before, so your treasures are well established.

**DO:** Label each pot with the common and scientific name.

**DO:** Use attractive labeling sticks or other devices.

**DO:** Wipe your pots a day or so before the sale.

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**DON'T:** Bring non-native plants.

**DON'T:** Bring your plants the morning of the sale, unless absolutely impossible to bring them the night before.

**DON'T:** Forget eye appeal. Would YOU buy your donation?

**DON'T:** Forget to attend the sale, help the night before, and lend your knowledge to our visiting buyers.

# Indiana Spring

Hilary Cox, Leescapes  
Garden Design LLC

The first time I saw Indiana was from a train window in May. The view was charming—typical expanses of agricultural land dotted sparsely with farmhouses surrounded by evergreen windbreaks and flowering redbuds, dogwoods, and crabs. Little did I know, back in 1986, that I would eventually live in Indiana and get to know it better than anywhere else I have lived. Even less did I know how that charming landscape I crossed bore little resemblance to its previous incarnation—wide open prairie with “...the ornamental clumps of full-grown oaks scattered by the hand of nature so that they defy imitation by art” (from John Madson’s *Where the Sky Began: Land of the Tallgrass Prairie*).

Now I know better. I still find the Indiana landscape charming, but for its true self: for its dunes and wetlands, its remnant prairies and forests, its gentle rolling hills in the south with the mighty Ohio flowing through, to the flat plains of prairie land in the northwest; and for its natural inhabitants, the indigenous flora that has become my life. Now I know where, and when, to find the native floral display that each season offers to Hoosiers and their visitors.

I am horrified by how many people, born and raised in this state, have never wandered out into the woods in April to see the magic carpet of colour under their feet. Let me encourage you right now, if you number yourself amongst these, to get out and do so this year! You are in for a treat, for April is the month of forest “herbs” as they are collectively termed: ephemerals and perennials that thrive on the nutrients, bacteria, and fungi conveniently provided by the trees (see *The Hidden Forest* by Jon R. Luoma).

Let’s stop a moment and contemplate what I’ve just said. These herbs thrive under trees! How many times, in my work as a garden designer, do I hear the refrain “I’ve got shade, and nothing grows there”? Please tell me why you think nothing grows in the shade when there’s this fairytale going on in your woods in April? I can’t even count the flowers that I’ve seen growing in just one woodland, never mind identifying them all!

Many of these are plants that were discovered by early English botanists and sent back to the motherland; then tested for garden worthiness, hybridized, incorporated into the vast selection of plants for our gardens...and shipped back to the United States as English flowers! In some

cases it has taken more than 200 years for some of these wonderful plants, now returning to roost “back home in Indiana,” to be appreciated where they belong.

Let’s consider what makes a plant garden-worthy. To me, a garden-worthy plant grows in a variety of soil and light situations, blooms reliably for a long period of time, is relatively long-lived, and is reasonably “well-behaved”—that is, it does not try to hound every other plant out of its vicinity. Fragrance is an added benefit, as is the ability of the nectar, pollen, or seed to attract pollinators and birds. So which of our April woodland plants fit these criteria?

We can start with a plant everyone knows: columbine. Until relatively recently, your home-grown, uniquely coloured *Aquilegia canadensis* was not commonly seen in gardens of the Midwest. These plants are reliable and self-sow with nice restraint, just sufficient to keep stock going should some die out, but never becoming invasive. Their airy,

delicate, red and yellow bells dance on the long stems for weeks on end, making a display worthy of any garden. Planted in swathes, they are impressive.

Another familiar woodland inhabitant rarely seen in gardens is cranesbill. *Geranium maculatum* sometimes flowers in late April and continues through June. When the lavender blooms finish, the seed heads continue to provide interest and, in fall, the leaves turn red and orange. And how about wild Sweet William, woodland phlox, or *Phlox*



Wild columbine ©2000 Donald Davidson  
[www.nps.gov/plants/cw/watercolor/index.htm](http://www.nps.gov/plants/cw/watercolor/index.htm)

*divaricata*? In my garden some of the cultivars bloom for three months—and the fragrance is knockout!

Both cranesbill and woodland phlox self-seed with restraint—I have never found one yet in a place I didn't want it—and often some of their leaves remain visible throughout the winter, making these valuable four season plants. Why don't I see masses of these plants in everyone's garden? Is the reason the old adage "familiarity breeds contempt"? Some of my oldest friends have, with closer familiarity, inspired only higher admiration. Can't it be the same with plants?

Of course, many, many more woodland inhabitants appear on my list of garden worthies. To discover your own, I urge you to observe your native flora closely through all the seasons; a good book to get you started is *Wildflowers of Indiana Woodlands* by Runkel and Bull. Then come to the INPAWS Native Plant Sale and Auction and take home as many of them as you can lay your hands on! Make a splash of colour and fragrance in your own back yard that's just as magnificent as the one nature provides for those who have learned to see!

*British-born Hilary Cox makes her home in an antique Indiana farmhouse on land where the topsoil runs 18 inches deep. Her garden designs using native plants have been featured in Better Homes & Gardens and Fine Gardening.*

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## TRANSITIONS

# Speakers Bureau Pioneer Passes the Baton

After a decade of service, Colletta Kosiba has retired as Director of INPAWS' Speakers Bureau. The Bureau was born in the first year of INPAWS' existence, and Colletta has served as writer, director, producer, key grip, and sometimes actor for the Bureau ever since.

Colletta created slide shows and scripts. She coordinated speakers and engagements. She made sure materials were shipped to the right person at the right time. Through her efforts, hundreds of Hoosiers have had the opportunity to learn more about our native plants.

Colletta recently turned over a perfectly organized set of records and materials to an impressed Kit Newkirk, who will try to fill her enormous shoes.

INPAWS members are welcome to borrow any of the slide shows and scripts to make presentations around the state. Colletta also rounded up a stable of 15 volunteer speakers, INPAWS members who give generously of their time to educate Indiana on the subject of native plants.

## To borrow a slide show or schedule a speaker:

Please contact Kit Newkirk at 765.653.5590 (w) or 765.526.2202 (h) or [Kit@GamePreserve.com](mailto:Kit@GamePreserve.com).

Our thanks to Colletta Kosiba  
and to all the following who in 2004  
volunteered to share their enthusiasm  
for Indiana's natural heritage.

### Spring Wildflowers

Wabash Valley Garden Club: Joanne Fiscus  
Marion County Master Gardeners: Colletta Kosiba  
Mothers and More, Brownsburg: Julie Beihold  
Heartland Sierra Club: Tina Meeks  
Eagle Creek Garden Group: Colletta Kosiba  
Brownsburg Public Library: Colletta Kosiba  
Sugar Creek Historical Society: Kelly Frank  
Pendleton Garden Club  
Elkhart Public Library Adult Education: Gretel Smith

### Native Trees & Shrubs

Eckhart Public Library: Gretel Smith  
Greencastle Library: Katherine Newkirk  
Sugar Creek Historical Society: Kelly Frank  
Allen County Izaak Walton League: Gretel Smith  
Speaker in Garnett, Indiana

### Invasive Plants

Common Ground Garden Club: Art Hopkins  
Audubon Monroe County Library: P.J. Pulliam  
Polymtics of Valparaiso: Pat Tabor  
Advance Master Gardener Training, Danville: Mike Rian  
Master Naturalist Class, Hancock County: Becky Pfeifer

### Naturalized Flowers & Their Weedy Cousins

State Garden Wildflower Workshop, Bradford Woods:  
Colletta Kosiba

### Endangered Wildflowers

State Garden Wildflower Workshop, Bradford Woods:  
Susan Ulrich

### Gardening with Native Plants

State Garden Wildflower Workshop, Bradford Woods:  
Phyllis Goble

### Edible Plants

State Garden Wildflower Workshop, Bradford Woods: Dan  
Anderson

### Native Shade Plants

Art Hopkins

### Summer Wildflowers

Master Gardeners of Newton & Jasper Counties: Alyssa  
Solomon  
Eckhart Public Library Adult Education: Gretel Smith



# Mustard Family = Brassicaceae = Cruciferae

Rebecca Dolan, Ph.D.  
Friesner Herbarium, Butler University

The mustard family comprises 50 genera and 1350 species found everywhere but deserts; in Indiana, ca. 36 genera with 72 species.

## Characteristics

Annual, biennial, or perennial herbs with pungent, watery juice. Leaves alternate, simple, often dissected.

Flowers of 4 sepals, 4 petals (arranged in a cross) and 6 stamens (4 long, 2 short), radially symmetrical. Petals often long-clawed; the distinctive cross shape is the origin of the traditional family name *Cruciferae*. Fruit is a silique, an elongated capsule.

## Economic Importance

**Food crops:** Lots of vegetables are members of the genus *Brassica*: brussels sprouts, broccoli, kohlrabi, cabbage, cauliflower, and kale are all the same species, *Brassica oleracea*, selected for different features of the plant; *Brassica campestris* gives us turnips and Chinese cabbage; other *Brassic*as give us mustard greens, horseradish, radish, and mustard seed.

**Ornamentals:** Honesty, candytuft, alyssum, money plant, dame's rocket.

**Troublesome weeds:** Garlic mustard and other weedy mustards, shepherd's purse, peppergrass, dame's rocket.

**Plant products:** Canola oil, mustard.

# Watanabe Gardens

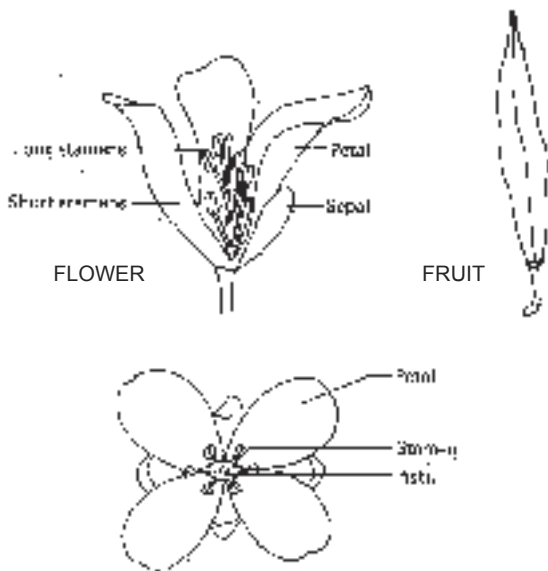
Dan Anderson

When the Indiana State Museum relocated to White River Park in 2001, museum management desired the setting to be representative of our state and in keeping with the landscaping of the other facilities in the park. To design such a setting, they chose the firm Ratio Architects of Indianapolis.

Ratio's inspiration was an old limestone quarry. The serpentine walk, representing a river bed, is made from Indiana limestone, and along the sides are stone benches and decorative blocks of the same material. Plants chosen for the upper end of the walk, near the front of the museum, are characteristic of higher altitudes and cooler climates. Those at the lower end, facing the canal, represent plants found in the lower, warmer parts of the quarry or in southern Indiana. The family of Dr. August "Gus" Watanabe, M.D., former vice president of Eli Lilly and Company, made a generous donation to the project which was matched by Lilly, so it is fitting that the gardens bear the Watanabe name.

Ratio's plans called for the purchase of 20,000 plants and 60 trees, all species native to Indiana. In the main garden, plantings are formal, with each species located in a specific area, roughly circular. Two satellite areas are more informal, comprising a scattering of species without any observable order.

Maintenance of the gardens was set up as a project for Marion County Master Gardeners by Debbie Specht, Manager of Volunteer Services, ISM, and was initially directed by Master Gardener Charlotte Carmichael. Several INPAWS members, who are also Master Gardeners, participated. In the fall of 2003, Dan and



## Common Spring-Blooming Brassicas

- Bitter wintercress—*Barbarea vulgaris*\*
- Black mustard—*Brassica nigra*\*
- Cut-leaved toothwort—*Cardamine concatenata*
- Garlic mustard—*Alliaria petiolata*\*
- Pepper grass—*Lepidium virginicum*
- Purple rocket—*Isodanthus pinnatifidus*
- Purple springcress—*Cardamine douglasii*
- Shepherd's purse—*Capsella bursa-pastoris*\*
- White springcress—*Cardamine bulbosa*
- Yellow cress—*Rorippa palustris*\*

\*Introduced; many of the mustard family are non-native.



Sophia Anderson started a project to collect and package seeds from the garden for sale in the Museum Shop, and the seed project was continued in 2004.

The soil in the Watanabe Gardens has not been excavated to the extent of those at Holliday Park and the Butler Prairie, so the use of many deeply rooted prairie species has been avoided. Other than prairie dropseed (*Sporobolus heterolepsis*) and a couple of sedges (*Carex* sp.), grass-like plants are absent. The collection has virtually no spring-flowering plants. The peak season of bloom is from mid-July to the end of August, with some of the asters retaining color until frost. Seed collection begins in mid-September and lasts until the end of October.

Several desirable “hitchhikers” have appeared along with the designated plants, including swamp milkweed (*Asclepias incarnata*), great blue lobelia (*Lobelia siphilitica*), dogbane (*Apocynum cannabinum*), and Culver’s root (*Veronicastrum virginicum*). Scattered plants of these species will be brought together in available waste areas and added to where necessary. In addition, we plan to introduce Queen-of-the-prairie (*Filipendula rubra*), ironweed (*Vernonia* sp.), and Joe-Pye weed (*Eupatorium* sp.) The latter was supposedly included in the garden plantings, but I have found none in the last two years. Nor have I seen blue false indigo, also in the plan; white false indigo may have been substituted. If any of you have four or five *Filipendulas* you would care to donate, please let me know.

Weed control has been the major effort of our volunteer maintenance crew. The first spring, clover, lawn grasses, ground ivy, and knotweed were the most common weeds. Fast-growing willows and yellow sweet clover (*Melilotus officinalis*), with their extensive root systems, were difficult to dig. Later, in 2003, there was a plague of horsetweed (*Erigeron canadensis*). Last year, the main culprits were daisy fleabane (*Erigeron annuus*) and the small white asters, which seemed to think the entire garden area was theirs.

I invite all INPAWS members to see these award-winning gardens (see Field Notes, page 14). Those who wish to adorn their home gardens with some of these beautiful Indiana native plants may pick up one or several reasonably priced seed packets at the Museum Shop.

If anyone has some spare time, **volunteer gardeners are always welcome** and receive a wide range of benefits. For details, please contact me or call Debbie Specht, Indiana State Museum, at 317.232.8351.

## What to See

*Aster cardofolius*—heart-leaved blue wood aster

*Aster ericoides*—heath aster

*Aster lateriflorus*—side-flowering aster

*Aster novae-angliae*—New England aster

*Allium cernuum*—nodding wild onion

*Asclepias tuberosa*—butterfly weed

*Baptisia leucantha*—white false indigo

*Ceanothus americanus*—New Jersey tea

*Coreopsis palmata*—plains coreopsis

*Echinacea purpurea*—purple coneflower

*Ratibida pinnata*—yellow coneflower

*Heliopsis helianthoides*—false sunflower

*Lobelia cardinalis*—cardinal flower

*Liatris spicata*—dense blazing-star

*Petalostemum purpureum*—purple prairie-clover

*Pycnothemum virginianum*—mountain mint

*Rudbeckia fulgida speciosa*—showy black-eyed Susan

*Rudbeckia subtomentosa*—sweet black-eyed Susan

*Solidago nemoralis*—gray goldenrod

*Solidago speciosa*—showy goldenrod

*Silene regia*—royal catchfly

Most, if not all, the plants and trees at the Watanabe Gardens have identifying plaques. The gardens can be accessed without entering the museum.

*Editor’s Note:* One satellite “wild” area of the Watanabe Gardens, near the entrance to the underground garage, was the subject of considerable brouhaha last summer when the intent was announced to convert it to turf grass. Current plans are to maintain the area as a naturalistic planting.

## STATE FLOWER PROJECT

### Firepink Not in the Running

Lynn Jenkins and Jo Ellen Meyers Sharp conducted surveys among attendees at the Indiana Flower & Patio Show in March to find out their choice for the Indiana state flower.

A list of six garden-worthy native plants in Indiana and the Midwest make up the ballot:

**Purple coneflower—*Echinacea purpurea***

**False sunflower—*Heliopsis helanthis***

**White trillium—*Trillium grandiflorum***

**Coral bell—*Heuchera americana***

**Columbine—*Aquilegia canadensis***

**Gayfeather—*Liatris spicata***

The recent *American Gardener* article about native plants was incorrect about firepink being the selection. Firepink (*Silene virginica*) is not on the list because INPAWS wants to engage members of the public in this effort with garden-worthy natives they may be familiar with and those available in garden centers or mail-order catalogs.

The ballot and photos of the plants will be posted soon on the INPAWS website so that anyone in the state can vote. Ballots also will be distributed at various garden-related events over the next several months.

Votes will be tallied later this summer. Then, work will begin with legislators to get a bill written and other steps taken to present it to the 2006 Indiana General Assembly.

Jenkins and Sharp are asking you and members of other garden-related groups to:

- **Talk about the state flower initiative in your community.**
- **Ask the public to vote on the ballot.**
- **Forward the names of legislators you know are interested in gardening or may have a sympathetic ear to the cause.**

*Contacts:* Jenkins, ljenks@tds.net, or Sharp, hoosiergardener@earthlink.net

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## INPAWS SMALL GRANTS PROGRAM

### 2004 Winners Give Native Plants High Visibility

The INPAWS Small Grants & Awards Committee received 10 proposals for review in September 2004, so there was a lot of competition! Two grants were made:

• **\$300 to Friends of the Sands (Gus Nyberg)** to purchase native plants for their project "Native Plant Landscaping at Newton County Fairgrounds." This is a demonstration/education garden to increase the public's awareness and appreciation of the plants that are part of this Newton County black soil prairie ecosystem.

• **\$500 to the Indianapolis Zoo (Lori Johnson Roedell)** for 13 species of native trees and shrubs to be planted in a 12-acre area at Fort Harrison State Park, Marion County, for their "Project Indiana Habitat."

Both projects are in areas of high visibility, providing native plant education—and inspiration—to a large number of people.

Five proposals were submitted by the March 1 deadline for 2005 grants. The committee expects to complete its review by mid-April.

## INASLA INPAWS AWARD

### Watanabe Gardens Honored

As part of its annual professional awards program, the Indiana chapter of the American Society of Landscape Architects (INASLA) submitted two candidates in the INPAWS category—works that prominently feature plants native to Indiana.

The INPAWS Small Grants & Awards Committee selected the "Indiana State Museum Eastside Gardens" (later named the Watanabe Family Gardens) for the October 2004 award. John Jackson managed the project for Ratio Architects. The Watanabe Gardens were also recognized for civic beautification in Keep Indianapolis Beautiful's 2004 Monumental Award.

Besides creatively incorporating native plants into the ISM landscaping, these gardens show the public two different approaches to native plantings by working into the design a manicured, geometric look as well as an open, wild look.

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## Letter to the Editor

*Responding to Bob Minarik's letter about proposed drilling in the Arctic National Wildlife Refuge, Rosemary Ervin writes:*

[Minarik] says "If we as a nation can be independent of foreign oil, I fully support oil exploration in the Arctic." I have never heard or read any expectations that ANWR would even come close to giving us independence from foreign oil. The U.S. Geological survey estimates that at peak production (1 to 1.3 million barrels/day), only about 10 percent of our current demand would come from ANWR and only for 20 or 30 years. Better we should decrease our demand for oil and speed development of alternative fuel sources.



## Saturdays with CILTI

Central Indiana Land Trust Saturday projects are a fun way to enjoy a little piece of nature. Please RSVP for all projects at 317.631.5263 or [msteiner@cilti.org](mailto:msteiner@cilti.org). CILTI will follow up with directions and other necessary information.

April 9, 9:00 am, **Sutton/Amos Butler Audubon Rookery, Johnson County**—Tree planting and a rare chance to see the area's largest Blue Heron Rookery from a safe distance.

April 16, 9:00 am, **Blue Bluff Nature Preserve/Shalom Woods, Morgan County**—Removal of invasive plants, litter abatement.

April 23, 9:00 am, **Burr Oak Bend Preserve, Hamilton County**—Removal of invasive plants, litter abatement, possible tree planting.

April 30, 9:00 am, **Hemlock Ridge Nature Preserve, Putnam County**—Trail maintenance, sign installation

May 1, **Hemlock Ridge Nature Preserve**—Dedication ceremonies; visit [www.cilti.org](http://www.cilti.org) for details.

May 7, 9:00 am, **Glick Preserve, Marion County**—Removal of invasive plants, litter abatement.

May 14, 9:00 am, **Hajji Hollow Preserve, Parke County**—Removal of invasive plants, litter abatement.

May 21, 9:00 am, **Pioneer Cemeteries, Henry County**—Trimming and clean-up.

May 28, 9:00 am, **Burnett Woods Nature Preserve, Hendricks County**—Removal of invasive plants, litter abatement, fence maintenance.

## Spring Wildflower Hike

April 16 (Saturday), Shades State Park. "Spring Wildflowers of the Entrenched Valley; Where the Past Meets the Present" is the title of this rugged hike through Shades State Park. Naturalist Mike Mycroft will explore the ecology and history of a unique natural area of Indiana using spring wildflowers as a guide. Gain practice identifying spring ephemerals while learning how to use wildflowers as habitat indicators and as tellers of historic tales. Meet at the Dell Shelter at 10 am and plan to hike for about 2 hours. Hike is free and open to the public after paying the standard gate fee: Indiana residents \$4/car, non-residents \$5/car. Call 765-597-2654 for more information.

## 20th Annual Wildflower Foray

April 22–24 (Friday–Sunday), South-Central Indiana. This celebration of Indiana's natural history and early signs of spring offers traditional bird and wildflower walks as well as hikes featuring wetlands, fungi, nature photography, and history. Hikes and programs are held at various locations in Brown and Monroe Counties.

Leaders represent the Department of Natural Resources, Hoosier National Forest, Monroe County Parks & Recreation, The Nature Conservancy, Indiana University, and other organizations.

The Saturday evening Foray Review includes an overview of concerns and projects, a summary of the wildflower census, and a look at an exciting new endeavor by The Nature Conservancy.

All programs and hikes are free, but some DNR properties charge a gate fee. Pre-registration is required for some of the hikes. For information on hikes other than those on the National Forest, call T.C. Steele State Historic Site at 812.988.2785.

## Sycamore Benefit Gardening & Landscaping Show

April 16 (Saturday), 9:00 am to 4:00 pm, Bloomington Convention Center, 3rd and South College, Bloomington.

This sixth annual one-day show includes gardening and landscaping vendors and environmental groups eager to share their knowledge. The South Central Chapter of INPAWS will have a table. Contact Cathy Meyer to volunteer, [cmeyer@co.monroe.in.us](mailto:cmeyer@co.monroe.in.us).

Bring kids to the Children's Corner where fun activities go on all day. Regular admission is \$6; free to children age 12 and under. Proceeds benefit the Sycamore Land Trust, which preserves natural landscapes for today and the future in south central Indiana.

For more information about the show visit [www.sycamorelandtrust.org](http://www.sycamorelandtrust.org) or contact Betsy Whitehead at 812.339.1782 or [betdon@earthlink.net](mailto:betdon@earthlink.net).

## Special Offer: NATIVE PLANTS Magazine

As an INPAWS member, you can receive the only magazine of its kind in North America at a special rate—25 percent off the regular price!

For just \$15 you will receive a year's worth (four issues) of *Native Plants* magazine, published by the Lady Bird Johnson Wildflower Center. A winner of national awards, this ad-free magazine explores native plant conservation, restoration, and use. Thought-provoking editorials and gorgeous four-color nature photography examine issues of regional interest and national significance.

Browse the current and previous issues at [www.wildflower.org](http://www.wildflower.org). To sign up online, click Read Our Magazine, then Subscribe, then Special Offer.

# Ready or Not. . .

Wendy Ford

Here comes my very first issue of INPAWS JOURNAL!

When INPAWS President Becky Dolan asked me to take on its editorship, I thought no problem, I should be able to fit it into a weekend once every three months. With my years of freelance writing and publishing experience, I should have known better.

I am humbled by what has proven a considerably more complex but engaging process. My hat's off to Anne Wilson who has laid out the newsletter from the beginning. I hope my efforts live up to the high standard set by her elegant layouts. Kudos also to past editors Bobbi Diehl, Carolyn Harstad, Dan Anderson, and Chris Carlson for consistently giving us articles of high quality and interest.

You may wonder about the newsletter's name change. Becky encouraged me to develop my own look for the newsletter, and the move to a briefer title came as this designer's desperate attempt to avoid stating the entire name of our distinguished society in the masthead.

I chose "journal" because, to me, it connotes both the personal reflections that gardeners jot in their notebooks and the observations that naturalists log in the field. It also signals that we do more than report news—we convey a body of knowledge and experience, whether penned by professional experts or amateur enthusiasts.

Having survived trial by fire with this first issue, I would now like to issue a challenge.

I invite each of you to help me make INPAWS JOURNAL reflect your needs and wants, your joys and frustrations, and your own encounters with Indiana's natural heritage. I'm not sure what form this will take, but I would like to initiate the conversation. You needn't write a full article—a paragraph or two or even rough notes would be welcome.

Here are some ideas to get you started: What would you like to learn more about? What wonderful place have you discovered that you'd like to share with fellow members? Do you

have practical advice for those of us trying to grow our own natives? Are you looking for seeds or giving them away? What was in bloom when you visited a specific nature preserve? Can you top Dan Anderson's garlic mustard lasagna recipe? What preservation and conservation projects have you been working on? What lessons have you learned?

With your input, these pages will speak with a more personal voice to all the membership.

When would I like your submissions? Any time I can get them. My contact information and deadlines for the quarterly issues are found on page 2 of this issue.

I thank Becky and the INPAWS Council for entrusting the INPAWS JOURNAL to me, and I look forward to hearing from many new voices in the coming months.



INDIANA NATIVE PLANT  
*and Wildflower Society*

16508 Oak Road  
Westfield, IN 46074

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