



Restoring Prairie Creek Barrens One Step at a Time

Michael A. Homoya, Botanist/Ecologist
Indiana DNR Division of Nature Preserves

Rome wasn't built in a day, and neither is a restoration project. Recently this has become abundantly clear to me while working to restore a natural community in the sand hills of Daviess County.

Two hundred years ago the early land surveyors and pioneers referred to our sand hill community as barrens, a name that ecologists continue to use to describe natural grassland communities with droughty conditions and sparse tree growth. Sand barrens once occupied dozens of square miles in southwestern Indiana, but today have all but disappeared.

The specific area to be restored is located at an Indiana DNR State Nature Preserve known as Prairie Creek Barrens, an 85-acre tract located about five miles north of Washington. Although the wetland portion of the preserve is significant in its own right (and the reason for the acquisition), the uplands were in row crops just prior to its pur-

chase in 1999. Our goal for the upland restoration is to reintroduce species that are appropriate for the site both ecologically and genetically, i.e., species that would have grown naturally in the sand barrens habitat, and that possess the genetic makeup specific to the area. But how do we know what species are appropriate, and where do we find local plants if the habitat has disappeared?

Fortunately, there's help. Determining what grew near the preserve was greatly benefited from the work of the early 20th century botanists Charles Deam, Dorothy Lawlis, Ray Friesner, and Ralph Kriebel. Although the natural vegetation was already quite rare when they botanized the area in the 1930s and



Mississippi milk pea (*Galactia volubilis*) is one of many species being introduced at Prairie Creek Barrens. Drawing by Joe MacGown.

40s, there were still a few existing remnants. Many that they visited were within a few miles of the preserve, with one site as close as one-quarter mile. [You can find references to the latter site in Deam's *Flora of Indiana* under the headings of milk-pea (*Galactea volubilis*) and slender marsh pink (*Sabatia campanulata*)]. Luckily the botanists collected specimens, now housed in herbaria, that enabled us to compile a species list. An additional reference that was of great help was the 1947 work by Dorothy Lawlis, then a graduate student at Indiana University. Her thesis, titled "Taxonomic Survey of the Vascular Plants of Seven Wind-blown Sand Hills in Southwestern Indiana," has a complete list of plants she

Continued on page 4

Inside

Push for Conservation.....3	Duneland Orchid 8	2006 Grant Guidelines 12
Remembering Sara Stein.....5	Snapdragon Family 9	Green Dragon 13
Decapitated Coneflowers6	Pawpaw 10	Field Notes 14



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INPAWS Mission

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

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A Push for Conservation

Rebecca Dolan

Hello friends,

Congratulations to Nancy Hill and her committee on another successful Annual Conference. More than 150 people heard educational talks, visited vendor displays, and enjoyed tasty food in the beautiful, historic Indiana School for the Blind.

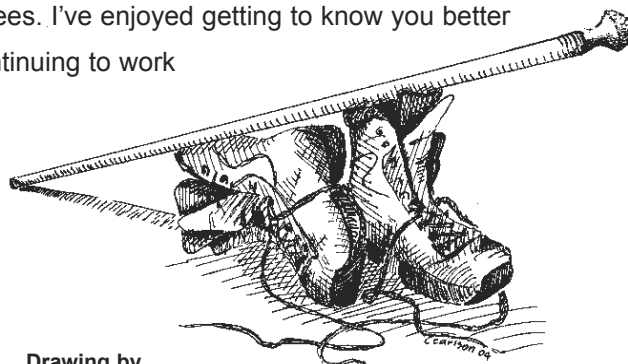
Upcoming events for INPAWS include the second annual Conservation Day at the Statehouse on February 20, 2006. This event is organized by the Indiana Conservation Alliance (INCA), an umbrella group of conservation-oriented organizations whose goal is to promote a conservation ethic in the state. Many INPAWS members attended last year.

Conservation Day starts with a session on how to meet with your legislator and share your concerns about environmental issues. It is an excellent civics lesson. I would never have thought that you could send in a note when the legislature is in session and your senator or representative will come out to chat with you. It actually works this way. The INCA training helps you understand how to be most effective in your communication.

Following the training, there is a poster/booth display session in the rotunda and a buffet lunch to which legislators and staff are invited. Please mark your calendar and plan to attend if you can. If you came last year, you are welcome back for all or part of the day. Volunteers are needed again to help with check-in and other logistics.

This is my last President's Message. If I can take credit for any improvements in INPAWS during my presidency, it is finding excellent volunteers willing to chair committees. I've enjoyed getting to know you better and look forward to continuing to work with our new President, Karen Hartlep, her Council, and all of you in 2006.

Rebecca



Drawing by
Chris Carlson.

INCA: The Indiana Conservation Alliance

This state-wide network of nonprofit organizations provides a unified voice for the protection and wise use of natural resources to enhance our quality of life. INCA works to foster and promote:

- A greater conservation ethic throughout the state
- Organized conservation advocacy
- Greater legislative, financial support for conservation
- Collaboration between and networking with various organizations

The INCA collaboration began in fall 2004, focusing on Conservation Day 2005 as its major activity. Plans are being made for an INCA weekend this summer, which would include coordinated activities throughout the state.

Conservation Day 2005 sponsors were:

1. American Fisheries Society, Indiana Chapter
2. Central Indiana Land Trust, Inc.
3. Hoosier Environmental Council
4. Hoosier Heartland RC&D
5. Hoosier Hikers Council
6. The Wildlife Society, Indiana Chapter
7. Indiana Deer Hunters Association
8. Indiana Forestry and Woodland Owners Association
9. Indiana Land Protection Alliance
10. INPAWS
11. Indiana Park and Recreation Assn.
12. Indiana Wildlife Federation
13. Izaak Walton League, Indiana Div.
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15. Pheasants Forever, Central Indiana
16. Save the Dunes
17. Sierra Club, Hoosier Chapter
18. Soil and Water Conservation Society, Hoosier Chapter
19. The Nature Conservancy, Indiana Chapter
20. Whitewater Valley Land Trust

For more information, call Angela Hughes at 317-951-8818 or 800-YES-LAND or email ahughes@tnc.org.

It's sobering to look out over the vast landscape, knowing how magnificent it must have been, and now being forced to sift through the scraps.

Barrens, continued from page 1

encountered in habitats similar to those at the preserve. It was from her list, and the compilation of herbarium specimens, that we developed a plan of what species to introduce into the preserve.

With information in hand, our next task was to locate the sites, find the listed plants, and gather seeds for the restoration. Sounds simple enough, right? Unfortunately that's not been the case. The sad reality is that the remnants visited by Deam and the others are but a vestige of their former selves. During the past 60 years all of them have experienced changes unkind to the native flora. Today we're lucky if we find any native plants at the sites, and if we do, it's often only a few individuals. It's sobering to look out over the vast landscape, knowing how magnificent it must have been, and now being forced to sift through the scraps.

But we keep looking...looking along road cuts, in fencerows, on ditch banks, along railroad rights-of-way... anywhere a desired native species might be hanging on. And to our amazement, we've found quite a few, albeit in low numbers of individuals. These few are the survivors, somehow having outlasted all that's been thrown at them—livestock, herbicides, aggressive exotic species, and the plow. Seeing such a plant, especially one that exists as a lone individual, often brings pause as I realize that it could be the last of its kind in the region, perhaps attached to an ancient rootstock that dates back to the time when bison and wolves roamed the land. Now *that* is a survivor.

It also makes me realize that there's not much time left to act. It's conceivable that in another 60 years most if not all of these plants will be gone. Thus we gather seeds. Over the past few years, these seeds have been germinated and nursery-grown for eventual planting at the preserve.

With Golden Eagle Grants from Indianapolis Power and Light to cover the costs of producing over 18,000 seedlings of more than 60 species, and planting assistance from volunteers, including INPAWS members and university students (mostly from Indiana University—Purdue University Indianapolis and University of Southern Indiana), we're off to a great start.

Partial List of Species Introduced into Prairie Creek Barrens

- | | |
|--|--|
| <i>Andropogon gerardii</i> (big bluestem) | <i>Lespedeza capitata</i> (round-headed bush clover) |
| <i>Asclepias amplexicaulis</i> (sand milkweed) | <i>Monarda fistulosa</i> (wild bergamot) |
| <i>Aster patens</i> (purple daisy) | <i>Penstemon calycosus</i> (smooth beard tongue) |
| <i>Bouteloua curtipendula</i> (side-oats grama) | <i>Ruellia humilis</i> (wild petunia) |
| <i>Chrysopsis camporum</i> (golden aster) | <i>Schizachyrium scoparium</i> (little bluestem) |
| <i>Commelina erecta</i> (barrens day flower) | <i>Sorghastrum nutans</i> (Indian grass) |
| <i>Coreopsis tripteris</i> (tall tickseed) | <i>Sporobolus clandestinus</i> (rough rush grass) |
| <i>Desmodium sessilifolium</i> (sessile-leaved tick trefoil) | <i>Ratibida pinnata</i> (yellow coneflower) |
| <i>Galactia volubilis</i> (Mississippi milk pea) | <i>Tephrosia virginiana</i> (goat's rue) |
| <i>Gaura filipes</i> (slender stalked gaura) | |
| <i>Kuhnia eupatorioides</i> (false boneset) | |

The original sand barrens community at Prairie Creek Barrens Nature Preserve was certainly complex and diverse in ways we will never know. And putting it back together, if it can be done, will likely take many decades. In truth, the site will never again have all the characteristics and attributes it possessed 200 years ago, but maybe, just maybe, we can help it regain some of its original grandeur.

Mike Homoya authored Orchids of Indiana (IU Press, 1993) and several articles on ferns for INPAWS.



Though not as open as Indiana's original sand hills, this northeast Illinois oak savanna resembles Prairie Creek Barrens. Photo by Mike Pingleton at www.pingleton.com.



Remembering Sara Stein

Sara Stein, natural gardening advocate, educator, and author, died February 25, 2005, at her home in Vinalhaven, Maine, after a battle with lung cancer. She was 69 years old. Cindy Crosby, a member of the education and advocacy group Wild Ones®, interviewed Sara in 2004.

Introduction by Cindy Crosby

Through her books, Sara Stein has taken us along on her journeys of self-education and discovery.

Roses and lawn, vegetables and flowerbeds. They comprised my gardening palette until six years ago when I moved to suburban Chicago and a friend gave me Sara Stein's *Noah's Garden: Restoring the Ecology of Our Own Backyards*. Sara's wry, down-to-earth description of the transformation of her rural New York acreage from traditional to a more native landscape, brimming with biodiversity, captured my imagination. Six years later, inspired by her book, my backyard likewise has morphed to include a small pond, a tallgrass prairie plot, and a wildlife-friendly tree.

Others across the country were also reading *Noah's Garden* and rethinking their approach to landscaping. Sara writes, "*Noah's Garden* became the story of what has gone wrong with our increasingly inanimate land." She jump-started the native landscaping movement of the 1990s by giving voice to what was being lost in backyards across America....

Sara introduced me to Wild Ones through her book, *Planting Noah's Garden: Further Adventures in Backyard Ecology*.... In the following conversation, Sara shares with me some of her gardening philosophy, a few tips for native landscapers, and some encouragement for the Wild Ones organization.

Wild Ones: You write in *Noah's Garden* that you came into gardening "backward, from the wild verges instead of through the garden gate."

Sara Stein: I started out as a traditional gardener, knowing nothing about gardening. My husband and I were young and vigorous, and we transformed our land from weedy to lovely lawns and bedding. We very quickly noticed that we lost the birds, butterflies, and wildlife we used to have when our yard was a mess! So, we started transforming our now-neat, cultivated place back to the wild.

It's the flock, the grove, that matters. Our responsibility is to species, not to specimens; to communities, not to individuals.

—Sara Stein

WO: By "wild," do you mean you let it go back to how it was when you originally purchased it?

Sara: No. When we first bought the place, it had lots of invasive aliens, such as bittersweet and multiflora roses. It was not a nice native place; actually, it was not native at all. It was overgrown and weedy. Transforming it was quite a job.

WO: What do your neighbors think of the change?

Sara: Well, they haven't complained, but they haven't taken to it, either. They haven't been influenced by my yard. Every year when we burn, we invite our neighbors over and nobody comes. I think it is because my five or six acres are back from the road, and most of my neighbors have large acreages. People don't know each other well here.

WO: Would it be different on a smaller lot?



Sara: On a small property, next to a road, your neighbors can see your flowers and butterflies, and you can have a lot more influence. I have a little place in Maine, on a dead end street, on a saltwater tidal inlet. The whole town can see it from across the water, and many people walk down the little road for the view. So it's more influential....

WO: What's happening on your own property these days?

Sara: Neglect. We burn. Other than that, we try to keep track of invasives like buckthorn and bittersweet. We monitor them. We also keep the paths cleaned up through the wetland, and take down dead branches and pile them up. Someone comes in and helps us now. We've been here 25 years, long enough to watch the landscape develop. It changes on its own. You plan the planting, and the plants do what they want.

WO: It's been a little more than a decade since you wrote *Noah's Garden*. What changes have you seen in attitudes toward native landscaping?

Sara: Most of the changes are incremental. There are more articles about it, more interest in native landscaping, and more native plants for sale

Continued on page 8

Mystery of the Decapitated

In Which Our Intrepid Gardener

Like all wildflower gardeners, I look forward to checking out the garden each day to see what's new. I often do that the first thing in the morning, starting my day off with something cheerful before going in to the pressures of work.

Last summer I was especially looking forward to the first blooms of the only purple coneflower (*Echinacea* sp.) in my new front yard garden. Imagine my dismay when, instead of seeing that first bloom, I discovered a coneflower head nearly severed from the stem. It was hanging by a thin piece of the remaining stem.

The next day my morning optimism was met with the same result. This continued for a week or so. Whenever a purple coneflower head was ready to burst open, it was severed and left hanging adjacent to the stem. I noticed the same thing happening to my rosinweed plants in another garden, yet black-eyed Susans (*Rudbeckia* sp.) were unaffected.

What or who could be doing this? Was it a bird, an insect, or maybe a mischievous neighborhood kid? I quickly discounted the latter option—I couldn't imagine any of the neighborhood kids being so dedicated to a practical joke that they would come back almost every night to repeat it—and a check with several knowledgeable friends did not produce an answer.

Many of you are familiar with what I did next. I sent a plea for help to the INPAWS email list, along with photographs of the sorry-looking coneflowers, confident that I would find some informed member who would know the culprit. I received a number of good replies.

I quickly discovered that I was not alone in my frustration. Many members had similar problems but were also unsure of the cause. A lively email interchange ensued...

I've seen this before, and I can't remember what it is. I suggest going out at night, when it's probably happening, and looking with a flashlight. The insect might be there caught in the act. Maybe a beetle?

Could easily be the common stalk borer...

Groundhogs are notorious for breaking off plant material similar to what is pictured...

A reference suggests "spraying thoroughly and frequently" with acephate or carbaryl....

Insecticides like carbaryl can be very toxic to bees and other pollinators visiting the flowers...

Eventually there developed a consensus that the culprit was a weevil. Eventually I also learned that the answer was as close as my bookshelf! Ruth Ann Ingraham, in her book *Swimming with Frogs: Life in the Brown County Hills*, writes:

Black weevils are beetles that lay eggs at the base of purple coneflow-

ers, prairie dock, and cup plant in my meadow. There must be some ingenious reason why the weevil nearly severs the hollow stem beneath the blossom, leaving a tiny portion that acts like a hinge, before laying its eggs. The blossom falls downward and wilts, yet remains loosely attached to the stem. The eggs later hatch into tiny larvae inside the wilted flower and feed there.

In the ultimate irony, I had just completed reading her book about two months earlier. I think I failed my reading comprehension test.

Later I talked to Bob Waltz, Ph.D., State Entomologist with Indiana Department of Natural Resources to learn more about this strange behavior. Dr. Waltz confirmed that it undoubtedly was a weevil of some type but could not confirm the exact species without a sample specimen. Many weevils would be capable of such actions as I had noticed, but with varying habits otherwise.

I learned that more than 60,000 species of weevil are found worldwide,



Ruth Ann Ingraham snatched this weevil off a coneflower in Shaw Nature Reserve on our September INPAWS excursion to Missouri. Photo by Dawn Steltz.

Coneflowers

Tom Hohman, INPAWS Central Indiana Chapter

Seeks Help from INPAWS Members—and Finds the Answers



Forlorn snapped stems of *Echinacea* among untouched *Rudbeckia*. Photo by the author.

and 2,388 species (at last count) in the U.S. Most are easily recognizable as weevils by the long snout, but after that it gets tough. The easiest identification method for all of us non-entomologists is to take the insect in question to the county office of the Purdue University Cooperative Extension Service. If they are unable to identify it, they will probably send it to the Plant & Pest Diagnostic Lab at Purdue University.

Even without knowing the exact species involved, Waltz was able to explain to me part of what had happened. The weevil culprits had cut the coneflower stalk with their sharp mandibles and laid their eggs in the unopened flower head. The larvae feed in the head until some point at which they drop to the ground. Waltz speculated that the reason they leave

the head dangling is that the eggs and larvae are safer there than they would be on the ground.

The big question that I still had was, What could I do to prevent this?

Like many wildflower gardeners, I accept insect predation as part of nature, often with the pleasurable result of producing butterflies. But this was different. This insect was decapitating my flowers! My tolerance does not extend this far.

Bob Waltz mentioned insecticides, but I shook my head. While I do not totally abstain from insecticides, I normally keep them for a last resort. Several INPAWS members had suggested removing the decapitated head and destroying it. While this does destroy

the larvae, the adults doing the damage will likely have already left.

Unfortunately, the weevils themselves are nocturnal, so the chances of catching them in the act are slim. However, Waltz suggested a trick entomologists use when they are surveying an area. They lay a piece of cardboard or a wood board on the ground. The weevils are attracted to the cover the board provides during the day, crawling under it. If this works, it is then possible to use the old-fashioned “squash ‘em” technique. If only small numbers of the weevil show up in an area, this may be an effective and environmentally friendly way of saving my flower heads.

If the weevils return next year, I will try the board method as well as remove and destroy damaged heads. If any of you have additional experiences with this problem, or find a better way to combat it, I would surely like to learn of it.

Tom Hohman is a professional engineer and INPAWS member who has had a lifelong interest in nature-related activities. His interest in wildflower gardening began only six years ago when he was given a jack-in-the-pulpit seedling by Jimmy New of J.F. New Nursery. The plant promptly died, but Tom has been hooked on wildflower gardening ever since.

Ed. Note: Member Bobbi Diehl points out that the native American goldfinch, which is struggling somewhat in its competition with the introduced western house finch in this area, adores purple coneflower seeds. “One will sit on a seed head and just pig out for half an hour or more. So we need all the help we can get growing echinacea!” Thank you, Tom, for alerting us to preventive measures that may mean more seed for the goldfinches.

Annals of a Duneland Orchid

Barbara E. Plampin, Ph.D.
Shirley Heinze Land Trust



January, 1974. The downy rattlesnake plantain orchid (*Goodyera pubescens*, hereafter DRPO) in my Christmas present terrarium dies. I mourn the three-inch spike of dense, tiny, fat-pouched, white warty-petaled flowers rising from a basal rosette of white-netted, snake's-head-shaped evergreen leaves.

"Downy" refers to the pubescence on the stalk and within the flower. (Warts and hairs are best viewed with magnification.) In the wild, the July-to-August blooming flowers can produce up to 16-inch spikes. Find them in

Downy rattlesnake plantain (*Goodyera pubescens*). Photo ©Keir Morse at www.keiriosity.com.

about 28 Indiana counties. To me, the leaves are the thing. Rhizomatous, plants can form dense colonies especially delightful to the winter hiker.

Summer, 1985. I explore damp woods bordering a local commuter railroad station parking lot for the DRPO found by Indiana Dunes National Lakeshore (IDNL) biotechnician Ken Klick. Ah! I spot a small colony near dwarf ginseng (*Panax trifoliata*) and swamp maple (*Acer rubrum*). Shining club moss (*Lycopodium lucidulum*) pushes up its shaggy bottlebrush spears nearby.

March, 1988. Parking lot expansion announced. Negotiations to save woods fail.

Sara Stein, *continued from page 5* in nurseries. When I speak, the audiences are larger and more varied.... I did a keynote talk, "Home Ground Ecology 101," for several thousand members of the Ecological Society of America. Ecologists are usually interested in what is already in the landscape, rather than thinking in terms of what could be planted. The idea of *making* an ecosystem is new to them.

WO: Some of the attention you have received has been negative. Wasn't your criticism, in *Noah's Garden*, of writer Michael Pollan's planting of a Norway maple followed by his criticizing your gardening philosophy and the "natural garden movement" in the *New York Times*?

Sara: (*laughs*) He called me a "Plant Fascist." Now my husband introduces me as "The Plant Fascist"....

WO: If you were to offer one bit of wisdom to those attempting native landscaping for the first time, what would you say?

Sara: Very simple. Everyone has an ugly, over-trimmed hedge or foundation planting. Substitute it with something fruitful, and you'll have birds right away. For example, my niece, who has children, put in a rasp-

berry hedgerow. Her kids think this is the most wild and fantastic thing—to pick fruit and eat it! Or you can plant a small-fruited crab apple tree. It will attract a whole flock of robins, or maybe some bluebirds. Do anything that gives you a quick, cheap return on your money.... Put in a little water spot. In Maine, I made a quarry pool. The frogs came the minute the water was turned on. Even in just a little pool, children will see things right away—frogs, dragonflies.

WO: Those are simple ideas.

Sara: You can't ask people to do a whole yard. Most of them don't have enough labor or money. But you can do one good deed for your yard, and make a dramatic difference.

WO: This makes native landscaping seem approachable.

Sara: If you ask people to go native all at once—to change everything—it's terribly difficult for them. But you can ask them to think about planting a tree, and to choose that tree wisely. Maybe plant an oak tree with acorns. The money they spend is the same.

WO: Do you think native landscape aficionados [are] too demanding?

Sara: The idea can become too "precious," too "cultish." Native land-

scaping should be easy. Everyone can be encouraged to do one little thing.

WO: What is the biggest challenge facing our country in the area of biodiversity?

Sara: There aren't enough resources, and we have too many people. And here I am with four kids and six grandkids! But there are too many people. There's no easy solution to that.

WO: Are there things the Wild Ones can do as an organization to better promote native landscaping?

Sara: The more visible your projects, the more you will get people to come and see. Write about biodiversity. When ornamental grasses became popular in gardening, the fad began with magazine articles. Everyone had ornamental grasses for sale. People look at gardening magazines. Go for every kind of publicity you can get....

This abridged interview may be viewed in full at the Wild Ones website. Adapted with permission from the Wild Ones: Native Plants, Natural Landscapes at www.for-wild.org or 877-394-9453. Wild Ones promotes environmentally sound landscaping practices to preserve biodiversity through the preservation, restoration and establishment of native plant communities.

A Saturday in September, 1988.

Bulldozer and I arrive simultaneously in woods. "Stay north while I dig," I shout. Bulldozer obliges while I frantically dig orchids and club moss.

Later, same day. IDNL botanist Noel Pavlovic supervises a friend and me in transplanting orchids and moss in adjacent woods farther east. We hand-carry water in, but fail to map the location.

Commuters toss in trash.

Early 1990s. Alarm and sorrow. I can't find the orchids. Plants dead or merely lost? Recently fallen trees no help. (Club moss died the first winter.)

February, 1995. A friend and I find new DRPO colonies several miles to southeast. They flourish in an ecotone slope between sand and black cherry woods, at the edge of a former house site, and in a tire-piled sand pit (almost blue leaves here). A fine colony of 90 thrives in a neighboring abandoned road. Also relocated, a colony found on north slope in rich woods.

Spring, 1995. Abandoned road becomes official IDNL trail. Promise to save orchids by rerouting trail falls through the cracks. Ninety orchids ground to dust.

Summer, 2002. Hooray! Commuter station parking lot orchids back, two

colonies now, found by me and a visitor.

March, 2005. Local newspaper headline: COMMUTER STATION PARKING LOT TO EXPAND

► *To Be Continued* ◀

Some Books

Homoya, M. *Orchids of Indiana*. Indiana Academy of Science, 1993.

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

Yatskievych, K. *Field Guide to Indiana Wildflowers*. Indiana University Press, 2000.

BOTANY 101, LESSON 27

**Scrophulariaceae =
Snapdragon Family
= Foxglove Family**

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

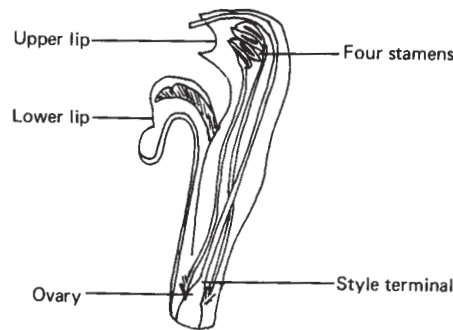
The snapdragon and foxglove family comprises about 220 genera and 3000 species worldwide. Indiana has about 24 genera and 59 species.

Characteristics

Mostly annual and perennial herbs, although there are some woody members, such as Princess tree.

Flowers irregular with parts in 5s (sepals and petals sometimes fused and 4-lobed), usually showy. Corolla two-lipped. Stamens 4, sometimes with a 5th staminoid (modified stamen, such as the hairy, sterile staminoid that is the bearded tongue of beard-tongues).

Stem can be square, easily confused with mints, although leaves are usually alternate. Fruit a capsule.



Economic Importance

Some garden ornamentals, including snapdragon, turtlehead, beard-tongue, and foxglove.

Heart drug digitalis is from foxglove. Some are semi-parasitic on the roots of other plants.

Some Scrophs in Indiana

Native

Beard-tongues, *Penstemon* spp.

Blue-eyed Mary, *Collinsia verna*

Culver's root, *Veronicastrum virginicum*

Indian paintbrush, *Castilleja coccinea*

Late figwort, *Schrophularia marilandica* (my favorite, the family name-sake genus, always only a few plants in an area)

Louseworts, *Pedicularis* spp.

Monkeyflowers, *Mimulus* spp.

White turtlehead, *Chelone glabra*

Non-native

Butter-and-eggs, *Linaria vulgaris*

Common mullein, *Verbascum thapsus*

Moth mullein, *Verbascum blattaria*

Speedwells, *Veronica* spp. (mostly non-native, a few natives)

Pawpaw, *Asimina triloba* (L.) Dunal.

The Indiana

Marion T. Jackson.

Professor Emeritus of Ecology
Indiana State University

Banana

Where o' where is pretty little Susie?
Where o' where is pretty little Susie?
Where o' where is pretty little Susie?
Way down yonder in the pawpaw patch.

Pickin' up pawpaws, puttin' 'em in her pockets.
Pickin' up pawpaws, puttin' 'em in her pockets.
Pickin' up pawpaws, puttin' 'em in her pockets.
Way down yonder in the pawpaw patch.

Come on boys let's go find her.
Come on boys let's go find her.
Come on boys let's go find her.
Way down yonder in the pawpaw patch...

So went the sing-song refrain of the square-dance caller as we clogged to that tune in the early 1950s.

Dating from pioneer days, this song relates in a general way to the ecological conditions where and how pawpaw trees typically grow. Large colonies (patches) are routinely found on well-drained mesic soils, especially in ravines and along stream courses, in rich woodlands from New York state across to Michigan, thence to Nebraska, south to Texas, and east to Florida. Three states—Michigan, Illinois, and West Virginia—have small towns named for this tree.

Apparently pawpaw colonies typically originate from one or a few germinating seeds, after wildlife species eat the fleshy fruit, then disperse the large, glossy-brown flat seeds. Root suckering from the original seedling enlarges the clonal colony, as it often grows concentrically around the parent plant, thereby producing a thicket of usually genetically identical above-ground plants. This growth pattern frequently results in larger, older trees

in the colony center with progressively shorter, younger individuals toward the periphery.

Both pawpaw and sugar maple seedlings have increased dramatically in the understory of old growth Midwestern forests in recent decades, primarily due to fire suppression, absence of logging, and the loss of American elm, all of which favor these shade-tolerant, fire-sensitive species. Pawpaw increases are further augmented by the absence of deer browse. Deer find pawpaw unpalatable, likely due to the disagreeable odor of the leaves when crushed. Also, pawpaw twigs are a source of acetogenins (currently being investigated as a source of anti-cancer drugs

and botanical insecticides), which may repel deer.

Pawpaw plants are more often encountered as shrub-sized rather than tree-sized individuals, with larger trees only rarely reaching more than 30 feet tall or greater than 6 inches in diameter. About 1959, our Dendrology class visited a pawpaw tree at a private residence along South Grant Street in West Lafayette that taped 11+ inches dbh—the largest specimen that I have ever seen—but the tree was gone some 15 years later when I revisited the site. A few pawpaw trees greater than 6 inches dbh were tallied during my 1969 forest survey of Hemmer Woods in Gibson County, Indiana. Romeyn Hough reported a specimen 18 inches dbh in his 1960 *Handbook of Trees of the Northern States and Canada*.

The Annonaceae, noted botanically for having some of the largest pollens in the Plant Kingdom, are a moderately large family of mainly tropical species, the majority of which are Old World. Only two genera occur in the United States: *Annona*, the Pond Apple of South Florida, and *Asimina*, the widespread pawpaw (from *asiminas*, the



Pawpaw flowers, as ill-scented as the decaying flesh they resemble. Photo by Rick Mark at www.usi.edu/science/biology/TwinSwamps/Wildflowers_of_Twin_Swamps.htm.

French name for the fruit). *Asimina's* specific name, *triloba*, is from the three parts (or lobes) of its floral structure. The euphonious common name pawpaw (sometimes spelled papaw) is the Native American name for the fruit.

The handsome large leaves (to 1 foot long and 3–5 inches wide) give the pawpaw tree a distinctive tropical appearance. Especially in autumn, when the leaves turn a buttery yellow and gleam beneath the forest canopy like Nature's neon signs, pawpaws become truly enchanting.

The flowers, which emerge with leaf expansion, are equally noteworthy and may reach 1–1½ inches in diameter. They are green at first; then the three crinkled, leathery sepals and six similar petals turn a deep maroon, the color of raw steak. Ill-smelling, somewhat like the decaying flesh they resemble, the flowers usually attract fly or beetle pollinators, although bees sometimes visit.

Like the trees themselves, the fruits are called pawpaws, or in our state “Indiana bananas”—it's “Michigan bananas” north of our border—because of their distinctive shape and taste. Fruits usually range from 1¼ to 1¾ inches in diameter by 3–5 inches long, although I have seen huge pawpaws reaching 2 by 6 inches, the largest native fleshy fruit in Indiana. Technically, the pawpaw is a berry, since it is derived from a single pistil, and has a number of seeds embedded within the pulpy matrix.

Both white- and yellow-fleshed fruits occur, with the bright yellow pulp being far and away the more tasty. They usually become fully ripe in October, and improve in flavor after frost. Most people either really like the fruits or actively dislike them. Some who try pawpaws consider them too sweet, even mawkish. I find them delicious when fully ripe, and equally nutritious. Usually they are eaten raw, and they make a passable pawpaw cream pie (à la Euell Gibbon's recipe), but extracting the pulp from the stringy fibers proved worrisome. When I was growing up, in season we occasion-

Pawpaw fruit. Photo courtesy of Ohio University, where research shows that pawpaw may be a suitable fat substitute in health-conscious cooking.



ally flavored our homemade ice cream with pawpaw pulp for a true delicacy. James Whitcomb Riley, in his inimitable Hoosier dialect, extolled this wild fruit in his poem, *Amazingdy*:

And sich pop-paws! — Lumps o' raw
Gold and green, jes' oozy th'ough
With ripe yaller — like you've saw
Custard-pie with no crust too.

In his book, *Follow the River*, James Alexander Thom described his heroines' reliance on pawpaws for food during their trek from Kentucky back to present-day West Virginia, after escaping from their Native American captors. Also, it was recorded 200 years ago that members of the Lewis and Clark expedition were saved from food shortage after they re-entered Missouri on their return trip by eating abundant pawpaws, when wild game had grown scarce.

Some people contract dermatitis from handling or eating the fruit, so care should be exercised when using pawpaws. Also, the pulp can be mildly cathartic if eaten in large quantities, as Thom's heroines discovered!

Individual pawpaw trees, or even large groves, do not bear fruit each year, so finding the ripe fruit is chancy at best, especially when considering that many wild mammals relish pawpaws as well. Once when touring the state in search of new county tree records for *101 Trees of Indiana*, John Bacone

and I found some choice fruit hanging from large trees along a rural Howard County road, and picked our pawpaws from the car window!

The wood is very lightweight at 24 pounds/cubic foot, soft, somewhat porous, and yellowish-green in color. Trees are generally too small to be harvested, but apparently our pioneer ancestors carved wooden spoons, small kitchen utensils, and fishnet floats from the wood. The inner bark has long fibers, and, as such, was used by Native Americans for fish stringers and fishnets.

The pawpaw makes a lovely ornamental and should be more used as such. A number of people are working toward growing the trees horticulturally for fruit production. Wild-grown fruit spoils rather quickly when taken to market, but cultivars hold future promise. The “Indiana banana” holds special meaning for me, for “Paw Paw” is the name our darling two-year-old granddaughter Mia has chosen for me!

Indiana Native Plant and Wildflower Society

Small Grants Program Guidelines for 2006

NOTE: March 1, 2006, is the deadline for grant proposals to be submitted. This will be the *only* time for grant proposal submissions in 2006.

INPAWS' small grants program supports projects that are in line with the mission of the society. In 1998, the Board allocated \$10,000 from the general fund to an endowment account. The interest from this account is available for grants. **The Awards Committee anticipates funding two grants of up to \$500 each in 2006.** These grants can be used in conjunction with other sources of funding for projects that support the mission of INPAWS.

The mission of INPAWS is 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.

Applications are requested from groups or individuals and must be e-mailed (*preferred*) or postmarked by **March 1, 2006.** They will be reviewed by the Small Grants & Awards Committee.

Successful awardees **must prepare a poster or other presentation** to share with the membership at the INPAWS Annual Conference after the project is completed.

At the discretion of the Board and membership, **larger awards may be made** from time to time from the assets of the operating budget. Requests for funds for special projects may be made at any time to the Executive Committee. All requests must be made in writing with a clear statement of how the award would further the mission of INPAWS and benefit our membership.

Application Procedures for INPAWS Small Grants Program

1. Cover sheet, including:

- ▶ Name of project
- ▶ Amount requested
- ▶ Location
- ▶ Applicant/contact person information—name, address, telephone, email
- ▶ New or existing project
- ▶ Category that best describes the project—research, training, education, conservation and habitat, demonstration garden, etc.
- ▶ Prior INPAWS funding

2. Text of proposal, not to exceed 2 pages:

- a) Summary of the project, not to exceed 50 words
- b) Clear, concise description of the project, including:
 - ▶ How does the project further the INPAWS mission?
 - ▶ Why is the project needed?
 - ▶ Specific objectives to be achieved

- ▶ Specific information on how INPAWS grant funds would be used, including a detailed species list of all plants and seeds to be used
- ▶ Who benefits from the project? How many? How do they benefit?
- ▶ Names of organizations involved, if any, with a brief description of each, including number of members
- ▶ Financial resources committed to the project from other sources, if any
- ▶ Anticipated starting and completion date of the project

3. Budget sheet, showing:

- a) Labor, material, and program costs
- b) Sources and amounts of funds already raised, if any
- c) Total cost of project

E-mail 1 copy (preferred) or **mail 4 copies** of the grant proposal postmarked by March 1, 2006 to Joan Mohr Samuels at mohrsamuels@insightbb.com or 5828 Prophets Rock Rd., West Lafayette, IN 47906.

The Green Dragon

Arisaema dracontium

Gene Bush, Munchkin Nursery

Green dragon. The name conjures up images of forbidden forests, the smell of brimstone, drifts of smoke upon the still air. Though no belching of flame reveals its location in its native woodland haunts, in the garden the green dragon lends a formidable presence.

Perhaps lingering in incendiary dreams, *Arisaema dracontium* rises late. It emerges well after Jack-in-the-Pulpit (*A. triphyllum*)—at the tail end of April in my southern Indiana garden, with the warmer winters and springs we have been having, and sometimes not until early May. The emerging *Arisaema* resembles an umbrella. Completely formed in all parts, the green dragon first pushes up the bloom with foliage unfolding along each side. As the plant matures, foliage comes up and over the bloom, which is actually a modified leaf. I have never seen more than one bloom on a stalk.

The size of green dragon varies widely with genetics, the environment, and cultural practices in the garden, ranging from about 15 inches to just over 30 inches in height. The tall, stout stalk sprouts from a shallow tuber and carries no foliage except at its end. There, 5 to 15 leaflets form around the outside edge of a half circle that some liken to a horseshoe. The half circle sits centered upon the stalk.

The mature *Arisaema* blooms about one-third to one-half of the way up the stalk. On a slender stem, a fleshy tubular inflorescence forms with a long pointed “tongue” reaching upward alongside the stalk. This modified leaf

can reach 2 inches or more in length; the tongue can reach 6 inches or more. I have seen the tongue coloration range from the same green as the rest of the plant to orangey-yellow.



While walking the woods, look for *Arisaema dracontium* in wet shaded areas. I found my first growing in my own back yard in a drainage ditch at the edge of a woodland. Seepage areas, floodplains, and the edges of small steams are primary places of discovery, but the plant does not demand that environment. I have several in my garden, some of which reside at the base of a mature tree in rocky soil. The ones in drier places simply do not get as large as the ones that have ample moisture. Good, rich humus and a loose, leafy mulch that decays produces a nicer plant in the garden—as with any other garden plant, the better the environment, the better the plant performs. If you choose to use fertilizer, which I do not, be very careful. *Arisaema dracontium* does not need a lot of nitrogen and can easily burn.



Photo by Janice Stiefel, courtesy of University of Wisconsin—Stevens Point.

A “giant” form of *Arisaema dracontium* occurred in my garden some years back. While walking a path, I noticed a single green dragon coming up from the middle of a drift of *Begonia grandis*. Somehow this individual appeared different from the others in my garden, reminding me of the Himalayan species *A. heterophyllum* that, at first glance, looks like *A. dracontium* on steroids. I moved the plant to a different location where for several years now it has been reaching a height of 5 to 6½ feet. It is a heavy producer of seed and does a decent job of producing offsets. Several mature plants, along with immature offsets, now grow on a steep hillside with Christmas

ferns and large limestone rocks as company.

The green dragon contributes great architecture to gardens and conveys a sense of uniqueness. The most colorful part of a mature green dragon is the seeds. Come late August and September, the shiny green seed clusters turn to scarlet, waxy berries lying across the green of nearby plants. I find the show of seeds to be as colorful as any perennial bloom.

Arisaema dracontium always looks good with ferns. The groundcover partridge berry (*Mitchella repens*) is probably my favorite companion.

Text ©2005 by Gene Bush. Gene owns and operates Munchkin Nursery & Gardens, LLC, in southern Indiana and writes of gardening experiences and plants grown in his hillside garden. He can be reached at www.munchkinnursery.com. For a hard copy catalog, send \$3 to 323 Woodside Dr. NW, Depauw, IN 47115-9039.

INPAWS thanks the speakers, sponsors, exhibitors, and numerous volunteers who made our November 5 Annual Conference a success.

Speakers

Bill Cullina, New England Wildflower Society

Don Ruch, Ball State University

Bob Barr, IUPUI

Stephen Perrill, Butler University

Paul Rothrock and Janna McIndoe, Taylor University

Lenore Tedesco, IUPUI

Neil Diboll, Prairie Nursery

Exhibitors

Medicinal Plant Garden of the Indiana Medical History Museum, Kathy Hull

Indiana Dept. of Transportation, Jeanette Wilson and Bill Fielding

Central Indiana Land Trust (CILTI), Maria Steiner

Munchkin Nursery, Gene Bush

Friends of the Sands, Alyssa and Gus Nyberg

Avon Outdoor Learning Center, Carol Ford

Bryan Hanson, author of *Understanding Medicinal Plants*

Whitewater Valley Land Trust, Inc.

McCutcheon High School "Naturally Wild," Micky Penrod

Sponsors

Institute of Botanical Training, Dana and Justin Thomas

Heartland Restoration Services, Ben Hess

Art Hopkins Landscaping

JFNew, Scott Namestnik

INPAWS Officers Elected for 2006

Karen Hartlep, President

Ellen Jacquart, Vice President

David Savage, Recording Secretary

Ruth Ann Ingraham, Corresponding Secretary

Cheryl Jensen, Treasurer

Opportunity: INPAWS Annual Conference Coordinator

Coordinating the INPAWS annual conference is an extremely satisfying effort, says Nancy Hill who ran the past two years' outstanding events. It involves decisions about who, what, and where and, like a big wedding, requires following up on details and making sure everyone and everything is where it should be. There is always good input from other INPAWS members about speakers and venues, and 90 percent of the coordinating can be accomplished via e-mail. Detailed notes for the last two conferences, including a CD with all documents and correspondence, are included in notebooks ready for the new coordinator. It is a fun way to meet experts in a variety of fields. Volunteers help with catering, exhibitors, set-up and clean-up, book sales, and registration. If interested, contact Karen Hartlep at khartlep@RATIOarchitects.com or 317-633-4040.

IMA Offers Internships

Indianapolis Museum of Art seeks gardeners for three-month internships this growing season. A highly trained and motivated full-time staff of 11 works with interns on a rotating basis. Features include a formal garden, a cutting garden, mature and new perennial gardens, annual plantings,

and a retail greenhouse. Candidates must be studying horticulture, botany, or related field in college or have related experience in gardening; must display a strong interest in public horticulture; and must be able to handle the physical tasks to complete the job requirements. Assistance in locating housing is available. Compensation: \$8/hour. Apply by March 1, 2006. Contact Gardens Supervisor Chad Franer at cfraner@ima-art.org or 317-920-2662 ext. 500.

Prophetstown Earns INASLA's 2005 INPAWS Award

This year's recipient of the *INPAWS Award* of the Indiana Association of Landscape Architects was the project "Prophetstown State Park, Phase 1." The INPAWS Award plaque was presented to landscape architecture firm Kevin K. Parsons & Associates, Inc., and also to the Indiana Department of Natural Resources, which played a large role in the project.

Prophetstown was honored with the award because the project:

- Prominently features plants native to Indiana and features about 90 different prairie species native to Tippecanoe County planted in huge numbers.
- Creatively integrates native plants with local natural materials in the construction of its facilities, playgrounds, benches, and a bridge, giving a cohesive look to the park and achieving a "prairie style park" that is appropriate to the site and in line with the park concept.
- Was designed in such a way that the Phase 1 facilities were put in without disturbing the existing wetlands and fens, thereby preserving the native vegetation already in place.

The INASLA Professional Awards Program recognizes professional excellence and outstanding examples of landscape architecture by Indiana landscape architects and honors works that represent the forefront of the profession and embody high levels of creativity and imagination.

Awards are given in three categories. Constructed Projects and Unbuilt Work are reviewed and judged by an independent jury of landscape architects from another state. Candidates for the INPAWS Award are reviewed by an INPAWS jury. Jury members this year were Joan Mohr Samuels, Brian Tunis, and Diane Beasley.

Weeds Gone Wild: Alien Plant Invaders of Natural Areas

This web-based project of the Plant Conservation Alliance's Alien Plant Working Group provides information for the general public, land managers, researchers, and others on the serious threat and impacts of invasive alien (exotic, non-native) plants to the native flora, fauna, and natural ecosystems of the United States.

Along with a compiled national list of invasive plants infesting natural areas throughout the U.S., the site provides background information; illustrated fact sheets that include plant descriptions, native range, distribution and habitat, management options, suggested alternative native plants, and other information; and selected links to relevant people and organizations. Visit www.nps.gov/plants/alien.



Forces Against Nature

The Brown County Hills Project provides an object lesson in all the obstacles that human beings pose to the conservation of native flora and fauna.

The Project identified six conservation targets within the Brown County Hills area. These were the matrix forest, forest interior birds, Kirtland's snake, timber rattlesnake, yellowwood trees and first- to third-order streams. With these targets identified, they looked at what stresses were degrading or impairing each target, and what was the source of that stress.

Among the sources of stress to the Brown County Hills area conservation targets were:

- Fire suppression
- Excessive deer population
- Incompatible forestry practices that promote shade tolerant species
- Invasive species
- Incompatible development of homes
- Incompatible development of roads and utilities
- Incompatible agricultural practices
- Inappropriate agricultural practices
- Water management
- Loss of riparian habitat
- Stream channel alteration
- Inappropriate wastewater management
- Poaching or commercial collecting
- Incompatible open land management
- Incompatible wildlife management practices

"Once you know the source of the stress," said Dan Shaver of The Nature Conservancy, "you can work toward strategies that alleviate or minimize the source of stress, helping your conservation target." Dan wrote about the Brown County Hills Project in the Summer 2005 issue of INPAWS JOURNAL.

COMING EVENTS

Thursday, February 9 IMA Horticultural Society Lecture: Colorful Combinations for the Shade Garden

7:30 pm, DeBoest Lecture Hall,
Indianapolis Museum of Art, Free

Blessed with an abundance of shade? Rather than curse the darkness, take full advantage of what nature has bestowed. Gene Bush of Munchkin Nursery shares his experience with great garden companions and their behavior over the full gardening season, proving there is no shortage of color for shade gardens.

Monday, February 20 Conservation Day at the Statehouse

Organized by the Indiana Conservation Alliance (INCA), this is an opportunity to influence your legislators to support a conservation ethic in the state. Volunteers are needed to staff the INPAWS booth. Contact Karen Hartlep at khartlep@RATIOarchitects.com or 317-633-4040.

Saturday, April 1 Fourth Annual Prairie Creek Barrens Restoration Day

INPAWS members and friends are again invited to help restore one of southwest Indiana's rarest vegetation types—sand barrens. A remnant of the type exists at the state-owned Prairie Creek Barrens Nature Preserve in northern Daviess County. Thanks to an IPL Golden Eagle Grant, we will have over 9,000 plugs of various prairie grasses and forbs to plant. Contact Mike Homoya before March 15 at mhomoya@dnr.in.gov or 317-232-0208 for additional details, including meeting time and location.

Resolutions

Wendy Ford,
Editor

For the past two years a resolution high on my New Year's list has been "take up bellydancing." At last having located a suitable teaching DVD—the ample, bejeweled Jillina will be my Level 1 instructor—I should soon be on my way, and high time, too, as December saw me pass the start of my seventh decade on this planet. This leaves me casting about for a new resolution to fill out my list for 2006.

I'm guessing that some of you are in the same boat, and I have some resolution ideas to share with you.

Recently I had the pleasure of perusing INPAWS committee chairs' descriptions of what their committees do. Every year I'd pondered the check-off list of volunteer opportunities on the membership renewal form, not really knowing where I could fit in—in particular, not wanting to get stuck with too much responsibility before I learned the ropes. Now I had before me details of the worthy efforts put forth by leaders and followers in our all-volunteer organization—and you will too, if you scan the back of the membership renewal form that recently arrived in your mailbox.

Among the listed opportunities, I saw some that looked fun, not too difficult, and promised to tap into the friendship, enlightenment, and good feelings that come with volunteer service to INPAWS. I offer those now to pique your interest as you decide where to focus your community service this year.

✓**Help plan a field trip.** Our bus trip to Missouri Botanic Garden was a world of fun—INPAWS people make fascinating travel companions—and such excursions always require helpers to work out the logistics. The Program/Field Trip committee will make you feel welcome.

✓**Talk up native plants** at your local library, neighborhood association, or garden club. No need to be an expert, just tap into your enthusiasm. The Speakers Bureau provides prepared scripts along with slides or PowerPoint presentations.

✓**Dream up a project** that promotes Indiana native plants or educates the public about their beauty, diversity, and environmental importance. Then apply for funding from INPAWS' Grants & Awards program (see guidelines on page 6).

✓**Greet the public** at an INPAWS information table. Share the joys of landscaping with natives. Swap stories with those who already do, and bring them into the INPAWS fold. Warm bodies are needed to staff INPAWS tables all over the state. One of them should be you. Sign up with the Education, Invasives, Conservation, or Publicity committee.

✓**Learn how to talk to your legislators.** Receive training on Conservation Day at the Statehouse in February, and be prepared to advocate for Indiana native plants or any other issue that floats your boat.

✓**Get your hands dirty.** Rescue, propagate, or overwinter potted Indiana natives under the auspices of the Native Plant Rescue committee.

✓**Make yourself indispensable.** Are you attentive to detail? Our spring Plant Sale/Auction and fall Annual Conference encompass a multitude of discrete tasks and processes that require loving attention. Flex your organizing muscles on a small scale by taking on one of these.

Add just one of these resolutions to your list, and you'll be helping INPAWS further its mission in 2006. And don't even think about asking me to bellydance at your next INPAWS chapter pitch-in. I won't be ready for that until at least 2007!



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and Wildflower Society

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