



# INDIANA NATIVE PLANT *and Wildflower Society*

Volume 6 Number 2 • Summer 1999

## NEWS

### *Links to a Legacy . . .*

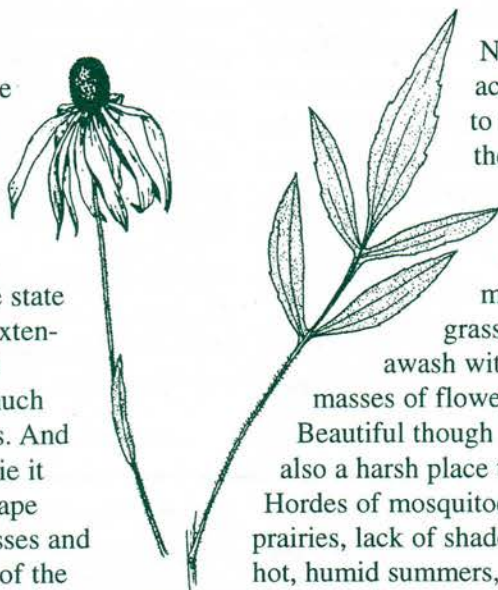
## Prairie Cemeteries

by Lee Casebere

As most of you know, prairies were once a part of the Indiana landscape. The vast majority of these were in the northwestern part of the state where they were extensions of the Grand Prairie covering much of northern Illinois. And what a grand prairie it was from a landscape point of view—grasses and forbs were on top of the world for mile upon mile, and open sky was all around. A few shady places were

scattered here and there where oak groves dotted the uplands and cottonwoods lined the streams. But this was true prairie wilderness in all its beauty, diversity and immensity.

Modern estimates of the extent of this ecosystem in Indiana put the size at around three million acres. And even though most were confined to northwestern Indiana, small prairie inclusions were found here and there throughout the state. Even today, the presence of prairie plants in rather unlikely places is testimony to this history.



Yellow coneflower  
(*Ratibida pinnata*)

Numerous accounts testify to the beauty of the prairie landscape, where during the summer months the grassy palette was awash with color from masses of flowering forbs.

Beautiful though it was, it was also a harsh place to the pioneers. Hordes of mosquitoes on the moist prairies, lack of shade during the hot, humid summers, and the difficulty of breaking the dense prairie sod made it a difficult place to eke out a living. But the

fertile prairie soil was the very best of farmland, and the persistence of the pioneers won out in an amazingly short time. As a result, the prairies were almost completely destroyed. Remnants containing respectable amounts of the rich diversity of our prairie flora are among the very rarest of our natural resources.

Many of our remaining prairie remnants are protected either on public lands or on lands owned by conservation land trusts. These include many of the best and most well-

known remnants such as Hoosier Prairie owned by DNR's Division of Nature Preserves, Spinn Prairie owned by The Nature Conservancy, and Cressmoor Prairie owned by the Shirley Heinze Environmental Fund.

Occasionally, tiny remnants of prairie vegetation are found in other places, such as along railroad rights-of-way. Many of these old railroad beds were laid out in the late 1800's before the prairies were gone. Modern-day railroad prairies struggle to survive. Because of their long, linear shape, they have an incredible amount of "edge" where they border disturbed landscapes such as cultivated fields. Since cultivation inspires the best growth of many a pernicious weed, these

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narrow, linear prairies are constantly under the assault of weedy invaders. Certain of them, such as Canada thistle and wild parsnip, are formidable opponents that challenge the prairie plants for elbow room, and frequently win.

Another assault that the prairie plants must endure is the railroads' use of herbicides along their tracks. Usually these are either general herbicides that kill all vegetation, or broadleaf herbicides that don't kill grasses, but that kill pretty much everything else. In either case, the end result is that long-lived perennial prairie plants die out. Prairie plants are well known for their "slow start" in establishing themselves. After mature plants succumb to the herbicides, the infant prairie plants popping up from the seed bank lose the



Prairie phlox  
(*Phlox pilosa*)

competitive battle against the quicker-to-establish weeds that are better suited to filling niches in disturbed habitats. But in spite of these setbacks, prairie plants continue to struggle for a place in the sun on the old homeplace. As the struggle continues, their numbers dwindle, and fewer and fewer of the most conservative species survive. These poor survivors represent a meager testimonial to a regal landscape lost forever. A hundred years hence, will any remain?

. . . . .

Yet another place where prairie plants put forth their best effort to overcome difficult odds is in old pioneer cemeteries that were established on or near original prairies.

Few of these are known, and few are allowed to flourish. Aldo Leopold was perhaps one of the first people to note that prairie plants sometimes survive in old cemeteries. In *A Sand County Almanac* he gives an account of several prairie species (including a compass plant) occupying the triangular corner of an old cemetery where the mowing equipment couldn't reach. More recently, prairie expert Dr. Bob Betz of Northeastern Illinois University raised the consciousness of midwestern prairie enthusiasts to the presence and importance of prairie remnants in pioneer cemeteries. Dr. Betz visited dozens of cemeteries in Illinois and Indiana in the 1960's trying to find remnant prairie vegetation.

Usually, the cemetery prairies that Dr. Betz discovered were being maintained to some degree by mowing. Often, this was not vigor-

Prairie . . . continued on page 3

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We welcome opposing viewpoints.

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*The mission of the Indiana Native Plant and Wildflower Society 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.*

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# President's Message

## Native Plants – the Means to an End

by Ruth Ann Ingraham

Are you inundated by masses of printed information as I am? If you're superhuman, you read it all.

I took a speed-reading class when I was a student at Broad Ripple High School here in Indianapolis. In the classroom I sat in a small, darkened booth, one of many, with a textbook on the desk before me. A narrow, horizontal beam of light moved across the lines of print and then down the page. We could increase the span of light to illuminate more words and, eventually, more lines. We could work up to paragraphs. We could also increase the rate the light moved. We checked our comprehension frequently. The objective was to train our eyes to encompass ever-increasing clusters of words at an ever-increasing pace while maintaining good comprehension.

Long ago I relapsed to my leisurely reading pace. My mind must serve as a fine filtering system as it encounters the mountain of information. It must ignore the extraneous and select materials that relate directly to what I care about. For instance, I care about biodiversity. When I find materials of this

subject, I often file them for future reference.

In a culled stack of old magazines and articles, I found what I needed for my message for this newsletter. First was a Wild Earth\* magazine which describes The Wildlands Project, a concept that makes sense to me. The big thinkers behind this have drafted a blueprint for an interconnected, continental-scale system of protected wildlands linked by habitat corridors.

Then in a file folder I located an essay entitled *Gardens for the 21st Century* from the May/June 1993 issue of *Nature Conservancy*. Janet Marinelli, author and editor at the Brooklyn Botanic Garden, writes, "As wilderness shrinks and backyard acreage increases, the ecological impact of home gardeners grows ever greater. . . Home gardens have a potential as ecological sanctuaries. . . Gardeners are restoring native plant communities, learning how to put back the pieces so that nature can heal itself and get on with evolution." Marinelli suggests that we imagine the possibilities: a new suburban landscape in

which natural gardens link up to provide living space for beleaguered wildlife, forming a network of corridors that crisscross the continent.

Marinelli brings the concept of biodiversity to my level—something I can do immediately that may make a difference. I have landscaped my front yard here in urban (not suburban) Broad Ripple with native plants and hope that my neighbors will grasp the idea and join me.

If we each grow a variety of trees, shrubs, flowers, vines and aquatics that are native to our regions, we can produce the means to the end—biodiversity.

So let's persevere and not let the information age boggle our minds. Look for gems of wisdom that we can use to make our earth a better, friendlier place for all creatures.

\* Wild Earth, 1955 W Grant Rd., Suite 148A, Tucson, AZ 85745



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*Prairie* . . . continued from page 2

ously administered mowing, but infrequent mowing that allowed the prairie plants some shot at a meaningful existence. Other times, the mowing was not close up to the stones, which left some room for a few species to flourish in an otherwise neatly trimmed environment. In some cases, Dr. Betz was successful in convincing those respon-

sible for maintaining the cemeteries into "letting them go." This translated into cessation of mowing which allowed the prairie plants to be free at last to fully express themselves.

Letting these cemeteries "go" is not an easy decision for most folks responsible for caring for them. Our culture is geared toward neatness.

And after all, cemeteries are the final resting places—places of honor—for our fathers and mothers, brothers and sisters, friends and neighbors. In the minds of many, letting the grass grow shows disrespect for the deceased. Many of the cemeteries where prairie plants survived were old, small, pioneer

*Prairie* . . . continued on page 4

*Scientific names of plants mentioned in the article*

\* Indicates an invasive exotic species

- Big bluestem**  
*Andropogon gerardii*
- Butterflyweed**  
*Asclepias tuberosa*
- Canada thistle \***  
*Cirsium arvense*
- Common milkweed**  
*Asclepias syriaca*
- Compass plant**  
*Silphium laciniatum*
- Cream wild indigo**  
*Baptisia leucophaea*
- Culver's root**  
*Veronicastrum virginicum*
- Downy sunflower**  
*Helianthus mollis*
- False aloe**  
*Agave virginica*
- Hoary puccoon**  
*Lithospermum canescens*
- Indian grass**  
*Sorghastrum nutans*
- Leadplant**  
*Amorpha canescens*
- New Jersey tea**  
*Ceanothus americanus*
- Pale purple coneflower**  
*Echinacea pallida*
- Prairie dock**  
*Silphium terebinthinaceum*
- Prairie dropseed**  
*Sporobolus heterolepis*
- Prairie gentian**  
*Gentiana puberulenta*

cemeteries where new burials hadn't taken place in decades, and they were often somewhat neglected anyway. At cemeteries where the plants were allowed to grow, the results were often incredibly exciting with many prairie species flourishing and spreading in just a few years.

During his prairie cemetery excursions, Dr. Betz found a few interesting cemeteries in Indiana. Then in the 1970's and 1980's, natural area inventories—efforts to locate significant natural areas—were in full swing in many midwestern states. These efforts were often conducted in association with efforts by newly established Natural Heritage Programs in many states to locate rare plants and animals. During these inventories, several other cemetery prairies were found in Indiana. The Natural Area Registry, a cooperative landowner contact effort between The Division of Nature Preserves and The Nature Conservancy, became the vehicle through which several cemetery prairies became managed areas.

Over the years, most of these areas were dropped as managed areas, usually for one of two reasons. First, it turned out that some contained few prairie species. Each site commanded attention, if not just for annual prescribed burning, then for weed control. With manpower resources stretched thin, we chose

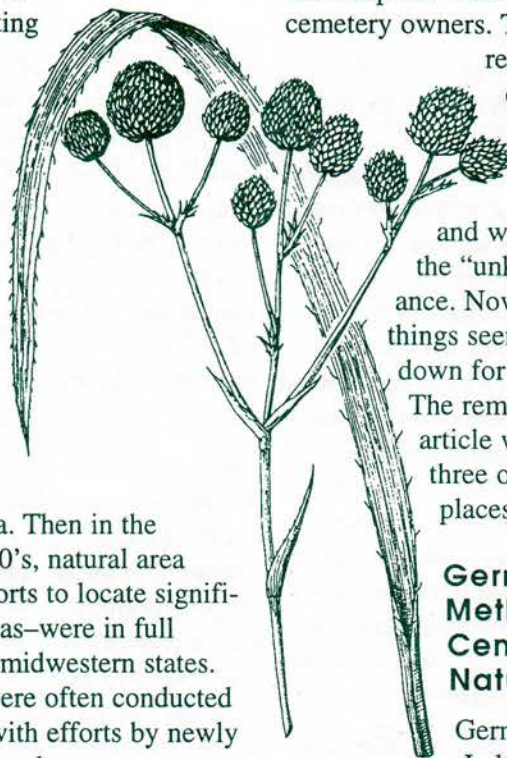
to drop some of the cemeteries that had few species in order to focus efforts on higher-priority management needs elsewhere. Secondly, some cemeteries that we would have kept on were dropped by the cemetery owners. This was often in response to criticism from folks who had relatives buried in the cemetery, and who objected to the "unkempt" appearance. Now, years later, things seem to have settled down for the time being. The remainder of this article will focus on three of these important places.

**German Methodist Cemetery Prairie Nature Preserve**

German Methodist, in Lake County, is unique among the three sites that will be discussed here in that there are no

grave sites in the prairie. This prairie was discovered by Floyd Swink and Ray Schulenburg of the Morton Arboretum, who informed Bob Betz about it. Dr. Betz visited it on several occasions and compiled a species list of over 65 native prairie species, thus documenting its special significance. At the time of its discovery, it consisted of approximately 1.6 acres in an L-shape on the north and east sides of an existing cemetery.

Convinced of its significance, Dr. Betz contacted William Barnes of the rather newly established Division of Nature Preserves in the Indiana Department of Natural



Rattlesnake master  
(*Eryngium yuccifolium*)

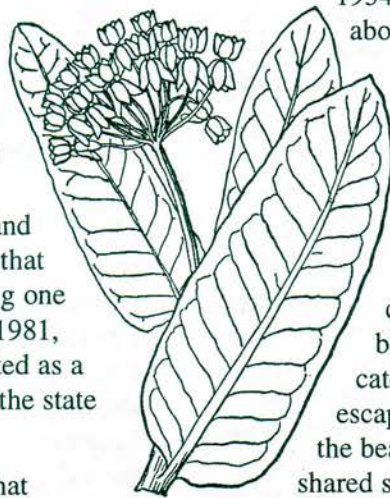
Resources. This was apparently in 1972. During the next couple of years, initial contacts were made with the owners of the cemetery in order to broach the subject of protection of the prairie with the suggestion being presented that a land trade be made whereby the cemetery would not experience any loss of land for burials. In 1974, before acquisition ever really got off the ground, it was discovered that the cemetery administration plowed up and destroyed the north piece consisting of about .6 acres. That act inspired much effort to protect the remainder before it, too, was destroyed. While trying to decide what to do, different scenarios were discussed regarding who should buy it and who should own it. Finally, The Nature Conservancy took the lead, and in 1979 they were successful in buying adjacent land and making the land trade that protected the remaining one acre of the prairie. In 1981, the prairie was dedicated as a nature preserve under the state nature preserve law.

There is no question that German Methodist Cemetery Prairie is a jewel. The species list for the area is now over 100 species, although some of these are not native species, and a few are not really prairie plants. It has been suggested that perhaps German Methodist is the most diverse acre in Indiana. Whether or not it is doesn't really matter much. It is clearly one of the finest remaining prairie remnants in the state regardless of its size. Dominated by prairie dropseed grass, the prairie plant association reflects the very

best of what a virgin black-soil prairie should represent. The list goes on and on, but includes prairie phlox, cream wild indigo, hoary puccoon, shooting star, prairie panic grass, prairie lily, purple prairie clover, wild quinine, compass plant, rattlesnake master, prairie gentian, and many, many more.

### Smith Cemetery Nature Preserve

In 1979, the Indiana Natural Heritage Program was attempting to locate old collection sites for royal catchfly, an endangered species in Indiana, in Vermillion County. The information they had indicated that it had been found in 1945 and in 1954 along Route 63 about a mile south of Perrysville. At Smith Cemetery, they found what they were looking for. In the fencerow along the north side of the cemetery, the blazing red royal catchfly couldn't escape attention. There, the beautiful catchfly shared space along the fence with a handful of other prairie plants. A quick



Prairie milkweed  
(*Asclepias sullivantii*)

cemetery revealed that a few other prairie plants were tucked around the stones within the cemetery proper.

Based on the success of Dr. Betz and others in Illinois, and others in other midwestern states, it was decided to approach the township trustee with the idea of "letting the prairie grow." The area was nomi-

- Prairie lily**  
*Lilium philadelphicum*
- Prairie milkweed**  
*Asclepias sullivantii*
- Prairie panic grass**  
*Panicum leibergii*
- Prairie phlox**  
*Phlox pilosa*
- Prairie violet**  
*Viola pedatifida*
- Purple prairie clover**  
*Petalostemum purpureum*  
or *Dalea purpurea*
- Rattlesnake master**  
*Eryngium yuccifolium*
- Royal catchfly**  
*Silene regia*
- Sand milkweed**  
*Asclepias amplexicaulis*
- Scaly gayfeather**  
*Liatris squarrosa*
- Shooting star**  
*Dodecatheon meadia*
- Short green milkweed**  
*Asclepias viridiflora*
- White prairie clover**  
*Petalostemum candida* or  
*Dalea candida*
- White wild indigo**  
*Baptisia leucantha* or  
*B. lactea*
- Wild parsnip \***  
*Pastinaca sativa*
- Wild quinine**  
*Parthenium integrifolium*
- Yellow coneflower**  
*Ratibida pinnata*

Prairie . . . continued on page 12

# Basic Reproductive Biology of Flowering Plants

by Dr. Rebecca Dolan

Recall, from the first article in this series, in the spring issue, volume 6 number 1, that the stamen is the male reproductive organ in plants. It is made up of the anther, that produces pollen, and the filament, that elevates the anther above the base of the flower. Anthers dehisce, or open, in elaborate ways to release pollen. Some

anthers have pores that open like flip-tops; some open all along their sides like mature green beans.

Pollen produced is released in search of an egg to fertilize, but first **pollination** must occur.

Pollination occurs when a pollen grain lands on the surface of the stigma of a carpel, the female organ of

a flower. Pollination may be facilitated by insects, such as bees and butterflies, or other animals. Some other plants rely on wind to carry pollen from flower to flower. These are the notorious allergy causers like grasses, ragweed, and forest trees. The copious pollen needed by plants that rely on chance winds to carry out pollination means some of that pollen ends up triggering hay fever in sensitive noses.

A pollen grain is a microscopic two-celled structure surrounded by a

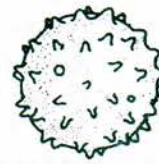
thick wall to prevent desiccation. These thick, tough walls are some of the most enduring structures made by plants. Fossil pollen from thousands of years ago remains and is used to reconstruct ancient floras. Characteristics of the pollen walls can be used to identify

genera and sometimes species.

The cells within each grain are the **tube cell** and the **generative cell**. Both have half the normal chromosome complement of mature plant cells. Like sperm in mammals, these cells are the products of the type of cell division called **meiosis**. The

generative cell will divide to form two **sperm**. The tube cell will direct the growth of the **pollen tube** through which the sperm will reach the egg (more on this later).

Once pollination has occurred, the tube cell produces a pollen tube that grows through the style of the flower and deposits the two sperm into an ovule within the ovary. One-seeded fruits have one ovule per ovary, many-seeded fruits have many ovules. Each seed produced is the result of the successful growth



EXTERIOR OF POLLEN GRAIN

of a pollen tube and successful fertilization. It's fairly easy to imagine the path of a pollen tube through the style of a cherry flower toward the single ovule within the ovary.

But imagine the congested style of a watermelon flower!

As in humans, plant ovaries produce **eggs** by meiosis, and these also have half the number of chromosomes as adult cells. Thus, when the egg and sperm join during **fertilization**, the resulting embryo has a complete set of chromosomes, half from each parent. Events associated with fertilization in flowering plants are somewhat more complex than in humans, however.

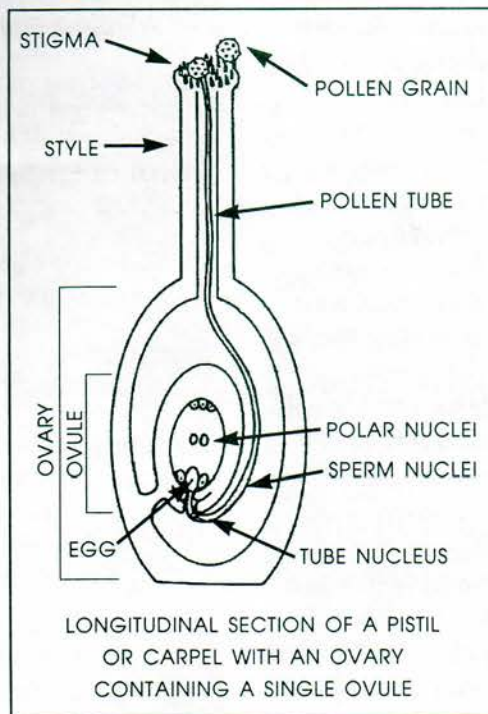
In addition to the egg, plant ovaries produce some accessory cells that help in seed development. You may have wondered, why produce two sperm from each pollen grain? One sperm joins with the egg to form the embryo. The other joins with two **polar nuclei** to form an unusual tissue called **endosperm**.

Endosperm provides nutrients to the embryo as it develops within the seed. Endosperm has not one, or two, but three chromosome sets (one from each polar nucleus, one from the sperm). The two-step union of the egg and sperm along with the union of the sperm with the polar nuclei is unique to plants. It is referred to as **double fertilization**.

Next time we'll look at the anatomy of a seed.

*Becky Dolan is Director of the Friesner Herbarium at Butler University and an INPAWS member.*

*Illustrations by Jan Glimn Lacy*



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# Bombs Over Nature at the JPG?

by Ted Harris

Located a few miles north of the town of Madison in southeastern Indiana, the Jefferson Proving Ground (JPG) is a 55,000-acre site that served as a testing center for the U.S. Army from 1941 to its closure in 1995. A legacy of its use is that the JPG's Northern Firing Range Area (51,000 acres) still contains 1.5 million rounds of unexploded munitions.

The Jefferson Proving Grounds lies on the Illinoian Till Plain in an area known as the Muscatatuck Flats and Canyon Section of the Bluegrass Natural Region. This section's trees include American beech, red maple, sweetgum, black gum, pin oak, swamp chestnut oak and tulip tree.

Because of munitions testing, the Northern Area was off-limits to most human uses for many years. Areas that had formerly been converted to agriculture reverted to forests. Remnant populations of native plants and animals were able to thrive. In 1992, leading up to the planned closure, Indiana's Division of Nature Preserves was invited to survey the Proving Ground's plant species in its unrestricted areas.

Potential natural community types (nine in number) and potential rare plant species (forty-six in number) were identified prior to beginning the ground search. The search itself yielded a remarkable twenty-nine endangered, threatened, rare, and watch-list plants. State endangered species were clustered foxglove, twining bartonia, elliptical rushfoil, round-leaved boneset, tree club-moss, climbing fern, Maryland meadow beauty, longbeak arrow-head, and netted chain-fern.

The Division of Nature Preserves made eight management recommendations in its 1993 report: 1) consider a large portion of JPG as an ecosystem reserve; 2) protect the best blocks as Research Natural Areas or as Indiana Nature Preserves; 3) control exotics; 4) manage some areas as old growth; 5) reduce roadside mowing frequency to one time per year; 6) prohibit wetland draining and dam construction; 7) expand the use of fire; and 8) conduct additional surveys as further clean-up and reuse decisions were made.

In addition to forests, JPG contains 6,000 acres of wetlands. It also has several high-quality streams, large grassland areas and 31 caves, supporting diverse populations of mussels, fishes, amphibians, reptiles, birds and mammals. Numerous professional and conservation organizations jumped on the bandwagon urging protection for this property, and, for a time, the chances for JPG's protection appeared to be good.

In May 1997, the U.S. Army and the U.S. Fish and Wildlife Service entered into an agreement. It called for the USFWS to develop an ecosystem-based plan to maintain and enhance habitat, as well as to provide controlled recreational opportunities. This was basically an initial step toward creating a 51,000-acre National Wildlife Refuge, which would be among the largest in the Midwest.

Later in 1997, the Army also entered into an agreement with the Indiana Air National Guard, allowing them to use 1,000 acres for air-to-ground training in

exchange for helping with mowing and other maintenance tasks. Now, however, the Air National Guard has requested an expansion of their activities to include the whole 51,000 acres; and the Army has pulled out of negotiating with the Fish and Wildlife Service regarding a refuge.

Bombs over Nature? No thanks! INPAWS is writing to protest these developments, and INPAWS' members might well do the same. Consider these words from the Division of Nature Preserves' 1993 report: "... we have observed an almost overwhelming variety of successional natural vegetation types, as well as mature forests, which uniquely represent the vegetation of this entire region. Nowhere can such an assortment of the region's natural heritage be found; it just does not exist, especially at the scale found in JPG, anywhere else." The JPG clearly deserves to be protected.

Support the Jefferson Proving Ground National Wildlife Refuge by writing to

Honorable Paul Johnson  
Deputy Assistant Secretary  
Installation and Housing  
Department of the Army  
110 Army Pentagon  
Washington, D.C. 20310-0110

and send copies to

Representative Baron Hill  
U.S. House of Representatives  
Washington, D.C. 20515

and to both Senators Richard Lugar and Evan Bayh, each at the United States Senate, Washington, D.C. 20510.

Thanks.



# M U L T I F L O R A E

## Mark your calendars for the INPAWS Sixth Annual Meeting!

**Saturday, November 20, 1999**

at the beautiful new building  
of the

### Indiana Historical Society

located near the Canal and  
Military Park in downtown  
Indianapolis.

Note the new date and loca-  
tion. There will be more infor-  
mation in the next issue of this  
newsletter.

### **Sycamore Land Trust**

will have a workday on  
**Sunday, September 19, 1999,**  
to conduct a tree survey at  
SLT's Wayne Woods site, which  
is west of Bloomington in  
Monroe County.

Meet at the Monroe County  
Public Library at 9:30 AM to  
carpool to the Woods. For  
more information, or for direc-  
tions to the site, call Dave  
Welch at (812) 323-9983 or  
Kathleen Dowd Gailey at  
(812) 824-3441.

Governor and Mrs. Frank  
O'Bannon have asked INPAWS  
to help establish an  
**Indiana wildflower garden**  
on the grounds of the official res-  
idence on North Meridian Street  
in Indianapolis. If you are inter-  
ested in contributing some native  
wildflowers to this project, or  
know of a construction site in  
Indianapolis where native wild-  
flowers can be rescued, please  
contact Carolyn Harstad, 5952  
Lieber Road, Indianapolis, IN  
46228, or call her at  
317-257-9452.

## Join Indiana's Newest, State-Wide Beekeepers Organization

*"To promote better beekeeping throughout Indiana"*

Indiana Beekeepers Association hosts field trips  
and workshops, and publishes a newsletter.

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October 16 • Conference in Muncie (Dave Laney • 219-656-8701)

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Annual Dues: \$10 – Individual; \$15 – Family

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25725 New Road  
North Liberty, Indiana 46554

For more information contact Dave Laney (219) 656-8701

### *Herb Gatherings*

"The Newsletter for the Thymes"  
has initiated a campaign to  
encourage the U.S. Post Office to  
honor our rich botanical heritage by  
featuring native American herbs,  
such as Purple Coneflower,  
Butterfly Weed, Bee Balm, etc., on  
stamps as early in the new millen-  
nium as possible. To lend your sup-  
port, write to the

#### **Citizen's Stamp Advisory Committee**

**c/o Stamp Development  
U.S. Postal Service**

**475 L'Enfant SW, Room 4474E  
Washington, DC 20260-2437**

and send some reasons why you  
think herbs should be featured on a  
U.S. postage stamp (food, medicine,  
clothing, decoration, fragrance). For  
further information about this pro-  
ject, contact

Herb Gatherings  
10949 E. 200 S  
Lafayette, IN 47905  
or call (765) 296-4116.



# LETTER TO THE EDITOR

From the Editor of *Wild Garden* Magazine

Dear Carolyn:

I'm very sorry to tell you that we will no longer be able to publish *Wild Garden*. We had hoped to sell the magazine but the sale fell through, and we don't have the financial resources to continue. All of the current subscribers will receive *The American Gardener* magazine (published by the American Horticultural Society), which in recent months has had about 90 percent native plant content. Please let your members know that they will soon be receiving a letter to that effect. Thanks for all of your support for the magazine. I know that the native plant movement will continue to flourish with support from organizations such as INPAWS.

Best Regards,  
Joanne Wolfe  
*Wild Garden*

Indiana has a wealth of wildlife that Hoosiers enjoy and benefit from every day, but wild animals can sometimes become a nuisance. The **Indiana Nuisance Wildlife Hotline** can provide information on how to live with wildlife, as well as advice on how to manage conflicts with wildlife. Wildlife professionals are on hand from 8 AM to 5 PM, Monday through Friday, to provide expert advice and information on management and control resources. Call 1-800-893-4116, or from the Lafayette area, call 496-3968.

## Highlights of the INPAWS Overnight Bus Trip to Northern Indiana, Saturday and Sunday, August 28 and 29, 1999

Prairie restoration in Indiana will be our focus. First stop will be in Lafayette to visit the Museums at Prophetstown, where more than 100 acres of prairie have been sown over the past two years. We will witness the development of seeded prairie and learn about the future restoration of the Museum property, and Prophetstown State Park. Our second stop will be Spinn Prairie Nature Preserve, a 30-acre native prairie that is being restored effectively through brush removal and prescribed fire, increasing both the diversity and the abundance of the native prairie flora. Our final site will be The Nature Conservancy's Kankakee Sands Restoration project, an ambitious undertaking that will restore 7,000 acres of prairies and wetlands. Project manager and former INPAWS president Jeff Maddox will describe the efforts.

Sunday's first stop is Pigeon River Fish and Wildlife Area. Lee Casebere and Tom Swinford of the Division of Nature Preserves will lead us through the spectacular fens of this preserve where we'll see Spotted Joe-Pye Weed, Showy Black-Eyed Susan, and Boneset in full bloom, and many smaller species such as Purple Gerardia, Grass of Parnassus, and Kalm's Lobelia. Tom will also introduce us to his dragonfly research at the site, providing insight into these fascinating predatory insects.

*Registration info will be in the mail soon. Please join us for this enjoyable and educational weekend.*

Kevin Tungsavick • 765-354-2775



## NATURE WALKS AT BUTLER UNIVERSITY

Join Dr. Rebecca Dolan for nature walks on the **second Tuesday** of each month at noon:

### *Visiting Butler Prairie*

**August 10**  
**September 14**  
**October 12**

Meet behind Gallahue Hall on the Butler University campus near the greenhouse. Walks will last about 45 minutes. There is no charge and all are welcome.

*If you would like to receive a monthly reminder of the walk, or wish to be dropped from the reminder list, please call Dr. Dolan at 317-940-9413, or email [rdolan@butler.edu](mailto:rdolan@butler.edu).*

## [www.inpaws.org](http://www.inpaws.org)

Visit our website for news and information about INPAWS and native plant issues, as well as links to a wealth of like-minded organizations.

We would like to update our site with **your** news, information, comments, ideas, opinions, suggestions. In short, anything of interest to all concerned with preserving native plants and their habitats.

**Please email Anne Wilson**  
[wilson@hsonline.net](mailto:wilson@hsonline.net)

## 1999 Plant Sale and Auction Report

by Marilyn Spurgeon,  
Chairman

May 15. What a wonderful day! The weather and facility were perfect. The plants, more than 600, were in great condition due to early digging and great cooperation from INPAWS members. The volunteers were a helpful, willing, cheerful group. The plant experts were on the ball from beginning to end. The food was refreshing and appreciated by the volunteers and proved to be a hospitable gesture to the visitors. The auctioneer and his assistants were in top form—a truly successful, educational experience.

Our event brought in just over \$5,000! What joy and satisfaction for the committee. We are truly grateful for all the work and help, from members, visitors, and Indy Parks.

The two work days, which paid the rent to use the Burello Center at Garfield Park, were an easy way to save \$250 and help the parks by planting grass and sedge plugs. Some of us even enjoyed a hike, a swim, or playing in the mud.

## Mud Therapy in Indianapolis

by Don Miller

It ought to be a new age therapy if it isn't already. Brookston soil is a Central Indiana clay soil that is extremely gooey when wet, as INPAWS members discovered. Between laughing, swimming, falling down in the muddy water, and Subway sandwiches, INPAWS volunteers installed more than 1,000 wetland plants at Raymond Park last week. The project was done as part of a trade-out agreement for the use of Garfield Park for the 1999 Spring Plant Auction.

Altogether, more than 8,000 sedges, rushes, forbs and grasses have been planted at Raymond Park by INPAWS, ASC Corporation volunteers, and more than 500 school students. This includes 37 different wetland species, all native to Central Indiana. The seven-acre project includes a three-acre mesic prairie, a one-acre emergent wetland, and a three-acre wet-mesic prairie area that will be planted this month. Some huge red oak trees occupy a high-quality woodlot adjoining the site.

Raymond Park middle school teachers and students currently use the facility as an outdoor lab. The park is located adjoining Raymond Park Middle School and Indy Island Aquatic Facility near the 8500 block of E. Raymond Street in Indianapolis. INPAWS members and friends are welcome to volunteer in other native planting opportunities this year. If you are interested contact Don Miller at 327-7416 or Wendy Smith at 327-1724. Thank you.



Many thanks to **Spence Restoration Nursery** in Muncie for providing the plants and specifications, and to Marilyn Spurgeon, INPAWS auction chairman, who organized the project.

**Would you like to look back and realize that you had a major part in raising more than \$22,000 for INPAWS projects by giving just one day a year to the effort?**

Let me tell you how!!

I need relief as your plant sale auctioneer. Health and lifestyle dictate the need to make a change.

If you would like to step up and take over, I would be happy to coach you if you desire, and provide back-up if you choose. In short, I would reveal everything I know (wouldn't take long!). The next auction will be in the spring of Y2K.

There is no age or gender restriction. (An Auctiondear?) You would be ably assisted by a cadre of seasoned supporters.

**Would you like to try?**

Call me at 317-356-0953 or email: [rekontak@Juno.com](mailto:rekontak@Juno.com))

Thanks a big bunch for all your past support. It has been wonderful!!



**Rolland Kontak**

*"Leaves of three, let them be; berries white, take ye flight"*

## Poison Ivy

by Carolyn Harstad

While hiking in late summer in a wooded area not far from the Indiana Dunes, I came upon a large mass of beautiful red leaves and striking white berries. Upon closer examination, I discovered that this lovely groundcover was none other than my old nemesis, Poison Ivy.

"Leaves of three, let them be; berries white, take ye flight" is the old adage for Poison Ivy (*Rhus radicans*). Anyone planning to hike in the woods, rescue or transplant wildflowers, or weed wooded areas should become familiar with this vine. This member of the Sumac Family is poisonous in any season, and even burning it can cause severe allergic reactions. Early in the spring, Poison Ivy leaves may be red and greasy-looking, but as the season progresses the leaves become larger, and turn medium-green. The leaves look very similar to Virginia Creeper (*Parthenocissus quinquefolia*) except that Poison Ivy has three leaflets and white berries, while Virginia Creeper has five leaflets and blue-black grape-like berries. I like to describe the two outer leaflets of Poison Ivy to my grandchildren as "mittens," since they often have a coarse tooth on the side which looks like a thumb. The center leaflet may be smooth, or may have a broad tooth on each side. There is a similarity in the shape of Poison Ivy leaves and the leaves of the Poinsettia plant. Birds love the berries of Poison Ivy, so even "bad" natives have some good qualities.

I used to be able to pull Poison Ivy without concern as long as I wore protective clothing and showered thoroughly when I finished. However, in recent years I no longer

have that privilege. I suppose repeated contact with this plant has broken through my so-called immunity because now when I come in contact with it, I invariably get the familiar rash of reddish, water-filled blisters—and the nasty accompanying itching!

In fact, as I write, I can see two spots of those familiar blisters on my right hand.



This rash is caused by urushiol, the oil which is part of a Poison Ivy plant. This insidious oil can attack you directly from the plant, but it can also be transferred to your sensitive skin by your clothing, shoes, gardening tools, and even your favorite pet's fur. So what do I do to prevent receiving this "gift" from the Poison Ivy plant? I wear long pants, socks and enclosed shoes regardless of temperatures when I know I will be in an infested area. Generally I also wear a long-sleeved shirt, but sometimes the heat demands bare arms. When weeding or gardening, I remove all jewelry, including my watch and don the disposable latex medical gloves which I purchase in boxes of 50-100 at the local drugstore. Yes, they make my hands sweat, but I prefer sweaty hands to itchy ones, and latex gloves ARE disposable. Finally, I use a product called Tecnu (available at the drugstore). This translucent liquid keeps the urushiol from penetrating the skin—although it is not foolproof. The directions tell consumers to apply the liquid, rub it into the skin thoroughly, and rinse with plenty of water within eight hours of exposure. I also use Tecnu in two other ways. I put a light coating on all exposed skin, just as you would apply sunscreen,

before heading outside. And I have discovered that a few drops applied directly to those nasty blisters and left to dry actually seems to stop the itching and help the rash heal more quickly. I have tried a variety of Poison Ivy products all of which are designed to seal off the rash from the air and help alleviate the itching. These include Ivarest cream, CalaGel, and lotions containing calamine, caladryl, or benadryl, but so far, I find Tecnu the most effective.

As you enjoy the wonderful outdoors, remember that an ounce of prevention is worth a pound of cure. Poison Ivy grows throughout the woodland floor as any other leafy green perennial, or can be found scrambling up trees as a vine. Even dead Poison Ivy contains urushiol oil, so always take precautions whenever you are near this plant. Learn to recognize Poison Ivy and avoid it. Watch for it as you walk through the woods. Pull it out of your home landscape and dispose of it in a plastic bag, or hit it with Roundup or a good poison ivy spray. After you have completed your task, be sure to shower **immediately**, wash your clothing in hot water with a strong detergent, and throw the latex gloves away. A walk in the woods, rescuing wildflowers from construction sites, or even weeding your woodland garden are pleasurable activities. Just watch out for that old nemesis—Poison Ivy!

*Editor Carolyn Harstad's book Gardening with Native Plants and Wildflowers in the Lower Midwest will be coming soon from IU Press. Watch for information about a book-signing party in September!*

nated to the Natural Area Registry, and Registry Director Paul Carmony approached trustee Delores Hicks with the idea. She agreed to go along with this unconventional request in 1981, and the cemetery has been managed as a prairie ever since. In 1997, the area was finally dedicated as a nature preserve.

Smith Cemetery is not as diverse as German Methodist, but it had a long history of mowing which probably led to the demise of some prairie plants. But in spite of that, the plant list has over forty species, the majority being good prairie plants. The rarest ones are the royal catchfly and prairie violet. Among the best of the other species are lead-plant, hoary puccoon, Culver's

root, prairie dock, pale purple coneflower, wild quinine, and white prairie clover. A particularly colorful time to visit is when the royal catchfly is in bloom in late July and early August.

To anyone interested in the cultural history of Smith Cemetery, the stones in the cemetery were documented by former state park naturalist Lois Gray. The information is bound into a book that is available at local Vermillion County libraries in Perrysville, Newport and Cayuga.

### Barrens Cemetery

In pre-settlement Indiana, large areas of Harrison and Washington Counties in south-central Indiana were known as "barrens." Located among the sinkholes on the Mitchell

Karst Plain, the barrens occurred on dry, flinty soils and contained most of the same plant species as the prairies of northern Indiana. Why these prairie-like areas occurred here is subject to speculation, but it was probably a combination of several factors. First, the soils are relatively dry and drain rapidly due to the numerous sinkholes which drain away water quickly after rainfall. Moist, wooded stream valleys are known to be effective fire barriers in many cases. With few surface streams in the sinkhole plain, fires would have been able to burn over larger areas without encountering such barriers. Fires were known to have burned over the barrens on a regular basis, and these were probably started by Native Americans most of the time, and by lightning part of the time. Since other parts of the Mitchell Karst Plain had dry soils, and most of it

was forested, these reasons don't fully explain why the barrens existed. The answers may never be known.

In any case, barrens covered hundreds of acres in this area. It was a landscape feature of note to the early settlers—they established the settlement of Central Barren near the center of one of the largest areas of barrens in Harrison County. Fire suppression, conversion to farmland, and urban development—the same things that caused the demise of the prairies—eliminated the barrens. Very few remnants are known, and even fewer contain much diversity. One of the very best remnants known is Barrens Cemetery.

Discovered by the Division of Nature Preserves in the early 1980's, this cemetery was another old pioneer cemetery that received occasional mowing, but just enough neglect to let the barrens plants survive around the stones and along the edges. Since 1984, the cemetery has been "let go" and managed for the significant vegetation that exists there.

Among the many familiar prairie plants that survive there are big bluestem, Indian grass, hoary puccoon, white wild indigo, yellow coneflower, rattlesnake master, New Jersey tea, and downy sunflower. Milkweeds are well represented here, and include butterflyweed, common milkweed, prairie milkweed, sand milkweed and short green milkweed. Since this site is so far removed from the northern Indiana prairies, it can be expected that species with more southerly ranges would be present. That is exactly the case at Barrens

Cemetery, and false aloe and scaly gayfeather are among the southern species present.

. . . . .  
You have just learned a little bit about three significant places in Indiana, closely associated with cemeteries, that preserve remnants of Indiana's original prairie heritage. It seems a little ironic that the pioneers who paved the way for the

destruction of the prairies and barrens are now sharing their final resting place with plants from those long-gone ecosystems. But perhaps it is a fateful reunion of the pioneers with familiar plants. One thing is



Purple prairie clover  
(*Dalea purpurea*)



Hoary puccoon  
(*Lithospermum canescens*)

for sure. These plants are no longer familiar to the general populace.

But to those of us who relish diversity in our landscapes and native plants in our midst, the knowledge that these places exist is comforting; the desire to visit them and revel in their existence is food for hungry botanical appetites. Perhaps especially since they are located in or adjacent to cemeteries, it causes one to reflect upon what our culture has done to its native landscapes, and what we might do to prevent further losses.

. . . . .

In case you're interested in visiting these three sites, here is more information:

German Methodist Cemetery  
Prairie Nature Preserve:

This is a restricted access preserve in Lake County. Please contact The Nature Conservancy at 317-923-7547.



Prairie lily  
(*Lilium philadelphicum*)

### Smith Cemetery Nature Preserve:

Smith Cemetery is located about 2 miles south of Perrysville in Vermillion County. It is about 1 3/4 miles south of the intersection of State Route 32 and U.S. 41 on the west side of the road. Park along the gravel lane along the north side of the cemetery (be sure not to block the lane since it provides access to a home). There are no trails in the cemetery, but

makeshift paths are usually evident. Chiggers are often prevalent during summer months, so be prepared.

### Barrens Cemetery:

From the intersection of State Road 135 and State Road 64 in Harrison

County, go north on SR 135 for 1 1/2 miles to Cemetery Road which T's in from the east. Turn east (right) and go about 1/4 mile to the cemetery located on the south side of the road. There are no trails, but paths are usually evident. Chiggers are present in summer. So, too, are "seed" ticks. Again, be prepared.

*Lee Casebere is assistant director of the Division of Nature Preserves of the Indiana Department of Natural Resources, and a charter member of INPAWS. He is interested in birds, reptiles, amphibians, nature photography (he was the principal photographer for Orchids of Indiana, by Mike Homoya, published by the Indiana Academy of Science in 1993) and, of course, plants. His special interest is in the rarer plant communities of prairies, savannahs, limestone glades, barrens, fens and bogs, habitats all well represented in Indiana.*

## Amos Butler Audubon **Birdathon**

On May 17th, INPAWS board members Roger Hedge and Lee Casebere, along with Cloyce Hedge and Cliff Chapman, participated in a Birdathon to raise money for the Amos Butler Audubon, the Indianapolis area chapter of National Audubon Society. Those four fellows comprised the "DNR Team," one of three main teams involved in the local event.

The Birdathon is an annual event that raises money for worthy conservation purposes. This year, the money is earmarked for purchase of rainforest in Ecuador, breeding bird studies on the Hoosier National

Forest, and for the establishment of a National Audubon office in Indiana.

This event is the major fundraising event for Amos Butler Audubon each year. Last year, the event raised over \$23,000, for which the DNR Team raised more than \$3,000. This year's totals are not yet known, but it looks as if they will beat last year's.

Pledges are made to the birding teams, usually based on "X" cents per species seen. This year, the DNR Team saw 151 species of birds on their route which took them

through parts of northwestern Indiana (including the Lake Michigan shoreline), and down into west-central Indiana as far as Shades State Park.

**Anyone interested in pledging next year to the DNR Team can contact Lee or Roger at 317-232-4052, and they'll put you on their list.**



INPAWS Coming Events  
watch for details in the mail

**Saturday, August 28 and  
Sunday, August 29**

Two-day bus trip to northern Indiana. Day one will feature prairie restoration at Museums at Prophetstown, Spinn Prairie, and Kankakee Sands. Sunday will feature the Fens of Pigeon River with a variety of beautiful wildflowers.

**Saturday, October 23**

Hike at Post Oak-Cedar Nature Preserve in Wyandotte Woods, Harrison County. View spectacular fall foliage and fascinating prairie glades. Join us for a picnic prior to the hike.

**Saturday, November 20**

Sixth Annual Meeting at the new Indiana Historical Society facility, located near the Canal and Military Park in downtown Indianapolis.

**MEMBERSHIP APPLICATION/RENEWAL**

Annual dues pertain to the fiscal year January 1 - December 31.  
Dues paid after September 1 are applied to the following fiscal year.

- Student \$10     Individual \$18     Family \$25  
 Patron \$100     Sponsor \$250     Corporate \$500  
 Supporter (Additional Donation) \$ \_\_\_\_\_ Total Enclosed \$ \_\_\_\_\_

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c/o Katrina Vollmer  
3134 Greenbriar Lane  
Nashville, IN 47448

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