

INDIANA

Native Plant and Wildflower Society

NEWS

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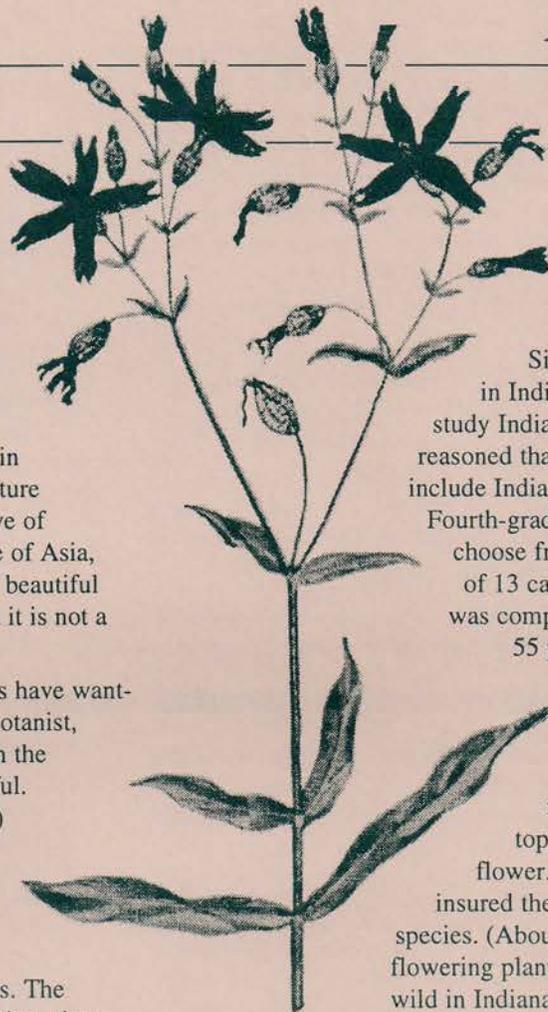
State Flower Project

Indiana is one of only a handful of states with a non-native as a state flower. The first state flower was the CARNATION, a native of Europe. In 1923, this was changed to the TULIP TREE, an Indiana native found in practically every county. Then in 1931 the state legislature changed it once again, this time to the ZINNIA, a native of Mexico. The current state flower, the PEONY, a native of Asia, was selected by the legislature in 1957. The peony is a beautiful plant providing glorious floral displays in late May but it is not a native of Indiana.

Ever since the change, biologists and nature enthusiasts have wanted to nominate a native species. The famous Hoosier botanist, Charles Deam, said it best. "The Indiana flora is rich in the number of native species that are attractive and beautiful. Out of our abundance of native flowers (2,000 species) we should be able to select one for our state flower... Why advertise our ignorance of our native plants? I appeal to readers to take pride in our state and in our native plants."

There is another good reason to choose a native species. The combination of natural habitat loss and introduction of invasive exotic species is creating environmental chaos. Because of the magnitude of this problem, the Indiana Academy of Science sponsored a major national symposium in 1991 on the topic and published a book in 1993 focusing on the problems being caused by non-native species and the importance of promoting the use of native species. A recent United States Congress report indicated that the damage caused by just 15 non-native species during the next 50 years could cost Americans more than 130 billion dollars.

Selecting a suitable replacement for the current non-native state flower (the peony) has become a project of the Indiana Academy of Science, a 1,200-member, statewide, nonprofit organization established in 1885. The Academy is dedicated to promote scientific information and to improve education in the sciences. Among the many activities sponsored by the IAS are symposia, research grants and publications. The Indiana Native Plant and Wildflower Society (INPAWS) has supported the state flower project as well, by providing assistance in preparing mailings.



by Bill McKnight

Since all fourth-graders in Indiana are required to study Indiana state history the IAS reasoned that this also could include Indiana natural history. Fourth-graders were asked to choose from among a short list of 13 candidate species. The list was compiled from a survey of 55 persons with expertise on the flora of Indiana. Each person involved with the survey submitted a rank-ordered list of their top five choices for a state flower. This screening process insured the selection of a native species. (About 20 percent of the flowering plant species found growing wild in Indiana are non-native).

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A poster and a résumé for each candidate flower were produced and distributed to all 4,041 fourth-grade classes in Indiana, in both public and private schools. The poster features a high-quality color photograph of each of the 13 candidates. The accompanying résumés briefly describe distribution, habitat, morphology, flowering time, suitability as a garden plant, and other generally interesting attributes. The candidates were **Bloodroot, Bluebells, Blue Phlox, Butterfly Milkweed, Cardinal Flower, Fire Pink, New England Aster, Nodding White Trillium, Shooting Star, Spring Beauty, Wild Columbine, Wood Poppy** and **Yellow Trout Lily**. The students were asked to vote for one of the 13 wildflowers, and encouraged to search for all 13 species in their wild native haunts. Regardless of which species got the most votes, they were all winners since the students now have a greater understanding of the Hoosier flora and our environment.

More than 6,000 fourth-graders voted for the **Fire Pink** (*Silene virginica*). (Illustration on page 1). It should be noted that Fire Pink received about 2,000 more votes than its nearest competitor, Nodding White Trillium, which received 4,000, and that each of the 13 wildflowers did receive a number of votes, including 43 for the peony. The 55 adult experts also chose Fire Pink as their first choice.

Fire Pink (*Silene virginica*) is a resident of rocky, wooded slopes and openings, and is frequent to common (except in

the northwestern counties) in spring. The many brilliant red star-like flowers are as visible in daylight as lightning bugs during summer nights. Its flowers are produced near the top of a two-foot stalk with simple, paired leaves. A sister species, Royal Catchfly (*S. regia*), is found in Indiana only in prairie remnants at a few locations; both are eye-catching garden plants.

This project is also a civics exercise. The Academy will obtain bipartisan support to get the necessary legislative action to change the Indiana state flower from the non-native peony to the Fire Pink. Students can be kept aware of the politics through media coverage or through the IAS HomePage (<http://www.statelib.lib.in.us/www/ias/ias.html>). It should be noted that this project is being supported with volunteer effort and funding from the Indiana Academy of Science; no state tax dollars are involved.

The State Flower Project Committee includes:

<i>Chairman Bill N. McKnight</i>	<i>Park Tudor School</i>
<i>William C. Block</i>	<i>Izaak Walton League of America</i>
<i>Michael Dana</i>	<i>Purdue University</i>
<i>Rebecca Dolan</i>	<i>Butler University</i>
<i>Michael A. Homoya</i>	<i>IDNR Division of Nature Preserves</i>
<i>Paul E. Rothrock</i>	<i>Taylor University.</i>

Indiana Native Plant and Wildflower Society Newsletter

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Published quarterly by the Indiana Native Plant and Wildflower Society for members.

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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Submission of articles

Information for the newsletter is supplied by Society members and others interested in sharing information about Indiana native plants. Articles or drawings should be sent to the Editor, Dan Anderson, 7412 Graham Road, Indianapolis, IN 46250.

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President's Message

by Carolyn Harstad

Environmental issues have been a high priority for INPAWS since its inception in the spring of 1993. On the back of a friend's sweatshirt, I read, "We will conserve only what we love. We will love only what we understand. We will understand only what we are taught." News articles regularly report the results of man's carelessness—depletion of the ozone layer, oil spills in our seas, loss of plant and animal habitat—the list is endless.

The Autumn 1996 issue of *Wildflower*, a publication of the Canadian Wildflower Society, Ontario, Canada, reports on the Wood or Celandine Poppy (*Stylophorum diphyllum*) as one of Canada's endangered species. The article, by Elaine Gosnell, terrestrial and wetland biologist, shows a map of the range of the Wood Poppy with Indiana at the center. (This plant grows readily in Indiana and I have heard people tell of "weeding" it out when it becomes too vigorous. I was surprised to find that this lovely cut-leaved bright yellow wildflower is in danger in other parts of its range in North America. Perhaps we need to be more watchful in our local environment).

The Nature Conservancy ranks the Wood Poppy as "globally secure but critically imperiled in Ontario and Canada" and was listed as an endangered species in Canada in March 1991. Two sites are discussed in the article. At one site the Wood Poppy population had decreased from around 5,000 plants in an area approximately 100 m. in 1987 to 161 in 25 m. in 1995. Gosnell writes, "The cause of the demise of the population was fairly obvious. Extensive tree cutting had taken place along the ravine slope and fill material had been dumped at the entrance to the ravine. The trees and understorey vegetation (including wood poppies) which were inundated by fill were either buried or were dying. The once shady and sealed-off ravine was now exposed to the full dry-

ing effects of the sun and wind. Further openings in the tree canopy had been created by the selective tree cutting which occurred in the ravine." The article went on to list other potential stresses such as "encroaching development, aggregate extraction, agriculture runoff and increased human access."

On Tuesday, November 12, 1996, the *Indianapolis Star* published an article by William F. Hartwig entitled "Heeding warning signs of something amiss in nature" written in response to a September 22 editorial in the *Star* which claimed that "the fairy shrimp and spotted owl are not in danger of extinction and have cost jobs and stopped construction projects." Hartwig writes, "... to suggest that saving endangered species must come at the cost of jobs and human needs is specious. A strong economy and healthy environment go hand in hand." He says that species such as the fairy shrimp and the spotted owl are natural smoke alarms, "signaling that something is amiss with the natural systems that keep us all alive."

Ken Druse, our 1995 Annual Meeting speaker, called frogs "the barometer of nature." Recent news articles tell of deformed frogs in over 100 sites in 57 of Minnesota's 87 counties. The problem has not been identified, yet the frogs are undoubtedly a part of nature's alarm systems.

At the INPAWS 1996 annual meeting attendees were encouraged to "Think globally, act locally." Our environment is precious and it is fragile. As members of INPAWS, we need to monitor these "alarms," encourage legislators and developers to work with nature and not against it, and help to educate our citizens about the importance of the environment.

Working together, we *can* make a difference.

INPAWS COMING EVENTS

*Planning is now underway
for 1997 activities.*

If you have an idea for a program or field trip contact Kevin Tunesvick, program committee chairman, at 317-354-2775, or send e-mail to wilson@hsonline.net.

Lost and Found

LOST: Small black camera at annual meeting. Please call Helen Merrill at 317-255-3433.

FOUND: Pair of women's black leather gloves at the annual meeting. Call Carolyn Harstad 317-257-9452.

FOUND: Platter, at Holliday House, Holiday Park, after the February 18 slide fest and dinner pitch-in. Call Carolyn Harstad 317-257-9452.

Letters to the Editor

STATE FLOWER

Just a note regarding your comment about our state flower in the last INPAWS News. It has always seemed inappropriate to me that a non-native flower was chosen, and I would support any effort to change this. We were in Colorado in July, photographing and studying the flora of the sub-alpine and alpine regions, when I remarked to a Coloradian how abundant the columbine was, and what a good choice it was for their state flower. He asked where we were from, and when we said "Indiana," he said "otherwise known as the Peony State." I guess our reputation precedes us, at least in some circles, and thought you might find the comment amusing.

Doug Johnstone, Martinsville

HONEYSUCKLE – OUR WORST WEED?

You note in the August issue that Amur Honeysuckle is "our worst woody weed." In North Carolina we have some established populations of this species but by far in the mountainous area our worst woody weed seems to be Multiflora Rose (*Rosa multiflora*), though some would suggest it is Kudzu (*Pueraria lobata*) or perhaps Oriental Bittersweet (*Celastrus orbiculatus*). Recently I note many more species are appearing in our woodlands, including Leatherleaf Viburnum (*Viburnum rhytidifolium*), Winged Euonymus (*Euonymus alatus*), and Autumn Olive (*Elaeagnus pungens*). But I nominate the Multiflora Rose because of its prickly nature and ability to get into both wetland and meadow areas. Have you knowledge of how far the virus that is infecting the rose has progressed? I would be happy, from my perspective, to learn the virus was eliminating our Multiflora Rose.

J. Dan Pittillo, Cullowhee, North Carolina

(J. Dan Pittillo is the editor of *Chinquapin*, the newsletter of the Southern Appalachian Botanical Society—Co-Ed.)

MORE ON HONEYSUCKLE

The latest newsletter is very nice. Good layout, articles, graphics!

The article on honeysuckle is very timely as Indy Parks is getting heat from a couple of birders that honeysuckle is the most important plant for birds and that removing it from parks is a crime and they want it stopped. We need to get this info out before the public.

Bill Brink, Indianapolis

Send your letters to the Editor, Dan Anderson,
7412 Graham Road, Indianapolis, IN 46250
or e-mail wilson@hsonline.net

CLARIFICATION

I attempted to clarify *What is a Native Plant*. The editing of my article, published in August 1996, resulted in misleading and inaccurate statements. Corrections follow:

I. Plant Kingdom

A. Bryophyta: liverworts, hornworts, mosses

II. Monera Kingdom

A. Cyanobacteria: blue-greens

B. Bacteria

C. Viruses

III. Protista Kingdom

A. Pyrrophyta : dinoflagellates

B. Chrysophyta: golden algae, yellow-green algae, diatoms

IV. Mycetae Kingdom (Fungi)

A. Myxomycota: slime molds

B. Oömycota: water molds, downy mildews, white rusts

C. Chytridiomycota: chytrids and allies

D. Zygomycota: black bread molds and allies

E. Ascomycota: yeast, molds, mildews, morels

F. Basidiomycota: rusts; smuts; jelly fungi; gill, pore, coral and toothed fungi; puffballs; stinkhorns; bird's nest fungi

In Indiana there was *tall-grass prairie* in the northwestern part of the state. The rest of Indiana consisted of *eastern deciduous forest*. The types of deciduous forest in Indiana include oak-hickory, beech-maple (central Indiana), tamarack bog, cypress swamp and others.

The common names of *Viburnum trilobum* are American cranberry bush, Cranberry bush, High cranberry, Highbush, Pimbina, Cherrywood, Dowrowan-tree, Water elder, Marsh elder, Gadrise, Gaiter tree, Gattan tree, Grouse berry, Love roses. This plant is not to be confused with the source of cranberry sauce served at Thanksgiving dinner: *Vaccinium macrocarpon* (cranberry).

An advantage of growing plants native to an area is that desirable native birds and butterflies use native plants for food and shelter.

Janice Glimn-Lacy, Indianapolis

For further information on the evolutionary relationships of all groups formerly included in the Plant Kingdom please refer to the chart on page 42 of *Botany Illustrated* by Janice Glimn-Lacy and Peter B. Kaufman, Van Nostrand Reinhold Company, Chapman and Hall, New York, 1984.

ROPCHAN MEMORIAL BOG

by Anthony L. Swinehart

Dr. Charles Deam, the pioneer Hoosier botanist, recognized the need to preserve tamarack bogs in Indiana as early as 1924, as the tamarack trees were rapidly becoming scarce due to drainage and cutting.

Ropchan Memorial Preserve, in Steuben County, harbors one of the state's relatively few remaining tamarack bogs. It is situated in an area rich in diverse, glacial topography, with many kettle holes, the result of glacial blocks of ice, found in the region. Many of these favored the formation of bogs because of their small sizes and great depths. The wetland at Ropchan is an example of a kettle hole, which has become a bog during the last 12,000 years.

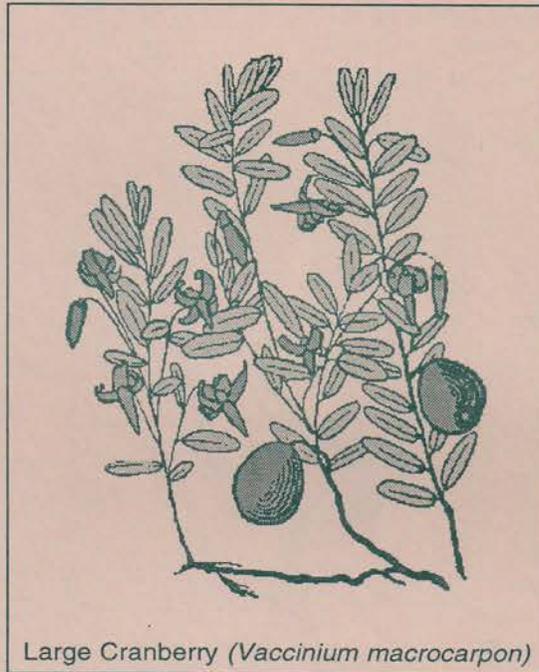
Unlike marshes and swamps, bogs accumulate peat, which is a decomposition product of plants and animals, which, because of poorly oxygenated conditions, do not fully decay. Instead of muck, they contain a soil made up mostly of plant parts, overlaid by a layer of *Sphagnum* mosses.

Peat began forming at the margins of the original lake, and spread inward until no open water remained. As the surface became more stable, trees, especially the tamarack, became established. The tamarack is a deciduous conifer, which loses its needles in the autumn. In Canada and the northern tier of states, it is found in a wide variety of habitats. In Indiana, it does not compete well with other trees, and is almost entirely restricted to bogs. Its ability to survive in a habitat unfavorable to other trees is temporary, as conditions favorable to other tree species may develop.

The tamarack forest in Ropchan is dying, as the peat has become firm enough to allow red maples to grow tall enough to develop a dense canopy, shading out the tamarack. Many of those remaining are spindly and weak, and it is likely that most will be dead within ten years.

The dense understory still harbors some remnant bog species, such as mountain holly, starflower, blueberry, ladyslippers, and goldthread. The chaotic arrangement of fallen and standing tamarack, dense shrub layer, and bright green *Sphagnum*

hummocks create a scene resembling a Jurassic bog. Studies are underway to learn more of the history of the bog through analysis of the plant and animal remains which are found in the layers of peat. After only 15,000 years or less, the material has not turned to stone, and often contains many of the same substances that constituted the living organism. We call these organic remains *subfossils*.



Large Cranberry (*Vaccinium macrocarpon*)

During the summer of 1995, Ropchan was one of the sixteen bogs and fens across northern Indiana to be studied. The peat was probed with segments of metal rods to map the original basins and locate the deepest areas. When the maximum depth of 28 feet was found, a coring device was pushed to the bottom to recover a stratified sample.

Remains of fifteen species were recovered. The lowest levels contained parts of stoneworts and bushy pondweed, indicating the presence of a lake. Seeds of yellow water lily, at higher levels, tell of the development of a marsh. Next came bulrushes and sedges, and brown mosses characteristic of hard, alkaline waters. As the peat clogged the basin, it cut off the flow of mineral-rich groundwater, and the *Sphagnum* mosses became established. Then cranber-

ries and bog rosemary carpeted the bog, but like the other species mentioned, have died out. In time, the bog will become a lowland forest dominated by red maple, swamp oak, and elm.

So, if you walk through the Ropchan Memorial Preserve, look out into the dense tangle of wetland trees and shrubs and turn back the pages of time in your mind—you just might hear the sound of waves lapping against an ancient shoreline. You might imagine a treeless glade carpeted with bright green hummocks of moss and cranberry bushes. And, as you consider the ecosystem we see today, you might agree that it is truly a reflection of a fascinating past and an indicator of changes yet to come.

This article is reprinted by permission of ACRES Land Trust, based in Fort Wayne, which administers several nature preserves in northern Indiana. Anthony L. Swinehart is a doctoral student at Purdue University.

“Tis the Season(ing) to be Jolly”

Many guides to edible wild plants tend to focus on those which are used in quantity—greens, roots, berries and nuts. Often overlooked are smaller varieties which, used in lesser amounts, can impart a delightful flavor to an otherwise bland dish. A number of these, with suggested uses, will be described below.

Wild onions, *Allium spp.*, and field garlic, *A. vineale*, were discussed in the previous issue of *INPAWS News*. The former, being strong-tasting, should be used more sparingly than the equivalent amount of civilized onions. The field garlic cloves may be used in the same amounts as you would use commercial garlic.

Sheep sorrel, *Rumex acetosella*, has small, vitamin-C-rich leaves resembling spear or lance points. These have a pleasantly sour taste, and can be added to a mixed salad as a substitute for lemon juice. (It has been pointed out that eating large amounts over an extended period of time may inhibit the absorption of calcium by the body).

The mustard family (*Cruciferae*) furnishes us with a number of useful plants possessing various degrees of heating ability. The spindly, sparsely leaved stalks of black mustard, *Brassica nigra*, can often be found along field edges and roadsides. The clusters of small yellow four-petaled flowers help to identify it with the mustard family. We have used the flower buds in salads to give them a pleasant tang, and the ripe seeds can be ground to make an acceptable dry mustard. The peppergrasses, *Lepidium spp.*, and field pennycress, *Thlaspi arvense*, all bear seedpods, either round or heart-shaped, which are attached to the main stem by short pedicels at an angle of 45 to 90 degrees. The small pods can be used green or dried for later use. The roots of cut-leaved toothwort, *Dentaria laciniata*, can be chopped and added to salads, or ground and mixed with vinegar and a little salt as a horseradish substitute.

Wild ginger, *Asarum canadense*, was used by Amerinds and pioneers in the same ways as commercial ginger is used today. The long horizontal rootstocks can be candied, or dried and ground for use as a seasoning. The plant seems to be absent in many areas, but I have seen it covering large patches of ground in both Holliday Park and Ritchey Woods in the Indianapolis area.

We have recently enjoyed tea made from the spicebush, *Lindera benzoin*, and found it to be most pleasant in taste. The red berries can be dried and ground to make an acceptable substitute for allspice. The young leaves of *Sassafras*

albidum can be dried and powdered for thickening soup, or for making “gumbo filet” which is used in Cajun cooking. (It has been reported that sassafras contains a chemical, which if force-fed to laboratory animals in large amounts, can lead to the formation of certain types of cancer).

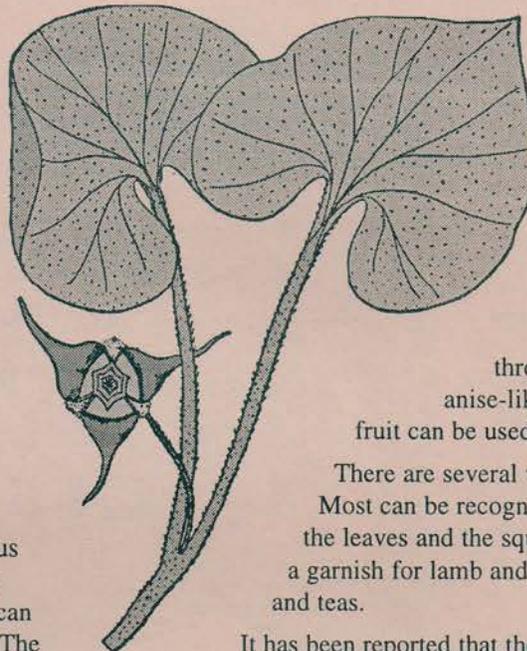
Sweet cicely and anise-root, *Osmorhiza claytoni* and *O. longistylus*, have fernlike lower leaves in sets of three. The roots have a pleasant anise-like odor, and both they and the fruit can be used in place of anise for flavoring.

There are several wild mints (*Mentha*) in our area. Most can be recognized by the characteristic odor of the leaves and the square stems. Mints can be used as a garnish for lamb and a flavoring for jellies, sauces and teas.

It has been reported that the crushed dried leaves of yellow and white sweet clover *Melilotus officinalis* and *M. alba* can be used in place of vanilla for flavoring pastries. The seeds can be used in soups and stews, although the source does not indicate what flavor they impart. Considering how common these plants appear to be in central Indiana, please feel free to help yourselves!

There are many good source books written about edible wild plants, the best-known of which are by Euell Gibbons. Gibbons concentrates on selected types, which he covers in detail with recipes and personal experiences. My favorite, from the standpoints of comprehensiveness and ease of use, is *A Field Guide to Edible Plants* by Lee Allen Peterson.

Dan is a wild-foods aficionado, editor of INPAWS News (this is his seventh issue!) and a charter member of INPAWS. He would love to hear about your favorite recipe using wild plants. Send it to him at 7412 Graham Road, Indianapolis, IN 46250. —Co-Ed.





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MULTIFLORAE

GOVERNOR'S CONFERENCE ON THE ENVIRONMENT

November 9th, in addition to being the date of our annual meeting, marked the 5th annual Governor's Conference on the Environment, which was attended by your editor as the representative of INPAWS. It appeared that about 125 people were in attendance at the meeting, which was held at the South Government Center at Washington Street between Senate and West Streets. A good many were affiliated with either DNR (Department of Natural Resources) or IDEM (Indiana Department of Environmental Management), or were exhibitors or speakers. Three utility companies were represented (NIPSCO, IPALCO and PSI), each of which has active environmental programs, including restoration of prairie and wetland areas near their facilities. Americorps, operating in the Elkhart area, was represented by a delegation of ten, many of whom expressed the wish they had heard of INPAWS before they planned their nature trails in the area. Many of the sessions dealt with proper waste disposal, projects involving public-private cooperation, and programs initiated by governments and private enterprise to help improve the environment. The exhibitors included such organizations as the Audubon Society, Clean Cities, White River Association, and groups involved in recycling efforts. Other than DNR and IDEM (which we have successfully infiltrated), most folks were unaware of INPAWS and were pleased to know that we are an active, expanding organization. I gave out about 40 applications and informational sheets on our organization, and had the opportunity to discuss with booth visitors (in addition to INPAWS activities) such matters as the best way to prepare spicebush tea and the merits of Indiana game stamps. It is vitally important that INPAWS be represented at events of this sort, as there appears to be an increasing interest in improvement of our environment and preservation of our desirable wildlife!

NEW BOOK on Native Gardens in Preparation

Garden writers Sally and Andy Wasowski are working on a new book tentatively titled *Native Gardens for the Prairie States* (University of Minnesota Press). They'll be traveling through the Midwest and into Canada and are on the lookout for photogenic landscapes. These may be residential or commercial, and should be composed of at least 50% indigenous plant materials. A brief description and, if possible, a few non-returnable photos would be appreciated. Contact the Wasowskis at P.O. Box 607, Arroyo Seco, NM 87514, or call 505-776-1499.

BAYH PROPOSES \$23 MILLION FOR NATURAL AREAS

Governor Bayh has proposed the expenditure of \$23 million over the next two and one-half years to complete the purchase of land for Prophetstown State Park in west-central Indiana and to increase funding for the Indiana Heritage Trust program. The latter has purchased more than 5,000 acres for forests, wetlands, parks, habitat and nature preserves. More than \$5.6 million has been generated by the sale of more than 225,000 environmental license plates, and the General Assembly appropriated an additional \$5 million in 1995. The 2,770-acre Prophetstown State Park is five miles north of Lafayette and West Lafayette, and will include a campground, nature center, picnic areas, playing fields and trails. Scattered wood lots will be restored, and restoration of a prairie, marsh and wetland is planned. A unique attraction to the park will be the park system's first Native American cultural center, which will be developed by the Prophetstown State Park Foundation.

We're getting around . . .

Douglasia, the newsletter of the Washington Native Plant Society has reprinted in its Autumn, 1996 issue, *Hope for the American Chestnut?* by Dan Anderson from our Winter 1995 issue, Volume II, Number 4 . . . and Sue Nord's article *Purple Loosestrife, an Unwelcome Wildflower*, from May 1996, Volume III, Number 2, has been reprinted in the October 1996 issue of the Northern Nevada Native Plant Society newsletter.

SEEDS WITH SPECIAL NEEDS

Bill Cullins reports in the fall issue of the New England Wild Flower Society that seeds of many of our favorite spring bloomers become non-viable when they have been allowed to dry out, hence must be planted when they are ripe but not dry. These include Hepatica, Wild Ginger, Trillium, Celandine Poppy, Spring Beauty, Mayapple, Squirrel Corn, Dutchman's Breeches, Bloodroot, and Twinleaf, among others. The Society's nursery is experimenting with packaging seeds of these species in moist vermiculite, sealed in plastic bags. If you would like more information on collection and storage of these "hydrophilic" seeds, please contact NEWFS Propagator Bill Cullins at 508-877-7630, extension 3402.

CONGRATULATIONS TO FRED WOOLEY, INPAWS member and Pokagon State Park interpretive naturalist, who has received the Lucy Pitschler award for his success in advancing the field of interpretation. Named for Indiana's first professional naturalist who worked at McCormick's Creek State Park, the award is the highest merit an interpreter can receive in the DNR.

Wildflower Rescue in Suburban Detroit

For an inspiring account of volunteers who have been performing successful plant rescues for many years, see the article *Wildflower Rescue* in the September 1996 issue of *House Beautiful* magazine. It tells the story of the Wildflower Rescue Committee of Cranbrook, formed 21 years ago, in Bloomfield Hills, Michigan. It is one of the oldest and best organized groups in the country, and its members now number 120. Thousands of plants are rescued each spring, with the written permission of developers, and go into private gardens and are sold at an annual plant sale.

Other veteran plant rescue groups mentioned include the North Carolina Botanical Garden in Chapel Hill, Wild Ones Natural Landscapers of Milwaukee, New England Wildflower Society, North Framingham, Massachusetts, and the Crosby Arboretum in Picayune, Mississippi, which specializes in saving bog plants.

Ken Moore, assistant director of the North Carolina Botanical Garden, said "Plant rescue operations offer a wonderful opportunity to go in and save selected plants, but we need to remember that these are last-ditch efforts. Our main goal should always be preserving natural areas intact."

This philosophy of plant rescue echos ours as well. If you would like to get involved with local efforts, contact

Sue Dillon, Native Plant Rescue Committee Chair
• 317-844-3558 •

❖ NATURE WALKS AT BUTLER UNIVERSITY ❖

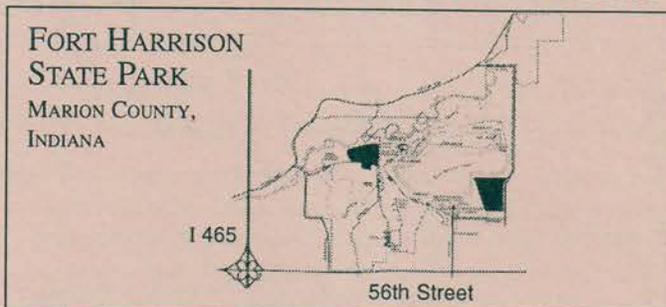
Dr. Rebecca Dolan, Director of the Friesner Herbarium at Butler, will be conducting the following walks. Meet behind Gallahue Hall near the greenhouse at noon on the second Tuesday of each month. There is no charge for the walks, which will last about 40 minutes each. During the winter months, please come prepared for mud!

January 14	Winter birds of the campus
February 11	Tour of the Butler Greenhouse
March 11	Early signs of spring in the Butler woods

If you would like to receive a monthly reminder of the walk, or wish to be dropped from the reminder list, call Dr. Dolan at 317-940-9413 or e-mail rdolan@butler.edu.

Dr. Dolan is also pleased to announce that the Friesner Herbarium has received a \$4,923 contract from the Indianapolis Parks Department to conduct a quantitative vegetation analysis of Spring Pond Nature Preserve, an old-growth wet-mesic site within Eagle Creek Park. Rebecca and Marcia Moore, Herbarium Assistant, will also prepare a slide presentation on the ecological value of old-growth forests for use in the Nature Center at the park.

INDIANA'S NEWEST STATE PARK BECOMING A REALITY



Recently, I had the opportunity to spend a little time with Jeannine Montgomery, who has recently been hired as the chief naturalist at the Fort Harrison State Park. Ms. Montgomery, an Illinois native, studied at Illinois State University, earning Bachelor's degrees in both geology and biology/geography education. Her recent experience includes 15 years as Ranger-Naturalist at Yellowstone National Park.

Parts of the park are already available for public use. These include the Delaware Lake picnic ground and the Fall Creek and Lawrence Creek trails, although the trails are muddy at present and several bridges are yet to be installed. The temporary Nature Center will be located in one of the existing buildings along Glenn Road. Display and lecture area will be about 1000 square feet, with additional area for staff and storage. A newly-built Nature Center is contemplated, but this will be several years down the road.

Other attractions of the park include the re-opening of the completely redesigned Fort Harrison golf course, and the construction of about 2.5 miles of bridle trails and stables where park-owned horses may be rented. The multi-use trail, which traverses flat terrain, will be resurfaced for use by hikers, bikers, and those using wheelchairs.

Ms. Montgomery plans to hire three seasonal naturalists, and hopes to attract volunteers with natural history and environmental education backgrounds. She plans to gear many of her programs toward school and senior citizen groups.

INPAWS members can help in many ways: species lists of Marion County native plants and reference plant materials are needed, trail monitors and volunteer naturalists are welcome, along with developers of educational programs and people to field telephone calls and answer questions in the office when the naturalists are out in the field. The help of artists to help decorate the nature center and designers of native plant plots (to be installed along access roads and between the park buildings) would be most appreciated. Someone with legal experience and knowledge of not-for-profit organizations and fund-raising would be most helpful.

The building intended as a temporary Nature Center is presently only a shell, but heat and light will be provided shortly. Ms. Montgomery anticipates that she will be able to start working with volunteers shortly after the beginning of 1997. If you would like to participate in any of the programs or volunteer activities of this newest Marion County asset, please call her at (317)-591-0904 or fax (317)-541-9532.

HOLLIDAY PARK NATURE CENTER, INDIANAPOLIS, *MOVING AHEAD*

The planned Nature Center at Holliday Park is moving closer to the construction phase, with several important developments. The Parks Department has indicated to several members of the Friends of Holliday Park that the department will provide \$300,000 in cash and \$700,000 in services toward the demolition of Holliday House and the construction of the new Nature Center. The Friends are also conducting a fundraising campaign, and are aiming for 2.5 to 3 million dollars in the initial phase. With the above pledge, the campaign is more than halfway toward its goal. A preliminary design for the new building has been prepared, and a number of suggestions made by members of the planning committee and by employees of nature centers in other cities have been incorporated.

During recent weeks, the Friends have received more than 600 letters from parents, teachers, school administrators, and neighbors supporting the project. If you are interested in helping in some way, please call the park office and ask for John or Vicki.

Sabrina Gorbett has recently been appointed to fill the position of Volunteer Coordinator, which has been vacant since Gwen Sniady moved from Indianapolis last year. We wish Sabrina good luck in her new position!

e-mail e-mail e-mail e-mail e-mail

If you have a quick comment (or a lengthy one) here are a few board members' addresses:

Bill Brink	bbrink@inetdirect.net
Carolyn Harstad	ptharstad@aol.com
Ruth Ann Ingraham	rai38@aol.com
Lynn Jenkins	jenks@iquest.net
Katrina Vollmer	vollmrvill@aol.com
Anne Wilson	wilson@hsonline.net

(Let Ruth Ann know if you'd like your e-mail address printed in the next issue)

Send us your news!

Please remember that we continue to solicit articles, art, commentary, etc. from anyone interested in native plant issues.

Send to Dan Anderson
7412 Graham Road
Indianapolis, IN 46250
or e-mail wilson@hsonline.net.

PURPLE LOOSESTRIFE, WETLANDS PEST, BANNED FROM SALE IN INDIANA

With the support of many environmental groups, the nursery industry and the Indiana Farm Bureau, a law was passed in the 1996 session of the Indiana General Assembly which banned all non-native *Lythrum* species from sale and distribution!

Previously only the species *Lythrum salicaria* was prohibited by state law, but the law was changed to ban all non-native *Lythrum* species, including *Lythrum virgatum*. Although the law does not require eradication of the species where it is found, control is recommended by most people familiar with the plant's serious problem-causing potential.

Mike Dana, Purdue University horticulturist and INPAWS charter member, said, "It's prudent that concern over natural habitat degradation should dominate over continued landscape use of *Lythrum*...and while purple loosestrife is a beautiful garden perennial...substitutes are available. A good alternative from our native flora that gardeners should try is Queen of the Prairie, *Filipendula rubra*."

Purple loosestrife, introduced from Europe, has taken over many millions of acres of wetlands in North America in the past 100 years. With no pests or diseases to slow its progress it reproduces rapidly, crowding out native species. The value of the wetland for wildlife is diminished due to loss of food for mice, voles and waterfowl. Also, the wetland cannot function as a filterer of water. Normally, the fibrous roots of most native wetland plants trap sediment as water moves through. The large tuberous roots of purple loosestrife are not effective at filtering water.

For more information contact Robert D. Waltz or Gayle Jansen, Indiana Department of Natural Resources' Division of Entomology and Plant Pathology, at 317-232-4120.

(See Sue Nord's article *Purple Loosestrife, an Unwelcome Wildflower* in the May 1996 issue of INPAWS News).

BLACK SOIL PRAIRIE PRESERVED

Cressmoor Prairie, in Hobart, Indiana, is among the last of the 300 acres of black soil prairie left in the state. The 37-acre tract in Lake County is to be dedicated as a state nature preserve.

Myrna Newgent, president of the Shirley Heinze Environmental Fund, said that so far botanists have found 178 native plant species, including four rare varieties, growing on the site.

The Hobart Industrial Economic Development Corporation has made a donation to the fund toward the prairie's acquisition.

For more information on land trusts as a way to protect biodiversity, such as the Shirley Heinze Environmental Fund, contact Ted Harris, INPAWS Conservation Committee Chairman, at 317-362-1509.

REPORT ON NATURAL AREAS CONFERENCE

by Art Hopkins

The Natural Areas Association/North American Prairie/Indiana Dunes Ecosystems combined conference met in Chicago recently. I attended the last two days—Friday, the day dedicated to all-day field trips, and Saturday, when I scrambled among five rooms in two buildings to attend twenty-minute research presentations. In the spirit of biodiversity, each room's moderator kept to a slightly different time zone, so that five minutes into each talk, a wave of newcomers surged into the room. This kept energy levels high, both among the original community and the late-arriving exotics—but I digress.

The Chicago area is rich in field-trip sites, having dozens of remnant/restored/recreated prairies, wetlands and woodlands. There's even a Prairie Parklands Macrosite covering 40,000 acres! That's an all-prairie site, and since I practice in Indiana, I wanted to learn about woodlands, savannas, wetlands and prairies, so I didn't go there.

Instead, I chose field trip #12—the Chicago Botanic Garden and Somme Prairie Grove. The CBG includes a 15-acre exhibit built atop highly disturbed, non-native soils. Hundreds of tons of soil and gravel were trucked in and sculpted to recreate (or, if you prefer, "imitate") six tall-grass prairie types: wet, mesic and sand prairies, bur oak savanna, a gravel hill prairie, and a fen. The latter was the trickiest to recreate.

As you know, a fen is a wetland fed by springs or seeps, as opposed to surface water. To mimic the seepage, water is pumped in from lagoons through big pipes filled with high-pH gravel. A pan of marl underlies two or three other soil types, with the most erodible, organic soil placed away from the water inflows. We saw slides of the work in progress, and were impressed by the feats of engineering and fund-raising involved.

The reconstructed prairies are a few years old now, and doing well. The CBG has tried hard to put appropriate plants in each niche. For example, the fen includes *Solidago ohioensis*, which was still in flower and glowing bright against a background of dark lagoon water. Nearby, in a drier zone, was *S. rigida*, taller and sparser, and with less color remaining.

The CBG's nursery for native woodland plants is modest but well planned. Within an area devoted to one species, adjoining rows of seedlings grown from seed gathered from three or four locations were set out. Different locations are presumed to have different genotypes. By keeping the rows distinct, the propagators hope to maximize genetic diversity by cross-pollination along and across the rows.

The 99-acre remnant Somme Prairie has it all, from woodland to wet prairie, all surrounded by rushing highways. Here I tasted the tiny, nutty seeds of *Sporobolus heterolepis*, Prairie Dropseed, which Indians ground into a nutritious flour. Dropseed is a clump-forming grass, a burnished red-

gold in fall, fine-textured and perfectly round in cross-section. Our guide from the Nature Conservancy, bubbling with enthusiasm, told us "landscape restoration today is at the Wright brothers stage of technology, just starting out. Fortunately, it's still cheap and easy to bend this strut or move that flap to see what will happen."

I remembered that comment the next day, during the technical presentations. Occasionally, I heard conflicting testimony presented as basic fact, e.g. "—in prairie restorations from seed, Big Bluestem (*Andropogon gerardi*) predominates by the end of the first year" or "Big Bluestem doesn't appear until Year 3, then multiplies thereafter." It was the same story with Indian Grass (*Sorghastrum nutans*)

but speakers did agree that at some point it takes over and just monopolizes a patch. Then, it practically disappears! Why? Does its presence change the soil/fungus biochemistry to the advantage of succeeding waves of competitors?

I learned a great deal from the twenty sessions I attended. My choices ranged from "A Nine Year Assessment of Successional Trends in Prairie Plantings Using Seed Broadcast and Seedling Transplant Methods" to "Riverbank Planting Project" to "Abundance and Nest Productivity of Wetland-Dependent Birds." For more information, call me at 812-372-2862, or write the Natural Areas Association at P.O. Box 900, Chesterfield, MO 63006. I look forward to meeting or hearing from many of you!

Art Hopkins is a new member of INPAWS and a practicing landscape architect in Columbus, Indiana.



JIM WILSON ADDRESSES RECORD CROWD AT THIRD ANNUAL MEETING, NOVEMBER 9, 1996

"Environmental awareness and landscaping with native North American plants have grown hand in hand," writes Jim Wilson in his book *Landscaping with Wildflowers*. Wilson, a resident of South Carolina and a host of public television's *Victory Garden*, was the featured speaker for the INPAWS third annual meeting and fall conference. He was very generous with his time and broad knowledge, lecturing and showing slides of native trees recommended for the landscape, conducting two mini-sessions with tips for meadow and prairie gardening and finally presenting his evening slide lecture on landscaping with wildflowers. He encouraged the 185 registrants to learn the Latin botanical names because this is the only way "scientists and wildflower hobbyists around the world can communicate clearly." He illustrated how the use of native plants rather than exotics can help to preserve our environment. Wilson does not disapprove of the use of cultivars of our natives, however, and explained these "cultivated varieties" are the result of scientific plant and seed selection to achieve a better, stronger variety of the original native plant.

Phil Kelly demonstrated using the web on the internet to find garden sites, communicate with others around the world about native plants, wildflowers and gardening, and brought up the newly created INPAWS home page on the screen (<http://www.iupui.edu/~mcox/inpaws>). Kelly also conducted a mini session on the use of computers and the internet.

Bill McKnight, Indiana Academy of Science, presented a proposal to change the Indiana state flower to a native wildflower. See complete story on page 1.

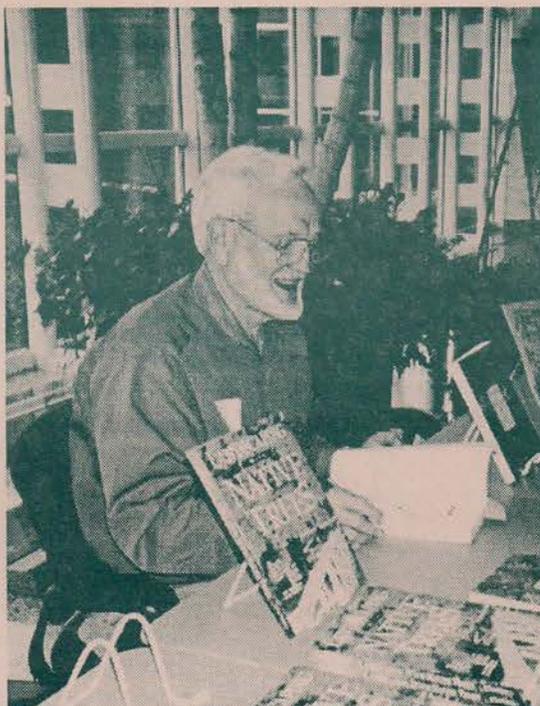
After a video presentation about land trusts, the representatives from Indiana's land trust organizations each gave a synopsis of goals, objectives, and accomplishments. Panelists included: Ralph Jersild, Central Indiana Land Trust (CILTI); Barbara Plampin, Shirley Heinze

Environmental Fund; Ed Schools, Sycamore Land Trust; Susan Ulrich, NICHES Land Trust; Bob Weber, ACRES Land Trust; Les Zimmer, The Nature Conservancy; and moderator Ted Harris, INPAWS Conservation Chairman. Discussion centered on land trusts—a way to protect biodiversity, and panelists indicated ways in which individuals as well as members of INPAWS could help these organizations. Les Zimmer encouraged all to focus on lands where there are endangered species. Many states have large numbers of active land trusts and Zimmer commented that he "dreams of covering the whole state with land trusts."

Conference participants were invited to choose two of five mini-sessions, each lasting a half hour. The mini-

sessions included *Creating your own herbarium sheets*, Dr. Rebecca Dolan, head of the Friesner Herbarium, Butler University; *Meadow/prairie gardening tips*, Jim Wilson; *Gardening to attract birds and butterflies*, Barb Kaczorowski, Accent Gardens; *Plant propagation and seed collection*, Hilary Cox and Kevin Tungsveck; and *Surfing the Web*, Phil Kelly.

During the brief annual meeting, a few slides of INPAWS program events for 1996 (including the two-day trip to the Dunes) were shown. The social hour included lively music by *Blackberry Jam*, a folk music group (Jean Roberts, Bill Bailey, Stephen Kobe, Judy Meister, Alberta and Don Lathan). Conference attendees enjoyed the paintings of



artists Jean Vietor, Mary Rose Wampler and Bill Zimmerman as well as exhibits by the Department of Transportation (Dave Sosbe); The Nature Conservancy (Jeffrey Maddox); the Indiana Department of Natural Resources—Division of Nature Preserves (Lee Casebere); the Indianapolis Parks Department (Don Miller), Spence Nursery (Kevin Tungsveick), and 4-H Wildflower project information (Sophia Anderson). Videos about native plants and grasses ran on the two floor monitors and books were available for sale from the speaker, Jim Wilson, as well as Jan Glimn-Lacy, Borders Bookstore, Indiana Academy of Science, and Dick Heibredder's used books. NICHES Land Trust offered a few items for sale to help their organization's fund.

A full buffet dinner followed the social hour, and all were encouraged to enjoy coffee and dessert in the lecture hall and to hear Jim Wilson's evening slide presentation entitled *Landscaping With Wildflowers*.

Special thanks are extended to the volunteers who made this annual meeting/fall conference run smoothly. Annual Meeting planning committee: Bill Brink, chairman, Carolyn Harstad; session facilitator and time keeper, Rolland Kontak; Registration table, Lynn Jenkins, Mildred Kontak; Membership table, Dorothy Chase, Jean Vietor; Nametags, Chris Carlson; Hospitality, Helen Merrill, Katrina Vollmer; Publicity, Margo Jaqua; Reservations/folders, Carolyn Harstad; Clean-up, Max Gentry; Banquet decorations, Dottie Gorman, Sue Nord; Hall decorations, Kevin Tungsveick; Book sales, Bill Brink, Margo Jaqua, Mary Johnson, Colletta Kosiba, Jan Lacy, Gayle Moore; Speaker introduction, Gilbert Daniels.

Seed packets were donated by Rolland Kontak and much of the food for the coffee break (see next column) was made by Katrina Vollmer. Our thanks to all for making this a very successful event!

There were so many requests for the recipes for Hospitality Chair Katrina Vollmer's fabulous concoctions served at the annual meeting that we are printing them for everyone to enjoy.

Amaretto Fruit Dip

16 oz. cream cheese, softened	2/3 c. sour cream
1/4 to 1/3 c. Amaretto liqueur	2/3 c. powdered sugar
1/2 t. each vanilla and almond extract	

Mix well and store in refrigerator for up to two months.

Apricot Coriander Bread

3/4 c. butter	1 1/4 c. sugar
1 egg	2 c. flour
1/2 t. baking powder	1 T. + ground coriander
2 T. sour cream	1/2 c. chopped pecans
1 (16 oz.) can drained and mashed apricots	

Cream butter and sugar, add egg, beat until fluffy. Add coriander, sour cream and mashed apricots. Combine dry ingredients and add to apricot mixture. Add nuts. Mix well. Spoon mixture into greased, floured bread pan. Bake at 350 degrees for about 45 minutes, until center is done.

Katrina's Truffles

4 c. powdered sugar	8 oz. cream cheese, softened
1 t. real vanilla extract	1 t. real almond extract
5 oz. unsweetened chocolate, melted	
1/4 c. Grand Marnier liqueur	

Combine cream cheese, melted chocolate, vanilla, almond extract and Grand Marnier. Gradually add the powdered sugar. Stir until all is absorbed. You may need to knead for a smoother texture. Refrigerate overnight. Shape into one-inch balls and roll in powdered cocoa, ground nuts or coconut. Or dip them in a melted mixture of one 6-oz package chocolate chips and 1/4 bar paraffin.

These freeze well, and freezing improves flavor.

CONSERVATION COMMITTEE Ted Harris, Chairman

The Conservation Committee is INPAWS' newest standing committee, having been authorized in July, 1996. Its main purpose is to help protect Indiana's remaining unprotected natural areas. For the most part, these are the scattered meadows, wetlands and woodlots that exist throughout Indiana and are owned mostly by private individuals. Together with the lands that already have a greater level of protection, such as land trust preserves and state parks, these privately held areas provide the principal home for Indiana native plants.

The Conservation Committee will help identify biologically-rich natural areas, and will assist willing owners in raising the level of long-term protection. This will be done, in part, through networking with land trusts and with Indiana land-management agencies.

The Committee will also educate INPAWS members and public officials regarding legislative and policy issues that affect native plant communities. If you are interested in participating in Conservation Committee activities, please call chairman Ted Harris at 317-362-1509, or write to him at 1120 Ridgeway Dr., Crawfordsville, IN 47933.

SPEAKERS BUREAU

Colletta Kosiba, Chairwoman

Our goal is to create excitement about, and appreciation for, native plants, to encourage the public to use native plants in home gardens, and to motivate them to help preserve native plants in Indiana.

We have had requests for speakers from schools, garden clubs, community organizations, and Master Gardener groups. From my list of INPAWS members who are willing to speak on subjects such as mushrooms, woodland plants, grasses, prairies, and fall flowers, I try to coordinate the talents of the speaker with the needs of the requesting organization.

Although we have several excellent speakers, we surely can use additional volunteers. If you can do a few programs each year, please call me at 317-852-5973 and help INPAWS spread the good word about our wonderful native plants!!!

COMPUTER COMMUNICATIONS COMMITTEE Hilary Cox, Chairperson

My main aim this year has been to cruise the Internet to find out what is happening with respect to native plants globally, and specifically how much interest there is among the public in maintaining some sort of balance in our natural habitats.

I am also in the process of setting up a Web page for INPAWS. I was disappointed to find so few Web sites for other native plant societies throughout the United States. However, this makes it easier to do something innovative and exceptional! We hope to be on line by the time this report is published.

MEMBERSHIP COMMITTEE Ruth Ann Ingraham, Chair

When a few of us met on a snowy March evening in 1993 to discuss starting a society of people interested in the native plants and wildflowers of Indiana, we knew there was a core of interested folks. Perhaps the time is ripe, we mused. How right we were! In fact, three and one-half years later, we are approaching a membership of 500 statewide.

Your satisfaction as a member is important to me as Membership Chair, and to the entire society. Are your expectations being realized? Are we going in the right direction?

Whatever sprouts in your mind regarding INPAWS, I would like to know. Please call or write me at 6106 Kingsley Drive, Indianapolis 46220, or E-mail me at rai38@aol.com.

A special welcome to all of you who have joined us since June 30th!

Those who have joined or renewed for 1996:

Julia Brillhart (Fishers), Dorcas Bush (Indy), Beth Coon (Bristol), Johanna Marie Eisenbraun (Warsaw), Mike Eoff (Indy), Margareta Fong (W. Lafayette), Betty and Burk Friedersdorf (Greenfield), Nancy Galliher (Muncie), Dan Gluesenkamp (Bloomington), Marilyn and Jim Hamaker (Indy), Randall Kirk (Richmond), Virgil Knapp (Zionsville), Amy Kress (Muncie), Linda McCaffrey, Jim Proctor, and Letha Quiesser (Indy), Gretel Smith (Garrett), Mary Sutherland and Bergin White (Indy), Sara Whitfield (Evansville) and Julia Yake (Connersville).

Those who have joined or renewed for 1997:

Joyce Adams and Eleanor Bookwalter (Indy), Rick and Melissa Combs (Westfield), Lois Davis (Indy), David and Ruth Eiler (N. Manchester), Wendy Ford, Helen Fowler, Rosemary Glass (Indy), Phyllis and Bob Goble (Winamac), Avital and Talia Guernsey (Indy), Paul Hammond (W. Lafayette), Anne Heighway (Indy), Dean Hill (Fishers), Wanda Holdren (Marion), Eva Hopkins (Chesterton), Art Hopkins (Columbus), Mary Kraft (Noblesville), Elisabeth Kroetz, Bryan Krueger, Bill McKnight, and Catherine Nagy (Indy), Parks Pifer (Beech Grove), Chris Salberg (Cedar Lake), April Shelske, Tom Tyler, Bridget Watkins, Don and Shirley Westerhaus (Indy), and Ro Anne and Charles Whittington (Elizabethtown).

DUNES TRIP, AUGUST 3 AND 4, ENJOYED BY ALL by Kevin Tungesvick

Thanks to wonderful weather, gorgeous natural areas and outstanding hike leaders, our first INPAWS overnight hike was a smashing success. The Indiana Dunes area provided a wonderful array of diverse plant communities. The expert interpretation of these communities, combined with excellent hospitality and camaraderie, resulted in an enjoyable weekend for all the participants.

Saturday began with a tour of Bieseker Prairie, a rolling mesic prairie oddly situated at the junction of two major highways. Dr. Gerould Wilhelm, our Saturday hike leader, began by expounding on the differences between the living virgin prairie that surrounded us and the sterile traditional landscaping that surrounded the buildings across the road. During the description, we got a humorous reminder of how far our educational efforts have yet to go, when a passing motorist yelled "Get out of the weeds, you idiots!" Unfazed, Gerould continued to describe the incredible attributes of the tallgrass prairie, including its diversity and ability to hold the soil. He then identified many fascinating plants present at the site, including their ecology and the origin of their Latin names. We saw several dozen species, including Prairie Dropseed (*Sporobolus heterolepis*), three members of the *Silphium* genus, and Leadplant (*Amorpha canescens*).

We then continued on to Hoosier Prairie, a spectacular nature preserve consisting of over 500 acres of prairie, black oak savanna, and wetlands. We were greeted by thousands of Dense Blazing Stars (*Liatris spicata*) in bloom along the first section of the trail. Other fascinating species in this area included Meadow Beauty (*Rhexia virginica*) and Tall Green Milkweed (*Asclepias hirtella*). As we entered the black oak savanna we were attacked by thousands of hungry mosquitoes. These pests, however, did not prevent us from seeing a variety of beautiful native shrubs, including Sweet Fern (*Comptonia peregrina*), Winged Sumac (*Rhus copallina*), and Black Chokecherry (*Aronia melanocarpa*). (Some references assign Black Chokecherry to genus *Prunus*-Ed.). We also passed several marshes containing Prairie Cordgrass (*Spartina pectinata*), Woolgrass (*Scirpus cyperinus*) and Soft Rush (*Juncus effusus*).

Our final stop on Saturday was Gibson Woods, a fine example of rolling dune and swale topography. The low dunes were covered with prairie and savanna species, including Woodland Sunflower (*Helianthus divaricatus*), Butterfly Weed (*Asclepias tuberosa*), and Flowering Spurge (*Euphorbia corollata*). A particularly beautiful species of this habitat was Goat's Rue (*Tephrosia virginiana*). The swales contained many interesting wetland species, including Tall Water Parsnip (*Sium suave*), Buttonbush (*Cephalanthus occidentalis*), and Royal Fern (*Osmunda regalis*). After we thanked Dr. Wilhelm for his wonderful interpretation of these three sites, we boarded the bus and traveled to the Indiana

Dunes Hotel where we were treated to a delicious buffet meal. The remainder of the evening was spent relaxing and enjoying the company of other INPAWS members.

Sunday began with a trip to the Cowles Bog area of Indiana Dunes National Lakeshore. Noel Pavlovic, of the National Biological Service, was our hike leader for the day. He began by describing the incredible diversity of the Dunes area and Cowles Bog in particular. Although the bog is now part of the National Lakeshore, Noel explained how it had been irreparably damaged by ditching and careless disposal of industrial wastes earlier in this century. In spite of the degraded hydrology, however, many beautiful and rare plants persist in the area.

The trail paralleled the edge of the wetland, where we saw a boreal relict forest including yellow birch, paper birch and white pine. The understory of this forest contained Cinnamon Fern (*Osmunda cinnamomea*), Skunk Cabbage (*Symplocarpus foetidus*), and the delicate Club-Spur Orchid (*Platanthera clavellata*). We then turned uphill into a black oak woods containing lowbush blueberry (*Vaccinium angustifolium*), Huckleberry (*Gaylussacia baccata*), and a single clump of the very rare Red Baneberry (*Actaea rubra*). We returned via the same trail to the waiting bus.

Our final stop of the two-day tour was Pinhook Bog, Indiana's finest example of a sphagnum bog. Because of the fragility of the site and the narrow boardwalk, the 35 participants were divided into two groups to tour the bog, whose fascinating flora included Tamarack (*Larix laricina*), Poison Sumac (*Rhus vernix*), and the Orange-Fringed Orchid (*Platanthera ciliaris*). Carnivorous plants conspicuous along the boardwalk included Pitcher Plant (*Sarracenia purpurea*) and Round-Leaved Sundew (*Drosera rotundifolia*). Noel explained the history of the bog and the continuing conservation efforts to protect this rare and fragile environment.

After dropping off Neal Pavlovic with hearty thanks, we headed south toward Indianapolis. As she had during the entire trip, Hospitality Chairman Katrina Vollmer kept us well supplied with wonderful snacks and beverages on the way home. On behalf of all the participants, I would like to thank Katrina for her hard work. I would also like to thank Carolyn Harstad for arranging the transportation and lodging for the trip. Thanks also to Ruth Ann Ingraham for helping Carolyn and Katrina with behind-the-scenes planning. Rolland Kontak also deserves our gratitude for obtaining delicious sweet rolls for a Saturday morning snack. Finally, I would like to thank Sue Nord for providing me with a detailed record of the botanical diversity seen on the trip. Her species list greatly assisted my construction of this summary.

Kevin Tungesvick is Program Committee Chair. Call him at 317-354-2775 with your comments and ideas for future field trips and activities.



Indiana Native Plant and Wildflower Society

MEMBERSHIP APPLICATION

Yes! I/we have been waiting for this exciting opportunity! Enclosed is a check for the following:

- | | | | | | |
|-------------------------------------|------|---------------------------------|-------|------------------------------------|-------|
| <input type="checkbox"/> Student | \$10 | <input type="checkbox"/> Family | \$25 | <input type="checkbox"/> Sponsor | \$250 |
| <input type="checkbox"/> Individual | \$18 | <input type="checkbox"/> Patron | \$100 | <input type="checkbox"/> Corporate | \$500 |

Additional Donation \$ _____

Total Enclosed \$ _____

NAME _____

TELEPHONE _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

COUNTY _____

NEW RENEWAL

How did you hear about us?

12/96

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

Gifts Do Help

Your gift of any amount will be most appreciated. Donations above student, individual and family membership dues are tax-deductible to the extent provided by law. Gifts will be used to help further the programs and purposes of INPAWS, such as publishing a newsletter and providing services related to monthly programs.

Membership Categories:

- Student:** For full-time students under the age of 22. Benefits include meeting notices, one vote on organizational issues, newsletter, membership directory.
- Individual:** Benefits are the same as for student.
- Family:** Includes head(s) of household and dependents. Benefits include meeting notices, newsletter, membership directory, and two votes on organizational issues.
- Patron:** Benefits are the same as for family, plus donation.
- Sponsor:** Benefits are the same as for family, plus donation.
- Corporate:** Benefits include newsletter, meeting notices, directory, special recognition, plus donation.

I would like to help on the following committee(s):

- | | |
|--|---|
| <input type="checkbox"/> Annual Meeting | <input type="checkbox"/> Auction |
| <input type="checkbox"/> Communications | <input type="checkbox"/> Conservation |
| <input type="checkbox"/> Fund Raising | <input type="checkbox"/> Governance |
| <input type="checkbox"/> Historian | <input type="checkbox"/> Hospitality |
| <input type="checkbox"/> Membership | <input type="checkbox"/> Native Plant Education |
| <input type="checkbox"/> Native Plant Rescue | |
| <input type="checkbox"/> Newsletter | <input type="checkbox"/> Programs/Field Trips |
| <input type="checkbox"/> Publications | <input type="checkbox"/> Publicity |
| <input type="checkbox"/> Speakers Bureau | <input type="checkbox"/> Volunteers Coordinator |
| <input type="checkbox"/> Other | |

Please complete this form and mail, along with your check made payable to:

Indiana Native Plant and Wildflower Society, or INPAWS
c/o Ruth Ann Ingraham, 6106 Kingsley Drive, Indianapolis, IN 46220.

It's time to renew your membership for 1997!

INDIANA
Native Plant and Wildflower Society

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Indianapolis, IN 46220

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