

INDIANA

Native Plant and Wildflower Society

NEWS

Volume II Number 2

Summer 1995

The Milkweed Family in Indiana

by Kay Yatskievych



Asclepias purpurascens



Asclepias meadii

Most of the 18 species of the Milkweed family in Indiana can be found blooming July through September, though some start blooming in June and a couple in May. Four-leaved Milkweed (*Asclepias quadrifolia*), a lovely smaller pink-flowered Milkweed with a whorl of four leaves, can be found as early as the first week in May in the woods in the southern third of the state. The Common Milkweed (*Asclepias syriaca*) also sometimes begins blooming as early as late May. It is a common sight along roadsides throughout the state. Also seen statewide is the only orange-flowered member of the family in Indiana, Butterflyweed (*Asclepias tuberosa*).

Three species that most people have not had the good fortune to see are the White Milkweed (*Asclepias variegata*) and two other species in a different genus, the Angular-fruited Milkvine (*Matelea gonocarpos*) and Large-flowered Anglepod (*Matelea obliqua*). All are listed on Indiana's Endangered, Threatened, and Rare list and are found in just a few counties in the southern third of the state.

Sadly, Mead's Milkweed (*Asclepias meadii*) formerly known from Lake County has been extirpated. It is now known only from a few states west of Indiana and is listed as threatened federally.

A list of all the species that have been found in Indiana follows. Where current scientific names differ from those used in Charles C. Deam's 1940 *Flora of Indiana* and a few other references, these have been noted in parentheses following the accepted name.

Indiana Species Milkweed Family (*Asclepiadaceae*)

Asclepias amplexicaulis. Blunt-leaved Milkweed, Sand Milkweed. Many counties in the northern third, plus a few in the rest of the state.

Asclepias exaltata (*A. phytolaccoides* of Deam). Poke Milkweed. Many counties, but not common.

Asclepias hirtella (*Acerates hirtella* of Deam). Tall Green Milkweed. Scattered counties in the western two thirds.

Asclepias incarnata subsp. *incarnata*. Swamp Milkweed. Most counties.

Asclepias meadii. Mead's Milkweed. Lake County.

Asclepias perennis. Thin-leaved Milkweed. Some counties in southwestern third, plus St. Joseph County.

Asclepias purpurascens. Purple Milkweed. Many counties in the northern third and southern third.

Asclepias quadrifolia. Four-leaved Milkweed. Many counties in southern third.

Asclepias sullivantii. Sullivant's Milkweed, Smooth Milkweed, Prairie Milkweed. Many counties in the northwestern quarter, plus a few in the rest.

The Milkweed Family continued on page 2

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INPAWS Coming Events

Saturday, May 13

This trip (to the Indiana Dunes) has been cancelled.

Sunday, May 21

INPAWS Plant Sale and Auction, Lawrence Community Center, 5301 N. Franklin Rd. Plants may be delivered from 11 AM to 1 PM. Auction will begin at 1 PM. Snacks and beverages will be available.

Saturday and Sunday, June 3 and 4

An overnight trip to Pigeon River Nature Preserve and Pokagon State Park to see native orchids and more. You may camp or stay in a motel.

Sunday, July 9

A visit to Bill Arnold's Field Guide Park, near Anderson, to see his wire sculptures in a setting of native prairie plants. Later, we will stop at Charlie's Pond, a restored wetland and prairie near Summit Lake State Park and enjoy a wiener roast.

Saturday, August 12

A trip to Falls of the Ohio State Park where we can view the world's largest exposed fossil reef and many interesting native plants of the Ohio River valley.

Sunday, August 20

Lecture program; subject to be announced at a future date.

Call an officer or committee chairperson for details.

The Milkweed Family continued from page 1

Asclepias syriaca. Common Milkweed. Most counties.

Asclepias tuberosa subsp. *interior* and subsp. *tuberosa*. Butterflyweed, Pleurisy-root. Many counties.

Asclepias variegata. White Milkweed. A few scattered counties in southern third.

Asclepias verticillata. Whorled Milkweed, Horsetail Milkweed. Many counties.

Asclepias viridiflora (*Acerates viridiflora* of Deam).

Short Green Milkweed. Northern tier of counties, plus a few others in the rest of the northern half, and Harrison County in the extreme southern part.

Cynanchum laeve (*Ampelamus albidus* of Deam).

Bluevine, Sandvine. Many counties.

Cynanchum louiseae (*Cynanchum nigrum*). Black

Swallow-wort. Collected only once as a weed in lawns in Marion County.

Matelea gonocarpos (*Gonolobus gonocarpos*). Angular-

fruited Milkvine, Large-leaved Angle-pod. A few counties in the extreme southwestern corner.

Matelea obliqua (*Gonolobus obliquus* of Deam).

Large-flowered Angle-pod. A few counties in the southern quarter.

Kay Yatskievych is one of the founding members of INPAWS. She works at the Missouri Botanical Garden in St. Louis, and has written articles and had photos published in National Geographic and Flora of North America. She is presently writing and illustrating a Field Guide to Indiana Wildflowers, which will be published by Indiana University Press.

Indiana Native Plant and Wildflower Society Newsletter

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

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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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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.

President's Message

by Jeffrey Maddox

Well Spring has really sprung now and I'm sure most of you are busy out in your gardens. Others of us are out hunting mushrooms and other early edible and medicinal plants. If you get out early enough you can hear the turkeys gobbling in most parts of Indiana now. Yes, spring brings fresh delights to replace the winter wonders.

While mother nature has been busy, so have INPAWS members. This news hot off the press....our first chapter has been formed in the Muncie area! They are just getting started and have a lot of good talent there to help them on their way. They are considering a proposal from the Minnetrista Center to form a partnership full of opportunities. They are calling themselves the *Oakhurst Garden Chapter* of INPAWS. Call Kemuel Badger at 317-285-8847 for more information. Good going folks! Who's going to be next?

INPAWS was also able to get five of the state's leading experts to help us better understand one of the biggest current issues in native plants - degradation by overpopulated deer, especially in our state parks. The March 26 meeting was very informative and gave us some constructive actions to take. We adopted a resolution and testified at the April 25 public meeting of the Indiana Department of Natural Resources Commission. We will also take an active role advocating appropriate management which will conserve the native plants in our state parks by supporting the advice of the experts on the Deer Study Committee.

INPAWS RESOLUTION: *In light of documented degradation of the flora and fauna on state-owned lands by problem animals and in light of the need for ecological restoration, the Indiana Native Plant and Wildflower Society supports the recommendation of the Brown County Deer Study Committee and the recent ruling of the Natural Resources Commission which would enable and enhance the ability of the Indiana Department of Natural Resources to protect native flora in Indiana's state parks.*

We are also doing a project with the Indianapolis Museum of Art to provide a native flower to school children as they learn about our natural heritage. Indy Parks has several more proposals where we can help. The plant rescue committee is ready to act when they find some sites. If you know of any potential areas, please call Kevin Tungesvick at 317-354-2775. INPAWS displayed at Orchard in Bloom May 5-7. We are sponsors of the Wildflower Foray in Brown County this year. And, there are several good trips coming up as well as the plant auction. I hope you'll make the time to come along.

There are many more good projects we can do when we get more members involved. Come join in the fun!

Regional INPAWS Chapter Guidelines

How do you organize a local chapter of the Indiana Native Plant and Wildflower Society?

According to our bylaws, at least five members residing in an area should first apply in writing to the Executive Board of INPAWS stating their purpose, proposed name of the chapter and the chapter's proposed territory.

What are some functions such a chapter would serve?

- Rescuing native plants and wildflowers from designated construction sites or areas where they are destined for destruction, and relocating them.
- Identifying native plants and wildflowers in the area.
- Meeting with people in the regional area for programs, field trips, special projects and fellowship.

What about dues?

Regional chapter members pay regular dues to the *Indiana Native Plant and Wildflower Society* (the state organization). Chapters may elect to have local dues as well if they so desire.

Are there any regional chapters in existence now?

See *President's Message* on this page for announcement of our first chapter!

Where can we get further information about establishing a regional chapter?

Write or telephone the membership chairman:

Carolyn Harstad
5952 Lieber Road
Indianapolis, IN 46208-1319
(317) 257-9452

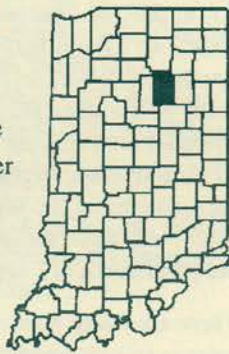
FOREST Fragmentation

Isolated Islands of Native Vegetation

by David J. Hicks

The last two centuries have been hard on Indiana's native plants. Relatively undisturbed habitats exist as an archipelago of tiny islands in a sea of fields and pastures in most parts of the state. Although I will focus on forests, the same theories, facts and thoughts hold for prairies and wetlands as well.

A study that I did in collaboration with Douglas Keller revealed the degree to which Indiana forests have been fragmented. We found nearly 1300 separate farm woodlots, nature reserves and other forest patches in Wabash County. The average area of these isolated stands is only 16 acres, and 90% are smaller than 50 acres. Although Wabash County had a nearly continuous forest canopy before European settlement, just 9% is forested now. Forests are isolated from each other; the average distance between them is 450 feet.



The picture in Wabash County is typical of the central and northern regions of the state. What are the consequences for conserving woodland plants? The ecology of such plants is key to answering this question. Most are specialists in the low-light, high-moisture conditions of the forest understory, and do not prosper in large, open areas.

How does the environment of a forest change when it is carved out from an extensive forest area and made into an isolated woodlot? Many studies have demonstrated the "edge effect" or production of a zone around the periphery of the stand where conditions are brighter, drier, warmer, and more variable than in continuous forest. These environmental changes penetrate 20 to 30 feet or more from the edge and thus are of greater consequence in small patches. Edge effects are generally unfavorable to specialized native plants, but favor invasive, introduced species. For example, in studies of

old-growth forests in central Indiana, Timothy Brothers and Arthur Spingarn found that edges are invaded by non-native, weedy species such as dandelion and pigweed. These aliens cannot invade undisturbed forest in force.

Trees in isolated patches also have much greater exposure to wind than they would in the interior of a large, continuous forest. The increased wind has significant effects. Many studies by foresters have shown higher rates of treefall in small forest parcels. Further, the holes left in the canopy by dead trees let light into the interior of the forest, introducing edge effects in the middle of the stand. Small stands are especially susceptible, and may suffer catastrophic damage. For example, in one Swedish study patches up to 2.5 acres in size had 90% to 100% death and damage rates vs. less than 10% for continuous forest.

Biologists who have studied oceanic islands have found evidence for increased rates of extinction on islands. Island populations are limited in size by the extent of the habitat, and thus are more susceptible to the effects of inevitable environmental fluctuations. But, unlike mainland populations, islands do not have a ready supply of new migrants to restart populations in areas where a species has gone extinct. This may be a significant problem in nature reserves, which are often isolated from other forested areas, and in which conservation of plant diversity is an important goal. Many deciduous forest plants have rather limited means of dispersal, and the number of seeds or fruits crossing a non-forested "sea" to an "island" reserve is probably quite low. Once a population becomes extinct, the chances of re-colonization without human help may be very low.

David J. Hicks teaches ecology, botany and genetics at Manchester College in North Manchester, Indiana. He is currently doing a study of cactus population dynamics in the Galapagos Islands.

Dr. Willard Nelson Clute

Co-Founder Of The American Fern Society

by Paul Debono

One day when I was very young, I found in the attic of our home a board with the name "Clute" on it. I never forgot the name, and years later, when I had graduated from college, I researched the name and came up with the following information:

Willard Nelson Clute was interested in plants from childhood, and graduated from the University of Chicago with a degree in botany. In 1893, he joined the Botany Department of Columbia University. The same year, he and five other botanists founded the American Fern Society. Clute became both publisher and editor of the society's newsletter, then called the *Linnean Fern Bulletin* (now *The American Fern Journal*).

From 1903 to 1928 Clute taught botany in three Illinois high schools and wrote four high school botany texts. During that period he wrote several other books on ferns and fern allies, including *The Fern Collector's Guide* and *Useful Plants of the World*. His writings were notable for the ease of reading and of use, and were appreciated by amateurs as well as professionals. He loved poetry, and often included poems in his textbooks, when he thought they were applicable.

In 1928, Clute moved to Indianapolis to begin a new position as Professor of Botany and curator of the Holcomb Botanical Gardens at Butler University. While there he continued writing, producing his best-known work *Our Ferns: Their Haunts, Habits and Folklore*. Other works included *Common Names of Plants* and *Swamp and Dune*.

In 1938, Indianapolis received an 86-acre parcel of land on the city's northwest side in a will, with the stipulation that a botanical garden be developed on the site. Clute was appointed as director of the garden, which was called Holliday Park. In order to devote his entire time to the project, he resigned his position at Butler.

During the following years, he filled the garden with rare and beautiful plants, some of which had been obtained from all over the world and raised by hand. One of his favorites was the golden-rain tree, which was brought to the Midwest by early settlers at New Harmony, Indiana. He built a sand garden in which he planted 43 varieties of cactus. Other unusual trees and shrubs included a "rubber-band tree," a tree that produced a flammable gas, and a winter witch hazel that flowered in the dead of winter. As part of future development of the park, a museum, library, and an auditorium were planned.

Three years later, Clute resigned his position after a dispute with city officials on how the park should be run. Plans for a showplace park were first shelved and then forgotten.

In 1950, Willard Clute died in his home at the age of 81, but many of the specimens he planted still live at Holcomb Gardens and Holliday Park. Unfortunately, this outstanding botanist and author has never received the recognition he deserves.

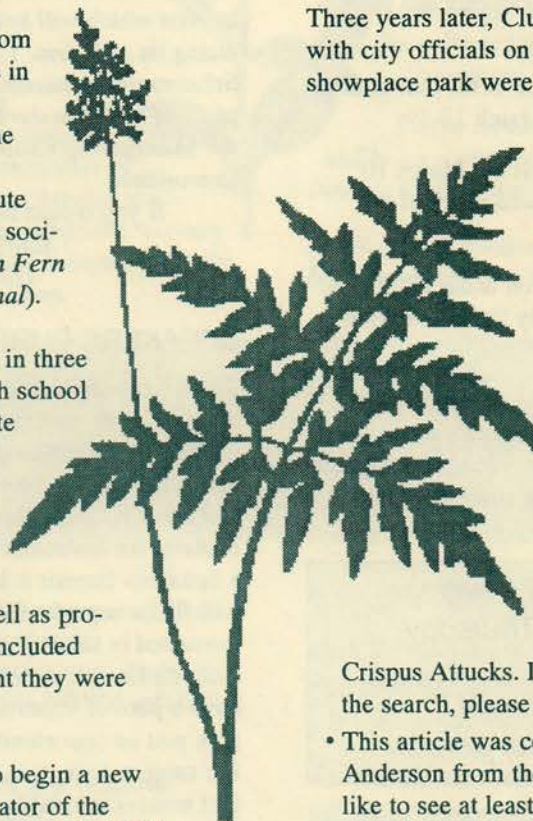
Notes:

- The Smithsonian is anxious to find a number of glass-mounted type specimens of ferns collected by Clute. The ferns are not at Butler, and may have been taken by Clute's assistant, Scott McCoy, who may have taught at Crispus Attucks. If any INPAWS members can help in the search, please contact the author.
- This article was condensed by INPAWS Editor Dan Anderson from the original. Dan comments, "I would like to see at least a plaque in his memory, and invite any of you who have questions or information about Clute to write to

Paul Debono

2346 N. Delaware Street
Indianapolis, IN 46205."

Debono is a free-lance writer and historian interested in lesser-known aspects of Indiana history. The above is an abridgment of his article published in Fiddlehead Forum, the newsletter of the American Fern Society.



INPAWS Activities

Our first field trip of the year, on February 26th, was a visit to Big Walnut Nature Preserve, west of Indianapolis. About 60 were in attendance, many of whom were not familiar with INPAWS but who had read our announcement in the activity section of the newspaper. President Jeff Maddox led the hike, which focused on tree identification using bark textures and bud arrangements as clues to tree identity. The March meeting on the deer problem, which was held at the 4-H extension offices on North Meridian Street, drew about 50 INPAWS members and visitors.

INPAWS members have been busy with exhibits and presentations:

Vice President Bill Brink presented some of his outstanding nature photographs at Holliday Park on March 17-19.

Carolyn Harstad was the guest speaker at the March 10 meeting of the Sons of Norway, and showed many of her beautiful slides of wildflowers.

Sue Nord gave a series of presentations on using wildflowers in the garden at several Marion County libraries during March and April.

Dan and Sophia Anderson have revived Carolyn Harstad's wildflower project for 4-H, and have scheduled a series of six sessions which began on March 29th. Five youngsters signed up, and more are expected by the time the classes begin.

INPAWS Executive Board meetings will be held on the third Thursday of every month. If you would like to attend contact a board member for details.

Walks at Butler University

Dr. Becky Dolan, INPAWS member and director of the Friesner Herbarium and Butler's 5.5-acre prairie, is leading the following walks:

- May 9 Wildflowers in Butler Woods
- June 13 Butler Prairie and the Water Canal
- July 11 Butler Prairie and the Woods

Meet at the back of Gallahue Hall at noon. Walks will last about one hour. All are welcome; there is no charge. Call (317) 924-9644 for more information.

PUBLICITY COMMITTEE

The Publicity and Public Relations Committee, chaired by Katrina Vollmer, is directed towards making the Indiana Native Plant and Wildflower Society publicly known throughout Indiana. Objectives include establishing a logo, developing a member and book resource list, obtaining junior members, and participating in public events such as Orchard in Bloom, Indiana State Fair, and the Flower and Patio Show.

The Publicity and Promotion Subcommittee is headed by Hilary Cox, and is responsible for advertising and news items in print which will help advance our organization by publicizing its activities. The Public Relations and Marketing Subcommittee, headed by Katrina, will work with special projects and logo development. Both will work closely with the Membership Chairman and the Special Projects Committee.

If you would like to help in this area, please call Katrina at 812-988-0063 or Hilary at 317-272-4938.

SPEAKERS BUREAU

There has been an increasing demand from public organizations, schools, and garden clubs for speakers knowledgeable in the areas of native plant appreciation and identification, use in the garden, propagation, restoration of prairie habitat and other subjects. Several of our members have had more requests for assistance than they have been able to accept, so a Speakers Bureau is being formed. In this newsletter you will find a separate form which you may fill out if you are interested in sharing your love of native plants with others. Colletta Kosiba, the chairperson, would like very much to have a pool of volunteers to draw on. The questionnaire will give you an opportunity to express your preferences regarding subject, time, location, and type of audience you would feel most comfortable with.

For more information please call Colletta at 317-852-5973.

Since publication of the 1995 Member Directory INPAWS has welcomed more than 40 new and renewal members!

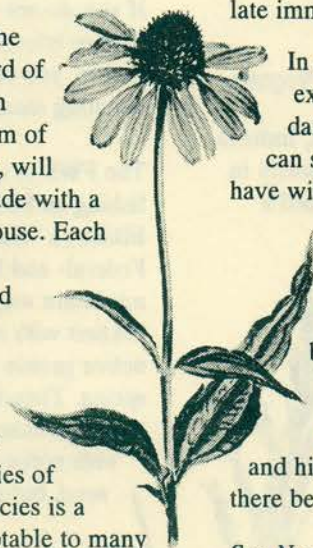
The first addendum to the directory is enclosed in this issue of the newsletter.

Sowing Seeds for the Future

by Sue Nord

As part of INPAWS' mission to help educate the public about the uses of native plants, our Board of Directors authorized funding for a portion of an enrichment program at the Indianapolis Museum of Art. The program, designed for second-graders, will teach about plant communities, and will conclude with a tour through the IMA grounds and the Greenhouse. Each student will decorate a clay pot, plant a purple coneflower in it, and will take home a "care and fun fact" sheet along with the plant.

Purple coneflower, *Echinacea purpurea*, was selected for the enrichment program because it ties in so well with the communities theme, providing a link between the communities of the past and the present. This native prairie species is a reliable perennial, being easy to grow and adaptable to many garden situations. The plants will provide a bounteous supply of colorful blooms, even for novice gardeners.



The coneflower has a rich history as an herb for healing. Native Americans used it long before European settlement, and early travelers brought the plant and knowledge of its uses back to Europe, where it is still being used. Some published reports indicate that extracts of *Echinacea* may stimulate immunity and help to relieve symptoms of colds and flu.

In addition to its medicinal uses, purple coneflower is excellent for attracting wildlife to the garden. The large daisy-like flowers are a landing pad for butterflies, who can sip nectar readily from the blooms. After the flowers have withered, the bristly seed-head or cone forms. Because it resembles a hedgehog (Greek *echinos*), the name *Echinacea* was given to the genus. Goldfinches will perch on the sturdy stems and peck the nutritious seeds right out of the cone. Any seed they miss can be collected and sown the following spring to produce many more plants.

Purple coneflower at once links beauty, reliability, and history with natural science. What better way could there be to show the interconnectedness of communities?

Sue Nord is a horticulturist and gardener at the Indianapolis Museum of Art, and a charter member of INPAWS.

INPAWS Newsletter Advertising Guidelines

With a thought to encouraging communication between members, and perhaps providing goods and services members need, we will run display and classified advertising in this newsletter. Here are the guidelines:

Display advertising:

Camera-ready ads are preferable, but we will also typeset ads. You may provide a logo (on a business card or letterhead). Items for sale, such as seeds, plants, gardening supplies, landscaping, books, etc., or services, should be related to INPAWS activities.

Display rates:

size	per issue	per year (4 issues)
1/4 column	\$30	\$100
1/2 column	\$40	\$130
1/2 page	\$60	\$200
full page	\$100	\$330

A 1/4 column ad is approximately business-card-size; a 1/2-page ad can be either vertical or horizontal.

Classified advertising:

Sold by the column-inch, at \$5 per half inch (four lines of approximately 25 characters each).

Deadlines:

- April 15 for the summer issue, published May 15
- July 15 for the autumn issue, published August 15
- October 15 for the winter issue, published November 15
- January 15 for the spring issue, published February 15

free!

Each INPAWS member will be entitled to place a half-column-inch classified ad **free** once each year, listing his or her needs, interests, or material available!

The editorial staff reserves the right to reject any ad. INPAWS will not be responsible for defective merchandise or problems resulting from a product or service.

Requests for advertising space must be accompanied by a check made out to INPAWS for the amount due.

Please send your ads to

Dan Anderson
7412 Graham Road
Indianapolis, IN 46250.

For more information call

Dan Anderson (317) 849-3105 or
Anne Wilson (812) 342-6838.

Restoring Tallgrass Prairie in Indiana

by Phil Delphey

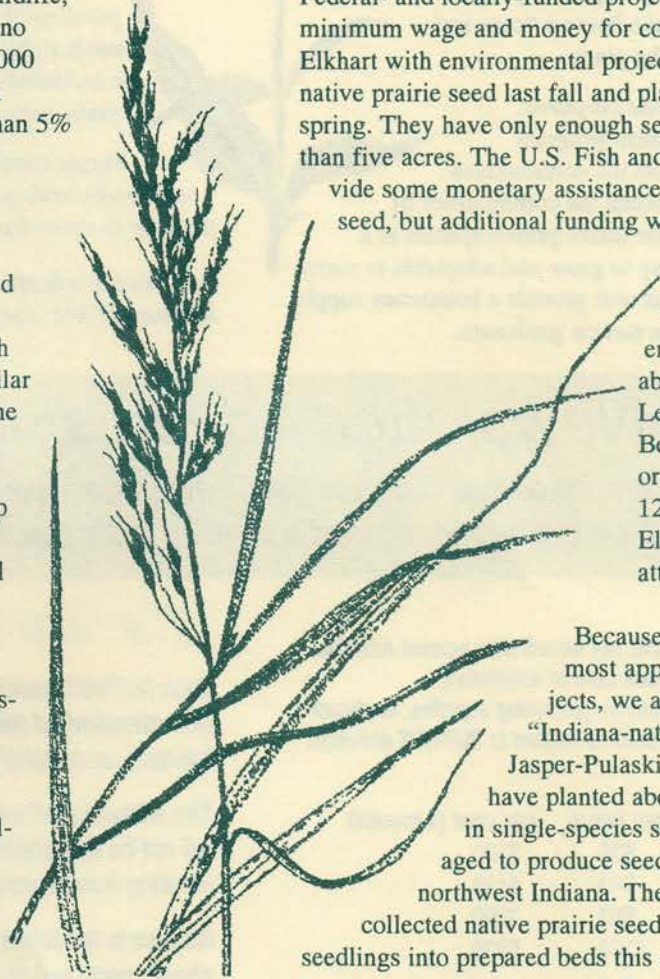
U.S. Fish and Wildlife Service's *Partners for Wildlife* Program

When Euro-American settlement began in the 1800's, Indiana contained about 3 million acres of tallgrass prairie, mostly in the northwestern part of the state. This prairie contained a diverse mix of tall and mid-height grasses, spectacular wildflowers, and many species of wildlife, several of which are now endangered or no longer exist in the state. Of the 169,000,000 acres of tallgrass prairie present in North America at the time of settlement, less than 5% remain.

With the loss of Indiana's prairie, large, "charismatic" prairie species, such as American bison and elk, quickly vanished from the region. Smaller prairie animals declined more gradually, since areas such as hayfields and large pastures were similar enough to native grassland to enable some species to hang on. Since the 1950's, however, midwestern agriculture has become dominated by intensive row-crop production, eliminating most of the last vestiges of grassland. As a result, several grassland bird species are suffering precipitous declines.

To recover some of this vanishing ecosystem, the U.S. Fish and Wildlife Service (FWS) began working with private and public landowners in 1993 to establish tallgrass prairie habitat. Landowners willing to devote five or more acres to supporting tallgrass prairie vegetation for at least 15 years may receive cost-share and technical assistance.

Smaller areas may qualify if the prairie planting would provide waterfowl nesting habitat for a nearby wetland. In general, we can only cooperate with landowners who will burn the planting themselves or do so with the assistance of a local fire department or conservation group. Burning is by far the best tool to successfully establish and maintain a prairie plant community. Mowing the planting for weed control during the first few growing seasons is also necessary.



If you do not have five acres on which you can plant prairie, but are interested in helping with the recovery of Indiana prairie, you can help by volunteering to collect seed or by donating money to a project such as the one listed below.

The FWS is working with the Elkhart Envirocorps in establishing an 80-acre prairie plant community on the City of Elkhart's "Boot Lake Property." The Envirocorps is a Federal- and locally-funded project in which persons earn minimum wage and money for college tuition while assisting Elkhart with environmental projects. The EE collected some native prairie seed last fall and plans to plant 20 acres this spring. They have only enough seed, however, to plant fewer than five acres. The U.S. Fish and Wildlife Service will provide some monetary assistance to purchase additional seed, but additional funding would increase the diversity

and quality of the seed mix planted. This project will likely continue for several years. For information about this project contact Lesia Bennett or Beth Coon at 219-294-6661 or write them at 1201 S. Nappanee Street Elkhart, IN 46516 attn. Eric Horvath.

Because local seed is likely the most appropriate for restoration projects, we are working to develop "Indiana-native" seed supplies. At Jasper-Pulaski Fish and Wildlife Area we have planted about 15 acres of native grass in single-species stands, which will be managed to produce seed for prairie plantings in northwest Indiana. The Hoosier National Forest collected native prairie seed in 1994 and will plant seedlings into prepared beds this spring. These beds will also be managed to produce seeds for restoration projects.

To discuss establishing native prairie species on your property or otherwise assisting with prairie restoration projects in Indiana, contact

Phil Delphey
U.S. Fish and Wildlife Service
620 S. Walker Street
Bloomington, IN 47403
812-334-4261 x207.

Introducing Children To Nature

by Betty Trusty

As more and more school systems are integrating classroom lessons with nature studies, it becomes increasingly more important for gardeners to offer their expertise as educators. Many teachers do an excellent job in introducing horticulture and agriculture in science lessons, design in math class and wildlife studies in biology. Yet after the children have been introduced to nature, what happens to the course of study?

Too often the class moves on to other subjects and the child with an acute interest is left wanting more information. That is when the "gardener" can offer to participate. You and your organization can plan one-day nature seminars for youth at the local library. Adopt an elementary school class and visit once a month with a short lesson on building birdhouses or making dish gardens. Invite a class to your home for a walk in the woods or a bird watch. Adult clubs can put out a nature newsletter for kids with nature-related recipes, pictures and games. Organizing a junior garden club is possible in many school systems; sometimes sponsoring PTO's will help with financing.

When instructing children on horticulture, do not be afraid to use scientific names and correct terminology. Don't forget, however, to EXPLAIN their meanings. By repeating *Tagetes erecta*, or marigolds, during a discussion with youth, they will

soon be telling others that *Tagetes erecta* ARE marigolds. Use correct names for gardening tools, never referring to tools as "digger" things because children, like adults, will remember the first explanation.

Children are like sponges, absorbing all information spilled out to them. Because of the innovative instructions in many public schools, children are being exposed to many phases of nature. Yet it is up to those who love gardening, wildlife and nature to continue to offer opportunities for children to expand their knowledge in these areas.

Perhaps you feel that you are not "qualified" to instruct children. Then try offering scholarships to high school students who plan to enter horticulture or a nature-related field.

Purchase trees for schools, scouts, church youth groups or 4-H members to plant for Arbor Day. Donate books on gardening, wildlife and nature to your local library. It can be a one-time gift, but chances are that when you begin encouraging youth to become involved, YOU'LL get involved!

With the many social and intellectual opportunities that society offers the youth of today, it is important that we give our children a sense of responsibility and "roots". This is our opportunity to ensure that the love of the earth endures.

Betty Trusty is a Master Gardener, landscape design critic, gardening consultant and holds positions on the local, district and state level in the Garden Club of Indiana, Inc. A Girl Scout leader, 4-H sponsor and leader of Hall's Junior Garden Club, she keeps involved in her three daughters' activities.

Children are like sponges, absorbing all information spilled out to them.

Turning On the Public to Turning Off Exotics

is the title of a meeting sponsored by the Eastern Native Plant Alliance, June 1-4, at Hilltop Arboretum, Baton Rouge, Louisiana.

For information call
(504) 767-6916 or
(504) 892-5424.

**... And NOW is the time to go after garlic mustard
(see article in spring newsletter)**

And speaking of exotics...

According to the September/October 1994 issue of *Audubon* magazine, Indiana botanist Charlie Deam issued this warning in 1948:

I understand they are strongly recommending now that all the old cemeteries be planted with multiflora rose. When Gabriel sounds his horn, I am afraid some will be stranded and not be able to get through the roses. Please do not recommend the multiflora rose except for the bonfire.

Free for the Picking

by Dan Anderson

What a difference a month makes! As I write this at the end of March, the woods floor is still covered with last fall's leaves, and one has to look closely to see the leaves of adder's tongue and cut-leaved toothwort just beginning to poke their way through the debris. By the time you receive this newsletter, in early May, the woods will be carpeted with green, the leaves of most trees will be out, and the short fruiting cycle of the delicious morel mushrooms will most likely be over.

The months of May, June and July are "prime time" for most of the wild edibles which can be eaten as leaves or shoots. Some of the ones we have found most enjoyable are very familiar to most; a few others perhaps less so.

Viola papilionacea

The blue violet, *Viola papilionacea*, is a familiar woodland friend and almost ineradicable invader of lawns, which sports flowers of purplish-blue, white, and seemingly as many variations of mottling and striping of the two colors as there are variations in snowflake designs. The leaves, which are reported to be high in vitamins A and C, are pleasant in salads and can be used as a cooked green. The flowers are most attractive when incorporated in a gelatin-type dessert or salad, giving a touch of elegance to a food which is often plain.

Cercis canadensis

One of the showiest small trees of spring is the redbud, *Cercis canadensis*, whose small flowers of a delightful pinkish-purple spring directly from the trunk and branches. According to some writers, the flowers can be dipped in batter and deep-fried, but the small size of the flowers and the need to avoid fried foods have discouraged their use in the Anderson household. Instead, we have used the young seedpods on several occasions as a substitute for snowpeapods in Oriental recipes. If the pods are picked while still tender, and cooked in boiling water for about five minutes, they will be tender and tasty and far less costly than the \$2 or more per pound for the purchased vegetable.

Hemerocallis fulva

The day lily, *Hemerocallis fulva*, is often seen in large patches along roadsides, blooming in June or early July. Its showy orange blossoms bloom for one day only, yet there will be a sufficient number in any clump to maintain color for two weeks or more. According to the Audubon Field Guide, the day lily does not produce seed, and reproduction takes place by propagation of the rootstalks. It's hard to go wrong with this delightful edible - the flower buds can be eaten raw or cooked like string beans, and the liquid remaining has a most

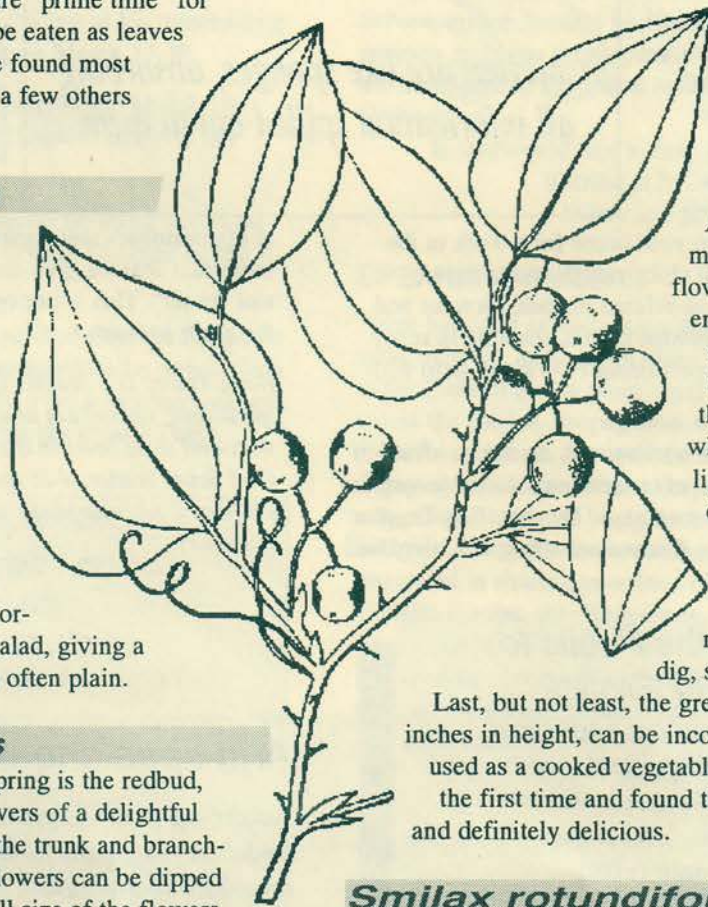
attractive aroma. If you should see "golden fingers" mentioned in an Oriental recipe, you're eating day lily buds!

Euell Gibbons, in his book *Stalking the Wild Asparagus*, reported that he made use of the withered flowers in flavoring and thickening soups and stews, and in addition, dug up portions of the root clump to separate the small tubers. These, when boiled for 15 minutes in lightly salted water, reminded him of sweet corn, but with a flavor all their own. (I tried this, but the small size of the tubers may not be worth the effort to dig, separate and clean them).

Last, but not least, the green shoots, which are 2-4 inches in height, can be incorporated raw in salads or used as a cooked vegetable. I recently tried them for the first time and found them to be slightly crispy and definitely delicious.

Smilax rotundifolia

Have you ever encountered a thicket of a thorny green vine with heart-shaped leaves? In all probability, it was Greenbrier (*Smilax rotundifolia*) or one of its close relatives. This prickly pest has one redeeming feature - the young growing tips with tendrils offer a choice nibble. But, before popping one into your mouth, make sure you shake off the ant or ants on the tip, otherwise you may get taste and protein you hadn't bargained for!



Polygonatum biflorum

Two other nibbles which can also be used in salads are Solomon's Seal, *Polygonatum biflorum*, and

Smilacina racemosa

False Solomon's Seal, *Smilacina racemosa*. Both sprout as leafless stalks somewhat like asparagus, and should be picked by snapping the stems off near the ground. Don't feel remorse at picking the shoot - the rootstock will soon send up another.

Typha latifolia

The Cattails, *Typha latifolia* and *Typha angustifolia*, are found along banks of ponds, in ditches, and in almost any spot where water is plentiful. Several parts of the plant are edible. First, when the sprouts are up about 18-24 inches, they can be cut and the outer leaves peeled away until the white oval core is left. This can be sliced and used in salads in the same way as hearts of palm or bamboo shoots. When the bloom spikes appear, both the green cylindrical flower head and the pollen can be used. Boil the flower heads for 10-15 minutes and butter (or oleo) them, and eat off the stem as if you had a small ear of corn. The pollen can be scraped off into a paper bag and later mixed 50-50 with flour in making pancakes or muffins. The result will be a yellow color and a delightful flavor. There are reports that the growing root tips and tubers furnish edible material, the first as a vegetable and the second a flour, after considerable work. As I never enjoyed rooting in mud (even when I was a kid) I'll pick the parts that are showing and leave the subterranean parts to the muskrats or whatever else enjoys them.

Morus rubra

One of the earliest fruit-bearing trees is the red mulberry, *Morus rubra*, which bears from late June into July. We have a large example on our Owen County property, across the lake from our cabin. Thanks to an unofficial understanding between us and the local avifauna, they leave the fruit on the low branches for us, and in return, they can have anything that's out of our reach. During the ripening period the tree is frequented by tanagers, cedar waxwings, red-bellied woodpeckers and other colorful and exciting birds, and the value of any fruit they take is more than equalled by our pleasure in watching them. I have found that the flavor of red mulberries varies from one tree to another, and one line of trees along Emerson Way in Indianapolis bore large clusters of berries without any flavor whatsoever. Our Owen County mulberries are very tasty with ice cream or cereal, but the picky person might object to the small green stem which is an integral part of each berry.

Sambucus canadensis

Many years I have made a ruby-red wine from the ripe berries of the Elderberry, *Sambucus canadensis*. If you need a good white wine, it can be made from the flowers, which bloom in June.



White Elderberry Wine

For one gallon of wine, you'll need the following ingredients:

- 5 cups flowers (stripped of green parts)
- 4 oz. white raisins
- yeast and yeast nutrient
- 2 lbs sugar
- grape tannin
- 1 orange, 1 lemon
- one gallon of water
- citric acid
- pectin-destroying enzyme.

Add to the water thinly-pared orange and lemon rinds, raisins, then bring to a boil. Dissolve in the sugar with stirring, then simmer for ten minutes. Put the blossoms in a large bowl, pour the hot mixture over them, and let cool until about room temperature. Add the lemon and orange juices, yeast and yeast nutrient, and put into a fermentation vessel without airlock, stirring daily. After six days, strain the juice into a fermentation vessel, add the last three ingredients, install the airlock, and let-er-rip for another four weeks or so. After the frothing has ceased, siphon off the liquid into clean sterilized bottles and allow to age for six months before opening.

(For you fritter fans, the elderberry flowers make good fritters also).

We hope that you'll get an opportunity to taste several of the above edibles!

Dan Anderson and his wife Sophia are charter members of INPAWS who have enjoyed a wide range of edible wild greens, mushrooms, nuts, fruits, and an occasional snapping turtle or muskrat over the past thirty years.

Bacon's Swamp Revisited

Compiled by Dawn Kroh

Shortly after the land now known as Marion County was ceded to the state of Indiana by the Miami Indians, a settler named Hiram Bacon came to the area. Bacon acquired a tract of land that today straddles Keystone Avenue between Kessler Boulevard and 52nd Street. A portion of this property contained a large bog which became known as Bacon's Swamp. The 150-acre peat bog was one of the few of its kind this far south in the United States.

This swamp developed in a basin of glacial origin. Recession of the Bloomington ice sheet, 60,000 years ago, no doubt left a lake at the site of Bacon's Swamp. The lake became extinct as vegetation transformed the original lake into a bog. In its final years of existence the bog began to transform into a swamp. The transformation was a response to the lowering of the water table due to increased agricultural tillage in the surrounding farmland.

In 1905 Mr. B.W. Douglass, interested in mining the peat for fuel purposes, conducted soil borings through the center of the swamp. Douglass wrote of his findings:

"I prospected Bacon's Swamp for the peat and invented a machine for compressing it for fuel purposes, back about 1905. My boring outfit had only 35 feet of pipe and I failed to touch the bottom at the deepest place, all solid peat. The entire swamp is underlain with a heavy, water-retaining, blue clay. I have no idea how thick this layer may be but it serves to hold the water in the swamp as perfectly as though it were a crockery bowl."

Much of the plant life in Bacon's Swamp was sphagnum moss, which has no roots and draws water through the wall of its stems and leaves. As new growth formed on the surface, the plants below were sealed from contact with the air. The weight of the water compressed the plants, and a peat bog was created. As the bog began its transition into a swamp the sphagnum disappeared. Douglass, who had explored the swamp at the turn of the century, expressed disbelief when informed of the disappearance of the moss in 1928:

"It is difficult for me to believe that you now find no Sphagnum at Bacon's Swamp...Certainly it grew there as abundantly and richly as I ever saw it in a Wisconsin or Michigan swamp, even better."

Unusual flora and fauna not native to the area abounded. As early as 1916 nature lovers and members of the academic community began voicing concern for the future of the bog. Walter Kiplinger wrote in *The Indianapolis Times*:

"There certainly are a few people in Indianapolis who hope that this one bit of wild land will remain unconquered...It seems to have a character of its own, an aggressive personality that excites admiration; and it is with almost childish satisfaction that one has observed the failure of the various attempts to drain and "improve" the place...We are going to need such places as this in the future and they ought to be preserved."

One of the "improvements" to which Kiplinger referred was the attempt in 1914 to build a dirt and gravel road across the swamp. The following winter a portion of the road disappeared as the weight of the road bed compressed the loose, water-soaked peat. In its place appeared a rectangular area of open water near the center of the swamp. Another attempt was made by WPA workers in 1937 with the same result.

Following World War II development pressures increased, and Bacon's Swamp began a rapid decline. Lowering of the water table, felling of trees on the north end of the swamp, periodic peat fires, installation of a drain, and illegal dumping, all posed serious threats to the integrity of the swamp's natural communities.

In 1945 Drs. Friesner and Potzger, of Butler University, pleaded with the Indiana Department of Conservation to consider turning the area into a natural history preserve. The department director replied that he believed the preservation project would best be handled by a city or school agency. In 1946 the Indianapolis City Park Board pledged to accept responsibility for perpetual care of the swamp and to protect the area from future commercial exploitation. The Director of Indiana State Parks also promised to investigate the possibility of creating a state preserve at Bacon's Swamp.

In the ensuing years, a series of tragedies led nearby residents to consider the swamp an attractive nuisance. In 1947 a child died in the large pond, and in 1956 three other children drowned when they fell through the ice in the northern portion of the swamp. That same year four proposals were generated in response to local calls for action: 1. Fence in the entire swamp; 2. Fill in the swamp; 3. Drain it; 4. Preserve it as a bird refuge and nature study area.

Bacon had sold the land in 1872, and the property had been subdivided and passed on by a series of different owners over the years. In 1956 several different people owned sections of

the swamp land, making it virtually impossible to coordinate a unified course of action. To solve the nuisance problem, some landowners decided to allow fencing around the perimeter of their portion of the swamp. Others requested their portion be filled in. Although city officials had been warned of flooding problems which would result from any attempts to fill the bog, filling began on the north portion. Shortly after fill operations began, reports of flooding in adjacent residential areas prompted the city to halt. Arrangements were made for a sewer to be constructed to counter the flooding and allow the city to continue fill operations.

A year after the drownings many officials were still debating the same basic options. The Metropolitan Plan Commission prepared a plan for a nature preserve and park, while at the same time filling resumed in the northwestern portion of the swamp. The city responded with a two thousand dollar appropriation to construct a fence along the northern border of the deepest part of the bog.

The greatest impact to the swamp however, came when a peat-mining company announced plans to reclaim Bacon's Swamp in the late 1950s. Reclamation costs would be financed by proceeds from the sale of the high-grade peat.

Within five years of that announcement, the natural features of the area had been almost completely destroyed. Chatard High School was constructed and the northern portion of the swamp was slated to be developed as the school's football field. Farther south the excavation and fill cycle enabled construction of the 56th Street extension. Given the depth of the peat in the bog it was estimated that it would take an additional six to eight years to mine the remainder of the marketable peat.

In 1989 a retirement village was constructed on the south end of the swamp. Behind that community, Bacon Lake (one of two ponds which are all that remain of the original 150-acre bog) is still a semi-natural area. This area bears no resemblance to the original glacial lake which began nature's cycle nearly 60,000 years ago. It serves only as a visual reminder of a community's efforts to alter the natural landscape. Their goal: to create a "more appropriate" cultural setting to conform with society's vision of an urban area.

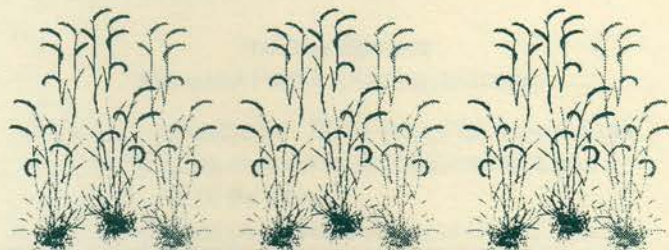
Thanks to the Sierra Club Wetlands Project for permission to reprint this article from their October, 1994 newsletter, The Wetlander, and to The Village Sampler, May 1992, article by Alice Roettger.

Book Reviews

by Gil Daniels

Plants of the Chicago Region (4th edition). Floyd Swink and Gerould Wilhelm. Indiana Academy of Science, Indianapolis. 921 pages, 1994.

Although the title references Chicago, the flora included in this work are found in seven counties of northwestern Indiana. In typical botanical fashion the illustrations are limited to distribution maps for each species, but keys for both genera and species are available for use in determining identification. Strangely, for a botanical book of this sort, all taxa are arranged alphabetically with the family listings and their generic keys mixed in with the genera and their keys to species. Some help in the use of the keys is offered in the illustrated glossary which is included, but generally this is a technical work, which while providing an excellent coverage of the flora, is not for use by the faint of heart.



Tall Grass Prairie. John Madson (Photos by Frank Oberle). Falcon Press, Helena, Montana. 112 pages, 1993. \$29.50.

This beautifully illustrated book brings the full range of the life of the prairie to a coffee table in your home. Unlike so many books of this sort, the accompanying text actually has something to say. Both the history and the natural history of the prairie are worth reading about and should you want to venture out to see it for yourself, the final chapter lists 67 sites in 15 states where the remnants of the original prairie still exist along with descriptions of each site and instructions on how to get there.

Gil Daniels' background and involvement in activities horticultural and botanical is lengthy and impressive. Regarding recent affiliations: he was director of the Hunt (botanical) Institute at Carnegie-Mellon University, was president and acting executive director of the American Horticultural Society, and is immediate past president of the Horticulture Society of the Indianapolis Museum of Art. He and his wife, Emily, both charter INPAWS members, put in many hours on their own fabulous botanical collection at home.

Indiana Native Plant and Wildflower Society

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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.
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c/o Carolyn Harstad, 5952 Lieber Road, Indianapolis, IN 46208.

Join us at the plant auction and sale, Sunday, May 21 – see page 2

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