

INDIANA Native Plant and Wildflower Society

NEWS

Volume III Number 1

March 1996

Garlic Mustard A Notorious Invasive Species



by Dr. Rebecca Dolan

The plant stays green and grows throughout most of the year in Indiana. An average plant can produce 350 seeds, which can remain viable for five years. 20,000 seedlings can be present in one square yard of soil.

Do you know this plant? If you don't, you should. It is garlic mustard (*Alliaria petiolata*), an eastern European native of disturbed areas such as hedgerows, which was first recorded in the United States in 1868. Since then, it has spread to at least 30 states and three Canadian provinces, preferring areas such as moist woodlands and their edges. Its high reproductive rate has helped it crowd out desirable native species such as toothwort, Dutchman's breeches, hepatica, bloodroot, and May apple.

The common name comes from a garlic-like scent often present in crushed leaves. Like other members of the mustard family (the Cruciferae or Brassicaceae) such as mustard greens, garlic mustard has been used as a potherb and salad green and may have been brought intentionally by immigrants. A possible use, as a cooked green replacing spinach in lasagna, was described by Dan Anderson in the fall issue of this newsletter. Apparently the taste is unappealing to animals, as even those insatiable vegetarians, white-tail deer, will not eat garlic mustard.

Garlic mustard can be identified by its basal leaves, which are dark green and kidney-shaped, with scalloped edges, somewhat resembling violet leaves. They remain green all year, even after frost. Stem leaves are alternate, sharply-toothed, triangular and 1-3 inches at the widest point. Seeds germinate in early spring, and produce a rosette, or small cluster of leaves, the first year, which lives through the winter. Flowering occurs during spring and early summer of the second year, when the plants can reach a height of 2-3 feet, but even small plants can flower. The tap root is slender and white, with a distinctive "s" curve at the top. The flowers are small and white, with the characteristic four petals of the mustard family.

The fruits are 1-2 inch-long pods called siliques, which line the flowering stem. These split open when the seeds are mature, and shaking of the plant by the wind scatters the seeds a small distance from the maternal plant. For wider dispersion, the seeds can be spread via boots and pants cuffs of woodland visitors, by machinery such as mowers, cars, or trains, or by floodwaters. Following seed production, the plant dies.

Once the plant becomes established in an area, it spreads quickly. Seeds can apparently be produced without cross-pollination; individual plants are self-fertile, so no mate is required. Large numbers of seeds are produced per plant, so the species can spread quickly in its favorite moist woodland habitat. Huge monospecific stands can be established quickly. Once it becomes established, little else can grow on the same site.

Garlic mustard continued on page 2

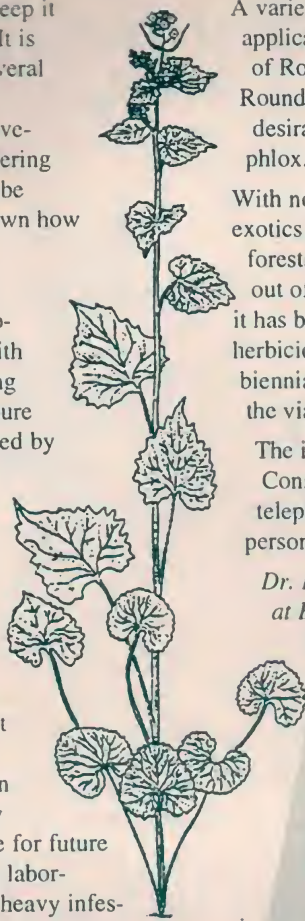
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The best way to control garlic mustard is to keep it from becoming established in the first place. It is much easier to deal with a few plants than several thousand! Victoria Nuzzo, of the Nature Conservancy, has assessed the relative effectiveness of several eradication techniques, considering the available labor and the size of the area to be treated. Even after treatment, it is not yet known how quickly the ecosystems will recover.

Nuzzo's work shows that cutting flowering stems as low as possible, before seeds are produced, results in the most effective control with the fewest undesirable side effects. The cutting must be done for five or more seasons, to ensure depletion of the seed bank. Plants can be pulled by hand, but at least half of the root must be removed, or the plant may resprout with multiple flowering stems. This method is labor-intensive, and disturbance of the soil may increase the risk of future infestation. Plant material should be removed from the site, as seeds can apparently mature even after the plant has been pulled.

High intensity fire can kill garlic mustard, but may harm seeds of desirable native species. Because of the seed bank, more than one burn will be needed, but the disturbance caused by burning may make the habitat more favorable for future invasion. However burning, because it is less labor-intensive, may be practical for large areas of heavy infestation.



A variety of herbicides was tested, and it was found that an application in the dormant season (the fall) of a 1% solution of Roundup was an effective control. The downside is that Roundup is a broad-spectrum herbicide which will also kill desirable semi-evergreen plants such as wild ginger and phlox.

With no known enemies, garlic mustard is one of the few exotics to successfully invade northeastern and midwestern forests. The best means of stopping its spread is to keep it out of new areas. It is much more difficult to eradicate once it has become established. Control by cutting, burning, or herbicide treatment can prevent seed production in these biennials, but multiple treatments are necessary until all of the viable seeds remaining in the soil have been destroyed.

The information above was gleaned from a Nature Conservancy Element Steward Abstract on the plant, a telephone interview with its author, Victoria Nuzzo, and personal observations on the Butler campus.

Dr. Rebecca Dolan is director of the Friesner Herbarium at Butler University, and newly-elected INPAWS Recording Secretary.

If you would like to prevent the takeover and eradication of our delicate native plants by this extremely invasive biennial, please consider helping out at one of the garlic mustard "pulls" scheduled for this spring.

See pages 8 and 9 for opportunities.

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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	Don Miller	(317) 327-7416
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Illustrations: Yellowwood, Cheryl LeBlanc; Garlic Mustard, Biology Department, Butler University

President's Message *by Carolyn Harstad*

My dream for the future of the Indiana Native Plant and Wildflower Society and for the state of Indiana includes:

Myriads of flowering native plants along beautiful road ways. Deep-rooted, drought resistant native grasses helping control erosion. Reduction of mowing, spraying, spreading rip-rap etc.

Regular course offerings at colleges and universities in identification, use and value of native plants as landscaping material, as well as the importance of the preservation and incorporation of existing native plants in landscape planning.

City and town planners choosing and using native trees, shrubs and plants in their urban landscapes—parks, median strips, parking lots, street plantings, etc.

Walking and biking trails throughout the state with native plants enhancing the trails. Methods of identifying these plants to enhance the trails.

Legislation to protect vanishing wetlands and woodlands. Requiring developers, builders and landscapers to preserve a given number of native trees on property being developed. Enforcing compliance.

Educating developers, builders and landscapers as to the value of compliance. Demonstrating how a wetland or a small woodland wildflower area can be a viable part of a commercial or private development.

Establishing active chapter organizations of INPAWS to identify locations of native plants and wildflowers destined for destruction and to rescue and relocate them to parks, trails, private lands etc. in their area.

Educating citizens to be aware of and concerned about the dangers of aggressive, invasive exotic plants (such as garlic mustard, loosestrife, Amur honeysuckle) which threaten to outcompete and destroy native plants.

Choosing a native plant as the Indiana state flower (rather than the cultivated peony which comes from China).

Encouraging young people through school environmental studies, 4-H projects, etc. to identify native plants and to become familiar with their use and importance in preserving the health of our planet.

Enlisting the support of Indiana leaders to accomplish the above objectives.

Helping all to realize that this natural heritage is ours to enjoy, is precious and should not be relegated to the "disposable, throw away" mentality of the twentieth century.

Indiana Native Plant and Wildflower Society members can make a difference for present and future generations if we consent to unite as one to protect, preserve, utilize, appreciate and understand the value of Indiana's native plants.

INPAWS Coming Events for 1996

Please make note of these dates. Detailed information will follow in the member directory or by mail before the event.

Sunday, February 18

Member photo slide fest, pitch-in dinner, Holliday House, Holliday Park, 5 PM

Saturday, March 23

Importance of burning in native plant communities – Ellen Jacquart and Lee Casebere speak and answer questions, Gallahue Hall, Butler University, 1:30 PM

Sunday, April 21

Member wildflower tour of gardens of Juanita Graham and Carolyn Harstad, 1 PM, begin and end at Holliday House

Sunday, May 5

Auction and sale of native plants, 1PM, Lebanon

Saturday, June 8

Shades State Park, 1PM, fern identification hike led by Mike Homoya (vigorous hike)

Sunday, July 14

Joint program with Oakhurst Chapter, Muncie, Minnetrista Center

Saturday and Sunday, August 3 and 4

Bus trip to Dunes State Park, Pinhook Bog, Gibson Woods, Hoosier Prairie, Beseker Prairie (overnight)

Saturday, September 14

Auction and sale of native plants, Holliday House, Holiday Park, Indianapolis

Saturday, October 19

Fall foliage and tree identification, Hoosier National Forest, Jackson County, hike led by Chip Weber

Saturday, November 9

Annual Meeting

Saturday, December 7

Annual Christmas Party, 7 PM, Carolyn and Peter Harstad's

Feeding Finches

by Sue Nord

Have you ever wondered what the goldfinches were eating before the homeowners of suburbia were hanging out thistle feeders? The answer is - the seeds of native plants. Many books tell how to attract hummingbirds and butterflies, but fewer resources are available about gardening to attract songbirds. Some observations at home and in the gardens of the Indianapolis Museum of Art have revealed to me some favorite plants on the goldfinch menu.

The nutritious seeds, rather than the showy blossoms, bring in the birds, so resist the temptation to pluck all the spent blooms. Many flowers, such as the purple coneflower *Echinacea purpurea* will continue to bloom even when some flower heads are allowed to mature. Imagine the sight of the canary-like birds, perched on the bristly seed heads while they patiently extract the seeds, one by one. Although the purple coneflower is a primary goldfinch magnet, many of the other goldfinch favorites also come from the composite family.

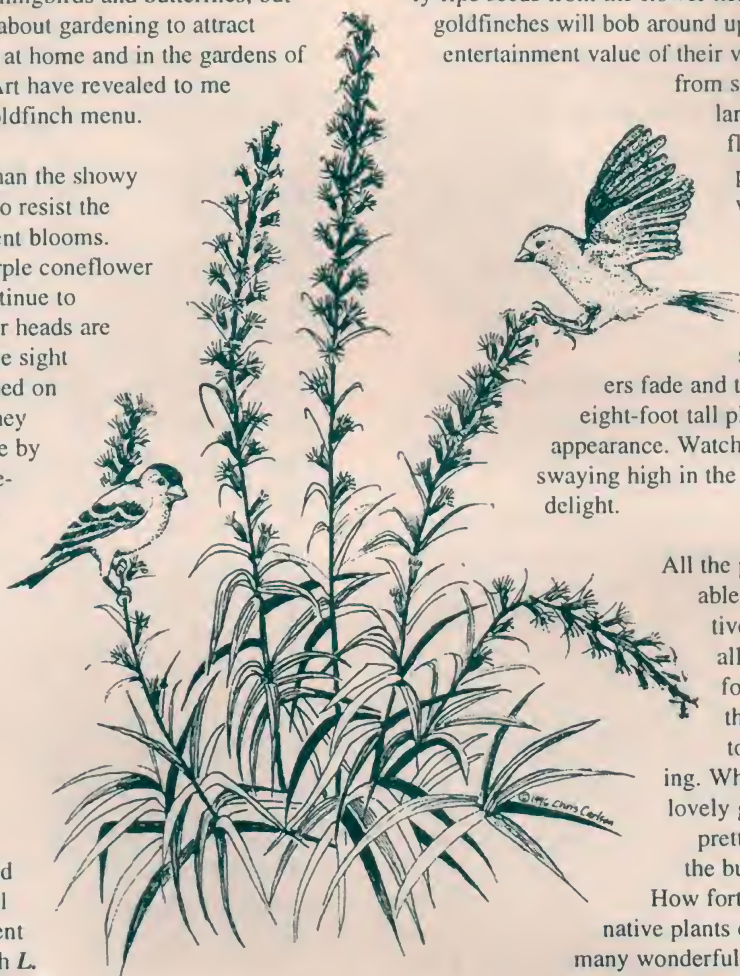
Once you attract the finches with the purple coneflowers, they will visit other suitable flowers in the garden, such as *Liatris*, known as gayfeathers or blazing stars. These are shades of purple and will add an interesting vertical element to the garden. Different species occur in the state, with *L. spicata* and *L. pycnostachya* being the most commercially available. Each species has a slightly different bloom time, and it is possible to extend the apparent bloom period by planting several species together. In addition, this planting scheme can spread the birds' mealtime over a longer period, too.

Two groups of very large plants also yield tasty treats for the goldfinches. These are sunflowers (*Helianthus* spp.) and Joe-Pye weeds (*Eupatorium* spp.). The wild, native forms of sunflowers, as well as the widely-available cultivated types, pro-

duce oil-rich seeds which are excellent food for the finches. Although many feeder birds are attracted to sunflowers, only the little finches seem to have the initiative to pluck the barely-ripe seeds from the flower heads. Frequently, the goldfinches will bob around upside down, adding to the entertainment value of their visit! I noticed competition

from squirrels only with the large-flowered types of sunflowers. This has not been a problem with the smaller wild types. The Joe-Pye weeds are less familiar garden plants, but are large and impressive in the garden. As the smoky plum-colored flowers fade and the seeds ripen, the five- to eight-foot tall plants take on a smoky appearance. Watching the little yellow birds swaying high in the cloudy masses is a true delight.

All the plants mentioned are reliable in the garden and attractive when in flower. They are all excellent nectar sources for an array of butterflies, so there will be colorful visitors while they are blooming. What a bonus it is to have the lovely goldfinches move in as the pretty blooms are fading and the butterflies are moving on! How fortunate we are to have native plants capable of attracting so many wonderful guests into our gardens!



This article was adapted from one which originally appeared in the IMA Garden News. Sue Nord, a charter member of INPAWS and a board member, is a horticulturist in the gardens of the Indianapolis Museum of Art.

Drawing of finches on *Liatris spicata* by Chris Carlson, a charter INPAWS member and former editor of this newsletter. She is a free-lance writer and illustrator whose Broad Ripple (Indianapolis) business, Creative Ink, provides a variety of publications services.

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Indiana Native Plant and Wildflower Society

Financial Report

January 1, 1995 - December 31, 1995

Item	Income	Expense	Balance
Balance forward from 1994			5150.53
Dues	5523.00		5523.00
Plant Auction	3460.05		3460.05
Annual Meeting	6322.61		6322.61
Ads	100.00		100.00
Contributions	545.00		545.00
Misc—uncashed check	2525.00		2525.00
From cancelled savings	3133.18		3133.18
Cash for change	400.00	400.00	
Recording Secretary		292.51	(292.51)
Corresponding Secretary		525.28	(525.28)
Treasurer		16.68	(16.68)
Program Committee		568.42	(568.42)
Membership Committee		1005.62	(1005.62)
Newsletter		3026.93	(3026.93)
Plant Rescue		30.43	(30.43)
Special Projects		246.84	(246.84)
Auction		505.20	(505.20)
Annual Meeting		7705.07	(7705.07)
Contributions and Dues (125 outstanding)		358.38	(358.38)
Speakers Bureau		56.90	(56.90)
Miscellaneous		2853.60	(2853.60)
TOTAL	22008.84	17591.86	9567.51

Trees for Home Landscaping

by Janice Glimn-Lacy

... to help distinguish natives from non-natives when purchasing trees

Trees NATIVE to eastern North America:

<i>Acer rubrum</i>	red maple
<i>Acer saccharum</i>	sugar maple
<i>Amelanchier canadensis</i>	serviceberry, shadbush
<i>Carpinus caroliniana</i>	american hornbeam, blue beech
<i>Cercis canadensis</i>	eastern redbud
<i>Crataegus crus-galli</i>	Cockspur
<i>C. phaenopyrum</i>	Washington hawthorn
<i>C. viridis</i>	'Winter King' hawthorn
<i>Fraxinus americana</i>	white ash
<i>Gleditsia triacanthos</i>	honey locust
<i>Liquidambar styraciflua</i>	sweet gum
<i>Liriodendron tulipifera</i>	tulip tree, yellow poplar
<i>Nyssa sylvatica</i>	black gum, black tupelo
<i>Ostrya virginiana</i>	Eastern hop-hornbeam
<i>Ptelea trifoliata</i>	common hoptree
<i>Quercus coccinea</i>	scarlet oak
<i>Q. rubra</i>	red oak
<i>Tilia americana</i>	American basswood



Non-Native Trees:

<i>Acer ginnala</i>	Amur maple (Far East)
<i>Acer palmatum</i>	Japanese maple (Far East)
<i>Acer platanoides</i>	Norway maple (W. Europe)
<i>Betula pendula</i>	European white birch
<i>Carpinus betulus</i>	European hornbeam
<i>Fagus sylvatica</i>	European beech
<i>Ginkgo biloba</i>	maidenhair tree (China)
<i>Malus baccata</i>	crabapple (Asia)
<i>Platanus x acerfolia</i>	London planetree (<i>P. occidentalis</i> x <i>P. orientalis</i>)
<i>Tilia cordata</i>	litttleleaf linden (Europe)
<i>Zelkova serrata</i>	Japanese zelkova

WILDFLOWER PHOTOGRAPHY WORKSHOP

with

TOM POTTER

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through
Illustrated lecture, field demonstration and supervised application

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 - Composition that enhances the subject
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 - Techniques of light control
 - Unique tripod applications
 - Film characteristics
 - Equipment

Eagle Creek Park
Saturday, April 13
9 AM – 4 PM

Holliday Park
Saturday, April 20
9 AM – 4 PM

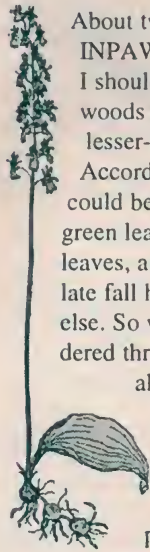
For details contact:

Tom Potter
4305 Belt Lane
Martinsville, IN 46151

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Fax (317) 342-0725
e-mail=tpotter@dialin.ind.net

Two Frequently Overlooked Orchids

by Dan Anderson



About two years ago, a fellow INPAWS member suggested that I should check our Owen County woods for putty-roots, one of our lesser-known orchid species. According to him, the plants could be found by noting their green leaves among the fall leaves, after the cold weather of late fall had killed off everything else. So wife Sophia and I wandered through the woods on several occasions, and were pleased to find a large number of single green leaves, low to the ground, which had a pleated appearance, but were distinctly purple on the

underside. They did not seem to correspond to the illustrations of the putty-root (*Aplectrum hyemale*).

Handbooks such as Peterson and the Audubon Society Field Guide did not illustrate a plant resembling what we had found. However, we finally found it in *A Guide to the Wildflowers and Ferns of Kentucky*. The popular name is crane fly orchid (*Tipularia discolor*).

Both species are mavericks, in that they produce one green leaf per plant in the late fall. The leaves remain green over winter, and die off in spring. The putty-root flowers appear in May or June, while the crane fly flowers are about two months later. In each case, the stalk is from eight to twenty inches high, bearing from 10-20 individual florets of some-



what nondescript colors. Crane fly orchid leaves resemble those of the common plantain (*Plantago major*), while the putty-root leaves are somewhat longer and narrower.

I transplanted several crane flies to my little "orchid garden" near our cabin, and noted that they were shallowly rooted, barely covered by soil. The bulbs were about the size and shape of cocktail onions, and I found as many as three bulbs in a string. This would explain why there were often two or three plants in a small area, as each bulb evidently develops into a separate plant.



Last fall, Sophia discovered two clumps of genuine putty-roots, each one consisting of about six plants. Their root systems appeared to be similar to those of the crane flies, both in depth and in the chain formation of the bulbs.

In a wooded area of about ten acres, we counted close to one hundred specimens of *Tipularia* and the dozen of *Aplectrum* as mentioned above. I am certain that there were many we didn't come across. Based on this, I believe these two are among the most common orchids in our area, and invite any of you who are out tramping in the woods between now and springtime to keep your eyes open for these interesting native plants!

Dan Anderson is a charter member of INPAWS and editor of INPAWS News.

Letters to the Editor

Dear Editor:

This group has grown faster than any of us might have dreamed at the earliest of INPAWS meetings. There were few people present, so when it came time to choose officers there was no competition. Slowly, the positions were filled by brave volunteers, who did not know what to expect. Finally, there were only two vacancies left: president and vice president. Fortunately, Jeffrey Maddox and Bill Brink stepped in with a little prodding and coaxing.

Times have changed, and the fledgling organization seems well established thanks to the first crop of officers and a very enthusiastic membership. I'd like to express my appreciation to the outgoing officers for making this group what it is. Best wishes to the rearranged and new officers for continued success.

Sue Nord

MULTIFLORAE

DNR BATTLES GARLIC MUSTARD

Indiana Department of Natural Resources is looking for allies in its battle with that invasive pest, garlic mustard. Lee Casebere, of the Division of Nature Preserves, is looking for volunteers to join *Garlic Mustard Patrols* to look for the appearance of the plant in previously clean areas, and to help pull it out in areas where it has already become established.

Garlic mustard first appeared in the Midwest in the 1960's, and has already had a detrimental effect on many woodlands and is rapidly dispersing to new sites. The plant competes strongly with native flowers such as Dutchman's breeches, trout lily, spring beauty, wood poppies, and trilliums, and can help change microsite conditions such as soil moisture and available light, to the detriment of native plants.

Working with a *Garlic Mustard Patrol* will be strenuous, but your involvement will offer you an opportunity to learn fundamental principles of forestry and conservation biology, as you help the DNR and Indiana's woodlands. The work is best done in late April and early May and is concurrent with songbird migration and the peak of the spring wildflower display. You'll also have the opportunity of seeing and learning about some of the best remaining natural areas in your part of the state.

Please be a part of this important effort.
Contact Lee Casebere or Tom Swinford
317-232-4052

Division of Nature Preserves
402 W. Washington Street
Indianapolis, IN 46204.

Want to Learn About Grafting?

Charles and Marilyn Spurgeon, members of INPAWS and of the Indiana Nut Growers Association, have invited INPAWS members to INGA's annual grafting workshop, to be held on March 19 at their home, 2500 W. 42nd Street, Indianapolis. There will be a pitch-in dinner beginning at 11 AM (bring a covered dish, plate, utensils and folding chair) followed by a short business meeting. An auction of horticultural material will be next, then a hands-on training session using material from the rootstock nursery.

INGA works with native as well as commercial nut trees, and searches for the top 5% of trees of each species, in a program to improve nut quality and production. Asexual grafting is one means of reproducing high-quality stock using lower-quality rootstocks.

Thanks to the Spurgeons for the kind invitation. If you need more information, please call them at 317-297-1326.

Garlic Mustard Pull

Southwestway Park

Saturday, April 20, 1996, 1 PM

for information call Reta Rutledge • 317-784-2927

Magazine Quotes First INPAWS President

Indiana is giving all creatures a chance at the good life, writes Cheryl Merser in an article entitled *Good Fences* in the March 1996 issue of *House Beautiful* magazine, which describes the steps taken by the state to protect public lands from depredation by one species, deer.

Jeffrey Maddox is quoted describing the poor physical condition of the deer population in Brown County State Park when he testified at the public DNR hearings which led to a law permitting hunting in state parks. "Deer...weighing half of what they should...their coats pathetic...their teeth worn down.... There is no vegetation in the park below six feet." Since the law was passed in 1995 the parks can do what is necessary "to control all the species to keep them in balance" said Jeffrey, INPAWS president from 1993 to 1995.

Southwest Indiana Four Rivers Project

The North American Wetlands Conservation Council has approved an \$800,000 grant for land purchase and forest improvements in a fifteen-county area of southwest Indiana, including the newly established Patoka River National Wildlife Refuge. The goal of the project is to improve the winter habitat and migratory stopover conditions for the more than 100,000 waterfowl that use the area, and the 200 or more species of other birds that have been found in that area.

Groups participating in the project have contributed 2388 acres of wetlands and \$2.2 million in services. In addition to the amount of the grant, \$3 million will be contributed to help protect, enhance, and manage the bottomland hardwood forests in the area of interest. Over 1100 acres will be acquired by purchase and another 644 acres will be improved. The project is part of the North American Waterfowl Management Plan, an international cooperative project among Canada, Mexico, and the United States.

Nature Walks at Butler University

with Dr. Becky Dolan

All walks will begin at noon on the following Tuesdays and last for about 50 minutes. Meet behind Gallahue Hall near the greenhouse. No charge, no reservations, all welcome.

March 12	Spring Wildflowers I
April 9	Spring Wildflowers II
May 14	Spring Wildflowers III

Holliday Park Activities

Pest Eradication Day

Saturday, March 2, has been designated a workday at Holliday Park to help with the eradication of two pestiferous plant species—**garlic mustard** and **Amur honeysuckle**. Work to be done includes hauling the cut honeysuckle to a chipping area, brushing of paths, and pulling up garlic mustard plants for disposal (or eating). The workday will begin at 8:30 AM and continue until 4 PM. Refreshments will be provided; however, it is suggested that those able to stay the entire day bring a lunch.

For more information, please call Vicky at 327-7180.

Butterfly/Hummingbird Garden Workshop

If you would like to turn your backyard flowerbed into a magnet for hummingbirds or butterflies, you can learn how at Holliday Park, Saturday, March 9, from 2 to 3:30 PM. The class fee of \$25.00 includes a wildflower slide show, printed materials, and a book on butterfly gardening. Discover planting tricks for larval and nectar foods, find out what species are popular with the little beauties, and learn how to create your own Hummingbird Haven or Butterfly Banquet at home. Registration is necessary, so please call Vicky at 327-7180.

Do you know of a . . .

- **natural area**
that's about to be developed?
- **garden or relocation site**
that could use native plants?

Call

Don Miller 317-327-7416
Ted Harris 317-362-1509

REPRINTS AVAILABLE

On page 5 of this issue is an index of articles which have appeared in past issues of this newsletter. If you would like copies of any of them, please send a stamped, self-addressed envelope with a request for the article(s) you need to:

Anne Wilson • 14701 Bellsville Road • Nashville IN 47448

4-H PROGRAM

We are hoping to expand the 4-H Wildflower Project, which was revived just last year, to a three-year activity from a single year, with the definition of new projects. Last year, we had some seven entrants in the Marion County fair. If you would like to promote a 4-H Wildflower Project in your county, you can receive a packet with the materials developed here, along with course requirements. Please write Dan Anderson, 7412 Graham Road, Indianapolis, IN 46250.

It's a new year . . .

and time to join INPAWS or renew your membership.

As a member you receive INPAWS' outstanding quarterly newsletter and notices about relevant programs and field trips. And you experience the joy of being with others who share a deep appreciation for natives and the natural environment we wish to protect. As one of our members exclaimed last summer, "Finally I've found a group of people who care about the same things I do."

1995 was only our third year in existence. And yet nearly 450 people from around the state of Indiana and beyond were members of INPAWS that year. An outstanding accomplishment.

If the membership form sent you has been misplaced, look to the back page of this newsletter for another. Send your dues right away and you will receive your yearbook/member directory in early March.

Welcome to new members . . .

as of January 18, 1996: Eleanor Arnold, Janell Baran, Ted Blodgett, Christine Brewster, Jack and Linda Carlson, Kenneth and Carolyn Cole, Jeannie Daniels, Ronda DaCaire, Bob Dodson, Audrey Finley, Craig Flandermeyer, Carolyn Faust, Linda Gall, Thomas Gast, Paul Hammond, Brenda and Jeff Hanssen, Bill Henderson, Kristin Kaiser, Theresa Talarek King, Gary Lehman, Sue Loudermilk, David and Barbara Malson, Mickey McColly, Kris Medic, Rhonda Miller, Elizabeth and Steven Mueller, Gary Poore, Barbara Rhodearmer, Nathan Simons, Don and Dona Snider, Wendy Story, Doris and Bob Thomas, and Mary Thomson.

We hope that you will be able to attend several of our meetings and field trips during 1996!

Spring Wildflower Foray

T.C. Steele Nature Preserve, Brown County

April 26-27, 1996

Hikes, talks, slide show. No registration fee, but donation appreciated.

Call Andrea or Kim at 812-988-2785

The New England Wild Flower Society

is offering its 1996 catalogue listing almost 200 varieties of seeds and spores of native species, along with an extensive list of books and gardening supplies. If you would like one please send \$2.50 to

Seeds

**New England Wild Flower Society
Garden in the Woods
Framingham, MA 01701-2699.**

American Yellowwood

I discovered American yellowwood by a circuitous route. Even though I'd visited Yellowwood State Forest since I was a child, I'd never really thought about why it bore that name. I think I had a vague idea that "yellowwood" must be a local colloquialism for tulip tree or yellow poplar (*Liriodendron tulipifera*).

It wasn't until I was doing a graduate research project on native plants of the southeastern United States that it dawned on me that yellowwood was *Cladrastis kentuckea*, or *C. lutea*, as it was then known. Peering at a distribution map of the species, I noticed a small, isolated population in southern Indiana, which happens to be in Yellowwood State Forest, the tree's northernmost stand.

Since my belated acquaintance with this graceful tree, I've made up for lost time by keeping a constant eye out for it in our area, and by specifying it in landscape plans at every opportunity. As an ornamental, it can hold its own with the prettiest trees the world has to offer.

Yellowwood has odd-pinnately compound leaves that unfurl a bright chartreuse in mid-spring, which gradually deepen in color to crayon-green. In late May and early June, the tree is covered with eight- to fourteen-inch pendulous panicles of fragrant white flowers which remind one of wisteria. The blooms appear as those of dogwood and redbud are fading, and, like black locust, are a favorite source of nectar for honeybees. The trees do not bloom early in life, and seem to flower more heavily in alternate years.

The attractive bright green foliage appears to be resistant to insects and disease, and retains its color until late in the fall. Then, the leaves turn yellow to gold before falling more or less all at once, minimizing leaf litter problems. Yellowwood casts a dappled shade, so it is easier to grow grass or other plants beneath it than with denser-canopied trees such as maples.

After the leaves are gone, two- to four-inch long seedpods remain throughout most of the winter, rattling pleasantly in the wind, and providing an element of visual motion. Also more noticeable in the winter landscape is the beautiful smooth silver-gray bark, similar to that of beech.

Yellowwood is a member of the Leguminosae, or pea family, and, as other members of the family, can fix atmospheric nitrogen and can tolerate poor soils. It does best in a well-drained site, and can tolerate soils of a wide range of acidity.

Although found mainly from North Carolina to Kentucky and Tennessee, it is hardy as far north as Zone 3, flowering even after being subjected to -30 F. It is thought that the tree's range was much farther north in the past, but the southward spread of glaciation during the last Ice Age eliminated it from its more northern habitats. This could explain the hardiness of yellowwood and many other Southeastern natives of landscaping merit.



Yellowwood can reach a height of 30 to 50 feet, with a similar spread, but I've never seen a tree of this size in a landscape situation. It has a moderate growth rate in youth, but slows down as it gets older (like all of us). Its small to medium size makes it an ideal lawn or patio specimen, where its broad canopy and light shade provide

a welcome arbor for a bench or outdoor dining area.

Most local nurseries don't handle yellowwood trees, but they are available from select growers at the wholesale level, so your local supplier should be able to get you one. A pink-flowered variety has been distributed by the Arnold Arboretum, but I was unable to find the source (if you know of one, please let me know!). Both single-stem and clump forms are available.

Trees can be transplanted balled and burlapped or containerized in spring or fall, or even in summer, if care is taken to keep the tree misted and watered until it recovers. The only pruning required is to remove weak (narrow) crotch angles in young trees, which will be subject to breakage during ice storms later on. Pruning should be done in summer; bleeding will occur if it is done in winter or spring.

If you would like to see yellowwood trees in their natural habitat, the best place is in Brown County's Yellowwood State Forest. Landscape specimens can be seen outside the east entrance of Adam's Mark Hotel at the Indianapolis airport, and in a churchyard at the southeast corner of 16th and Delaware Streets. If you're not familiar with this stellar native tree, look for it, especially when in flower, and then find a place for one in your own yard. American yellowwood's beauty as a landscape tree is surely one of Indiana's best kept secrets.

Barb Kaczorowski is a charter member of INPAWS and co-owner of Accent Gardens, a local landscape and nursery business. She has written for Rodale Press and Horticulture magazine.

Speakers Bureau

INPAWS receives many requests for programs, so we are establishing a speakers bureau. Please share your time and talents. INPAWS needs your help. Our goal is to create excitement and appreciation for native plants, and encourage the public to use native plants at home, and to help preserve native plants in Indiana.

Suggested topics:

- Spring wildflowers
- Edible plants
- Plant rescue
- Plants that invite the three B's (birds, butterflies and bees)
- Summer wildflowers
- Medicinal plants
- Landscaping with native plants
- Fall wildflowers
- Specialized areas (example, orchids)
- Native grasses
- Herbs
- Prairies

Questionnaire: (Please check all that you might be willing to help with).

- I can write a program.
- I can give _____ programs a year.
- I can create a video program to use at engagements.
- I will donate a commercial video to INPAWS for programs.
- I have educational material (slides, books, magazines) to share to create programs.
- I can furnish names of people, books and references to help.
- I am available to speak on _____ (day of the week).
- I would be comfortable speaking before: general public garden clubs other.
- I could travel _____ to give a program. (distance)
- I charge a fee of \$ _____ to give a program.

NAME			
ADDRESS			
CITY	ST	ZIP	
TELEPHONE			

Help educate the public about the positive aspects of native plants. We can make a difference.

Please return this form to:

Colletta Kosiba
5430 N. County Road 600 E
Brownsburg, IN 46112

For more information call Colletta at
 (317) 852-5973

MEMBER PARTICIPATION NEEDED!

This newsletter is for all INPAWS members! We would love to publish a regular *Letters to the Editor* column, if you have any suggestions, complaints or good things to say.

If you have any seeds or native plant material to offer, or are looking for some, you can put in a *free classified ad*.

If you would like to write an article, or have come across something in another publication that you think might be of interest, please let us know! The more input we get from all of you, the more informative and useful our newsletter will become!

LIBRARY PROGRAM

INPAWS News is now being distributed to all branches of the Indianapolis-Marion County Public Library. As an experiment, we sent complimentary copies to 50 libraries and state parks, offering free subscriptions. To date, nine libraries in various parts of Indiana have requested to be on the mailing list, including those in Crown Point, Decatur, Evansville, Lafayette, LaPorte, Marion, Richmond, Seymour, and Terre Haute. If you think your local library would like to receive INPAWS News on a regular basis, please contact Dan Anderson at 317-849-3105 for a sample copy and cover letter. By being represented in libraries throughout the state, more people will learn about INPAWS and more local chapters can be formed.

Indiana Native Plant and Wildflower Society

MEMBERSHIP APPLICATION

Yes! /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? _____

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"/> Computer Communications | <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"/> 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.

Spring is the time to control garlic mustard et al.! See cover story and pages 8 and 9.

INDIANA
Native Plant and Wildflower Society

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