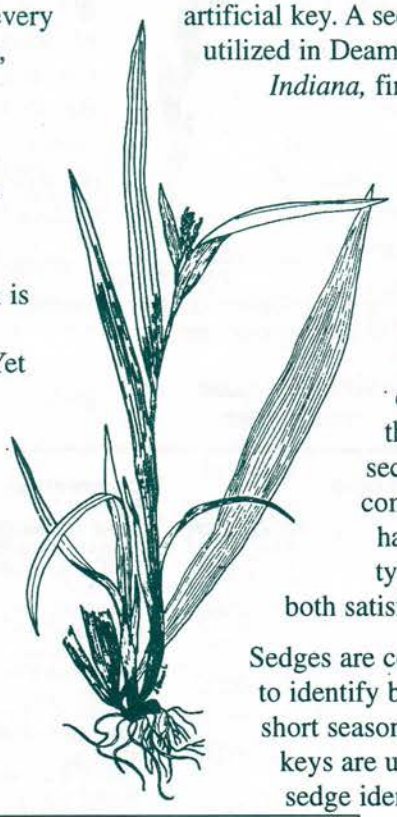
INDIANA NATIVE PLANT and Wildflower Society NEWS

Volume 6 Number 1 • Spring 1999

Sedges Our Most Diverse and Least Understood Group of Native Flora

by Kevin Tungesvick

Sedges occur in nearly every native habitat in Indiana, from shallow-water emergent communities to the driest hillsides. Nearly 8% of our native plant species are in the genus Carex. With 150 species of sedges, Carex is by far Indiana's largest genus of native plants. Yet many people who are otherwise very knowledgeable about plants can identify only a few species, if any.



Blunt-Scaled Wood Sedge
(Carex albursina)
by Jan Glimn-Lacy

Although some sedge species are extraordinarily hard to identify, many distinctive ones can be easily learned with a little patience and the use of a sedge key. There are two distinct types of dichotomous keys for the genus Carex. The first type, the artificial key, lumps all species together, distinguishing among them on the basis of physical characteristics. *Plants of the Chicago Region* by Floyd Swink and Gerould Wilhelm is a good example of a text with an artificial key. A second type of key, utilized in Deam's *Flora of Indiana,* first separates the genus into two subgenera. The subgenera are then separated into various sections. A separate short dichotomous key then divides each section into the component species. I have used both key types and found both satisfactory.

Sedges are considered difficult to identify because of the short season for which the keys are usable. Nearly all sedge identification is based on the mature fruit, consisting of a seed enclosed in a husk-like structure known as a perigynium. These cool-season plants flower in spring to early summer, and the fruit of many species ripens between late April and mid July. Therefore, those interested in learning sedge taxonomy should concentrate their efforts in this period. In general, woodland species tend to ripen earlier in the season than those of sunny habitats.

Sedge abundance and diversity reaches its peak in wetland habitats. In fact, permanently or seasonally saturated herbaceous communities are often referred to as sedge meadows due to the dominance of this genus. Sedge meadows were frequent in fens, glacial sloughs, and pond margins in presettlement times. Unfortunately, drainage for agriculture, peat mining, and degradation due to fire suppression, invasion of exotic species, and poor

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water quality have destroyed most of this diverse habitat.

Tussock Sedge *(Carex stricta)* is usually the dominant species of sedge meadows. It forms a dense clump up to 18 inches in height with an inconspicuous inflorescence appearing in May. The fine bright green foliage makes it a very attractive plant for wet spots or water gardens. The roots and stem bases of these long-lived clumps gradually build up small mounds, resulting in the uneven hummocky terrain associated with sedge meadows. Other species that frequently co-dominate in sedge meadows include Lake Sedge *(C. lacustris),* Hairy Fruited Lake Sedge *(C. trichocarpa),* and Woolly Sedge *(C. pellita),* all of which spread by rhizomes. It is not uncommon to find a dozen or more species in a well developed sedge meadow.

Lake Sedge
(Carex lacustris)

Sedge meadows are a crucial habitat for a variety of rare or declining wildlife, including Massasauga rattlesnakes, numerous dragonflies, ribbon snakes, and grassland birds such as the Bobolink, Northern Harrier and the aptly named Sedge Wren. Many wetland sedges are prolific seed producers, providing food for songbirds, waterfowl and small mammals. Several species of butterflies utilize sedges as their larval food plants, including Eyed Browns, several skippers, and the federally endangered Mitchell's Satyr. Sedge meadows are often replete with an abundance of nectar-bearing composites such as Asters, Goldenrods, and Joe-Pye Weeds, giving this habitat dual importance for butterflies.

Hop Sedge
(Carex lupulina)

Some of our most common and adaptable sedges often take up residence in moist old fields and roadside ditches. Fox Sedge *(C. vulpinoidea)* is perhaps the best known, sporting a dense clump of fine, dark green foliage and plentiful brown seedheads. Other species in these habitats include Meadow Sedge *(C. granularis),* Crested Sedge *(C. cristatella),* Bristly Cattail Sedge *(C. frankii),* and Awl-Fruited Sedge *(C. stipata).* Together, these species help form an important early successional plant community in wet areas.

Palm Sedge
(Carex muskingumensis)

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Indiana Native Plant and Wildflower Society Newsletter

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

We welcome opposing viewpoints.

Articles, letters, drawings should be sent to Carolyn Harstad, 5952 Lieber Road, Indianapolis, IN 46228.

e-mail pharstad@topaz.iupui.edu
arthop@hsonline.net
wilson@hsonline.net

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.

President's Message

by Ruth Ann Ingraham

In December I sat before this computer in my upstairs home office and composed my president's message for the winter issue of our INPAWS newsletter. I wrote with affection about this sappy organization–one which is healthy, fresh, and vigorous. My bias was showing.

So perhaps I should not have been surprised a week ago when I opened a letter from the Indiana Department of Natural Resources and read the following:

> "Dear Ms. Ingraham and INPAWS Members:
>
> "I am writing to congratulate you on being awarded an honorable mention in the DNR's annual conservation awards selection. You were nominated by DNR staff as one of Indiana's most active and successful conservationists of the past year."
>
> "Sincerely, Gary Doxtater, Director, DNR Division of Fish and Wildlife"

But I was totally surprised–and elated.

Last August when I wrote for the fall issue of this newsletter, football was in the air and I was inspired to write about team effort. In the final paragraph I wrote that INPAWS had enumerated simple ways that we as individuals can make a difference in our environment. Then I added that individuals teaming together may be formidable and will achieve many goals.

So, buoyed by recognition from our peers and considering the caliber of the INPAWS team of individual men and women, we will continue our well established, successful functions and strive to achieve the multiple goals we've set for 1999 as well:

- Publish the eagerly awaited *Native Plant Source Book.*
- Publish two brochures, *Invasive Plants in Indiana* and *Landscaping with Native Plants in Indiana.*
- Establish our second chapter, this one in the Greater Tippecanoe County Region.
- Consider further Indiana's State Flower, presently the peony introduced from China.
- Establish a native plant demonstration garden in a public space.
- Create a fourth-grade curriculum on native plants.

The 1999 year began on a roll when, thanks to your Board of Directors, I was tapped to attend a *Native Plant Conservation Initiative* Conference at the *Lady Bird Johnson Wildflower Center* in Austin, Texas. The experience was outstanding.

Returning to the team metaphor, INPAWS, as a member of the NPCI, can hope to have an impact at the national and even international level. Formed in 1994, the Native Plant Conservation Initiative is a consortium of ten federal government agencies and, now, over 130 non-federal Cooperators which represent a variety of disciplines within the conservation field. Included are biologists, botanists, habitat preservationists, horticulturists, resource management consultants, soil scientists, special interest clubs, non-profit organizations, native plant societies, concerned citizens, nature lovers, and gardeners. Members and cooperators work collectively to solve the problems of native plant extinction and native habitat restoration, ensuring the preservation of our ecosystem.

On the closing day of the conference attendees shared a meal with Lady Bird Johnson and Secretary of Interior Bruce Babbitt who on behalf of NPCI presented Mrs. Johnson with a lifetime achievement award for conservation. Mrs. Johnson's straightforward message has been "We should appreciate the God-given beauty of our country." In keeping with her philosophy, she founded the wildflower center which bears her name and which promotes the use of native plants in landscaping.

Secretary Babbitt's words were impassioned and many of us were deeply moved. For me his most stirring suggestion was that we turn from the European gardening model and look to the American landscape for our inspiration–to the woodlands, the wetlands, the grasslands, the deserts. Right on.

Botany 101

The Basic Structure of a Flower

by Dr. Rebecca Dolan

Ever wish you could take a college-level botany class? Wish you had paid more attention if you did? The *Botany 101* column is your chance. In every issue I will present material as it would be presented in a botany class here at Butler University.

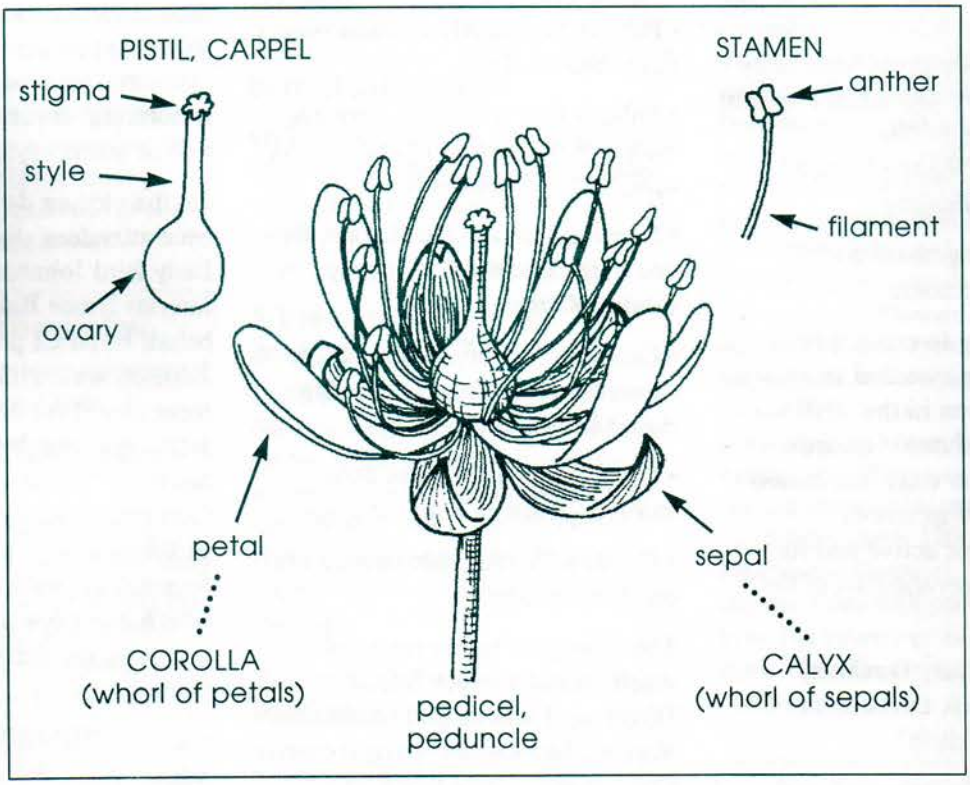
We'll start by examining the basic structure of a flower, how pollination and fertilization occur, and the structure of the resulting seed.

A generalized flower:

Flower parts occur in a standard arrangement of 4 whorls around the flower stem, or **pedicel** or **peduncle**. The outermost whorl is the **calyx**. The job of the calyx is to protect the developing flower. The calyx is usually green and its separate parts (**sepals**) are what we would recognize as the outside covering of a bud, as in a rose. As the flower opens, the sepals are pushed apart by the petals.

The whorl of **petals** is collectively called the **corolla** (hence the name of that flower catalog you may receive called *Calyx and Corolla*). Petals are usually bright-colored to attract pollinators to visit flowers.

Inside the petals, the next whorl consists of the male parts of the flowers, the **stamens.** The stamen's job is to make pollen. Tiny, microscopic pollen grains carry sperm from flower to flower. Yes, plants have sperm (more on that later). Stamens have two components: filaments and anthers. **Filaments** are thread-like structures like the filaments in a light bulb, that support the anthers out from the flower base. The pollen grains are produced in the sac-like **anthers,** which open in intricate ways to release pollen.



Finally, a generalized flower would also have female parts as the center whorl. Collectively, these are known as the **pistil** or **carpel.** Like stamens, they are made of parts: the **style** extends from the center of the flower and supports the **stigma,** the sticky surface on which the pollen adheres during pollination. At the base of the carpel in the center of the flower is the **ovary,** where eggs are borne.

All these structures are indicated in the wonderful illustration provided by INPAWS member Jan Glimn-Lacy. Now, this is a generalized flower. In nature, there are many variations on the general theme. Some plants have separate sexes, so that an individual plant bears only flowers with male (stamens) or female (carpels), parts, not both. Some flowers have colorful sepals, some have no petals, some have elaborate stamens that look like petals. Different species have different numbers of parts in each whorl. For example, a flower might have 5 sepals, 5 petals, 5 stamens and 5 carpels. Another might have 5 sepals, 8-10 petals, numerous stamens and fused carpels.

Next issue: how the pollen gets to the stigma, how the sperm gets to the egg, and how a seed is formed.

Dr. Rebecca Dolan is Director of the Friesner Herbarium at Butler University and an INPAWS member.

Illustration by Jan Glimn-Lacy.

HOW MUCH NATURAL AREA PROTECTION SHOULD INDIANA HAVE?

by Ted Harris, Conservation Committee Chairman

The answer depends on what we hope to accomplish. I will contrast two very different perspectives on this subject.

The Utilitarian Vision

In this view nature is a resource, supplying raw materials and economic opportunities. For example, natural areas are prime residential sites. The soil supports agriculture. Trees furnish fibers. Rivers provide recreation, water for manufacturing, and channels for sewage disposal. Some wild animals are good for sportsmen. The rest are mostly nuisances. Some wildflowers are good for herbal remedies. The rest are mostly weeds.

Public parks have some utility, but not much. Nature preserves have no utility at all. They just lock up resources that should be used to fuel jobs and profits. Property rights outweigh our responsibilities to future generations. Free markets provide the best paths to efficient utilization of nature. Public lands should be privatized. We have a manifest destiny to tame the last scraps of wildness and transform them for productive uses.

The utilitarian vision cares only "What good is it to us now?" It would probably answer this column's question by saying "very little, if any, natural area protection is needed."

The Biocentric Vision

In this view we feel remorse for what we have already done to the natural landscape and to ecological processes. If "rights" are a real thing and we have them, then plants and animals have them also. Mowing, plowing and paving are unnatural acts. Sending a bulldozer into a woods to carve residential streets kills thousands of small plants and animals. It is as morally bankrupt as driving a tank through a day care center full of kids.

Mining, grazing, logging and much development are characterized by greedy motives and shortsightedness. Many politicians respond principally to corporate lobbying and contributions. Nature has no voice, no vote, and no legal standing of its own.

A biocentrist would assert that half to two thirds of Indiana should be plenty for just one species, our human species. The other one third to one half should be restored to pre-settlement conditions, then protected and connected by wildlife corridors to similar areas in other states. All native species and ecosystem types should be represented in these reserves; and the reserves should be large enough to ensure genetic viability and resistance to disturbances. Extirpated species should be returned, including the large carnivores that keep natural systems healthy. A goal would be to **forever** allow species to migrate, interact and evolve as they have for millions of years. Our highest moral obligation is to defend the diversity of life on earth.

Where Do We Stand and What Direction Should We Take?

The author freely admits his bias. He has both feet firmly planted in the biocentrist camp. He acknowledges that the utilitarians' victory is ninety percent complete. Especially in the northern half of Indiana, our natural areas are virtual postage stamps, an archipelago of habitat islands. They have been fragmented by roads and development and corrupted by hundreds of exotic species.

Today, many people, especially those who are members of organizations like INPAWS, realize that things aren't right. However, apathy still predominates. It is easier to feel sympathy for nature and sorry for ourselves than it is to become active. Time is **not** on our side. Healthy native plant communities, a foundation for healthy ecosystems, may not be around Indiana a hundred years from now, much less a thousand years or a million, unless we change our direction soon. The most productive approach to preserving biodiversity comes from protecting, restoring and connecting really large natural areas. This is what we should strive to do.

You are fortunate to be alive at exactly the right time in our earth's history when your help is most needed. Please don't waste your opportunity.

Ted welcomes your comments and ideas. You can email him at tharris@tctc.com telephone him at 765-362-1509 or write to him at 1120 Ridgeway Drive Crawfordsville, IN 47933. Thanks.

MULTIFLORAE

Please join us to celebrate the 90th birthday of INPAWS' good friend,

Juanita Graham

Open House
Sunday, April 11
1 to 4 PM

at the home of
Carolyn and Peter Harstad
5952 Lieber Road, Indianapolis.

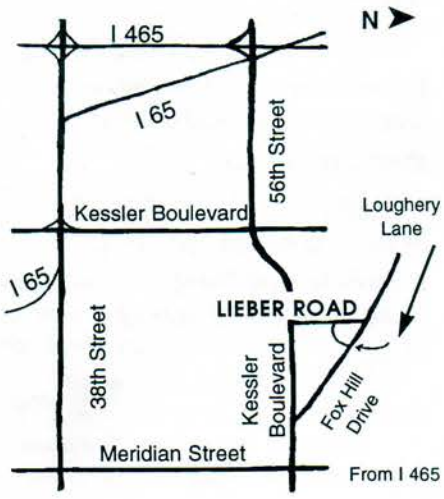
Tributes to Juanita at 2 PM.

Please bring an appetizer or dessert to share.

Carolyn Harstad
317-257-9452 • email
pharstad@topaz.iupui.edu

Park on Loughery Lane.

Lieber Road, on the north side of Indianapolis, is located between Kessler and Fox Hill.



DNR Nature Preserves 1999 Field Days

The popular Nature Preserve Field Trips are back! No registration required. For more details call Division of Nature Preserves at (317) 232-4052, or write to the office:
402 W. Washington St., Rm W267, Indianapolis, IN 46204.

Saturday, May 1, 9 to 10:30 AM
Fort Harrison State Park (Marion Co.). Celebrate Mayday with a wildflower hike through one of Marion County's finest remaining natural areas. Meeting Site: Walnut Plantation Parking Lot in Fort Harrison State Park. NOTE: There will be a $2 per car entrance fee ($5 for out-of-state vehicles) into the park.
Hike Leaders: Tom Swinford and Cliff Chapman.

Saturday, May 22, 10 AM to 1 PM
Potawatomi Nature Preserve in Pokagon State Park & McClue Nature Preserve (Steuben Co.). Pokagon is a diverse park with beautiful woods and wetlands. We will see deer-damage recovery, Lake Lonidaw, high-quality fens, marsh and more! Meeting Site: Toboggan Slide Parking Lot in Pokagon State Park. NOTE: There will be a $2 per car entrance fee ($5 for out-of-state-vehicles) into the park.
Hike Leaders: Fred Wooley and Rich Dunbar.

Saturday, June 5, 8 to 11 AM
Birds of Beaver Lake & Conrad Savanna (Newton Co.). Beaver Lake, a 640-acre nature preserve administered by the DNR's Division of Fish and Wildlife, is a popular destination for birders. Conrad Savanna consists of 300 acres of oak savanna. Meeting Site: Go 3 miles north of Enos on U.S. 41, then east 1 mile on Co. Rd. 400N, and north 1 mile on Co. Rd. 200W. Park along east side of road next to Beaver Lake.
Hike Leaders: Cloyce Hedge, Roger Hedge, and Tom Post.

Saturday, July 17
Mosquito Creek Nature Preserve, Harrison County, details to come.

Speakers Bureau

Byron Torke is assisting us in enlarging the slide collection of native plants that we have available for use in programs given by the speakers bureau. Ruth Ann Ingraham is donating slides her parents took of wildflowers. Thanks to both Ruth Ann and Byron!! The bureau can use any good-quality slides you wish to share with us. Just send them to Colletta.

Programs slated for 1999, as of this newsletter printing:

Wander Indiana Wildflowers (flowers spring-fall) given at Avon Township library and at the Hendricks County Master Gardeners Garden Show by Colletta Kosiba.

Landscaping with Native Plants to the Cultivator Garden Club by Kris Medic.

Non-Native Invasive Plants to Fall Creek Garden Club by Ellen Jacquart.

The Speakers Bureau always welcomes new speakers to add to our list. Could you do one or two programs a year for us to help educate the public and spread the good work of our great organization?

Contact Colletta:
5430 N County Rd 600 E
Brownsburg, IN 46112-8941

317-852-5973

Perigynium of
Shining Bur Sedge
(Carex intumescens)

LETTER TO THE EDITOR

Thanks for Art Hopkins' article on the American Chestnut tree.

INPAWS members Marilyn and Charles Spurgeon are dedicated members of the Indiana Nut Growers Association. Last fall Marilyn presented me with a gift of freshly harvested chestnuts. She described her cooking method using a microwave oven. I tried, tasted and am now hooked on these nuts. The chestnuts available here in some markets are imported from Europe and don't compare.

With that delicious memory in mind, I support Art's suggestion that we donate to the American Chestnut Foundation that works to develop disease-resistant trees. Let's hear it for our "megaflora."

Ruth Ann Ingraham

Big Walnut Tree-Planting Work Day

The Nature Conservancy is planning a tree planting day **Saturday, April 10,** at Big Walnut Nature Preserve. This preserve now includes 2,000 acres of forested land, one of the largest forests left in the Central Tillplain. By planting a variety of tree species in some old agricultural fields adjacent to the forest, we can better buffer the preserve and provide just that much more future forest habitat. Please bring a lunch and join us at 10 am April 10 for a day of planting and fun! Directions: Taking U.S. 36, go 2 miles west of Groveland to Co. Rd. 500E, turn north/right, continue north for 1 mile to Co. Rd. 800N, turn east/right, take first left (500E), continue north for 1 mile to the "T" intersection (900N), turn west/left, go approximately 1/3 mile. You will pass the Coffman Cemetery; look for the barn and TNC trucks on your left.

Nature Walks at Butler University

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

Looking at Wildflowers (ah, spring!)

April 13
May 11
June 8

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

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

Web Resources for Native Plants
First INPAWS Program of 1999

Twelve INPAWS members and guests met at the Ball State University library on Saturday, February 20, to receive an excellent presentation on internet navigating.

Each of us had a hands-on station from which to practice the tips shown live on a projection screen by Ball State instructor Jennifer Dorner.

Search techniques were explained, and practiced, and although most all had previous web use experience, the tips will certainly improve our usage of search engines and subject archives.

(See INPAWS website for some links. Ed.)

Thanks are due to Kevin Tungesvick and his committee, Susan and John Taylor who brought us this fine program.

Rolland Kontak

Kevin Tungesvick

. . . . . new links !!! . .

www.inpaws.org

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

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

Please email Anne Wilson wilson@hsonline.net

"Our Work Has Never Been More Important"

Recent assessments of the status of native plants in North America and elsewhere in the world underscore the need for heightened awareness–and action. In April 1998, the International Union for the Conservation of Nature (IUCN) reported that today 12.5 percent of the world's plant species are threatened with extinction. One other estimate indicates that 2,000 of the 18,000 native plant species in the United States are at risk of extinction, with as many as 700 of these plants possibly disappearing in the next ten years.

These losses are largely the result of habitat destruction (especially from the rapid growth of urban and suburban developments in the countryside) and the spread of aggressive non-native species that are displacing many native plants. If these assessments prove correct, or we lose even just a portion of these plants over the next half-century, the richness, beauty, and ecological integrity of our continent will be seriously diminished.

Robert Glass Breunig, Ph.D, Director of the Lady Bird Johnson Wildflower Center

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Excerpted from *Native Plants*, a quarterly publication of the Lady Bird Johnson Wildflower Center in Austin, Texas, Volume 16 Number 1, Winter 1999,

on the web at
www.wildflower.org

(Dr. Breunig was the keynote speaker at INPAWS fifth annual meeting, November 14, 1998.)

Membership for 1999

As a new year begins for INPAWS, this is a gentle reminder that if you haven't paid your 1999 dues, now is the time. This organization has a lot to offer its members and you don't want to miss out on all the activities planned for 1999. We need to get the word out about INPAWS and we need your help.

Several weeks ago I received the following letter prompted by a phone call and I quote,

> *"Thank you so much for your prompt and friendly response to my questions about your organization. I received the newsletter and I'm sending my check for membership. INPAWS is what I've been searching for–an Indiana resource connection–for about two years. Thank goodness for your listing in Wild Gardens magazine. I have looked in three libraries, the resource listings in the back of bookstore books, the Flower and Patio Show, as well as any other source. I know there have to be others like me out there searching and I am certainly spreading the word to my extension agent, fellow gardeners and libraries in my area."*
>
> *Dee Pring, Markleville, IN*

We need to get the word out about INPAWS. There are many potential members in Indiana just like Dee–SEARCHING. Will you help? Katrina Vollmer, Membership.

Contact Katrina at
KatrinaJo@iquest.net

We Need Your Best Photos of Our Worst Plants!

The Invasives Committee is moving full steam ahead to produce two brochures on invasive plants in Indiana, and we need color photos of these noxious weeds to feature in the first brochure. Examples include: **Amur Honeysuckle, Purple Loosestrife, Garlic Mustard, Japanese Honeysuckle, Reed Canary Grass, Common Reed, Glossy Buckthorn, Japanese Stilt Grass, and Multiflora Rose.** The plant in the photo should be easy to identify. We would also like photos showing areas dominated by invasive species, for instance, a forest understory that is nothing but garlic mustard. Color slides or prints are preferred. They will not be returned unless it is specifically requested. The photographer will receive credit in the brochure.

Please send your photos to
Ellen Jacquart at
The Nature Conservancy,
1330 W. 38th Street,
Indianapolis, IN, 46208.

If you have questions contact her at 317-923-7547 or ejacquart@tnc.org.

Glossy Buckthorn
(Rhamnus frangula)

Sedges . . . continued from page 2

Wet woodlands provide habitat for some of our best known and most ornamental sedges. Burr Sedge *(C. grayii)* with a spiny mace-like seed head is easily cultivated in moist soil in sun or shade. Hop Sedge *(C. lupulina)* has an elongate but otherwise similar seedhead. Both species are common in flatwoods and feature greatly inflated perigynia which enclose a relatively small seed.

Fox Sedge
(Carex vulpinoidea)

Palm Sedge *(C. muskingumensis)* is widely used for massing in moist shady areas. Its deep green shiny foliage and long pointed seedheads give it a season-long attractive appearance. Found throughout the state, it is particularly abundant in extreme southwest Indiana where it may easily be seen in flatwoods such as those at Twin Swamps Nature Preserve.

Many of our most attractive woodland sedges are broadleaf species in the laxiflora section of Carex. Plantain-leaf Sedge *(C. plantaginea)* has strap-like foliage about an inch wide and up to a foot long. In Indiana it occurs primarily in deep sandstone ravines, often associated with Hemlock *(Tsuga canadensis)*. It may be seen in Shades and Turkey Run State Parks. Related species with broad leaves such as Blunt-Scaled Wood Sedge *(C. albursina)* and Beech Wood Sedge *(C. laxiflora)* can be found in rich woods throughout the state.

Clump-forming sedges stabilize the soil, provide season-long interest, and complement the native wildflowers. In mesic soils, sedges such as Grass Sedge *(C. jamesii)* and Straight-Styled Wood Sedge *(C. radiata)* are attractive in a woodland garden. In fact Grass Sedge often persists in shady lawns where development has occurred in wooded areas. These species form clumps about six inches high and wide, resembling a small ornamental grass. They are especially attractive when planted with native wildflowers such as Wild Blue Phlox *(Phlox divaricata)*, Bloodroot *(Sanguinaria canadensis)*, and Trout Lily *(Erythronium spp)* to add contrasting color and texture.

Fine-textured Oak Sedge or Pennsylvania Sedge *(Carex pennsylvanica)* is a rhizomatous species that creates extensive patches in dry oak woods in northern and central Indiana. It is especially abundant in sand savannas of northwest Indiana, where it forms the dominant groundcover. Commonly available in the native nursery trade, it is best adapted to filtered shade and sharply drained soil.

Oak Sedge
(Carex pennsylvanica)

Sedges are often erroneously excluded from prairie restorations, when in fact, they fill an important early-season niche in the prairie. Since they are cool-season plants which accomplish most of their growth before the warm-season prairie grasses begin to elongate, they provide early season cover, and competition for exotic cool-season grasses.

Perhaps the best-known sedge of well-drained prairies is Copper Shouldered Oval Sedge *(C. bicknellii)* which is common in upland prairies in northern Indiana. Other characteristic sedges of prairies include Yellow Fox Sedge *(C. annectans)* and Mead's Stiff Sedge *(C. meadii)*. As a prairie becomes wetter, sedge diversity and density increase until the wet prairie grades into a sedge meadow.

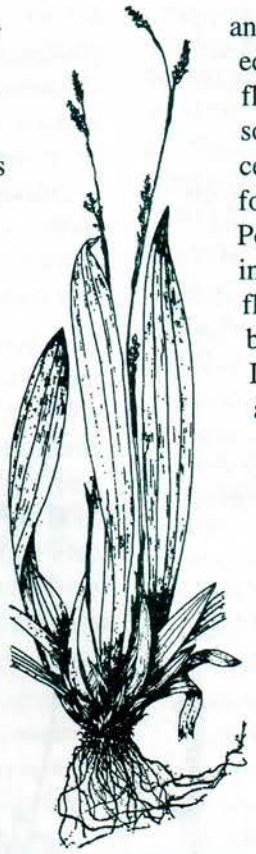
In cultivation, sedges are nearly indestructible, thriving through drought, flood and other extreme conditions. As our most diverse native plant genus, they should be a vital portion of any restoration, as they combine with grasses to make up the graminoid component vital to the stability of herbaceous plant communities. Their interesting forms and textures have a place in every native plant garden. Finally, although initially intimidating, sedge identification is a very rewarding pastime that will greatly enhance any naturalist's enjoyment of our native plant communities.

Kevin Tungesvick is INPAWS Vice President, Program Chairman, and works for Spence Nursery in Muncie. He will lead a hike at Clifty Falls State Park, Madison, on March 14 (see page 16) and will know the name of every single plant you will see!

Sedges have Edges . . .
Gardening with Sedges

by Carolyn Harstad

Grasses have become popular landscaping plants, but most people aren't familiar with a close lookalike–the sedges. Like grasses, sedges can be an effective addition to the landscape. Those species with creeping or running rhizomatous roots are better suited for ground cover, erosion control, or to restore a wetland area. If you want a specimen plant for your garden, choose a native sedge with a clumping growth habit, since clump-forming varieties stay where you put them, only increasing in girth.



Plantain-leaved Sedge
(Carex plantaginea)

Often mistaken for grass, sedges are easy to distinguish by applying the little saying, "Sedges have edges, but rushes are round, grasses are hollow and rush all around." Run your thumb and forefinger up and down the flowering stem, known as a culm, and you will find sedge culms sharply triangular, rather than round like grass stems. Unlike grasses, sedges do not have joints in their culms. The culms of sedges are solid, while most grass culms are hollow.

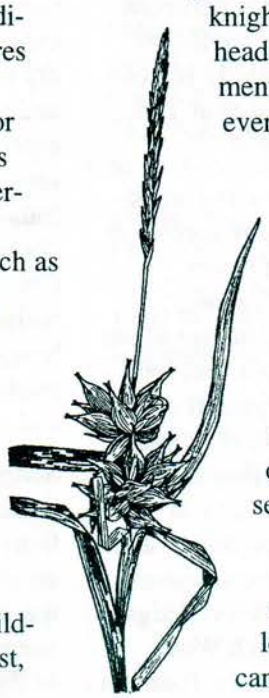
Plantain-leaved Sedge *(C. plantaginea)* is also known as Seersucker Sedge. This clumping sedge has broad, heavily-veined bright green leaves that can be up to one inch wide. It grows one to one and a half feet tall and equally as wide. Arching flower spikes with handsome, nearly black inflorescences emerge before the foliage in early spring. Portions of this sedge, including the base of the flowering stem, are a rich burgundy-red. 'Dr. Richard Lighty' is a cultivar that is almost identical to the species, except that it is smaller, maturing at only 12 inches tall.

Plant *C. plantaginea* in humus-rich, consistently moist, well-drained soil in a shady site. It will tolerate drier conditions if temperatures are moderate. It thrives near ponds or garden pools, and is attractive when interspersed with other woodland plants such as Appendaged Waterleaf, Spring Beauty, and Cut-leaved Toothwort.

Another good choice for the home garden, Carey's Wood Sedge *(C. careyana)* is similar to Plantain-Leaved Sedge, but is slightly taller. This bright green sedge grows among the woodland wildflowers typically found in moist, rich Beech-Maple forests.

Five to ten inflated spikes radiate out in all directions on the striking one-inch wide, ball-like seedheads of Shining Bur Sedge *(Carex intumescens).* This little clumping sedge grows one to two and a half feet tall, prefers moist, acidic soil, and makes a nice accent in the garden.

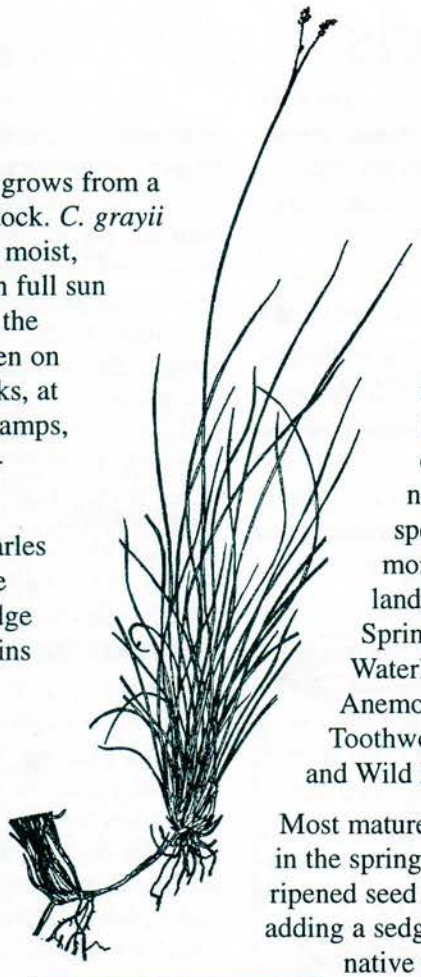
Another sedge with fascinating seedheads is *C. grayii* commonly known as Gray's Sedge, Burr Sedge or Morning Star Sedge. This unique, semi-evergreen sedge grows about two feet tall. Particularly attractive as an accent plant in a garden, it can also be massed or used as a ground cover, and colonizes readily. Just don't let it dry out! Its distinctive, rounded yellow-green seedhead resembles the spiked mace that Medieval knights twirled above their heads in jousting tournaments. These seedheads eventually develop a rich brown color and add interest to a dried floral arrangement. Plant a clump where you can see it from inside the house on a cold winter's day, and enjoy the interesting shadows created by the seedheads as they stand on stiff stems above the leaves. The narrow, light-green leaves of Gray's Sedge can become two to three feet long, but generally remain shorter in hotter climates. This sedge has a narrow



Shining Bur Sedge
(Carex intumescens)

upright form and grows from a short, thick rootstock. *C. grayii* likes consistently moist, humus-rich soil in full sun or light shade. In the wild, it can be seen on the banks of creeks, at the borders of swamps, and in rich woodlands.

According to Charles Deam, diminutive Black-seeded Sedge *(C. eburnea)* retains its fruit longer than any of our other species. It generally grows less than seven inches tall, forming symmetrical, twelve-inch-wide clumps of soft, exceedingly fine, wire-like green foliage. It grows from a rhizomatous rootstock, and is typically found amid woodland plants like Bloodroot, Hepatica, and Mayapple. Black-seeded Sedge, also called Ivory Sedge, is a perfect choice to snuggle in close to the base of a tree, tuck into a rock garden, or to use as a ground cover in a small area. Plant it in sun or partial shade in well-drained soil. This particular sedge prefers an alkaline soil that is dry, sandy, or rocky, but it has reportedly been grown successfully in neutral or acidic soils as well.



Black-Seeded Sedge
(Carex eburnea)

Grass Sedge *(C. jamesii)* resembles lily turf and is effective as a border near a path, sidewalk, or driveway. It has soft, narrow, dark green leaves that rise above the insignificant flowering stalks. Plant it in humus-rich well-drained soil with a neutral pH and intersperse some of the common Beech-Maple woodland wildflowers, like Spring Beauty, Virginia Waterleaf, False Rue Anemone, Cut-leaved Toothwort, Virginia Bluebells and Wild Blue Phlox.

Most mature sedges can be divided in the spring, or you can plant ripened seed in the fall. Consider adding a sedge or two to your native plant garden and try to learn more about these interesting plants!

Often mistaken for grass, sedges are easy to distinguish by applying the little saying,

"Sedges have edges, but rushes are round, Grasses are hollow and rush all around."

Run your thumb and forefinger up and down the flowering stem, known as a culm, and you will find sedge culms sharply triangular, rather than round like grass stems. Unlike grasses, sedges do not have joints in their culms. The culms of sedges are solid, while most grass culms are hollow.

Sources

Britton, Nathaniel Lord and Hon. Addison Brown. *Illustrated Flora of the Northern United States, Canada and the British Possessions.* New York: Charles Scribner's Sons, 1896.

Deam, Charles C. *Flora of Indiana.* Indianapolis: Department of Conservation, Division of Forestry, 1940.

Greenlee, John. *The Encyclopedia of Ornamental Grasses.* Emmaus, Pennsylvania: Rodale Press, 1992.

Swink, Floyd, and Gerould Wilhelm. *Plants of the Chicago Region.* Indianapolis: 4th Edition, The Morton Arboretum, Lisle, Ill. The Indiana Academy of Science, 1994.

Carolyn Harstad is a founder and former president of INPAWS, current newsletter editor, popular garden lecturer, nature photographer, certified Landscape Design Critic, and author of the book Gardening with Native Plants and Wildflowers in the Lower Midwest, *to be published in September by Indiana University Press.*

Native Plants in the Landscape

The Other Dogwoods

by Barbara Wilde

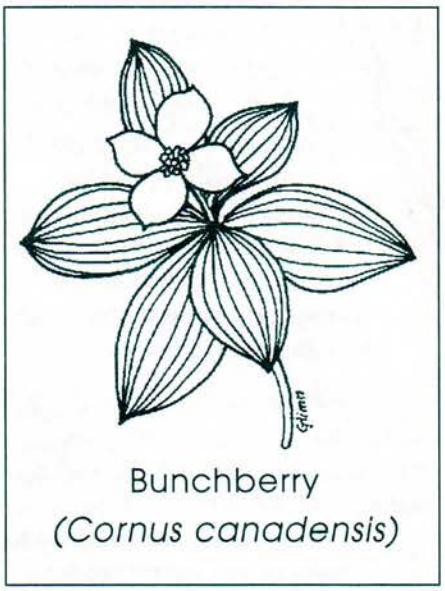
Say "dogwood" and most of us see in our mind's eye the ethereal drifts of white blossoms in our May woodlands. When you add red fall foliage color, shiny scarlet fruits, shade tolerance, patio-tree stature, horizontal branch structure, and handsome bark to its breathtaking floral display, you must admit that flowering dogwood *(Cornus florida)* is the undisputed queen of the genus. What many gardeners don't realize is that there are several less glamorous, but wonderfully stalwart and useful species native to Indiana. All but two of these are shrubs.

Redosier dogwood *(Cornus sericea)*

Redosier is probably the best-known and most widely planted of our native shrub dogwoods. If you want to stick with natives, make sure you don't confuse this species with Tatarian dogwood *(C. alba)* which is its Eurasian counterpart. Many cultivars of both these species are available in the trade. Native to moist and swampy areas of Indiana, redosier is more wet-tolerant and colonizing in habit than its European cousin.

At six to nine feet high and wider than tall, redosier is a robust shrub. Its most distinguishing feature is its colorful deep red bark which lights up the winter landscape. Redosier blooms with flat clusters of creamy flowers in late May and early June. These are followed by fruits which develop slowly over the summer and ripen white in late summer through early fall. You scarcely get a chance to notice the fruit display because the birds immediately strip them. It's the old trade-off between fruits for landscape color and fruits for attracting birds. But most of us native plant lovers are bird lovers as well, and are only too happy to host feasting flocks. Fall foliage is variable with this species, but some individuals do color up to a pleasing purplish-red.

From a landscape point of view, the main attraction here is the colorful stem bark. Many selections have been made that are superior in this department. My favorite is 'Cardinal,' which has unique, brilliant coral-colored bark over the wintertime only. In spring, its stems turn lime green. But there's so much else going on in the summer landscape that I don't mind its lack of color then. And the brightness of its orangey-rose winter bark is much more cheering than the deep, dull oxblood of the species. 'Flaviramea' is a widely available cultivar with chartreuse-yellow stems year-round. 'Silver and Gold' has yellow stems and variegated leaves with creamy margins.



Bunchberry
(Cornus canadensis)

Like all our native shrub dogwoods, redosier is not particular as to soil, which is a real boon to those of us with newly constructed homes and less-than-optimal topsoil. It makes a terrific and fast-growing screen between you and the neighbors. And because of its suckering, stoloniferous habit and rapid, vigorous growth, redosier makes an excellent large-scale groundcover and erosion-control plant. It flourishes best in full sun. Annual early spring removal of one-third of the oldest stems at their bases will ensure a flush of brightly colored new growth.

Silky dogwood *(Cornus amomum)*

This low-key shrub is almost unknown to gardeners but deserving of wider planting. When you need a screening plant in a shady spot where few other shrubs will flourish, consider planting silky dogwood. Similar in size to redosier, it has a more graceful, billowy, irregular habit. Its flowers are similar in look and bloom time to those of redosier, but the fruits are a treasure unknown to most gardeners. These ripen in late summer to various shades of turquoise and steely blue, reminiscent in their beauty of those of porcelain vine. Should you get to them before the birds do, the fruited branches make beautiful additions to indoor arrangements, with their jewel-like berries arrayed on rosy-red pedicels.

As is apparent by now, silky dogwood is a great bird attractor. In the landscape, it makes a graceful understory shrub, especially at water's edge. On the other hand, sharing in the adaptability of our native shrub dogwoods, it will thrive in more open, sunny locations and drier soils. Silky dogwood is native to low, wet woodlands in Indiana.

Gray dogwood *(Cornus racemosa)*

Gray dogwood is the brawny fellow of the three major native shrubby species. Growing ten to fifteen feet tall, it has almost indefinable spread because of its vigorously suckering habit. This characteristic makes gray dogwood a wonderful erosion-control plant, large-scale groundcover, or quick large-scale screening or massing plant. It is unsuitable, however, for small-scale landscapes.

The flowers of gray dogwood are similar to those of the other two species, but borne more profusely at the tip of every stem. Its hour of glory arrives in September, when its leaves color up to a deep purple-red earlier than those of just about any other shrub. The fall foliage provides a dramatic backdrop for the showy clusters of ivory fruits which are relished by over a hundred bird species. I know that most readers must have noticed silky dogwood at this stage in its life cycle along rural roadsides and even within city limits. After the birds strip the berries, the showy, rose-red pedicels (fruit stems) at the tips of the gray twigs continue the season of interest well into the winter.

It's hard to beat gray dogwood for adaptability. Sun or shade, moist or dry, and just about any old soil will do. In a world of landscape plants which often require extensive soil preparation to do their best, such vigor is not to be sneered at. If you need a shrub for a difficult area where there's plenty of room, gray dogwood can be just the ticket. And with no disease or insect problems, or pruning requirements, it's pretty much a plant-it-and-forget-it shrub, a boon to those of us who have better things to do than fuss over our shrub borders.

Two other native dogwoods are of note. **Pagoda dogwood *(Cornus alternifolia)*** is unusual among dogwoods in that–as its Latin name suggests–its leaves are arranged alternately along the stems. All other dogwoods (save one) have opposite leaves. Pagoda dogwood is a real connoisseur's plant. When you learn to appreciate its quiet beauty and beautiful, horizontal branch architecture (hence its common name), you can number yourself among the horticulturally astute (aka plant snobs).

This small tree may be grown multi- or single-stemmed. It is relatively slow-growing, ultimately reaching fifteen to twenty-five feet in height under optimal conditions. And wnile the triumvirate of shrubby species above are so very widely adaptable, pagoda dogwood is allied with flowering dogwood in its preference for moist, acid, partly shaded sites. Its refined qualities are best appreciated at close range in an intimate setting. It is a lovely patio tree, and equally attractive when placed so that its horizontal branches can soften the angles of a building or wall.

Pagoda dogwood has flower clusters that resemble those of the previous three species, and like them, it blooms in late spring to early summer. The flowers are followed by a pretty fruit display, with green, pink, plum, and deep blue berries presented simultaneously in open clusters. Like those of gray dogwood, the fruits are arrayed on attractive rosy pedicels, and are rapidly gobbled by birds. Fall color is usually a winey purple.

The final member of the native dogwood tribe is a rare plant in Indiana, and notoriously difficult in the garden. **Bunchberry *(Cornus canadensis)*** is our only herbaceous species, growing only three to nine inches high. For those who can manage to meet its fastidious growth requirements, it is one of the loveliest groundcovers in existence.

Bunchberry joins pagoda dogwood in having alternately arrayed leaves. These are a glossy, deep forest green and turn incredible shades of burgundy red in fall. And its flowers! Just imagine the blossoms of flowering dogwood, only slightly smaller and less blowsy, with bracts a bit more pointed, poised like stars over that rich green foliage. Finally, in autumn the plant is adorned with jewel-like clusters of shiny scarlet fruits (hence the name "bunchberry"). Truly this plant seems to hail from an elven forest.

Should you decide to try growing it, give bunchberry distinctly acid, moist, but well-drained soil in a cool location. This plant of the Northern Kingdom hates the heat. Beneath rhododendrons or pines is an excellent spot, as its cultural requirements are similar. But avoid spots in deep, dark shade. Bunchberry is best transplanted as a sod cut from an existing planting, but with care and attention to perfect environment, a container-grown plant can be coaxed into staying around.

From stalwart to persnickety, the dogwood tribe offers candidates for a wide range of garden situations. Whether for massing, screening, erosion control, specimen, or groundcover, use our "other" dogwoods to feast your eyes as well as the birds.

Barbara Wilde is a landscape designer, horticulturist, educator, and writer in residence at Mark M. Holeman, Inc. She is the regular gardening columnist for Indianapolis Woman *magazine, and has written for* Horticulture *and* American Nurseryman *magazines. Coauthor of several books for Rodale Press, her garden designs will be featured in the upcoming Rodale book,* Perennials for Every Purpose.

Illustration by Jan Glimn-Lacy.

Eagle Creek Park Nature Center, Indianapolis – Spring Adult Education Programs – *for more information or to register, call 317-327-7148*

Wildflower Identification

with Becky Dolan, Ph.D., Director of the Friesner Herbarium at Butler University.

9 AM, Saturday, May 8th

Learn the secrets of wildflower identification with an expert. Becky Dolan will teach participants in the field techniques needed to identify spring wildflowers. These same tools can then be used for flowers that bloom during other seasons of the year. Rain or shine. The class will conclude at noon. Registration fee $10.00.

Wildflower Photography

with Tom Potter, professional nature photographer.

9 AM to 4 PM, Saturday, April 17

This all-day program begins with an illustrated lecture demonstrating a variety of field techniques, equipment, and critique of participants' photos. All materials and concepts needed to create wonderful floral images will be covered. The afternoon will consist of a photo setup and then supervised field work in which all participants will take photographs of the many wildflowers blooming at this time in Eagle Creek Park. Meet at the Nature Center at 9 AM. Bring photo gear and a sack lunch. Be prepared to get your knees dirty. Registration fee $25.00.

Wonders of the Spring Sky

with Dan Goins, Director of the Martinsville High School Astronomy Program and Planetarium.

Saturday, April 3rd, 7 to 9:30 PM, rain or stars

Explore the wonders of the spring stars and constellations, the myths that cultures created about these marvelous patterns and the science that is informing us about the life and death of these magnificent stars. If the skies are cloudy, Dan has marvelous slides and stories about the heavens. Registration fee $10.00 for adults, $2.50 for ages 17 and under. Under age six participation is discouraged.

Bird Identification

with Tom Potter, natural history and birding tour guide with experience throughout North America, including Alaska and Costa Rica.

3 Tuesdays–April 6th, 27th and May 4th, 7 to 9 PM

Learn identification skills for the more difficult songbird groups as we prepare for the spring migration, especially for warblers, vireos, flycatchers and sparrows, with a view to adding helpful identification notes to our field guides. Registration fee $25.00 for all three evenings.

Youth Nature Photography Workshop

with Kevin Carlsen, award-winning photographer.

Saturday, May 1st, 9 AM to Noon

Designed for young people, ages 8 to 14. Learn the basics of nature photography from one of the best. Kevin will start with an illustrated lecture and then demonstrate the field techniques used to create pleasing and inspiring photos of the natural world. Kevin will then work with each individual, covering such topics as composition, visual perspective and reading of light to create a special image. A 35mm camera and film are necessary. Registration fee $10.00.

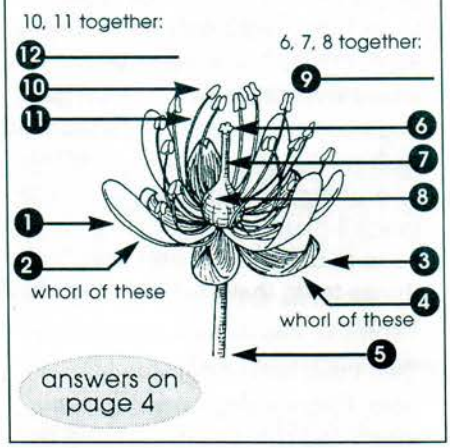
Smoky Mountain Wildflower Pilgrimage

April 20 to 25, 1999

Join naturalists Karen LaMere and Tom Potter for our annual trek to the Great Smoky Mountains to attend the 49th Annual Spring Wildflower Pilgrimage, a program of nature walks, motorcades, and photographic tours throughout the various habitats of the Park. Professional botanists from the region will help us study a variety of plant communities and habitats. Other events will include bird, geology, tree, fern, and cultural hikes and programs, all lead by regional experts. At this time of year many wildflowers will be in full bloom, including showy orchis, yellow ladyslippers, and numerous species of trillium. The trip fee includes transportation to and from Eagle Creek Park, lodging, and Pilgrimage registration. A pre-trip planning meeting will be held on Monday, April 12th, at Eagle Creek Park Nature Center at 7 PM. A $50.00 deposit is due with your initial registration. The balance of $425.00 is due on April 12th. The fee is based on double occupancy.

Yes, this is a quiz!

Can you name the parts of this flower?



answers on page 4

Spring Native Plant Sale and Auction

Saturday, May 15, 1999

Burello Family Center

Garfield Park

- **8 AM to 9:30 AM** donations accepted
- **10 AM** sale begins
- **11 AM** auction begins

Refreshments available
INPAWS items for sale

For more information call Marilyn Spurgeon 317-297-1326

The spring INPAWS plant sale and auction will be held with our co-sponsor, **Garfield Park**, in its new *Burello Family Center*, 2345 Pagoda Drive. Garfield Park is located on the near southside of Indianapolis (south of Raymond Street, west of Shelby Street, north of Southern Avenue).

Share your native flowers, grasses, bushes and trees by donating them to the event. Other gardening items, books, tools, and art work are also appreciated. Plants should be potted at least two weeks prior to the sale to prevent wilting at the sale. Each plant should be properly labeled with its Latin name, if possible, or at least the common name. Donors who would like a record of their donations for tax purposes will be assigned a number to allow an appropriate statement to be sent later.

Bring your donations to the Burello Family Center between 8 and 9:30 AM to allow for proper sorting and pricing. The sale will begin at 10 AM. The more valuable or spectacular specimens will be auctioned, starting at 11 AM, by our own Rolland Kontak, who is well known for dispensing wit and valuable horticultural information during the auction. Don't miss it!

Remember that the income INPAWS has received in the past from these sales has been substantial and is used to further our causes and keep our membership dues low.

If you would like to assist with planning, or helping at the sale, or if you would like to know a source for used pots, please call Marilyn Spurgeon or email her at cspurgeo@iupui.edu.

INDIANA NATIVE PLANT *and Wildflower Society*

MEMBERSHIP APPLICATION/RENEWAL

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

☐ Student $10 ☐ Individual $18 ☐ Family $25 ☐ Patron $100 ☐ Sponsor $250 ☐ Corporate $500

Supporter (Additional Donation) $_____ Total Enclosed $_____

NAME _____ TELEPHONE _____

ADDRESS _____ EMAIL/FAX _____

CITY _____ STATE _____ ZIP _____

COUNTY _____ ☐ NEW ☐ RENEWAL

How did you hear about INPAWS?

3/99

GIFTS DO HELP. INPAWS donors at the *Supporter, Patron, Sponsor* and *Corporate* levels will receive special recognition. All donations above *Student, Individual* and *Family* dues are most appreciated and can aid our mission. Donations are tax-deductible to the extent provided by law.

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

Indiana Native Plant and Wildflower Society, or *INPAWS*

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

I would like information on these committees:

☐ Annual Meeting
☐ Auction
☐ Conservation
☐ Demo Gardens
☐ Fund Raising
☐ Grants & Awards
☐ Historian
☐ Hospitality
☐ Membership
☐ Native Plant Education
☐ Native Plant Rescue
☐ Newsletter
☐ Programs/ Field Trips
☐ Publications
☐ Publicity
☐ Speakers Bureau
☐ Special Projects
☐ Volunteers Coordinator
☐ Other

Tentative Schedule of INPAWS Activities for 1999

details to follow • Kevin Tungesvick, Program Chairman • 765-354-2775

Sunday, March 14, 1 PM
First Signs of Spring hike, Clifty Falls State Park, Madison, Indiana. Spring comes early to our Ohio River counties. Join INPAWS Vice-President Kevin Tungesvick as we explore the canyons and woods of Clifty Falls State Park for the first wildflowers of spring.

Saturday, April 10, 1 PM
Spring Wildflower Hike, Burnett Woods. Join us on a visit to this beautiful flatwoods that INPAWS helped the Central Indiana Land Trust acquire. Division of Nature Preserves Botanist Mike Homoya will lead us through the diverse wildflower community.

Saturday, April 24 and Sunday, April 25
Garlic Mustard Pull at Shades and Turkey Run State Parks. Help keep two of the most beautiful parks in the Midwest from being overrun by invasive Garlic Mustard. Saturday will be at Shades State Park and Sunday at Turkey Run. Wildflower hikes will follow the Garlic Mustard pulls each day.

Saturday, May 15
INPAWS Native Plant Auction and Sale, Garfield Park.

Saturday, June 5, and Thursday, June 10
Work days at Garfield Park. Contact Marilyn Spurgeon, 317-297-1326, email cspurgeo@iupui.edu.

Sunday, July 18, 2 PM
Native Plant Communities on the Golf Course. Join us at Smock Golf Course to see the excellent work that Pro Jan Tellstrom has done in bringing native prairie and wetland plants to his golf course. Stay with us to carpool to other native landscaping sites.

Saturday, August 28 and Sunday, August 29
Two-day bus trip to northern Indiana. Day one will feature prairie restoration at Museums at Prophetstown, Spinn Prairie, and Kankakee Sands. Sunday will feature the Fens of Pigeon River with a variety of beautiful wildflowers.

September
Fall Plant and Seed Sale – date and location to be announced.

Saturday, October 23
Hike at Post Oak-Cedar Nature Preserve in Wyandotte Woods, Harrison County. View spectacular fall foliage and fascinating prairie glades. Join us for a picnic prior to the hike.

Saturday, November 13
Sixth Annual Meeting at the new Indiana Historical Society facility, Indianapolis. Details to come.

INDIANA NATIVE PLANT *and Wildflower Society*

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