



inpaws journal

Indiana Native Plant and Wildflower Society

Summer 2014

The Secret Life of Trees

By Holly Faust

Trees are the largest living things on earth. The impressive blue whale, the largest animal to have ever lived on earth at 100 feet long and upwards of 200 tons, pales in comparison to the largest trees. Some of the tallest

dust and pollen particles carried in the air. An average adult human consumes 651 pounds of oxygen annually. It takes on average 30 trees to offset this consumption. Fifty full-size trees are required to supply the annual oxygen demand of one family's automobile.

Trees' fallen leaves blanket the forest floor, protecting the soil from erosion, keeping it moist and adding nutrients. Trees' leaves and branches greatly reduce the impact of pelting



© S. Dickerson

According to the 2010 Indiana Big Tree Registry, this cherrybark oak (*Quercus falcata* var. *pagodifolia*) is the biggest of its kind in Indiana. It lives on the grounds of the Evansville State Hospital in Vanderburgh County. The tree is 98 feet tall with a crown that spreads 131.5 feet.

trees recorded are over 270 feet high and the heavyweights are recorded at over 6,000 tons.

We only know of the largest trees recorded by man, so this does not include trees of the past 300 million years. And we can only record what is above the ground – not the massive root system that makes up two-thirds of the actual tree.

Trees have provided food, medicine, shelter, clean air and water for the entire planet for over 370 million years. Trees are also the longest living organisms on earth, with some individuals over 5,000 years old.

Trees use their leaves to trap and filter out

Inside

Book Reviews	4, 5
Conference	7
Hikes	10, 11, 12
INPAWS in Action	6
Plant Features	2, 3
Strategic Plan	9

raindrops, sleet and hail. This also reduces erosion and helps water seep into the ground, filling wells and aquifers and keeping streams and rivers flowing at a more constant rate.

These same leaves and branches give a cooling effect to our homes and businesses. One moderate-sized tree has as much cooling effect in a city as 20 average room air-conditioners running 20 hours per day. This is all done with no demand on your electric power! Shade trees can cool your home by as much as 12 degrees on a hot summer day.

Here are two myths about trees that need to be dispelled.

Myth # 1: Trees' roots break sewer lines. Most tree roots are found in the top two feet of soil, well away from sewer lines. Some however do

Trees – continued on page 10

Crash Course in Sphagnum Mosses or Why There Are Very Few Bryologists

By Barbara Plampin

I've rashly let a friend talk me into signing a contract to help him find, identify, and report to the Indiana Dunes National Lakeshore (IDNL) botanist on the sphagnum or peat mosses in Porter County's Cowles Bog Wetland Complex (CBWC), all before September 15th. Several peatlands – including bog, fen, marsh, swamp, and forest – occur in this national natural landmark, which is now under restoration.



*“So far I know
that sphagnums
come in green,
red, and dead
...”*

– Barbara Plampin

So far I know that sphagnums come in green, red, and dead – dead as in hanging basket liners (sphagnums can hold up to 25 times their weight in water) as well as milled (ground up) to add to garden soil, and in chunks for fuel.

I know that sphagnum influences the surrounding plant community, creating such acidity that only special plants like the carnivorous pitcher can thrive in it. I know sphagnum can preserve unlucky mammoths, and I've seen in the British Museum the unfortunate Lindow Man, hypothesized to be the victim of Druidical sacrifice. Legless and flattened under pressure in peat since ca. AD 60, he resembles a highly polished brown leather suitcase.

I could also distinguish sphagnum from other mosses but couldn't explain why until my friend lent me Cyrus B. McQueen's more or less

pocket-sized *Field Guide to the Peat Mosses of Boreal North America* (New England, 1990). Indiana counts as boreal because of ancient climate conditions. Five hundred million acres of peat in North America hold approximately 300 species of sphagnum, of which Indiana is home to about 50. Currently, CWBC sphagnum species are down to six, fewer than hypothesized in a 1984 report.

McQueen helps one key out 26 species without a microscope and provides another key for those that need one. He provides color photos and drawings.

How to identify sphagnums? Tools include a 10- to 20-power hand lens, tweezers, a small metric ruler, perhaps a field microscope, and a permanent marking pen for staining.

Looking down while walking along, I observed erect stems, each topped by a neat to shaggy, somewhat daisy-like head or capitulum (pl. capitula). Only sphagnum mosses have capitula. Capitula come flat, domed, or hemispherical. The flower-like discs (center) are bud-like terminal branches. The rays are longer, more developed branches. Rays may be more or less prominent. Flat-topped capitula may resemble five-rayed stars. The common *Sphagnum gergenshonii* (no English names, apparently, for sphagnums), which McQueen says has stems that snap apart like celery, is especially stellate.

Below the capitulum appear branches arranged in bunches or fascicles. Bryologist Howard Crum writes, “Each fascicle consists of two or more spreading branches and one or more pendant (hanging) branches ... the number and kind of branches in each fascicle are important clues to species identification.” The stem itself also bears leaves.

Identification takes into account the shapes of both branch and stem leaves. Here, because both leaf types come in millimeters, staining them with a marker can be useful. All goes well if plants are anisophyllous, i.e., have distinctly different stem and branch leaves. Such plants often indicate “optimal habitat conditions.” But sphagnums are shape changers. Unfortunately, they may grow under “some hydrologic stress” and exhibit stem and branch leaves differing

Mosses – continued on page 5

Sweetgrass

Holy by Some Accounts

By Michael Homoya

Some say sweetgrass (*Hierochloa odorata*) is sacred, a holy plant. This is even reflected in the botanical name, formed by combining the Greek words *hieros* (sacred) and *chloe* (grass). Sweetgrass occurs naturally in boreal and temperate regions around the globe and is viewed as an essential component of sacred ceremonies by people of several religions.

In Europe sweetgrass, or *Mariengras* (Mary's grass) as it was traditionally known in Germany, was spread in front of church doors on saints' days. Amazingly, on a continent an ocean away, Native Americans used the very same species to construct braids to burn as ceremonial incense. Dried stems of the grass also were used to make baskets for storage of special items including children's dried umbilical cords.

What is it about sweetgrass that it is revered by so many? Clearly, it must be its delightful – make that “heavenly” – sweet scent emitted by its stems and leaves. The fragrance is reminiscent of vanilla, hence another of its names, vanilla grass. The scent is not all that perceptible when leaves and stems are fresh, but develops in the drying process. It persists for years, being especially noticeable on humid days. It also can be burned for incense.

Sweetgrass is a rather uncommon plant in Indiana, occurring sparingly in sunny wetlands in the northern half of the state as far south as Randolph and Tippecanoe counties. It is perhaps most regularly found in alkaline fens and other seepage wetlands – places where groundwater

flows to the surface and spreads in a diffuse manner, usually through highly organic peat and muck soils. It also occurs in moist prairie.

The attractive golden florets of sweetgrass bloom early in spring, usually before most other wetland plants. Typically this is mid-May, but it can be as early as April in some years. From the buried rhizome the mostly leafless flowering stalk emerges and develops first, followed by a separate leafy shoot. The floret is a true flower, just as much so as a lily or rose. Although the flowers of grasses may look different from typical ones, they nevertheless possess the capability of sexual reproduction, the primary function of a flower.

Whether divinely appointed or not, sweetgrass is clearly a plant of high favor. Thus, if you are tempted to gather some sweetgrass, know that finding it in Indiana is not all that easy. Although the long, tapering leaves of sweetgrass are quite shiny, making it rather distinct from other plants with which it grows, one normally finds only a few stems scattered here and there. Given this, and that the plant is not all that common in the state, perhaps the best way to procure leaves and stems of sweetgrass is to cultivate it. It can be grown successfully in cool, moist soil

kept free from competing weeds. A search on the Internet will reveal nurseries that offer it for sale. Enjoy!

Mike Homoya, a botanist with the Division of Nature Preserves, keeps a small sample of you know-what at his desk for his olfactory pleasure.

Reprinted with permission from Outdoor Indiana.



A Jump Start on Flower ID

Or An Easy Guide To Central Indiana Flowers In Bloom

By Amy Perry

Norma Wallman's *Wildflowers of Holliday Park: A Pictorial Guide Organized by Blooming Season* (Self-published, 2013) is not only beautiful, but useful. The book is meant to be used as one

encounters flowers in bloom on the park's trails, but it can be helpful in other locations. (Disclaimer: I assisted with the introductory sections of the book but not the body.)

The park is named for John Holliday, who donated his estate to the city of Indianapolis in the last century. A public urban park of just under 100 acres, it includes wetlands, seeps, floodplain, prairie, and developed areas.

The strength of the 194-page book lies in the close-up color photos and their arrangement not only by blooming season, but also by order of bloom within each season. Except for flowers that bloom across seasons, this arrangement means that flowers not in bloom at the time are already ruled out, thus giving the user a significant head start on identification. The blooms are shown in close-up detail, two to a page, making it easy to compare the photo with the plant you see.

Although the complete leaves are not always shown, usually enough is shown to confirm identification. Also the type of leaf (e.g., lobed, divided/compound) and leaf arrangement (e.g., opposite) are listed. In addition, for every species, the book provides the item number in Kay Yatskievych's

Field Guide to Indiana Wildflowers and the page number in Laurence Newcomb's *Wildflower Guide*, two highly respected references. To ensure accurate identification, the author, not a trained botanist, consulted many reference works as well as professional botanists.

Each entry also provides common name, scientific name, family, bloom dates, number of flower parts, bloom color, whether the species is an Indiana native, habitat, and a comment. In general the comments are useful and interesting, and reading them is like hiking with a knowledgeable and delighted guide.

Helpfully, the book includes weeds and non-native species that were planted when Holliday Park was planned to be a world-class botanical garden. (Some of those planted species have escaped into the woods.) For this reason the book is also useful in other locations. If the flower you are trying to identify is not the exact species shown in the book, it could be in the same genus or family, and the book has given you a head start.

The book lived up to its subtitle in a test on May 14. I pretended I did not know any of the species I saw. I identified seven species out of seven in 27 minutes. Two were species I would not have known without the book.

I encountered only two flowers I could not identify. One was only in bud and the other, it turned out, was in one of the gardens planted by the park staff. I later realized the book does not include the planted gardens per se. A suggestion for improving the book is to specify precisely the locations of the developed areas—the areas whose flowers (although native) are not in the book because they do not occur in the undeveloped areas.

The book fits into a passport necklace, thus leaving room for other items in your pockets or pack. The more than 400 photographs, all taken by the author, make it very attractive. I observed a ten-year-old girl spend quite a while looking through the book and reading it to her mother. I can easily see this book being instrumental in interesting more people in wildflowers and native plants.

I hope the author writes a similar guide to shrubs and trees of Holliday Park. I could use that guide as I walk around my neighborhood. I



Holliday Park – continued on page 9

Three Book Reviews “Stung by Bee Fever”

The Quest for the Perfect Hive

by Gene Kritsky

Oxford University Press, 2010

This book is the history of innovation in bee culture. The story is engagingly written and the photos are very helpful in illustrating some of the ideas and hive designs. I got “stung” by bee fever a couple of years ago. I have been reading books and listening to bee experts and combing the web since then for info on honey bees, native bees and other pollinators. I became interested in types of hives and the history of how they came to be. Kritsky travelled the world to search out the history of how honey bees were domesticated and how we have used bees over the centuries. I was immersed in the world of bees and their relationship with man. I definitely recommend it to anyone interested in how the honey on your table came to be there.

Keeping Bees

by Ashley English

Lark Crafts, Sterling Publishing, 2011

This book is all you need to know to tend hives, harvest honey and more. It is the first book I have read solely about keeping bees. I love that the first chapter is about understanding the bees. From there English walks you through step by step, from how to get started all the way to the harvest of the golden liquid. It is well-written, engaging, informative and demonstrative, a great book for the first-timer. The illustrations are priceless in teaching about the equipment and processes that go along with bee-keeping. Fun read!

The Bumblebee Queen

by April Pulley Sayre

Charlesbridge Publishing, 2005

This is an excellent children’s book, very well-written and beautifully illustrated. The illustrations use native plants and birds in vibrantly colored pictures to simply show us the life of a bumblebee queen throughout

the seasons. It has additional information encircled on several pages. Two pages in the back are titled “More Buzz about Bees”, giving the reader more information and sources to pursue. If you have children, or just the inner child in yourself, to read to, this is a wonderful, fun book about bumblebees. I found it through the Xerces Society web site. This book received the Bank Street Colleges of Education’s Best Children’s Book of the Year Award.

Reviewer Holly Faust is an interpreter with Hamilton County Parks & Recreation and a member of INPAWS Central Chapter.

Mosses

Continued from page 2

only somewhat, in what is called the hemiisophyllous form. When water levels vary, both kinds of leaves may be indistinguishable, assuming the isophyllous form. Enter the microscope and more technical books to examine cell arrangements to distinguish between the merely very difficult and the maddening species.

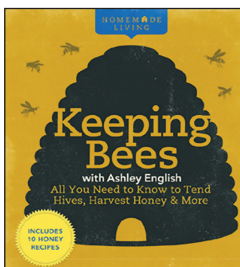
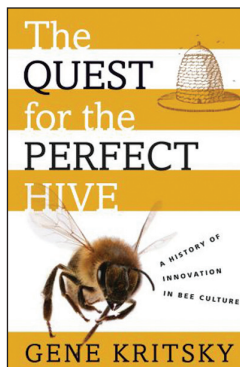
The best time to find differentiated leaves is summer when water levels are most stable. Optimally each species grows in specific water-level, nutrient and light conditions, i.e., wet-to-dry, degrees of acidity, and gradations of light to shade. Match the species to the habitat!

For example, *S. magillanicum* has “plants large and robust, usually forming mats and low hummocks in open bogs ... usually red to purple red, sometimes pink ...” In shade, however, its color is green. Being precise, McQueen gives seven shades of brown, six each of green and red, three of yellow, two pinks, light orange, and “almost black.” His color photos show up to four species cozily intermingling, some nearly indistinguishable from each other. Gather clumps of peat moss and pull them apart?

I still have the cells to face. Maybe my ability to ask questions and my writing skills will get me by in this summer job?

Barbara Plampin is a life director of the Shirley Heinze Land Trust and a field biologist.

Book Reviews



Native Plant Sale Has Wide Impact

INPAWS In Action

By Deb Bonte

The May 10 native plant sale at Park Tudor High School, Indianapolis, was a resounding success! As always, the sale was supported by generous INPAWS members who donated plants from their yards, and by several nurseries. A record number of plants resulted in a very busy day and great sales, which will help fund future INPAWS projects and small and large grants.

Nearly 50 volunteers were involved, including folks who drove the week before to pick up plants at nurseries and members' homes, those who helped with plant rescue digs in parks and yards, and native plant experts who identified and labeled plants the day before and morning of the sale.

Our plant rescue co-chairs, Jeannine Mattingly and Dee Ann Peine, organized several digs, which truly impacted the success of the sale.

A special thanks goes to our morning speaker Sally Weeks, a dendrologist and author from Purdue University. She had a record attendance of 78. Those people were then allowed to enter the sale 15 minutes before the public, and the excitement began!

Riveting discussions ensued as attendees spoke with our volunteer plant experts about what to buy and where to put a plant in their yard. Our longtime auctioneer Mike Stelts conducted the auction of rare and special specimens, and plant experts Hilary Cox, Sue Nord Peiffer and Kevin Tungesvick introduced each plant up for sale with anecdotes and tips on the characteristics of each plant. Some say our auction is like a mini-botany lesson.

At the end of the sale a few plants were left. Some were bought and donated to Daubenspeck Community Park to enhance their woodlands and education program.

People attended from at least 20 counties. They heard about the sale from more than 15 different sources. Besides being INPAWS' largest fundraiser, the sale is increasing the appreciation of native plants around the entire state.

Deb Bonte is 2014 plant sale chair and a member of INPAWS Central Chapter.

Sale Supporters

Cardno JF New, Walkerton
www.cardnojfnew.com/nursery

C.M. Hobbs Nurserymen, Plainfield
Rick Haggard (Wholesale to
INPAWS members)
www.cmhobbs.com

Holeman Landscaping, Indianapolis
Richard Blankenship
www.holemanlandscape.com/plant-sale

Native Plants Unlimited, Geist
Nursery, Fishers
www.nativeplantsunlimited.com/plantsale

Spence Restoration Nursery,
Muncie (Wholesale only)
www.spencenursery.com

Woody Warehouse Nursery, Lizton
Pete Berg
www.woodywarehouse.com

Rene's Bakery, Broad Ripple
www.renesbakery.com

Monon Coffee, Indianapolis
www.mononcoffee.com

Nov. 1, 2014

Plans Set for Conference

By Tom Hohman

The 2014 INPAWS annual conference is still several months away, but speakers have already been engaged and plans put in place for expanded events. The conference will be Nov. 1 at the Bloomington/Monroe County Convention Center. The conference will feature two exciting keynote speakers.

Lincoln Brower

Professor Brower is one of the country's foremost authorities on the monarch butterfly. A leader in conservation efforts, he has studied the habits of the monarch for over 50 years. Dr. Brower is professor emeritus at the University of Florida and a research professor of biology at Sweet Briar College.

Gerould Wilhelm

Jerry Wilhelm is the principal botanist/ecologist with Conservation Design Forum and co-author with Floyd Swink of *Plants of the Chicago Region*. The pair developed the FQA (Floristic Quality Assessment), a practical tool used throughout the continent to evaluate the quality of native plant communities. He is working on a new book entitled *Flora of the Chicago Region: An Ecological Synthesis*.

Additional Speakers

Eric Knox is director of Indiana University Herbarium. Before accepting that position, he worked for 10 years in Africa. He also teaches at IU on plant evolution and the local flora of south-central Indiana.

Ellen Jacquart is director of northern Indiana stewardship for The Nature Conservancy. She is also chair of the invasive plant advisory committee for the Indiana Invasive Species Council and team leader of INPAWS' invasive plant education committee.

Heather Reynolds, associate professor of biology at Indiana University, specializes in plant community ecology. She and her lab group research plant/environment interactions and their applications to the restoration of native

plant communities and sustainable agriculture.

Bill Weeks is director of the Conservation Law Center in Bloomington. He is former executive vice president of The Nature Conservancy and a past director of its Indiana chapter.

Special Hotel Rate

After several years of holding the conference in Indianapolis, it is time to go outside of Indy. This has advantages or disadvantages, depending on where you live. To help those who live far away or just want to get there early, INPAWS has arranged with TownePlace Suites by Marriott in Bloomington for a block of rooms at a special conference rate of \$99.

TownePlace Suites is located at 105 S. Franklin Road, near SR 37/45 and 3rd St. To get this conference rate, call TownePlace at 812-334-1234 and mention "INPAWS". Or, if you go to the INPAWS web site's conference information page, there is a direct link for conference hotel reservations. **Hotel reservations must be made by Oct. 3 to get the conference rate.** There are also other hotels in the area.

Friday Evening Activities

It has been a tradition for INPAWS officers and conference organizers to socialize with the speakers the evening before. This is an opportunity for us to get to know the speakers and help them feel comfortable. This year we have reserved a room at Crazy Horse Restaurant in downtown Bloomington, where we will have an open house (with cash bar) for all conference attendees to meet the speakers. This will be another incentive for those considering arriving early.

Consider becoming a sponsor of the conference or setting up a display for your favorite non-profit organization. A range of prices is available. Exhibitors for non-profits are allotted a space and table for a minimal cost. We have ample space and would like to fill the room with interesting and informative displays. Details are available on the INPAWS web site.

Look for more conference details and speakers' exact presentation topics in the fall issue of the INPAWS Journal. See you in Bloomington!

Tom Hohman is 2014 conference team leader and head of Central Chapter's Invasives SWAT Team.



library.missouri.edu

William P.C. Barton (1786-1856) included this botanical illustration of Rudbeckia purpurea (now called Echinacea purpurea) in his book, A Flora of North America, in which he wrote that while European scientists had studied the plants of the new world, American scientists had neglected their own native plants.

@inpaws.org

Officers

President president@inpaws.org
317-363-1643
Jeff Pitts
Past President pastpres@inpaws.org
812-372-2862
Art Hopkins
Vice President vicepres@inpaws.org
317-263-9655
Karen Bird
Recording Secretary recsecty@inpaws.org
317-595-9545
Amy Perry
Corresponding Sec corsecty@inpaws.org
317-255-1380
Sharon Patterson
Treasurer treasurer@inpaws.org
317-254-1660
Marilyn Frohberg

Landscaping Support landscape@inpaws.org
317-263-9655
Karen Bird
Membership membership@inpaws.org
317-334-1932
Wendy Ford
Native Plant Rescue rescue@inpaws.org
317-626-7343
Jeannine Mattingly
Dee Ann Peine 317-293-6282
Plant Sale Auction plantsale@inpaws.org
317-605-0821
Deb Belle Bonte
Public Outreach public@inpaws.org
317-752-5444
Karen LaMere
Website webmaster@inpaws.org
317-334-1932
Wendy Ford
Youth Outreach youth@inpaws.org
931-216-8373
Dawn Slack

Check out
INPAWS'
great blog at
inpaws.org

Chapter Leaders

Central central@inpaws.org
317-617-4796
Marc Woernle
East Central eastcentral@inpaws.org
765-348-4019
Jon Creek
North northeast@inpaws.org
574-287-8939
Steve Sass
South Central southcentral@inpaws.org
812-325-0968
Steve Dunbar
Southwest southwest@inpaws.org
812-455-1421
Dona Bergman
West Central westcentral@inpaws.org
765-447-2880
Gregory Shaner

Committee Chairs

Annual Conference conference@inpaws.org
317-831-1715
Tom Hohman
Conservation conservation@inpaws.org
317-873-5083
David, Jane Savage
Garden Tour gardentour@inpaws.org
Open
Grants & Awards smallgrants@inpaws.org
Jackie Luzar
Hikes & Field Trips hikes@inpaws.org
Mike Homoya
Historian historian@inpaws.org
317-253-3863
Ruth Ann Ingraham
Invasive Plant Edu. invasives@inpaws.org
317-951-8818
Ellen Jacquart
Journal Editors journal@inpaws.org
812-732-4890
Patricia Cornwell
Kit Newkirk 765-719-0414



©2014

INPAWS JOURNAL is published quarterly for members of the Indiana Native Plant and Wildflower Society. Material may be reprinted with the permission of the editor.

Submissions

All are invited to submit photos, articles, news, and event postings. Acceptance for publication is at the discretion of the editor. INPAWS welcomes differing points of view.

Please submit text and high resolution photos (300 ppi) via e-mail to journal@inpaws.org. Submission deadlines for specific issues are:
Spring—February 15 for April 1 mailing
Summer—May 15 for July 1 mailing
Autumn—August 15 for October 1 mailing
Winter—November 15 for January 1 mailing

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public at inpaws.org.

Share

Please direct information of interest to webmaster@inpaws.org.

INPAWS Strategic Plan

President's Message

By Jeff Pitts

I am writing on the eve of Memorial Day weekend – outside my French doors the air is filled with engine noise from the Hoosier Hundred dirt track race at the State Fairgrounds. I'm looking forward to summer; it was a long winter.

The INPAWS Council, made up of elected state officers, chapter presidents and leaders of standing teams, has met three times so far this year: twice for regular quarterly business meetings and in March for a leaders' retreat. One of our primary goals has been to complete a Strategic Plan. This document will serve as a guide for action, providing structure and steps for accomplishing our mission. I'm excited to report that the Strategic Plan was adopted at spring council on May 13. The time frame spans 2013 to 2016.

The priority goals are to:


- Establish a robust volunteer orientation and engagement process.
- Improve the quality of information available concerning native plants and invasives.
- Expand the youth outreach program to nurture more of tomorrow's stewards of the environment.
- Pursue partnerships and collaborations with other agencies, organizations and schools that could promote native plants as essential to healthy ecosystems.
- Develop a long-term financial and supervision plan that would allow for paid administrative support.

Two additional goals are to:

- Revisit governance structures to clarify state officer roles and distinguish between state and regional chapter responsibilities, resulting in seven *active* regional chapters of INPAWS in the state and updated bylaws.
- Expand the use of communications technology to establish audio/video conferencing, improved use of social networking and increased publicity of all sorts.

Each goal is explained and supported, followed by a framework of objectives and action points for the goal's accomplishment. The adopted plan fits well with my personal passion for maximizing our resources in educating others about the role of indigenous species in maintaining healthy ecosystems, broadening our ranks to include more youth and young adults, and collaborating with like-minded others.

I want to give special recognition and sincere thanks to Wendy Ford. Wendy took the skeleton plan and put meat on those bones. The practicality of the Strategic Plan is a testament to her sacrificial investment of intelligent energy.

The Strategic Plan is a living document, revisable as the need arises. This is an important and exciting step for our Society. 

*There are no passengers on
Spaceship Earth. We are all
crew.*

– Marshall McLuhan

Holliday Park

Continued from page 4

also hope that other parks publish similar guides. If an author doesn't have a database of more than 19 years of observation to start with, like Norma Wallman did, perhaps a synergy can arise between the author and the INPAWS Native Plant Wizard patch program. The children's notebooks could help the author's research. In any case, an attractive, easy-to-use, all-inclusive, scientifically accurate guide can only be an asset to a particular natural location.

Wildflowers of Holliday Park is available at INPAWS events and at the following Indianapolis locations: Holliday Park, the Indiana History Center, the Castleton area Wild Birds Unlimited, Kids Ink, and Indy Reads.

Amy Perry, a retired editor, is Recording Secretary of INPAWS Central Chapter. She is in the process of becoming a DNR-trained Tree Steward.

The Good, the Bad and the Beautiful Schramm Woods

By Sue Arnold

The native plant gods smiled down on Hancock County April 19, and 32 hikers had a wonderful warm spring day to enjoy the 31 acres of woods donated to DNR's Division of Nature Preserves by Armin and Dorothy Schramm in 1999.

We were met by preserve guides Mary Ann and Dave Wietbrock and joined by members of Hancock County Master Gardeners, Joe Whitfield of Greenfield Parks staff, and local Central Indiana Land Trust volunteers.

Several local residents, including Russ Sass and Bob Degitz, have labored on trails, removing fencing and invasives from this old hog farm and cataloging the many wetland trees and wildflowers.

Hike leader Marc Woernle, INPAWS Central Chapter president, handed out helpful Schramm Woods spring wildflower plant lists. (There is also a nature hike guide at the site.) Marc was joined by fellow Cardno JFNew botanist Ben Hess in identifying wildflowers, trees and some of those pesky invasives. We followed a 0.6-mile loop through this National Wildlife Habitat and Certified Forest.

Two hours sped by as the bark and buds of basswood, elm and hickory were compared in between flower sightings. We sniffed roots and bark (spicebush, for example) and explored.

We learned what plants look like before they mature or bloom. It is good to know what invasive dame's rocket and garlic mustard look like *before* they flower, seed and spread evil.

Mayapple, Dutchman's breeches, spring beauty, cut-leaf toothwort, dog-tooth violet, Jack-in-the-pulpit and many other natives were blooming. A bonus was yellow trout lilies, back-lit in the sun, at the base of a deserted rusty combine with trees growing up through it.

Migrating warblers joined us in the woods to make the day perfect.

Sue Arnold is a member of the INPAWS Central Chapter.

Trees

Continued from page 1

grow deep enough to be close to a properly buried sewer line. The roots do not enter the pipe unless it is defective. Once the clay tiled pipe cracks, breaks and leaks, due to earth tremors and soil settling, water and nutrients are released into the surrounding soil attracting the roots into the pipe defect.

Myth #2: Roots surface and damage lawnmowers. Roots are sometimes forced to the surface by shallow rocks and high water tables. Most of the trouble begins with construction activity that disregards the needs of trees. Poor soil excavated for foundations and basements is spread on the future lawn surface and then covered with a thin layer of top soil. This gets further compacted by foot traffic and repeated mowing – erosion follows. Also, excessive raking of leaves, twigs, fruits, flowers and other natural debris prevents new soil from building that normally would cover the roots.

Trees have been found to nurture their saplings with nutrients through their root systems. Trees communicate to each other by chemical codes. When one tree is attacked by an insect munching on its leaves, it releases a chemical into the air that is picked up by other trees of the same species. They in turn produce a chemical in their leaves that makes them less palatable to the insects. This chemical can also be picked up by predators of the harmful insects, increasing their chances of being eaten.

Whether you're into brilliant fall colors, summer breezes blowing through the leaves on a sunny day, the beautiful spring flowers of redbud, buckeye or dogwood, or the bare branches on bare trunks standing stoically through the swirling snows, please remember trees offer gifts to us daily with long open arms. Now draw a breath of clean air and raise your glass as you glance up at the trees. *Salud!*

Holly Faust is an interpreter with Hamilton County Parks & Recreation at Cool Creek Nature Center, Carmel. She is a member of INPAWS Central Chapter.

Hikes



Cornell Coop Ext. Svc.

While anytime is a good time to eradicate invasive garlic mustard, pulling the rosettes in early spring of their first year is a good way to prevent the development of thousands of seeds.

A Forest in the City

Wesselman Woods

By Kathy Eicher

It was an exercise in irony: necks craning to the tops of 100-foot tulip poplar trees, then down to the forest floor to gaze at delicate spring beauties (*Claytonia virginica*) and yellow violets (*Viola pubescens*). Mike Homoya led some 25 participants on an April 12 hike at Wesselman Woods Nature Preserve in Evansville.

The group tried to take in the magnificence of this 200-acre old growth forest while concentrating on identifying spring ephemerals along the paths—the stated purpose of the hike co-sponsored by the IDNR Division of Nature Preserves and INPAWS.

Susan Haislip, director of operations at Wesselman, carried a copy of the 1989 survey compiled by Thomas Westfall, who recorded over 300 species of wildflowers in 56 families in approximately one square mile.

By mid-April, spring would usually have presented an array of wildflowers in this preserve to form an impressive checklist. This year consistent cool temperatures, as experienced through most of the country, delayed the emergence of the spring ephemerals.

Many were still in tight bud, such as dwarf larkspur (*Delphinium tricorne*), Jacob's ladder (*Polemonium reptans*), May-apple (*Podophyllum peltatum*), and dwarf crested iris (*Iris cristata*).

Virginia bluebells (*Mertensia virginica*), cut-leaf toothwort (*Dentaria laciniata*), and large-flowered bellwort (*Uvularia grandiflora*), nonetheless, provided diverse color and form and hints of this preserve's amazing display that is sure to come. Wild blue phlox (*Phlox divaricata*) would open after a few more warm days, and prairie trilliums (*Trillium recurvatum*) were well on their way.

Mike showed us the pleated, dark green leaves of crane-fly orchid (*Tipularia discolor*), which was still holding on to its dried flower stalk and empty seed capsules. The leaves will break down and disappear completely before the plant sends up its one-foot flower spike of small greenish-brown blooms in July.

The seemingly dominant understory tree, pawpaw (*Asimina triloba*), was in bud. Mike noted that pawpaw trees form fruit after pollination by certain flies that are drawn to the

flowers' odor of rotten meat or fruit. Crush the leaves of the pawpaw, he said, and the "scent" is that of diesel fuel. How a smelly tree produces such a sweet fruit is a wonder of nature. *Asimina triloba* is also the host food plant for larvae of the outrageously stunning zebra swallowtail butterfly.

The dominant understory shrub, American spicebush (*Lindera benzoin*), noted for its fragrant leaves and berries, was still in bloom.

Back on the forest floor, we saw the state-endangered, ocean-blue phacelia (*Phacelia ranunculacea*), not yet in bloom. It will produce small, pale blue-violet flowers just 1/8" across in mid- to late April.

The finale of the hike was the native wildflower display garden in front of the nature center, alive with the blue and yellow of Virginia bluebells and celandine (or wood) poppies (*Stylophorum diphyllum*).

On your next visit to southern Indiana, don't miss the opportunity to hike Wesselman Woods, a unique "island forest" in the middle of Evansville. The history of the property, which includes the abandoned remnant of the Wabash-Erie Canal, only enhances the experience of hiking trails canopied by 200-year-old giants.

Kathy Eicher is vice president of the Southwest Chapter of INPAWS.



Barbara Homoya

Mike Homoya leads an April 12 hike at Wesselman Woods.



Indiana Native Plant & Wildflower Society

P.O. Box 501528
Indianapolis, IN 46250-6528
Address Service Requested

Non-Profit
Organization
U.S. Postage
PAID
Indianapolis, IN
Permit No. 229

Nature Preserve Hikes

Indiana Division of Nature Preserves will co-sponsor several hikes in the coming months. Participation is free, but registration is required at www.in.gov/dnr/naturepreserve.

<u>Date</u>	<u>Preserve</u>	<u>County</u>	<u>Co-sponsor</u>
July 12	Conrad Savanna	Newton	INPAWS
Aug. 23	Liverpool	Lake	INPAWS
Sept. 20	Coal Hollow	Parke	Friends of Turkey Run
Sept. 27	Seidner Dune/Swale	Lake	Shirley Heinz Land Trust
Oct. 11	Blossom Hollow	Johnson	Central Ind. Land Trust

From Google Earth, a picture taken near the Adams Mill Oxbow Natural Area in Carroll County