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News and Views from the Indiana Native Plant and Wildflower Society • Winter 2009–10

A Giant Leap Forward

Young Hoosier Conservation Corps Tackles Invasives

Mike Mycroft, Chief of Natural Resources
Indiana State Parks & Reservoirs

Many of us involved with working to maintain natural areas and specific habitat find the battle against invasive plants a seemingly endless war. Though progress may await those of us with will and means in any given year, additional pesky occurrences and species seem to present themselves regularly with each growing season. I know many have experienced the accompanying "one step forward, two steps back" feeling in such cases.

The natural areas and game management units at Indiana's 24 state parks and 9 reservoirs are home to many special communities that flourish to the benefit of plants, animals, and people alike. The parks alone have approximately 100 rare, threatened, and endangered species of plants that inhabit some unique areas.

Governor Mitch Daniels greets YHCC crew at Chain-O-Lakes worksite. Photo courtesy State of Indiana.

Inside

The reservoirs provide diverse habitats for game animals that attract approximately 50,000 hunter efforts annually. Though the primary use and purpose is different between parks and reservoirs, a common challenge of managing invasive plants is shared by both.

Most years, you can find many parks and reservoirs using small hand crews and heavy equipment to address invasive species here and there around properties throughout the system. This has been done for some time, primarily as funding becomes available. Naturally, that never seems to be quite as often as one would like. Using a can-do attitude and a spirit of "do what you can, *when* you can" the Division of State Parks & Reservoirs actively managed 600 acres of invasive plants in 2008—equivalent to one-quarter of the average state park! That's something many of us continue to be proud of. The volunteers, local groups, and sister agencies that helped contribute to that acreage remain just as proud. I like to think of the effort as small, annual baby steps on the way to conquering a larger obstacle over time. But I also wondered if we couldn't jump-start the eradication process in some way.

Colleagues and I often talked about how one or two really solid years of effort could go a long way in managing our issues with invasives. Most of these conversations had all the elements of

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INDIANA NATIVE PLANT
and Wildflower Society

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.

All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

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Spring
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Summer
May 23 for July 1 mailing

Autumn
August 23 for October 1 mailing

Winter
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INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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PRESIDENT'S MESSAGE

Flourishing

One August eighteen years ago, I saw seven or eight tiger swallowtails fluttering on a large pinkish-purple bloom and thought, "What in the heck is that plant?" I bought a field guide and found out it was called joe-pye weed. Over the next few years I fell in love with wildflowers—I didn't really know the meaning of "native plant"—and started finding names for other flowers. About twelve years ago I was sitting at my desk holding a torn off piece of paper with the name Carolyn Harsted scribbled on it with a phone number. When I called Carolyn, she told me about the group called INPAWS, started in 1993 by Ruth Ann and Joe Ingraham, Bill Brink, and herself. She encouraged me to attend the upcoming plant sale in New Augusta. I did, I joined, and I bought the sweatshirt.

I wasn't around at the beginning, but I've been around long enough to watch INPAWS grow into the large, vibrant, enthusiastic, varied group of members that it is today. What a pleasure that has been! Any of you who doubt the uniqueness of INPAWS need to talk with our conference speakers from other parts of the country who shake their heads in amazement over what INPAWS does in a year's time and the commitment and depth and breadth of interest they see in its members.

I thank you for allowing me to serve as your president, and I appreciate the support of those officers who leave their posts along with me: Kevin Tungesvick, Bobbi Diehl, and Kathleen Hartman. The past two years have been the best combination of work and fun!

With the careful planting done years ago, the cultivation that will come from the dedicated and creative leadership of new president Tom Hohman, the officers and committee chairs, and the regular affectionate tending and participation from all of us, I see INPAWS flourishing in the years ahead.

A beautiful, true native.

—Nancy Hill

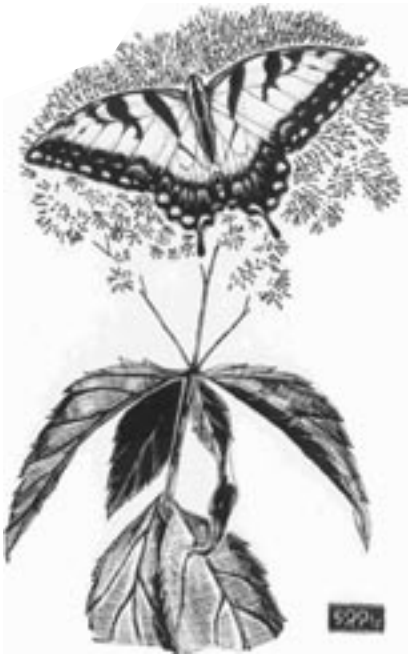


Illustration by Gary Pendleton.

INPAWS PARTNERS

Wildlife Friendly Properties

Through a generous grant from the Indianapolis Power and Light Company, Indiana Wildlife Federation is helping landowners install or restore wildlife habitat on their property.

In neighborhoods or workplaces, or on developing areas, property owners and planners can follow the guidelines established by the Wildlife Friendly Certification Program to create the kind of viable and sustainable habitat currently disappearing from Indiana.

The program requires property owners to

1) avoid, minimize, mitigate;
2) plant with natives;
3) control invasives; and/or
4) connect habitat areas.

Three different certification levels serve as a grading system based upon the number of program requirements met.

Union Township Fire Station recently earned Indiana Wildlife Federation's highest level of Wildlife Friendly Certification: Level 3 Ecosystem Steward—the first municipal building in the state to do so.

This certification marks the site as providing food, water, and shelter to local wildlife. The station boasts a wide array of native grasses and will provide homes for numerous wildlife species. More importantly, this site demonstrates the use of native grasses in stormwater management; the deep-rooted grasses allow for greater infiltration of stormwater rather than sending it downstream.

For more information, download the program brochure:

http://www.indianawildlife.org/documents/Wildlife-FriendlyCertificationProgramBooklet.pdf

Conservation Corps
continued from page 1

expertise, good planning, and execution—to an extent it was hard not to be excited walking away from such dialogue. But the inevitable WHO and HOW would usually grab our elbows and walk us back to reality.

Our world changed greatly on May 1, 2009, when about 1,500 freshly recruited members of the Young Hoosier Conservation Corps began work at each state park and reservoir property. As part of the federal Recovery Act, these young men and women came forth and provided the WHO and HOW we had been searching for.

In addition to painting, drainage work, trail/fence improvements, structural repair, erosion control, mowing, and cleaning, many of these folks were trained and put to work on invasives projects throughout the system. Needless to say, it was a unique experience and education for many. Though the days were often hot and project sites rather remote, most of the YHCC made the best of it and even enjoyed it. I know of two brothers on an eradication crew who even made the work competitive, almost like an old fashioned logging contest, seeing how much acreage they could each manage using hand saws to cut bush honeysuckle.

According to Aron Showalter, reservoir biologist at Patoka Lake, "The YHCC crew has given Patoka those extra sets of hands that were so desperately needed. They have been instrumental in many of our projects that have been neglected in past years due to time and personnel issues." Patoka had long had invasive plant colonies of *Ailanthus* trees and the ever-present autumn olive. With the herbicide provided for the program, the crew was able to cut and stump-spray tree groves in relative short order. They were then sent along 12 miles of

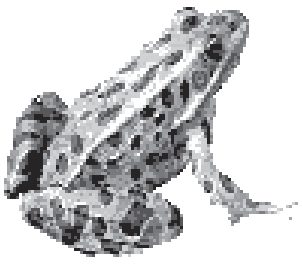
Before and after photos at Salamonie Reservoir. Hoosier Youth Conservation Corps crews cleared acres of understory of invasive honeysuckle. IDNR photos.

lanes, utility corridors, and field edges to foliage-spray autumn olive. “These species had been tolerated for many years, but the YHCC crew enabled us to move from tolerance to eradication,” Showalter said.

Sam Boggs, assistant manager at Pokagon State Park, recently lamented that the ongoing endeavor against invasive plants, begun with a goal of complete removal, often morphed into an encounter with a massive enemy that would not surrender. “The YHCC employees have offered us the opportunity to use the technique of sending forces into the Potawatomi Nature Preserve and selectively removing the aliens from the population,” said Boggs. “Using this technique is seemingly noticeable only to the trained eye and was not feasible without the numbers that the YHCC program has offered.”

Showalter and Boggs are only two examples of those among us who got to witness great progress toward managing invasives this year. In the end, nearly 5,000 acres of invasives were actively managed on state parks and reservoirs in 2009. We are truly thankful for the progress the YHCC made this year. With any luck, we may experience the same success next year and get another opportunity to forge ahead.

Jobs with Young Hoosier Conservation Corps are limited to Indiana residents between the ages of 16-24 who come from economically disadvantaged families. Preference is given to veterans and those receiving unemployment benefits. For more about the program, visit http://www.in.gov/yhcc/



INPAWS and Its Conservation Partners Invite You to…

The 6th Annual

Conservation Day at the Indiana Statehouse

Tuesday, January 26, 2010
9:30 a.m. – 2:00 p.m.

Sponsored by Indiana Conservation Alliance (INCA), a statewide network of over 30 nonprofit organizations providing a unified voice for the protection and wise use of natural resources to enhance our quality of life. INCA priorities for the 2010 legislative session are:

1. Reauthorization of the Lakes Management Work Group, which takes public comments and develops solutions for problems affecting Indiana lakes.
2. Passage of a Renewable Electricity Standard in Indiana.
3. Passage of a resolution to limit phosphorous in lawn fertilizer.

For best impact, contact your legislator ahead of time and invite him or her to attend or meet with you. Conservation Day is a great opportunity to show our elected officials that Hoosiers care about protecting our precious natural resources and preserving our environment. It’s your chance to engage legislators in the matters that mean most to us. You’ll also meet and network with like-minded people in conservation organizations throughout the state.

The more people who come to Conservation Day, the bigger the impact, so carpool with co-workers, friends, and family or take a brisk walk to the statehouse, and help make a difference!

Thanks to sponsor donations, registration for Conservation Day is FREE. Pre-registration preferred by January 16 at www.nature.org/indiana (click on Events) or 317-951-8818.

9:30 a.m. Discussion of Conservation Priorities
Indiana Government Center South

12:30 p.m. Reception with Indiana Legislators
North Atrium, Indiana Statehouse (dessert buffet, conservation awards, displays by INCA partners)

Location: 200 West Washington Street, Indianapolis, IN 46202. Park at White River/State Museum State Park or Circle Center Mall.

INPAWS Talks Native Plants at Hoosier Outdoor Experience

Tom Hohman, IDNR, INPAWS President-Elect

When the first annual Hoosier Outdoor Experience was held September 25-27 at Ft. Harrison State Park, INPAWS was there demonstrating the connection between native plants and wildlife.

The Experience aims to give visitors without a background in outdoor-related activities a chance to learn from people already participating in those activities, and often passionate about them. The hope is to ignite interest and overcome the initial reluctance that stems from uncertainty as to how to get started.

Many varied interests were represented at this inaugural event presented by the Indiana Department of Natural Resources, from fishing, boating, and hunting to hiking, bird watching, and off-road vehicles.

In addition to the usual INPAWS native and invasive plant display items, the INPAWS booth included information on butterflies and the migration activities of the monarch butterfly. The intent was to show the connection between native plants and wildlife.

On Saturday, Reni Winter, owner of Winterhaven Wildflowers & Native Plant Preserve and president of INPAWS West Central Chapter, explained to visitors the life history of the monarch. She demonstrated the tagging of monarchs to help track their migration. Ann Richardson of the Monarch Larva Monitoring Project brought her displays and butterflies on Sunday.

Losing Paradise?

Art Exhibit Showcases Endangered Plants

Goldenseal (*Hydrastis canadensis*). Watercolor by Gillian Harris.

Kay Yatskievych, Editorial Consultant, Missouri Botanical Garden

INPAWS member Gillian Harris's beautiful watercolor painting of goldenseal (*Hydrastis canadensis*) was accepted for inclusion in the art exhibit "Losing Paradise? Endangered Plants Here and Around the World." The exhibit includes 44 works showing plants that have been listed as endangered or threatened in the country in which they are found.

In addition to Gillian's goldenseal, seven other plants that are found in Indiana are represented in the exhibition: *Cyperus*-like sedge (*Carex pseudocyperus*), Pitcher's thistle (*Cirsium pitcheri*), pink lady's slipper (*Cypripedium acaule*), yellow lady's slipper (*Cypripedium parviflorum*), wood lily (*Lilium philadelphicum*), glade mallow (*Napaea dioica*), and royal catchfly (*Silene regia*).

The exhibit was organized by the American Society of Botanical Artists with assistance from the Smithsonian's National Museum of Natural History and also from the Center for Plant Conservation, which is housed at the Missouri Botanical Garden. The exhibition catalogue states that its purpose was "to tell two stories, those of the continuing relevance of botanical art and the often neglected story of plant endangerment."

In his introduction to the catalogue, MBG President Peter Raven says that the work of the artists makes it clear that plants are "a priceless resource.... Each is the unique product of billions of years of evolution, a storehouse of properties that we are only beginning to understand, and a source of opportunities for enhancing human life in the future as well as for nurturing our souls."

The show opened at Missouri Botanical Garden and was on view there through November 19, 2009. Showings scheduled for 2010 include:

Jan 16–Apr 11 Chicago Botanic Garden, Glencoe, IL
May 6–July 25 New York Botanical Garden, Bronx, NY
Aug 14–Dec 10 National Museum of Natural History, Washington, DC

The American Society of Botanical Artists is seeking other venues for the exhibit; check their website for updates (www.amsocbotartists.org). The full-color catalogue of the exhibition, also available on the website, provides information about each of the plants and the artists who depicted them.

Both Winter and Richardson fascinated visitors by recounting the incredible journey of the monarch in its annual migration to isolated regions of Mexico. They also explained how the future of the monarch is imperiled by loss of habitat and reduction in numbers of the larval food plant, milkweeds.

A big hit with visitors was INPAWS's new interactive display on butterflies and native plants. (See story page 16.)

Although cool, rainy weather kept the crowds smaller than hoped for, Hoosier Outdoor Experience was considered a success.

IDNR has already announced that they will hold the event again in 2010, on September 18 and 19. Long-term forecasts predict warm and sunny weather for both days! So mark it on your calendar and plan on coming. Even if you are already active in outdoor activities, you will find new ideas for things to do or organizations with which to become involved.

For more information, visit www.in.gov/dnr/5009.htm.

Photos by Wendy Ford and Tom Hohman.

LETHA'S YOUTH OUTDOORS FUND

Into the Woods

In the fall of 2009, Letha's Youth Outdoors Fund funded two more classroom applications, bringing the year's total to ten.

The first grant went to a Bloomington High School biology class that sought to participate in a watershed analysis project in cooperation with the Sycamore Land Trust. The application evidenced a clear research focus with a goal of producing a formal report showing comparative analyses between two sites. The funding request was primarily for transportation of 56 students to take water samples, make some tests in the field, and return to the classroom for further testing. Sycamore Land Trust and Monroe County Parks staff provided leadership to the activity. We look forward to a promised copy of the final report of this project.

The second grant was for a first grade field trip for 150 students to Eagle Creek Park in early November. Time of year suggested possible weather concerns, but post-trip photos show sunny conditions and excited children running about with insect nets, turning over rocks to see what's underneath, and kicking up leaves on the forest floor. Inside the Nature Center they were introduced to box turtles, opossums, and frogs. Thank-you letters composed by the students proved a challenge to decipher but were much appreciated. Many spoke of the simple joy we all know of walking in the woods. What made those comments especially poignant was a comment in the application where the teacher wrote, "Some of our children believe that elephants, tigers, bears and other nonnative species [occupy Eagle Creek Park]. We would like to give the children the opportunity to explore the woods [and] discover what animals actually live in Indiana."

The Bloomington biology teacher sounded the common concern that it is becoming increasingly important for students to experience more of the natural world: "As we become more and more technologically rich, I see students becoming more and more isolated from their environment, with many of my students actually expressing fear of the outside world."

Linking students to the natural world is the primary mission of Letha's Youth Outdoors Fund. We express our sincere thanks to the INPAWS members and friends who have contributed funds to make this effort possible.

REFLECTIONS

My Garden

Gene Bush, Munchkin Nursery

Sitting on my garden bench under the pine trees, the quiet was similar to the still of a cathedral. Like a child at church, I began to fidget after ten minutes or so, right on schedule with children of most any age.

Poking the toe of my work boot into the mulch, I nudged a fallen branch. It rolled over to reveal a busy colony of roly-poly bugs. Succumbing to temptation, I picked up the rotting branch so I could touch the midsection of each bug and watch it curl into a tight ball. Pillbugs are supposed to be a bane to gardeners, but I could not bring myself to harm the colony I had uncovered. They were doing what roly-polys normally do—hide under dead stuff and dine on our discards. As I continued to reflect on the roly-poly destiny, each one eventually uncurled and headed for someplace out of the light. It was time for the next distraction.

The eternal question then presented itself to me: Do little boys of any age find frogs, or do frogs find little boys? There one sat, staring at me with those two enormous eyes, sending out signals of "pick me up." A cynic in my old age, I questioned this come-on. Was his attention directed at me or the roly-poly colony I had uncovered? Attraction or lunch? I decided it was lunch and let him remain where he sat. The frog decided I was not going to bite and he needed to, so he hopped on in short bursts, disappearing as his green form blended into the foliage and shadows of my flowers.

Roly polys courtesy of dkimages.com.

Dear [INPAWS] Friends: Thank you for the study trip. My favorite part was...when I cech bugs (DeWayne)...wen me an my fren cac burfli (Catherine)...the frog (Zionie)..the boxtrtol becos it lookt like a ninjutrtol (Christopher)... woken in the wuds (Cristina, Jihad, Yosaria, Jonathan)...Your Friend [First Graders of Deer Run Elementary]

Swinging around on the bench to get up and go back to weeding in my garden, I noticed movement in the bird house in a pine at the edge of the woods. Too late for the house to be used by the chickadee, I mused; they had raised their family and taken flight. Careful watching confirmed that the movement was all wrong and, besides, chickadees did not have necks that long. A garter snake had climbed the tree and moved into the bird house! Giving him the benefit of the doubt, and having seen many Disney films, I assumed the snake was subletting from the chickadee family.

Redirecting my attention from the garter snake residence to my weeding, I saw a butterfly flutter by on her way to the next flower. Animal tracks told me that, sometime before dawn, deer had walked through the garden. I could not see any damage from their browsing, but I did notice that Ms. Bunny had chosen to cut my azalea stems in half—helping me prune, I suppose, but a more selective sense of timing would have been appreciated.

And all these years I had thought this was *my* garden…

Gene Bush writes and gardens in southern Indiana. His mail-order nursery at www.munchkinnursery.com specializes in ornamental shade plants.

New INPAWS Members

CENTRAL
Robert & Nancy Aram
Susanne LaMar Barnett
Phil & Sherry Cartwright
Jo Caudill
Jane Diedrich
Joan Haaf
Ilonka Herber
Beth A. Hirtzel
Glenn Lange
Tina Mackoy
Bill McKnight
Tilden & Cathy Mendelson
Christopher E. Moore
Edward Myers
Nancy E. Myers
Sarah & Paul Nahmias
Mark & Tarera Pauli
Jeff Pitts
Jim Plant
Michael Quinn
Maria Teresa Rizzo
Carl Smith
Katie & Jim Smith
Ella Spreckelmeyer
Joe & Elaine Whitfield
Deb Woodward

EAST CENTRAL
Alexandra Forsythe
Judy Schulz
Joann & John J. Smith

SOUTH CENTRAL
Casey Carrigan
Julie Davis
Diana Elkins
Betsy Gast-Bray
Dennis Hauersperger
Bennita & John Kennedy
Greg Meyer

WEST CENTRAL
Violet Seiwert
Ed Zschiedrich

OUT OF STATE
Sean Donovan
Jean Durbin

What's In a Name?

Rare Plant Discovered in Harrison County

Patricia Happel Cornwell, INPAWS Member

As a youngster, I roamed my family's farm on foot and on horseback. I knew when and where to find grape hyacinth, fire pink, spotted jewelweed, black-eyed Susan, mistflower. I remember the moment I saw my first rose pink, blooming in a hay field after the baler had come and gone. I remember my awe at the chartreuse star outlined in scarlet at the heart of each pink bloom.

After living in New Albany for many years, in 1997 my husband John and I decided we wanted "more trees and fewer people," so we moved to 19 acres in Harrison County, six miles from the Ohio River. We share this place with many creatures, and every time I think there is nothing left to learn, I am humbled by another discovery.

Last August 10, I noticed an unfamiliar plant at the edge of our woods. Above an upright six-inch stem were six sets of leaflets, the lower three smaller by half than the upper three. Each set was composed of three pairs of paddle-shaped leaves which, being broader at the tips than at the stems, looked as though they had been put on backwards. In the leaf axils hung three tiny white flower buds. It was faintly reminiscent of the low-growing sensitive-pea (*Cassia nictitans*) at the corner of the garage.

I photographed the plant and browsed six field guides for white flowers and opposite obovate leaves. I found nothing.

Five days later, the white buds were drooping, five-petaled yellow blossoms. I took more pictures and went back to the books. Wild senna (*Senna marilandica*) and partridge-pea (*Cassia fasciculata*), big brother of sensitive-pea, have similarly pinnate but pointier leaves and hold their flowers erect.

One by one, the flowers dropped their petals, unveiling two slender pods. Over the next few days, the pods grew like Pinocchio's nose until they were two and one-half inches long.

It had been years since I had seen a plant I couldn't identify! I got out my books and dug in my heels. Since my Rumpelstiltskin plant most closely resembled the sennas, I studied every pea-family description and footnote, with or without photo. Finally, in Kay Yatskievych's *Field Guide to Indiana Wildflowers*, I came upon her drawing of the egg-shaped leaves of blunt-leaved senna, *Senna obtusifolia*. Even without a photo, I had my ID.

Senna obtusifolia is a rare native in Indiana. According to Yatskievych's 2000 guide, the plant had been found only in Dearborn County, 90 miles northeast of Harrison County. She has since received a report of it in Spencer County, 38 miles west of Harrison, but says, "It's along a railroad, so was probably introduced."

Michael Homoya of the Indiana Department of Natural Resources says blunt-leaved senna has also been reported in Pike and Daviess, two contiguous counties 70 miles northwest of Harrison and 30 to 45 miles north of Spencer. All five sites are in the southern third of Indiana.

Observation of my rare find continued. In late August, morning temperatures slipped into the low fifties, and I found the sennas had folded up their leaves like prayer plants (*Maranta leuconeura*).

In September, I found two more blunt-leaved sennas at the edge of our woods. Each was 19 feet from the first plant, in opposite directions. One was 11 inches tall with only two sets of leaflets and one pod. The other was a mere four inches tall, with two sets of leaflets and no pod. I walked the entire woods border and fence line but found no more specimens.

My references told me blunt-leaved senna typically blooms in August or early September and tolerates drought and poor soil. It is a slow-growing annual, but can reach two feet tall. Although this species prefers full sun, my specimens may be "shorties" because they germinated in deep shade under low-hanging trees.

On September 29, I discovered that the four-inch senna had produced a belated flower bud. I began a daily vigil to see if it would bloom now that temperatures and the duration of daylight were dropping. It was in a dark, unpromising spot behind a log pile, and its big sisters had already gone to seed. The weather turned rainy. At 2:00 p.m. on October 21, I found the little green optimist in a narrow shaft of light where I had thought none could reach. On October 24, it enjoyed another brief hour of sunshine. Its petals appeared slightly looser. Would it bloom after all?

The wind blew lustily all the next day, and the following morning the senna's bud and half its leaves were gone. The larger sennas had let go their brown seedpods.

The species grows in 25 states, 24 in the eastern U.S. plus—take a giant step—one in California. The plant also grows in Puerto Rico, the Virgin Islands, and Hawaii. In most of these locales, it is introduced (it's a safe bet no bird flew cross-country to plant that first senna on the West Coast). In our region, blunt-leaved senna is found in a few counties of Kentucky, Tennessee, and Illinois, although it is absent from my Kentucky wildflower books. Oddly, Ohio is a total blank in this senna's map.

Senna obtusifolia is also known as "sicklepod," because its pods resemble a curved sickle blade, or as "Java-bean" or "coffeeweed." It was previously considered a bean of the *Cassia* genus. (Two plants of the *Arabis* mustard genus also bear the confusing common name of "sicklepod.")

Blunt-leaved senna is not welcome everywhere. An Illinois website says it invades soybean crops in the southeastern U.S. and even contaminates soybean oil if its toxins are not removed in processing. Wiley InterScience, a weed website, calls *Senna obtusifolia* an "invasive weed of northern Australia," where it reportedly has a significant negative impact on agriculture. Scientists have found a saving grace, however. This senna's seeds have edible nutrients, making it a potential pet food ingredient.

Two good sites for more on *Senna obtusifolia* are http://plants.usda/gov/java/profile

and www.illinoiswildflowers.info/prairie/plantx/sicklepodx.htm.

When we first moved to our country home, I told a city friend about seeing birds here that I never knew existed and showed her a picture of a towhee. She asked, "Now why is it that you want to know their names?" I stammered, "Because—they're the only neighbors we have out here."

I've been thinking about that question ever since. Why *am* I driven to know the names of wildflowers, trees, birds, snakes, turtles, insects?

What I couldn't articulate then I can now. "Humans seldom value what they cannot name," and, conversely, we seldom name what we do not value. The earth's biodiversity will be preserved only if we stop to ask our neighbors' names. That includes people who look or speak differently than us, birds and animals who share our space, and even that rare, odd little plant at the edge of the woods.

"Humans seldom value what they cannot name." —Biologist Elaine Brooks, quoted in Richard Louv's *Last Child in the Woods*

***Senna obtusifolia* flower (left) and seed pod (above). Photos by the author.**

THE LATEST INVASIVE THREAT

Japanese Chaff-flower *Achyranthes japonica*

Richard B. Lyons, Indiana Master Naturalist Volunteer

It's an all too familiar story of a non-native plant finding its way to our shores and discovering that conditions are ripe for it to go hog wild.

Japanese chaff-flower (*Achyranthes japonica* [Miq.] Nakai) was first reported in the U. S. by Hal Bryan (Kentucky Division of Environmental Analysis) and John MacGregor (Kentucky Department of Fish and Wildlife). In 1981, they found and collected a specimen on the banks of the Tug Fork of the Big Sandy River in Kentucky.

Since then it has rapidly spread along the Ohio River and its tributaries. It can probably now be found in every Indiana County that borders the Ohio River, not to mention its dispersal in Kentucky and Ohio. It has wreaked havoc on our native flora ever since.

A fierce competitor, Japanese chaff-flower easily outcompetes our native wildflowers. Once established in an area, it spreads aggressively, forming dense rhizomatous colonies that crowd out other vegetation. It was originally reported as a plant of shaded river valleys and flood plains, but disturbingly, it has recently been found spreading inland along ATV and hiking trails, into open fields, and high up the slopes of river bluffs.

Photo by the author.

Achyranthes japonica was first reported in Indiana in 2003 by Richard Maxwell and William E. Thomas, botanists from the Indiana University Southeast Herbarium. Its spread in our state has been rapid and damaging. It is posing a grave threat to many of our native species and may prove to be one of Indiana's and the nation's worst invasive plants.

Look for this perennial in mid-summer when it undergoes a burst of growth, attaining a height of 1 to 1.5 meters (3 to 5 feet). It starts to flower around mid-July and continues through September. The leaves are simple, entire, and opposite. Flowers are dense green cylindrical spikes with fruits developing on the lower part of the spike as flowering progresses. Fruits are drooping, reflexed, achenes containing an individual ovate seed. Plants can have from 10 to 60 fruits per flower spike with 20 to 40 spikes per plant.

When in seed, it resembles lopseed (*Phryma leptostachya*), but lopseed has serrate leaves and Japanese chaff-flower's leaves are entire. Before it flowers, it is hard to distinguish from the rare eastern bloodleaf (*Iresene rhizomatosa*), but after flowering it is readily discernable.

As a member of the Amaranths, Japanese chaff-flower shares the family capacity for prolific seed production. Mature plants can produce five hundred to two thousand seeds each. When one takes into consideration its natural tendency for dense colonization, with as many as one hundred mature plants in a square meter, and its high seed production, it's easy to see why this plant is spreading so rapidly. The seeds are dispersed mainly by floodwaters, but they also cling to clothing, animal fur, and feathers by needle-like bracts. Fruits can persist on the plant well into winter, attaching themselves to any passerby. In many cases they are being transported to sites a great distance inland from our waterways where they are developing new seed-producing colonies.

You can help prevent the spread of this invasive by early identification and eradication. As with many new invasives, methods to deal with it are still being worked out. At this time, keeping it from establishing itself in an area is the best defense. Because of its well-developed root system, Japanese chaff-flower is impossible to hand-pull. The use of an herbicide may be the only viable method of eradication.

References

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Maxwell, R. H. and Thomas, W. E., 2009, Distribution Records of Southern Indiana Vascular Plants III. Proceedings of the Indiana Academy of Science 118(1):31-38.

Jones, R. L., 1985, Plant Life of Kentucky, The University Press of Kentucky, Lexington.

What a Snow Plant Can Do

Barbara Plampin, PhD
Shirley Heinze Land Trust

Take heart, teachers of slow learners. Your pupil may become a highly respected plant ecologist with a PhD!

Part 1

Since his hiring as a data analyst at the Indiana Dunes National Lakeshore in 1983, my mentor, Noel Pavlovic, has been helping Dunes flora by studying their survival techniques, learning how to cope with invasives, and finding new native species in the Lakeshore. He takes time to rejoice with me about my finds and to help identify them.

Full title: Dr. Noel Bruce Pavlovic, Research Ecologist, Lake Michigan Research Station of the Great Lakes Science Center, Biological Resources Division, U.S. Geological Survey, Porter, Indiana. Noel's 16-page résumé looks frightening. Hear his infectious laugh at a meeting and examine the items on his office door, and you realize he's very approachable. Favorite item: clipping showing an Australian botanist demonstrating a rabbit-powered lawn mower.

As well as conducting research and being senior author of numerous reports and articles, including the *Pitcher's Thistle (*Cirsium pitcheri*) Recovery Plan* for U.S. Fish and Wildlife, and reading papers to learned and not-so-learned societies at home and abroad—for example, talking to Australian graziers about conserving arid land—Noel can explain the behavior of his dissertation topic, fame flower (*Talinum rugospermum*) whose flowers open only between 3:00 and 6:00 p.m., to Lakeshore hikers and the Karner blue butterfly lifecycle to third-graders. Noel is also Clerk of Duneland Friends Meeting and makes Bûche de Noël. Best of all, he's a super plant detective.

Botany captured Noel's interest when, at age six, he had to be dragged away from a red flower (snow plant, *Sarcodes sanguinea*) pushing up through Yosemite snows and continued when, in eighth grade, because of the eye problem from premature birth that still plagues him, he compensated for membership in the slow learners' class by teaching himself mushrooms.

A biology major at Earlham College, Richmond, Indiana, Noel later received a Graduate Diploma in Science with Merit from the Australian National University. (Another office door item: Noel's picture as a lanky, uniformed schoolboy when he was a Rotary International Exchange Student in Campbelltown, New South Wales.) While working as a Housekeeping Associate (janitor) at a Bloomington department store, after hours he taught himself sedges and grasses at the Indiana University Herbarium.

Next Time

Noel and plant detection, including bittersweet (*Celastrus scandens* and *C. orbiculatus*), blue hearts (*Buchnera americana*), and little elephants (*Spiranthes ovalis*).

Distributed largely in the West Coast states, native snow plant in full bloom. (Photo courtesy chestofbooks.com.) Inset shows buds that attracted our budding ecologist. (Photo courtesy Wikimedia.) In real life, both bud and bloom are a brilliant red.

INPAWS Small Grant Program Guidelines

Deadline February 1, 2010

The Small Grants Program supports projects that are in line with the mission of INPAWS. Awards of up to $1,000 can be used in conjunction with other sources of funding 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. Successful awardees **must prepare a report to share with the INPAWS membership** after the project is completed. From time to time, **larger awards may be made** for special projects by presentation to the Executive Committee. All requests must be made in writing with a clear statement of how the award would further the mission of INPAWS and benefit our membership.

Application Procedure

1. Cover sheet, including: name of project; amount requested; location; applicant/contact person information (name, address, telephone, e-mail); new or existing project; category that best describes the project—research, training, education, conservation and habitat, demonstration garden, etc.; prior INPAWS funding.

2. Text of proposal, not to exceed two pages: (a) summary of the project, not to exceed 50 words; (b) clear, concise description of the project, including: How does the project further the INPAWS mission? Why is the project needed? Specific objectives to be achieved. Specific information on how INPAWS grant funds would be used, including a detailed species list of all plants and seeds to be used. Who benefits from the project—number who benefit and how. Names of organizations involved, if any, with a brief description of each, including number of members. Financial resources committed to the project from other sources, if any. Anticipated starting and completion date of the project.

3. Budget sheet, showing: (a) labor, material, and program costs; (b) sources and amounts of funds already raised, if any; and (c) total cost of the project.

Two Ways to Submit Your Proposal

E-mail (preferred): Send 1 copy to smallgrants@inpaws.org, noting the name of your project in the Subject line.

Land mail: Send 4 copies, postmarked by February 1, 2010, to INPAWS Small Grants Program, P.O. Box 30317, Indianapolis, IN 46230-0317.

Tallamy Rocks Clowes Hall

In a return Indiana engagement initiated by INPAWS members Karen Hartlep and Kevin Tungesvick, University of Delaware entomologist Doug Tallamy drew a huge crowd to Butler University on November 3. More than 1,200 attended his lecture at Clowes Memorial Hall and stayed afterward to enjoy refreshments and get books signed. Copies of Tallamy's book, *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants*, now in a second (paperback) edition, sold out before the lecture began.

Chief sponsors of the event were Butler University's Center for Urban Ecology, Friesner Herbarium, and Woods Lecture Series on Science and Mathematics. Additional support was provided by INPAWS, Indiana Wildlife Federation, IMA Horticultural Society, and Marion County Soil & Water Conservation District. Butler hosted an elegant pre-lecture speaker reception for leaders of the sponsor organizations and those who put up lobby displays—possibly the first Indianapolis social event for so many like-minded advocates!

Tallamy commented that nobody made him feel as welcome as folks from Indiana. The organizers, led by past INPAWS president Becky Dolan, considered the event wildly successful and basked in the glow for days afterward.

Central Chapter Icebreaker Scheduled

Central Chapter will shatter the winter blahs with its second annual Icebreaker on Saturday, January 16, 2:00 to 5:00 p.m., at the Indianapolis home of Ruth Ann Ingraham. Members are invited to bring refreshments to share and enjoy conversation with fellow native plant enthusiasts.

IPS Environmental Magnet School May Lose Learning Ground

Cold Spring School, Indianapolis Public Schools' K–8 environmental magnet, may lose title to the very woodlands and wetlands that are its teaching tools.

IPS administration proposes to sell the land, which is part of the wildlife corridor shared with Marian University's EcoLab southwest of the Cold Spring campus, in order to raise cash for the district's other pressing needs. Its preference would be to broker a deal with Marian University, but if that does not happen by April 1, 2010, the property may be offered for sale to the public, including developers.

Several INPAWS volunteers have been working with the Cold Spring staff and students on a native plant demonstration garden. Along with volunteers from other partnering organizations, they are gathering evidence to inform the IPS School Board before it rules on the administration proposal. For details, visit www.landscapefancies.com/Friends of Cold Spring School/index.htm.

F I E L D N O T E S

Annual Conference Kudos

Congratulations to the INPAWS Annual Conference Committee for an outstanding day of inspiration, edification, and camaraderie! More than 200 attended the conference at the historic Athenaeum, finding driving routes that enabled them to avoid conflict with the Indianapolis Monumental Marathon that passed within shouting distance.

Following President Nancy Hill's roundup of the year's activies, new officers were elected for 2010–11: Tom Hohman (president), Art Hopkins (vice president), Janice Gustaferro (recording secretary), Hilary Cox (corresponding sectretary), and Clare Oskay (treasurer).

Speakers Don Leopold, Dan McCord, Steven Apfelbaum, and Shaena Smith addressed various aspects of the conference theme, "Plant Communities: What to Plant Where—and Why." Innovations introduced by the committee—no breakout sessions, and segments featuring Indiana's poet laureate Norbert Krapf and premier nature photographer Rich Clark—were well received.

Working behind the scenes to make this event a success were George Peregrim (conference chair and sponsorships); Christine & George Plews (sponsorships); Dan & Sophia Anderson; Karen Hartlep; Kathleen Hartman; Laura Hohman, Dee Ann Peine, Madelyn Peregrim (book sale); Mark Outcalt, Helen Harlan, Betty Randall, George & Betsy Wilson (registration); Nancy Hill (speaker hospitality); Ruth Ann Ingraham; Tom Hohman; Wendy Ford (publicity, program); and Marcia Moore (website).

Planning is already underway for the next conference, to be held November 6, 2010, at University of Indianapolis.

Thanks to all who provided feedback on the conference evaluation forms and who indicated their interest in volunteering for various INPAWS endeavors.

Coming Up

Saturday, January 16
Central Chapter Icebreaker
2:00 to 5:00 p.m., home of Ruth Ann Ingraham

Tuesday, January 26
Conservation Day at the Statehouse
9:30 a.m. to 2:00 p.m. (see page 5)

February 1, 2010
Small Grant Applications Due
Details opposite

Wednesday, February 3
INPAWS Council Meeting
3:00 to 5:00 p.m., Holliday Park Nature Center

Tuesday, February 23
Deadline for Next INPAWS Journal
Submission instructions on page 2

Saturday, May 8
INPAWS Plant Sales and Auction

Saturday, November 6
INPAWS Annual Conference
University of Indianapolis

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at www.inpaws.org.

Serviceberry an INPAWS Fave

Some months ago *Horticulture* magazine asked native plant societies to name their favorite native plant. A lively e-mail discussion ensued among a small ad hoc group of INPAWS council members, and eventually we agreed on the serviceberry. Bobbi Diehl kindly wrote up the rationale.

The article appears in the December 2009 issue, the INPAWS quote on page 58. The editor of *Horticulture*, aparently a recent convert to natives, mentions in a sidebar (titled "Going Native") that she is planning an all-native garden at her new house. Now that's progress!

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Jigsaw Puzzle a Promising Outreach Tool

Visitors to the INPAWS booth at Hoosier Outdoor Experience were treated to a new interactive display that helped them see the connection between butterflies and native plants.

The display is a giant jigsaw puzzle consisting of three-part mini-puzzles, each one featuring a specific native plant, caterpillar, and butterfly or moth. The puzzle pieces fit together in only one way: Each native plant piece connects only with the caterpillar that feeds on it, and the caterpillar piece connects only with the butterfly or moth that it later becomes. (Five of the mini-puzzle combinations are shown at right.)

The puzzle was designed by Amanda Smith and created by the Hamilton County Parks and Recreation Department in a cooperative agreement with INPAWS. When not being used at INPAWS events, the puzzle will be on display in one of the Hamilton County nature centers.

The puzzle's effectiveness was apparent in the reactions of visitors. You could tell from their comments that people suddenly understood that, without the native plants, they would not see the butterflies.

Got Something to Say?

Say it in *INPAWS Journal*. The *Journal* reaches 480+ member households, 105 affiliated organizations (other native plant societies, Indiana land trusts, libraries, cooperative extension offices), and occasionally 100 Indiana legislators (through additional printing funded by The Nature Conservancy).

We welcome articles on native plants, restoration projects, conservation issues, outreach efforts, botanizing expeditions, gardening with natives—anything likely to interest our readers. Article development assistance and editing provided. Please contact the editor with your ideas at wwford@comcast.net or 317-334-1932.