



Wipe Your Feet!

Ellen Jacquart, Indiana Chapter
The Nature Conservancy

Most of you are aware of what invasive species are doing to natural areas around Indiana. Many of you are actively fighting back in various ways from pulling garlic mustard to planting only non-invasive plants in your garden.

Want to know one more very simple thing you can do to help? Wipe your feet!

Invasive plants move around in many ways—fruits that are carried away by birds, seeds that catch on animals' fur,

seeds designed to be spread by wind or water. Some of our invasive plants, though, are moved primarily by—you.

Invasive plants that have small seeds—like garlic mustard, Japanese stilt grass, dame's rocket, and even purple loosestrife—can be picked up and carried in boot treads, bike or car tires, and horse hooves. It is no secret that the first places we find invasives like these are by parking lots and trail heads. From there, the invasives use unwitting visitors to move their progeny further and further into the area.

To make sure you are not spreading these species, use a stiff brush to get the dirt off your boots before hiking in a natural area. Preferably, do this brushing in an area nowhere near the natural area, but if you're going to brush your boots at the site, try to do it over a parking lot where plants have less chance of establishing. Anything that sprouts around the parking lot will be seen and removed by the natural area manager before it can spread.

To help visitors remember to brush their boots, this summer about 30 "Wipe Your Feet!" boot brush stations will be put in at trailheads on Indiana preserves owned by The



Boot brush stations will be installed at trailheads and preserves. Photo by John Exo, University of Wisconsin Extension.

Nature Conservancy, Department of Natural Resources, U.S. Forest Service, Central Indiana Land Trust, and Sycamore Land Trust. These stations, partially funded by the IPALCO Golden Eagle Grant program, will feature a sign with information on invasive species in Indiana. A boot brush mounted at the base will make it easy for you to "wipe your feet" while you read.

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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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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 values, beauty, diversity, and environmental importance of indigenous vegetation.

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

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Worth Celebrating

Rebecca Dolan

I want to thank INPAWS Plant Sale and Auction co-chairs Karen Hartlep and Julie Beihold for two years of great service. Along with almost 40 volunteers, they organized our most successful plant sale yet! The annual spring event is a great learning experience for native plant lovers, beginners through experts, and the funds raised help support all of our projects.

We are looking for new plant sale chairs for next year, and a new location. We need a large room with a floor that can get dirty, easy car access for plant dropoff and pickup, a hall where buyers can queue up before the sale, and, ideally, a stage for the auction and access to a kitchen for snacks. We can pay a rental fee. Please contact me if you know of such a place or if you can volunteer to co-chair the event.

This has been a year of collaboration. INPAWS was part of the Indiana Conservation Alliance (INCA), formed as an umbrella group of like-minded organizations broadly interested in conservation legislation in the state. INCA organized Conservation Day at the Statehouse this winter. Many INPAWS members attended and learned how to talk effectively with legislators about issues of concern. Two programs supported by the group passed into law: funding for the Indiana Heritage Trust to buy land for preservation, and Clean Water Indiana. The Heritage Trust will receive \$1 million a year for the next two years, and the Clean Water effort around \$3.6 million per year. These dollars are considered significant given this year's budget constraints.

INPAWS is also part of the new Comprehensive Wildlife Strategy being initiated by the state, an effort to keep wildlife from becoming endangered. As Conservation Partners, we will be asked to comment on habitat conservation efforts undertaken by state agencies. To learn more about the initiative, visit <http://www.djcase.com/incws>.

I hope you can join in some of our upcoming INPAWS programs. Thank you to Lynn Dennis and Ruth Ann Ingraham for planning this summer's events. Also, a big thank you to Wendy Ford for the great updated look for the INPAWS Journal.

Cheers, Rebecca

Indiana Heritage Trust

The Indiana Heritage Trust was established in 1992 to preserve and enhance Indiana's rich natural heritage for present and succeeding generations.

Indiana has lost thousands of acres of its original plant and animal habitat. In 1800, about 87% of our state was covered with hardwood forests. Today, less than 20% of Indiana is forested. More than 86% of our original wetlands have been lost.

Many natural plant communities have nearly disappeared. More than 400 plant species are listed as either rare, threatened, or endangered. Some 31 species of animals are extinct in Indiana and 172 are rare, threatened, or endangered. At least 85% of Indiana's known archaeological sites have been destroyed or damaged by agricultural activities, mining, construction or vandalism.

The Indiana Heritage Trust acquires state interest in real properties that (1) are examples of outstanding natural resources and habitats, (2) have historical or archaeological significance, or (3) provide areas for conservation, recreation, protection, or restoration of native biological diversity. Properties are acquired only from willing sellers, never through the power of eminent domain.

With the help of INPAWS and other partners, the Indiana Heritage Trust was granted some funding from the Indiana legislature. The remaining funds come from partner organizations and the sale of Environmental License Plates.

Please do your part. Buy an Environmental License Plate, and urge others to do so.

As an individual citizen, you can initiate the process to see more land in your county preserved for the future. Visit <http://www.in.gov/dnr/heritage/apply.html> to download an application for Indiana Heritage Trust funding.

Adapted from the Indiana DNR website.

Sassafras albidum (Nutt.) Nees.

The Mitten Tree

Marion T. Jackson, Ph.D.
Professor of Ecology
Saint Mary-of-the-Woods College

My woodshop fills with the spicy aroma of sassafras as tawny shavings curl up and away from my antique wooden hand plane.

Only a skilled woodsmith will be able to distinguish my rich-grained work piece from golden oak, once it is fitted into the picture frame I am making. Beautiful, easily worked, and relatively inexpensive, sassafras lumber is gaining wide popularity among wood crafters.

What an ancient and versatile tree is the sassafras! Ancestors of the modern sassafras shared the warm-wet forests of the Tertiary geological period with early redwoods, tulip-trees, magnolias, and sweet gums. Today only three species of sassafras survive in the world, one in central mainland China, one in Taiwan, and ours, which ranges widely over the eastern United States. Locked within our species are secrets gleaned during its 60 million year history, before the early French settlers applied their version of the euphonious name by which aboriginal Americans called the tree.

Best known of its uses is the refreshing tea which derives its flavor from the safole which is steeped from the fresh bark of large roots. As soon as frost left the ground in late February or early March, my father always grubbed out several dark red roots to flavor the ruddy brew we used as a spring tonic to thin the blood "so we would be in shape for spring farm work." Our pioneer ancestors recognized both red and white varieties of sassafras, and believed that roots from red sassafras (variety *molle* from the pubescent leaves) made the best tea. We sipped the spicy tea as we

sat around the wood stove on blustery evenings of late winter, unaware that one day someone would find it contained a possible carcinogen. Most likely we would not have stopped drinking it had we known.



Courtesy of Ohio DNR.

Sassafras belongs to the Lauraceae, the aromatic laurel family of higher plants. One of its cousins produces the avocado; another yields cinnamon and camphor. Spicebush, with its glossy green leaves and scarlet berries, is a common shrub in mesic Indiana woodlands and was once used as a substitute for allspice. Dried sassafras leaves are the file used in the southern dish file gumbo. Oil of sassafras, once an ingredient in patent medicines, is still used in the preparation of certain soaps, perfumes, and cosmetics. A Mediterranean cousin, *Laurus nobilis*, is the source of culinary bay leaves as well as the leafy laurel branches once woven into garlands to crown successful poets and athletes in ancient Greece and Rome.

Although "resting on one's laurels" is not a good practice, a slender sassafras pole makes a near-ideal walking staff. Its springiness, light weight, and durability—the qualities which also made it a much-used wood by American pioneers—will improve your footing in rough terrain for years. Easily riven with a hickory-handled froe and an ironwood beetle, young trees were once a favorite for shingles, slats, and fence pickets. Its durability in contact with soil and the ease with which it is split were properties sought for use in fence posts and rails. The pioneers boasted that well-seasoned sassafras posts would outlast three post holes!

Coopers hand-shaved sassafras staves for making wooden water pails and kegs. Hay frames for wooden-wheeled farm wagons on horse-powered farms were often made of sassafras lumber because of its strength and its light weight for ease in exchanging wagon beds. The best booming pole, to anchor fast the loose hay, wheat bundles, or corn fodder during hauling, was also made from a seasoned sassafras sapling.

Little need to plant a sassafras tree, even though its cinnamon-tinged bark, lemon-colored pom pom flowers, varied leaves, and showy fruits make it a lovely ornamental. In fact, farmers consider it a "weed" tree. Throughout the tree's native range, during autumn song birds plant, in every fencerow and untended field border, the glossy purple fruits which they eagerly pluck from the tree's bright vermilion egg-cup receptacles. If left alone, the seedlings will soon sprout into large colonies, which become blazing burnt orange copses in later autumn. Individual seedlings, however, usually

Please help us find This one!

Black swallow-wort (*Vincetoxicum nigrum*, syn. *Cynanchum nigrum*)

are transplanted with difficulty; since their root development is sparse, survival rates are low.

Sassafras typically does not grow to great size, although some very large specimens are on record. Charles Deam had a photograph in his *Trees of Indiana* of a man standing inside a hollow stump of a Jennings County specimen. In life that tree must well have exceeded four feet in diameter because it still measured 48 inches dbh nearly 50 years after it was cut in 1866. A fine old tree that I measured in Versailles State Park in 1967 was 29 inches in diameter and had a clear bole of 44 feet. Some forest-grown individuals in the old-growth section of Hoot Woods in Owen County were about 24 inches dbh, with clear boles of 50 to 60 feet. Since sassafras is intolerant of deep shade, these trees undoubtedly began growth in canopy openings decades earlier.

The varied leaf shapes are the tree's trademark—in fact, its Latin name was once *Sassafras variifolium*. How does the tree “know” when and how to make a simple oval leaf form, a single left-handed or right-handed mitten or the curious double mitten? And what selective advantage does variation in leaf shape convey to the sassafras? I am not sure any botanist has ever answered those questions completely. Perhaps some mysteries of nature should remain mysteries.

Have you seen this invasive plant? Black swallow-wort is known from only two places in Indiana—a backyard in Indianapolis and at Hayes Arboretum near Richmond. However, it was introduced to North America from southwest Europe around 1900 as an ornamental, so there are likely other plantings out there in Indiana.

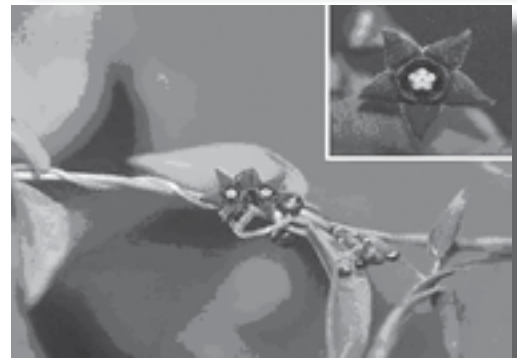
Why are we watching for black swallow-wort? In the east it has become an aggressive invader, primarily on roadsides and disturbed sites, but also moving into forestlands and prairies. The vine crawls over other vegetation, forming a dense, impenetrable thicket (another common name for the species is “dog strangling vine”). A University of Rhode Island student, Jennifer Dacey, found that monarch butterflies will lay eggs on this member of the milkweed family but that all the larvae die because swallow-wort has a different toxicology than members of the genus *Asclepias*. Once established, this species is very difficult to kill, so we want to nip this one in the bud.

What to look for:

Black swallow-wort is an herbaceous, perennial vine in the milkweed family. It has dark, glossy-green, simple leaves with a rounded to slightly heart-shaped base, smooth edges, tapered point, and very short petioles.

The deep purple flowers are small (1/8-inch across), borne in clusters at leaf axils, and have triangular petals with short white hairs. It blooms from May to August. The fruit typically grows in pairs and resembles slender milkweed pods. Like that of native milkweeds, the seed is winged and readily spread by the wind.

Black swallow-wort may be confused with a common native vining plant often found in disturbed areas, called

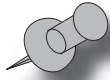


Leaf and pod photos by Peter M. Dziuk, Minnesota Department of Agriculture; flower photo by Charlotte Pyle, USDA.

sandvine (*Cynanchum laeve*). Sandvine, however, has small white flowers and deeply heart-shaped leaf bases.

What to do if you find it:

Report any finds to Becky Dolan at rdolan@butler.edu. To assure identification, a good photo of the plant and the flowers (preferably showing the hairs) is necessary. For more information and photos, see the INPAWS website at www.inpaws.org.



INPAWS Sponsored Programs

Coming Up

July 17 (Sunday)—Talk and hike at **Brown County State Park**. Jim Eagleman will discuss the recovery of flora in the park after years of deer culling. Meet at 1:00 pm at the Nature Center.

August 27 (Saturday)—Tour of **Cressmoor Prairie**, Lake County, owned by the Shirley Heinze Land Trust. Led by “Plant Detective” Barbara Plampin. Meet at 8:30 am (local time). See article on this page.

September 9–11 (Friday–Sunday)—Bus trip to **Missouri Botanical Garden**. Join fellow plant lovers on a weekend bus trip to St. Louis, where Kay and George Yatskiyevych will guide us through the display gardens and research facilities of the world-renowned Missouri Botanical Gardens. Sunday we will visit the 2,400-acre Shaw Nature Reserve, home to tall grass prairie, forests and glades, woodlands, and wetlands. Watch for a mailing with a tear-off reservation form. For more information, visit www.mobot.org or contact trip coordinator Ruth Ann Ingraham at 317-253-3863 or rai38@aol.com.

Down the Road

October 22 (Saturday)—Mosses and lichens at **Plaster Creek Seep**, Martin County. Hike led by Bill McKnight and Harold Allison.

November 5 (Saturday)—**INPAWS Annual Meeting**.

For further details visit www.inpaws.org or contact Lynn Dennis at 317-951-8818 or ldennis@tnc.org.

A JEWEL IN LAKE COUNTY

Cressmoor Prairie

Warren Buckler

What's perhaps most remarkable about Cressmoor Prairie in Hobart, Indiana, is that it exists at all. Against all odds, this once forgotten piece of land continues to offer visitors a view of northwest Indiana's landscape much as it did when white settlers arrived in the early 1800s.

Virtually all Indiana's black soil prairie, of which Cressmoor is a prime example, has been converted to agricultural use or, more recently, consumed or degraded by industrial and subdivision development. Had Cressmoor's previous owners not left it alone, and had it not been “discovered” by a knowledgeable passerby, the 38-acre site likely would have fallen into the hands of commercial or residential real estate interests.

Happily, fate intervened. In 1988, a plant enthusiast and school teacher from Bremen, Indiana, named Keith Board just happened to be driving by when he caught sight of a compass plant flower stalk. Knowing that the plant usually doesn't occur far from a true prairie, he investigated and, indeed, soon found himself “in the middle of a beautiful prairie.” His findings were a revelation even to some local conservationists.

The privately endowed Shirley Heinze Environmental Fund—a Chicago Wilderness organization that buys, protects, and restores significant natural areas in Indiana's three lakefront counties—negotiated the purchase of the land with state backing and continues to own and manage it. Cressmoor was designated an Indiana Nature Preserve in 1996. (For more information about the Heinze Fund, call 219-879-4725.)

The Cressmoor preserve is bordered by a golf course, an apartment complex, a railroad track, and a busy road. New houses are going up across the street, and downtown Hobart (often pronounced HO-bert) is about a mile away. Indeed, the proximity of homes, highways, and manufacturing plants typically adds to the challenges of maintaining high-quality natural areas in urbanized northwest Indiana.

But a short walk along the trail that leads from the small parking area off Lake Park Avenue allows visitors to leave most of the man-made world behind. And deep into the prairie visitors can find vistas that convey a powerful sense of the plant and animal communities that prevailed in this region centuries ago.

In a leisurely one- to two-hour hike (the mowed trail is about two miles long), beginning botanists can test their skill at recognizing some of the 184 native plant species identified so far at Cressmoor. Veteran plant hunters should be on the lookout for purple milkweed, prairie lily,



Compass plant. Courtesy of Butler University Friesner Herbarium.

ragged and green-fringed orchids, prairie sundrops, and the imposing and intriguingly named rattlesnake master. Much of the preserve is typical of pure prairie habitat, with large stands of big and little bluestem, Indian and other grasses interspersed with a wide variety of flowering plants. Cressmoor also has some savanna and low-lying wet areas. Amethyst aster was recently found in the savanna, making its first known appearance in Lake County, Indiana. American hazelnut is abundant in the transitional zone between Cressmoor's savanna and prairie.

The prairie wildflowers, including six types of goldenrod and blue and white varieties of aster, reach their peak in late summer and fall. But midsummer, when coreopsis, sunflowers, blazing star, ironweed, gray-headed cone-flower, and eight species of milkweed are in bloom, is nearly as rewarding. Birds, butterflies, and small mammals and reptiles abound. Five rare remnant-dependent insects—leaf hoppers, a skipper and a butterfly—have been found in areas of Cressmoor with a history of fire.

About a third of the prairie is burned each year, explains Jan Hunter, (former) stewardship program manager (Paul Quinlan now fills this role), restoring a natural cycle that was interrupted by settlers' fire suppression efforts. The prescribed burns remove layers of dead leaves and grass, return nutrients to the soil, help with seed germination, and discourage large woody plants.

No less important is the effort to promote respect and understanding for the preserve among nearby residents, some of whom in times past may have regarded the land as a convenient dumping ground, play area, or a place to ride off-road vehicles. Vandalism remains an occasional problem. But the larger Hobart community has been supportive, and busloads of visiting students down to kindergarten age are helping to turn the prairie into an outdoor learning laboratory. Cressmoor is becoming a community asset, a living example of one of Indiana's rarest ecosystems, and one of a few sizable remnants left in the state.

Reprinted with permission from Chicago WILDERNESS Magazine, www.chicagowildernessmag.org. For information about nearby attractions, eateries, and places to overnight, see the full article in the archived online Fall 2001 issue.

TOUR CRESSMOOR WITH INPAWS SATURDAY, AUGUST 27

Cressmoor Prairie is the largest protected example of a silt-loam or "black soil" prairie in Indiana—the prairie that Native Americans knew, thousands of years after the Ice Age. Black soil prairies were once the most common prairies in Indiana, but their rich, fertile soil was among the finest agricultural ground anywhere in the world, so most were plowed under for farming. Only about 300 acres of black soil prairie remain in Indiana today. Cressmoor Prairie is one of only three remnant areas.

DIRECTIONS

Cressmoor Prairie is on Lake Park Avenue in Hobart, Indiana. From the intersection of I-65 and Business US 6 (Exit #258; also called Ridge Rd.), go east on Ridge Rd. about 2.5 mi. Turn south (right) on Lake Park Ave., and go about 0.5 mi. to the parking lot on the west side of the road.

Saving The Big Woods

Early settlers called Indiana's forests endless, vast, unbroken, and a limitless resource. Today there are few places where people can use such words to describe forestland. But when you drive State Road 46 from Columbus to Bloomington or State Road 135 from Brownstown to Beanblossom, you can still get a sense of what settlers saw. This area is the largest contiguous block of forestland in Indiana, but history has taught us that it is far from endless or limitless.

The Nature Conservancy's Brown County Hills Project is a community-based conservation project trying to protect the most heavily forested portions of the Brown County Hills Section (see map). The goal is to keep as much contiguous forest on the land as possible for the benefit of all the plants, animals and natural communities that constitute this forest system. But to protect it we must first understand what forces threaten the Big Woods. Through a science-based planning process the Project identified nearly 20 human-influenced factors that stress the Brown County Hills ecology—then ranked them by the severity of damage and the scope or extent of damage each could cause to the natural area. Here are three of the most serious threats to the forest system.

Changes to Natural Fire Patterns—For hundreds of years, natural fires and fires started by Native Americans were regular occurrences in Indiana. In the pre-settlement Big Woods, low creeping ground fires burned through parts of the forest floor every year. Occasionally this low-

intensity, human-caused fire would become a major fire (perhaps coinciding with severe drought or large amounts of dead wood due to ice or wind storms), killing mature trees and clearing large areas, allowing the oak-hickory forest type to persist on the landscape.

With European settlement, this natural cycle of fire and regeneration was broken. The forests were cleared using fire, ax, and ox and kept open for agriculture. When much agricultural land was abandoned in the early 20th century, the oaks and hickories again took over. Since then, we've suppressed fires to protect human life and property. But, without periodic fires, our forests are slowly changing from the oak-hickory dominated forests typically found in this area to a beech-maple dominated system. Although this shift in species composition is natural, the lack of disturbance is not. If a beech-maple forest dominates this area, many understory species are shaded out, and many sources of food and shelter for birds and animals disappear. The result is a less diverse forest system.

Excessive Deer Population—White-tailed deer are native to Indiana and play an important role in the forest system. But today's deer overpopulation is a direct result of human actions. We have fragmented the forest, creating more edges. We have planted row crops, which help to inflate the deer population, at the same time that we have removed all the natural predators. Hunting, once commonplace and a means of subsistence, is now restricted on more and more land. Restriction of hunting creates local-



The Nature Conservancy's Brown County Hills Project

ized overpopulation that stresses vegetation and creates browse problems for neighboring landowners as well.

Deer populations are now high enough to seriously degrade the herbaceous and shrub layer of the forest. As the understory is thinned and weakened by deer browsing, opportunistic alien plants such as the invasive garlic mustard are able to spread rapidly and crowd out native species. In some areas the population is high enough that deer browsing is changing the future overstory of the forest, reducing and limiting regeneration of young trees.

Fragmentation and Parcelization—Habitat becomes fragmented when the continuous forest is broken up into smaller sections. Fragmentation creates gaps in the forest which allow alien species more places to take hold. Gaps also create smaller habitat islands, resulting in less available habitat for forest interior species. Parcelization of the forest is the shift from a few large landowners to more and more smaller owners. Parcelization reduces the size of management areas, making it harder to implement management activities that mimic natural disturbance patterns.

These stresses and many others are serious threats to the Big Woods. Given time, they will degrade this forest system and lead to a loss of biodiversity. This forest system has already survived near destruction once. Although the change occurring now is more subtle, it is far more permanent—but we can choose otherwise!

The Nature Conservancy is using strategies such as conservation easements, land acquisition, private land conservation programs, and educational programs to help combat each of these threats and help protect the last great forest in Indiana. The Nature Conservancy cannot do this on its own. The success of this project depends on the collaboration of public land managers, local land trusts, private landowners, local conservation organizations, and people all over Indiana who care about native plants, biodiversity, and healthy forests. Time will tell, but the hope is that this forest system will continue to function for the benefit of all the plants, animals, and natural communities that represent the diversity of life in the Big Woods.



Yellow timber rattlesnake.



COME SEE THE BIG WOODS!

INPAWS Talk and Hike, July 17, 1:00 pm, Brown County State Park, Nature Center. Jim Eagleman will speak on recovery of native flora after deer culling.

Brown County Hills Project Open House, September 24, 10:00 am–12:30 pm, Yellowwood State Forest, Yellowwood Lake shelter house. Program on raptors of Indiana. Presentations by public land managers. Cookout follows.

Mint Family = Lamiaceae = Labiatae

Worldwide the mint family comprises about 180 genera and 3,500 species centered in the Mediterranean region. Indiana has about 30 genera and 70 species.

Characteristics

Herbs or shrubs with square stems. Leaves simple and opposite or whorled, with aromatic oils. Inflorescence axillary or whorled. Flowers irregular with 5 parts. Fruit of 4 nutlets.

Economic Importance

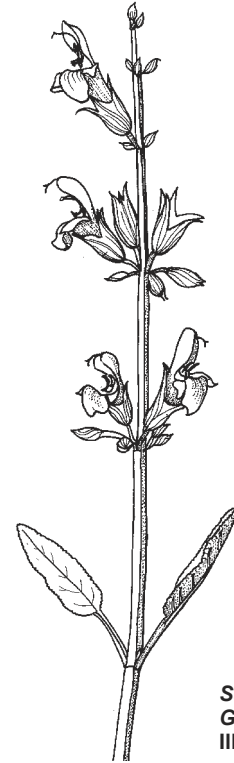
Source of aromatic essential oils, many ornamentals, and important culinary herbs. Garden plants include ajuga (bugle), coleus, catnip, ground ivy, lavender. Herbs include sage, marjoram, thyme, rosemary, basil, oregano, mint, peppermint, spearmint.

Many mints that grow wild in Indiana are introduced. Common mints in Indiana include some non-native noxious field and yard weeds: dead-nettles (*Lamium purpureum*), hen-bit (*Lamium amplexicule*), gill-over-the-ground (*Glechoma hederacea*)

Some Nice Natives

Lyre-leaved sage—*Salvia lyrata*
Mad-dog skullcap—*Scutellaria lateriflora*
Obedient-plant—*Physostegia virginiana*
Bee-balm, wild bergamot—*Monarda fistulosa*
Virginia mountain-mint—*Pycnanthemum virginianum*
Smooth hedge-nettle—*Stachys tenuifolia*
American germander—*Teucrium canadense*
Virginia bugleweed—*Lycopus virginicus*

Rebecca Dolan, Ph.D.
Friesner Herbarium, Butler University



Salvia flower by Janice Glimn Lacy, Botany Illustrated.

GOING PLACES

Virginia B. Fairbanks Art & Nature Park

If you visit the newly expanded Indianapolis Museum of Art (IMA) this summer, take a look at what's going on in the lowland behind the museum.

Underway is an ambitious project that will transform 100 acres of highly disturbed habitat into a place where visitors can enjoy "playful, adventurous, and unexpected encounters with art in nature and nature in art—always changing, always challenging."

The future Virginia B. Fairbanks Art & Nature Park lies between the Water Company Canal and the White River, across the canal from the main IMA grounds. At its center is a 40-acre lake that was once a gravel pit used in the construction of nearby interstate highway I-65. Also visible are remnants of flood plain forest, old agricultural fields, and a wetland.

As part of planning for the site, five years ago Rebecca Dolan, INPAWS

President and Director of the Friesner Herbarium, and Marcia Moore, INPAWS webmaster, both of Butler University, conducted a year-long floristic inventory of the site. Funding was provided by the Indianapolis Department of Parks and Recreation, as the park lies adjacent to the canal tow path, a city Greenway.

Dolan and Moore recorded a total of 187 species, of which sixty-six (36%) were non-native and eleven were considered invasive. They found remnants of historical floodplain forest—sycamore, cottonwood, ash, maple, hackberry, and elm—along with patches of native understory herbs including wild ginger, pale Indian plantain, giant bellflower, squirrel corn, dutchmen's breeches, appendaged and Virginia waterleaf, blue phlox, and bloodroot. This inventory provided base-line information which is now being used to monitor

changes as the IMA develops the park.

Plans for the site include removal of invasive species, especially bush honeysuckle, and restoration of native species.

This summer, Dolan and Moore are undertaking new work funded by the IMA, starting with the installation of permanent transects in the honeysuckle eradication areas. Quantitative vegetation analysis will document the frequency, density, and basal area of all tree species present, along with measurements of the percent cover of herbaceous plants by species. Butler faculty and students will also inventory vertebrate species inhabiting the area.

The future Art & Nature Park will exhibit temporary and permanent artistic creations—sculptures, audio works, films, and photo-based art—that take into consideration the natural and cultural conditions of the site.

For more information, visit www.ima-art.org.

Beauty and the...Turkey?

Barbara E. Plampin, Ph.D.
Shirley Heinze Land Trust

Winter pleasure: choosing slides of purple fringed orchid (*Habenaria* or *Platanthera psycodes*), state rare, for an "Orchids of the Dunes" slide show. Problem: which to omit?

One shows a stately wand of especially deep purple flowers, another shows deeply cut fringe, yet another the long spurs. (Hummingbird clearing hawkmoths and long dash skippers extract the nectar.) A fourth



demonstrates the three-part lip's resemblance to a child-fashioned snow angel. There's one in which the topmost blossom readies for flight; after all, psycodes can be translated "butterfly." Yet, the parts of the column (fused reproductive organs) can resemble a witch's face or Groucho Marx's moustache.

Homoya says many purple fringed sightings are really of similarly colored phlox, but I managed to mistake the orchid for the phlox. The plant grew near an abandoned house site only ten feet from the road, for Pete's sake. A friend pointed out the truth.

I did better when I sighted a rod of purple near an overturned picnic table in a low, wooded floodplain. However, most of the purple fringed orchids I've seen do live, as Swink and Wilhelm say, "in swampy woodlands where the mosquitoes are the thickest."

About July 26, it's time to don hat, long sleeves, wet pants, and wellingtons to go purple fringed orchid hunting.

Though the orchids keep their feet dry on hummocks, one can lose a shoe in the surrounding skunk-cabbage-carpeted muck. Plants appear infrequently, perhaps near blue flag iris (*Iris virginica shrevei*), woodland knotweed (*Polygonum virginianum*), and papaw* (*Asimina triloba*). Sunny, wet prairie is another habitat.

Enter the wild turkey, over whose restoration to Indiana the March/April *Outdoor Indiana* exulted for eight pages. Perhaps the Department of

Natural Resources should reconsider and research the turkey's diet. Naturalist Emma Pitcher tells of wild turkeys eating 98 out of 100 purple fringed orchids in a Michigan preserve.

Rather horrid to think that one's Thanksgiving bird could be orchid-flavored. Shades of the cartoon "Li'l Abner," with the villain who needed just one drop of pet piglet (*Hamus alabamus*) to perfect his sauce.

The piglet always escaped. Will the orchids?

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*Swink and Wilhelm allow that papaw can be spelled pawpaw. They don't say that it's also called Indiana banana in Indiana and Michigan banana over the line.

Purple fringed orchid ©1999 by Eleanor S. Saulys.

Gentle Spirit

Fond remembrance of a

Those of us who botanize on a regular basis know that wonderful sense of familiarity each growing season brings—“Ah, there’s the first spring beauty in bloom,” or “That’s the biggest pawpaw patch I’ve ever seen!” Seeing these old friends return after winter releases its grip gives us a sense of the timelessness of nature, of comfort, and of home.

Imagine having to leave your country, never to return. Your one link to your homeland? The plants and natural areas that remind you of home.

Helene Starcs was born in Bikspi, a small village in Latvia, in 1912. She studied botany and natural sciences at the University of Riga and worked in the herbarium and as a lab assistant following graduation. She married Karlis Starcs, a plant pathologist working for the Agriculture Department. Fate intervened in the form of World War II. In 1944, when Russia took control of Latvia, escape seemed the best option. She left her mother behind, walking with her husband and 1-year old son Janis across a bridge out of Riga. “I couldn’t have made my feet move if I hadn’t been holding my baby son,” and thinking of the future she wanted for him, she said.

They ended up, like thousands of other eastern Europeans, in displaced-persons camps in Germany. To pass the time and tedium of this existence and help keep their sanity, the Starcs collected and identified mosses from the local countryside, a hobby that ended up paying big dividends in Indiana years later. The refugees organized schools for the children in the camps, and Helene taught natural science to the high school students.

After six years in the camps, they were sponsored by a Lutheran church in Indianapolis to immigrate to the United States. When they arrived, Karlis was hired as a gardener by Eli Lilly II for his estate on Sunset Lane in Indianapolis. Helene wanted to go for more schooling to help find a job, and Eli Lilly agreed to buy their moss collection from Latvia to pay for that education. He then donated the moss collection to Butler University, where Helene attended classes. Unfortunately, Karlis died only a few years after arriving in Indiana, leaving Helene a single mother. Her studies in bacteriology and microbiology at Butler got her a job as a laboratory technician in medical mycology at Wishard Hospital, and she worked there for 24 years.

It was while she was at Butler University that she met and worked with Dr. John Potzger, professor of botany. She took many trips around the state with him, collecting plants and learning the natural areas of Indiana. As she became familiar with the plant species of Indiana, Potzger suggested she focus on sedges because they

were a tough group that needed someone talented to work on them. Her favorite community type was fens, and she was instrumental in helping the state identify fens worthy of protection as state nature preserves in central Indiana. She told Becky Dolan, curator of the Friesner Herbarium at Butler University (and president of INPAWS) “Lying on the ground, looking up at the clouds and seeing *Filipendula rubra* (Queen of the prairie) and *Deschampsia cespitosa* (tufted hairgrass) brought back the strongest memories of my childhood meadows.”

When she retired, she was able to take botany back up as a hobby, and she leant her considerable teaching abilities to teaching plants to others in the 1980s and 1990s. Many of us in Indiana benefited. I got to work with Helene ten years ago when I was at the Hoosier National Forest and we contracted a rare plant inventory that was conducted by Helene and Perry Scott (a botanist and member of the Indianapolis Symphony Orchestra). I spent a number of days in the field with her, not only learning new plants but getting a new appreciation for those I already knew. She had a way of describing sedges that made them come alive, as if they each had a distinct personality. Perry and I were both amazed that Helene, in her early 80s, was as fit and limber as we were and did not let the hills of southern Indiana slow her down.

Roger Hedge of Division of Nature Preserves recalls, “I spent a great deal of time with Helene, marveling over her knowledge of plants. Many years ago before I worked in Nature Preserves, I wanted to learn more about sedges and called her up. She graciously invited me to her home,

Helene Starcs, Botanist

November 1, 1912—January 3, 2005

and over several weeks she went through the keys and specimens with me; my recollection is that we covered most, if not the entire *Cyperaceae* family occurring in Indiana.” They also went on outings to see the sedges “in person”: “Most of our trips at this time were local, such as outings to Eagle Creek or the Fortville seep, Mounds Fen, and others. It was my impression that she felt most at home in wetlands and would often approach a plant and, in her excited but quiet manner, say ‘Here’s my old friend!’”

great lady who taught us much about the flora of Indiana



Latvian-born botanist Helene Starcs teaching Ellen Jacquart and Perry Scott the fine points of sedge identification.

Mike Homoya of Division of Nature Preserves also remembers her expertise. “Of course, her knowledge of sedges was exceptional, and she taught several of us here at Natural Heritage the fine points in ‘Cyperology.’ I met her for the very first time in 1982 during a field excursion to southern Indiana, specifically looking at a sinkhole swamp near Palmyra in Harrison County. She found a single plant of the log sedge (*Carex decomposita*), which at that time was thought to be extirpated in the state. It was a celebratory moment.”

Her genuine love of plants was evident to all. Mike remembers, “Helene, with her gentle spirit, was able to diffuse the most angry of men. I recall a trip to the DNR Marsh Lake property in Steuben County. After botanizing the property, we were met by an inflamed landowner. Apparently we had mistakenly crossed over onto his land on the walk back to the car. In his agitated interrogation he asked what we were up to, which I’m certain he had already determined

to be no good. Helene, with her plastic bag of specimens in hand, pulled up a specimen of a sedge and enthusiastically told him of the virtues of *Carex*. In a short time, the man was visibly calmed and seemed genuinely impressed, if not puzzled, that an elderly woman would submit to the dangers of the swamp, including rattlesnakes, poison sumac, and ‘quicksand,’ for the pursuit of a lowly plant. She had won him over.”

Actually, Helene won over all of us who worked with her. This Latvian immigrant taught us much about Indiana’s flora, and we’re all grateful for what she shared with us.

Ellen Jacquart

The account of Helene’s early history was adapted from Rebecca Dolan’s article in the May/June 1999 issue of Outdoor Indiana.

Orchids to...INDOT

INDOT surprised us with an announcement at the last Invasive Plant Species Assessment Working Group meeting that they intend to remove all autumn olive from Indiana's highways! They have already finished I-70 to the Ohio border and much of I-69. Thanks to INDOT for taking the initiative on this issue—ridding our highways of this invasive nuisance is a great step to take.

Conservation Day at Indianapolis Zoo

The Indianapolis Zoo will host its third annual Conservation Day on September 17. For information, contact Cathy Kurek, Plains Biome/Conservation Day Committee, 1200 W. Washington St., Indianapolis, IN 46222, 317-630-2098.

A RIPping Good Time!

West Central Chapter of INPAWS has formed a RIP Squad to Remove Invasive Plants in coordination with Tippecanoe County and West Lafayette Parks and Recreation Departments. Joan Mohr Samuels says so far 14 volunteers have signed up to work on specific RIP spots in six parks. They'll focus on garlic mustard in the spring and bush honeysuckle in the fall. Joan hopes this program will have a RIPple effect leading to the formation of local neighborhood RIP Squads in the future!



Congratulations to everyone involved in the 2005 INPAWS Annual Plant Sale and Auction!

Due to our incredible volunteers, many weekend plant rescues, generous corporate and member donors, and a wonderful venue, this year's sale generated a record \$8999.18 in revenue, for a profit of \$8188.93. The proceeds support INPAWS programs such as brochure printing and grants.

The auction, ably run by our novice auctioneer Michael Stelts, proved a huge success. With his enthusiastic banter, supplemented with actual plant knowledge provided by Sue Nord Peiffer and Hilary Cox, Michael worked the crowd to garner \$45 for *Iris cristata*, \$45 for *Uvularia grandiflora*, and \$50 for a pair of *Phlox divaricata*, which really impressed veteran INPAWS auctioneer Rolland Kontak. Melissa Moran stepped in as recorder at the last minute and quickly learned the ropes from Mildred Kontak. Treasurer Dawn Stelts collected the payments, assisted by Diane Stipler, and kept the accounts straight.

Auctioned items included plants donated by our members, featuring an amazing terrarium of carnivorous plants courtesy of Rolland Kontak. Many items came from the multiple plant rescues at Butler University, which were organized and run by David and Dawn Bauman with logistical help from Dr. Rebecca Dolan. Generous donations were also provided by the following companies: Allisonville Nursery & Landscaping, Altum's Horticultural Center & Gardens, Hobbs Nurseries, J.F. New, Mark M. Holeman Inc., Munchkin Nursery & Gardens, Spence Restoration Nursery, Wild Birds Unlimited, and Woody Warehouse. A special thanks to Linda Bullard, who was instrumental in soliciting and picking up many of these donations.

Ruth Ann Ingraham graciously agreed to sign her just-published book *Swimming with Frogs*, adding a touch of class to a rather raucous event. All the books on hand were sold and yielded almost \$150 in profit for INPAWS.

This year's sale also generated a record 15 new members, partially due to Jane Savage's gently persuasive tactics as she worked the room handing out membership brochures, explaining our mission and the benefits of membership. Our membership now stands at 382.

Virginia Harmon once again provided and beautifully displayed a healthy snack table that was greatly appreciated by all.

Dan and Sophia Anderson had a big job this year at our education table, as we had to warn our customers of the possible presence of garlic mustard in the rescue plants. The message was ably conveyed.

Janice Gustaferra was our silent partner in this endeavor. She arranged for our use of the St. Pius X School facility and was there from the very beginning to the very last sweeping! Janice also generously provided the pizza for our Friday night volunteers and ran numerous emergency errands for supplies. Thank you Janice—we couldn't have done it without you!

Unfortunately, there isn't space to describe the myriad ways each of our other dedicated volunteers contributed to the success of the sale. Many worked both Friday night on the set-up and Saturday for the sale. We were absolutely amazed (for the second year) at how well everyone worked together to get the job accomplished, scouting out what needed to be done before we could even ask.

The following volunteers worked one or both days: George Peregrin, Janice Gustaferro, Ron Jackson, Charles Spurgeon, Marilyn Spurgeon, Don Bryson, Carolyn Bryson, Rolland Kontak, Mildred Kontak, Becky Dolan, Kate Dolan, Paul Beihold, Stephen Beihold, Annie Beihold, Donovan Miller, Rosie Springer, Susan Zellers, Tom Hohman, Dee Ann Peine, Dan Anderson, Sophia Anderson, Krista Gremos, Ruth Ann Ingraham, Hilary Cox, Suzanne Stevens, Nancy L. Gwin, Melissa Moran, Betsy Wilson, Virginia Harmon, Cheryl Andrews, Andy Andrews, Jane Savage, Marion Harcourt, Mary Bent, Doris Thomas, Bob Thomas, Kim Krull, Chuck McCoy, and Suzanne Stevens. If we inadvertently omitted anyone from this list, please accept our apology and let us know.

Thank you all for your dedication to INPAWS and to our successful Plant Sale and Auction!

Julie Beihold and Karen Hartlep

Conservation and Native Landscaping Awards

U.S. Environmental Protection Agency Region 5 and the Chicago Wilderness consortium are now accepting nominations for the 2005 Conservation and Native Landscaping Awards program. Corporations (including not-for-profits), developers, public sector entities, and public-private partnerships can be nominated for an award. The nomination period will close July 27, 2005.

The awards recognize outstanding efforts to use native plants in landscapes within the Chicago Wilderness region. Also to be recognized are communities and developers who plan and construct residential and commercial developments in ways that protect watersheds and the environment.

Chicago Wilderness is a regional nature reserve that includes more than 220,000 acres of protected natural lands. It stretches from southeastern Wisconsin through northeastern Illinois and into northwestern Indiana.

For more information, or to nominate a site, visit www.epa.gov/greenacres/awards.html.

Balloting Continues in State Flower Project

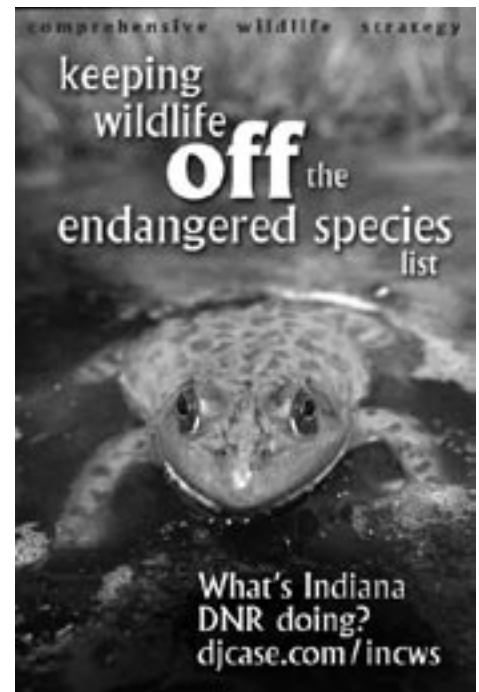
So far, purple coneflower (*Echinacea purpurea*) is the leading vote-getter in ballots submitted by the public at various garden shows. INPAWS' effort to get a native plant to represent Indiana has also attracted media coverage. The *Fort Wayne Journal Gazette* recently featured the state flower project in an article that included interviews with Jo Ellen Meyers Sharp and Becky Dolan.

Talleys to date: purple coneflower, 435 votes; large flower trillium, 202; columbine, 199; liatris, 101; false sunflower, 78; and coral bells, 51.

Cast your vote and encourage your gardener friends to vote at the INPAWS website, www.inpaws.org.

Mustard Family Revisited

Alert reader Jerry Tiehm of the Nevada Native Plant Society spotted an error in our last Botany 101 lesson. Members of the mustard family are much more numerous than reported—more than 300 genera and 3000 species—and are found everywhere but the tropics. Jerry should know, for the *Brassicaceae* make up a large part of the flora of Nevada, occurring from the saline valley bottoms to the top of the mountains. Thanks, Jerry.



INPAWS Grants Awarded

The Small Grants Committee has announced the following awards for 2005:

- \$400 to Tina Meeks and the Eagle Creek Gardening Committee to fund native plants and tags for their "Trickling Stream" project adjacent to the Eagle Creek Park Nature Center.
- \$320 to Mickey Penrod of McCutcheon High School for native plants and identification markers used in a "Naturally Wild" project within this Lafayette school's NWF Certified Schoolyard Habitat.
- \$300 to Betty Heffelfinger of Huntington County Master Gardeners for native plants in the "Historic Forks of the Wabash Demo Gardens" on Miami Treaty Grounds.

Growing My Own

Wendy Ford, Editor

The neighbors cheered and brought water when the workers dismantled the huge satellite dish in our back yard. Who needed 120 more channels to watch when we had a new, much larger lawn to tend along with our newly purchased house?

But what to do with the 12-foot diameter mound of earth on which sat the dish—the only smidgin of topography on this converted dairy farm property? Remembering the almost vertical slopes along roadsides in Switzerland and how they let you see the meadow flowers like a massive pointillist painting on a wall, I thought, hmmm, I'll make of this mound a prairie!

The ten years since have not disappointed. The mound is where I head with my morning cup of coffee to see what's buzzing and blooming.

It's full of old friends encountered for the first time at the INPAWS auction—the standing cypress from Juanita's cherished land, the little bluestem from Carolyn's garden, the rattlesnake master, the Ohio goldenrod, the sundry treasures snapped up at auction's

end "for one price," as auctioneer Rolland would say.

A lone specimen of prairie smoke blooms as we speak, one of five that in more innocent days I purchased mail-order as my very first planting on that rocky hill.

Hollis's wine cups have come and gone, and so has the hardy cactus I picked up from Bluestone's table at a long-ago Orchard in Bloom. These lasted only a few years. But I still have pussy toes, lead plant, indian grass, green-headed rudbeckia, something stellata (Kevin could tell me—he talked me into bidding on it), and oodles of very happy penstemon and New England aster.

The truth be told, I also have legions of Queen Anne's lace, and weedy goldenrods, and poison ivy, and this year my very own ecological crisis—a nasty invasion of myrtle. I'm not a prairie purist, so in the spring the mound is decked out in reticulated iris and later fragrant poet's narcissus. At high season a fringe of cutleaf sumac forms the backdrop for my prairie

palette. A mown path up and over lets me view everything up close.

I hope you enjoy wandering Indiana this summer. This issue of INPAWS Journal should whet your appetite for a number of locales that offer fruitful plant watching and chances to appreciate the restoration efforts of dedicated people.

Me, I'm wandering barefoot in my backyard, heading for prairie hill with my cup of coffee to see what's happening next.

This Just In...

Wildflower seeds collected last fall from the Indiana State Museum's prairie gardens are going begging! Seeds of nodding wild onion, white false indigo, swamp milkweed, liatris, cardinal flower, sweet black-eyed Susan, and gray-headed coneflower are available for the asking. Contact Dan Anderson at 317-849-3105 or danjand1@cs.com.



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