

Indiana Audubon Society

CARDINAL

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**PREPARE FOR
SPRING!**

NATURE JOURNALING, PLANTING
NATIVES, AND MORE!

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The Cardinal Newsletter

is a bi-monthly publication of the Indiana Audubon Society. Its purpose is to share stories and conversations so that members and the birding community beyond can stay meaningfully connected both to birds and to the people dedicated to their protection.



On the cover:

Black-eyed Susan Marmalade by Shari McCollough

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Mailed printed copies of bi-monthly & quarterly newsletters			✓	✓	✓	✓		
Complete access to Birds of North America Database	✓	✓	✓	✓	✓			
Discounted Field Trips & Programs	✓	✓	✓	✓	✓		✓	✓
Special Access to Mary Gray Birding Sanctuary	✓	✓	✓	✓	✓		✓	✓
15% discount on all IAS online store merchandise				✓	✓			
Register a friend to any IAS field trip at member rate				✓				

➤ Be a part of Indiana Audubon Society! Sign up at: Indianaaudubon.org/membership



UPCOMING TRIPS & EVENTS

The Indiana Audubon Field Trips Committee is continuing field trips, while adhering to the most up-to-date health and safety recommendations. To comply with CDC guidelines, all field trips will follow the following restrictions:

- All IAS trip participants must register in advance for upcoming field trips.
- All participants should utilize facial covering and/or social distancing during the field trip if not vaccinated against COVID-19. Social distancing is also encouraged among vaccinated participants.
- All participants should plan on traveling separately rather than carpooling during trips featuring multiple locations.

FEBRUARY 4-6: Winter Snowy Owl UP Tour- FULL [St. Ignace, MI]

FEBRUARY 8: Building Birder Skills- Backyard Birds & Feeding Workshop [Zoom]

FEBRUARY 14: Tropical Valentine's Day: Costa Rica Virtual Birding III [Zoom]

FEBRUARY 18-21: Winter Sax-Zim Bog Tour- FULL [Duluth, MN]

FEBRUARY 28-MARCH 10: IAS 2022 Costa Rica Tour- FULL [Costa Rica]

MARCH 12: Summit Lake Waterfowl Trip [Summit Lake State Park]

MARCH 30: Spring into the Rainforest: Costa Rica Virtual Birding IIII [Zoom]

APRIL 9: Lye Creek Burn Longspur Trip [Lye Creek Burn]

MAY 7-8: Goose Pond Weekend Birding Trip [Goose Pond, Linton]

Visit the Indiana Audubon Events Page at WWW.INDIANAUDUBON.ORG/EVENTS to see all the field trips and events now posted for registration. These trips will fill fast!

CONGRATS TO #21IN21 WINNERS!

2021 was your chance to join us across the state to celebrate the Indiana Birding Trail by visiting 21 sites during the year. Everyone who participated got a special certificate and patch to commemorate the journey on the Indiana Birding Trail Challenge. Additionally, several prize baskets were awarded by #21in21 sponsors.

Congratulations to the prize winners:

Vortex Viper HD Binoculars: Joyce Weber

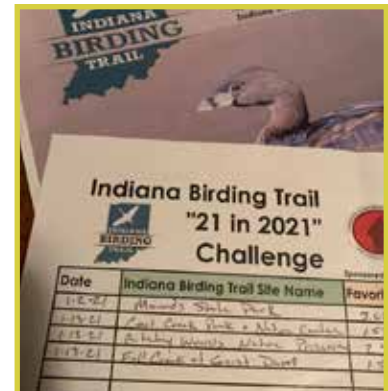
DNR State Parks Prize Package: Shandell Hobbs and Angie Huser

Indiana Dunes Birding Festival Registration: Angela Vanderver

IAS Membership Basket: Thomas Culbertson

Dunes Calumet Audubon Prize Basket: Jen Woronecki Ellis

Sassafras Audubon Prize Basket: Megan Mayer



Don't let the contest's ending prevent you from missing out on some of the best birding sites in the Hoosier state. Find your adventure today on the Indiana Birding Trail.

LEARN MORE AT WWW.INDIANABIRDINGTRAIL.COM

IAS MOURNS THE LOSS OF CHARLES KELLER

The birding community lost a legend this past week with the passing of long-time Indiana Audubon member, Charles E. Keller, 92, formerly of Indianapolis, on Christmas Day. He was preceded in death by his loving wife Shirley (Golding) Keller.

Although ornithology was only an avocation, his contributions were manifold. Following a 1951-53 stint in the U.S. Army, Charles spent most of his professional career as an associate pharmacologist with Eli Lilly & Company. Charles' educational achievements included an associate in Arts from the University of Indianapolis in 1971 and an honorary Doctor of Science from the University of Indianapolis in 2000. He was quite active in the Indiana Audubon, where he served as editor of the Indiana Audubon Quarterly from 1986 through 2005.



Charles' contributions to Indiana ornithology were focused on avian research and a prolific publication of articles related to birds. His first publication, "bacon swamp notes" appeared in the 1946 Indiana Audubon Yearbook and was followed by more than 600 articles, notes, papers, and book reviews. Most noteworthy among these were statewide treatises on shorebirds and herons, which were published as multiple-part series in the Indiana Audubon Quarterly. Having a penchant for shorebirds, Charles employed the use of call notes in studies at the Indianapolis sewage ponds to resolve the vexing "dowitcher problem."

In 1979 he teamed with wife Shirley and son Timothy to publish Indiana Birds and their Haunts, a combination bird finding guide and summary of Indiana ornithology. This work included assessing the status of avian species in each of the three tiers of Indiana counties. In 1993 Charles and his son Timothy published the Birds of Indianapolis, a guide to birds in the eight counties around that city. Charles Keller's most important work was his co-authoring of the 1984 The Birds of Indiana, in which he was the second author. Over the ensuing two decades "Mumford and Keller," became the standard reference to Indiana birdlife.

The family asks that in lieu of flowers, donations may be made to the Indiana Audubon or The Michael J Fox Parkinson's Foundation. Memorial donations can be made online at WWW.INDIANAUDUBON.ORG/DONATE

INDIANA BIRDING TRAIL FEATURED IN OUTDOOR INDIANA

The January /February issue of Outdoor Indiana features the Indiana Birding Trail as it's cover story. The Indiana Birding Trail contains the best of the best for Indiana birding opportunities. Since it's inception in late 2019, it has grown to represent 66 birding sites around the state.

Outdoor Indiana spent 12 months visiting the Indiana Birding Trail and capture the essence of Indiana birding with both a visual and well written feature story.

If you're an Outdoor Indiana subscriber, look for the latest issue or visit WWW.OUTDOORINDIANA.ORG



INDIANA AUDUBON HEADING TO THAILAND

In early 2023, Indiana Audubon will host the next in a series of great birding adventures, as IAS takes you off the beaten path to a set of unique. For sheer diversity of birds in a short trip, it's hard to beat Thailand. Thailand is one of Asia's most appealing destinations; it boasts excellent infrastructure, some of the most popular cuisine in the region, and an ancient and fascinating Buddhist culture, making both birding and cultural excursions easily combined. And that's not to mention the birds! Thailand is a country where massive bird lists can be amassed, if all the varied regions are visited. The mountains of the north, the parks of the central part of the country, and the Thai Peninsula, which connects with Malaysia, are all distinct, with varied bird lists in each. This tour focuses only on Central and Northern Thailand. As the peninsula is largely similar, bird-wise, to Peninsula Malaysia and, to some degree, Borneo, those species are perhaps better covered on a later trip to those areas; this also serves to keep the trip to a shorter length.

- DAY 1: Arrival in Bangkok, nearby airport hotel.
- DAY 2: Laem Pak Bia and Phak Thale shorebirds
- DAY 3: Laem Pak Bia to Kaeng Krachen
- DAY 4: Kaeng Krachen National Park
- DAY 5: Kaeng Krachen National Park
- DAY 6: Khao Yai National Park
- DAY 7: Khail Yail National Park
- DAY 8: Chiang Mai/Doi Inthanon National Park
- DAY 9: Chiang Mai/Doi Inthanon National Park
- DAY 10: Chiang Mai/Doi Inthanon National Park
- DAY 11: Doi Inthanon National Park, fly to Bangkok
- DAY 12: Departure from Bangkok



Prices based on double occupancy are: \$5,829 per person IAS Member. \$5,929 per person non-IAS Member. Single Supplement: \$485.

VISIT

WWW.INDIANAUDUBON.ORG/EVENTS
TO LEARN MORE BEFORE THIS TRIP FILLS UP!



THANK YOU TO OUR END OF YEAR DONORS!

With great generosity from people like you, Indiana Audubon is able to continue its mission of supporting the birds through conservation, research, and education. We sincerely appreciate your generosity!

Cheryl Ammon	James Schowe	Robert Layman	Steve Doud	Tina Ferguson Rosier
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Tracy Oxtoby	Neal Miller	Gracie Reiff	Kathy Broshous	
Dee Ann Peine	George Kopcha		Rebecca Parker	

NOTES FROM MARY GRAY BIRD SANCTUARY

Big things are happening at Mary Gray! It might be the dead of winter, but we're thinking ahead to Spring. Yearly events like the Spring Gathering, Outdoor Education, the Hummingbird Festival, and bird banding are on the horizon, and events canceled due to COVID like Indiana Master Naturalists courses are making a return. Keep an eye on the IAS activities page and the Mary Gray Facebook page for more information to come!

For now, lots of behind-the-scenes work is going into making these future events fun and safe. Namely, working on felling dangerous trees before they come down on their own! If you've visited recently, you might have noticed some new trees down near the first pond, the first residence, and on Beech trail. Most of these were Ash trees, killed by the Emerald Ash Borer beetle years ago but still standing. We're sad to see these trees go, but their wood is keeping our Operations Manager and Resident Caretaker warm this season! Not quite everything made it through the tree work unscathed: if you're thinking of coming out for a winter hike all of our trails are currently open, but be aware the Biology Bridge on Beech trail is closed, with repairs and improvements are on the horizon!



If you have any questions or concerns, don't hesitate to reach out to Libby, Operations Manager, at lkeyes@indianaaudubon.org



2022 INDIANA DUNES BIRDING FESTIVAL



The Indiana Dunes Birding Festival is back for 2022. Begin making plans to join us in the Indiana Dunes May 12-15, for the Indiana Dunes Birding Festival. The festival committee is hard at working creating an interactive and safe festival for birders from all over the country. Both carpool field trips and van guided trips will be back, with the return of popular events like outdoors Birds and Brews, the annual bird calling competition, and more.

Registration is open for the annual Fine Art Print Reveal, on Saturday, February 26 in Chesterton. Visit our Events page to register to join us for some games, pizza, and the official unveiling of the 2022 Fine Art Print. A limited number will be available for purchase, with first dibs to those in attendance.

INDIANA AUDUBON MEMBERS WILL HAVE FIRST CHANCE TO REGISTER FOR THEIR FAVORITE TRIP OR WORKSHOP BEGINNING ON MARCH 1. YOUR EMAIL ADDRESS WILL GAIN YOU EARLY ACCESS TO THE REGISTRATION SITE IN 2022. NO MORE SECRET CODES!

KEYNOTE



David Lindo, The Urban Birder

Urban Birding: A Gateway to Nature

SAT 5:30-9PM | SAND CREEK COUNTRY CLUB

Join us for this Saturday keynote presentation and dinner! The silent auction will also be available online and end during this time. David Lindo has been urban birding since the devil was a boy and has now dedicated his life to engaging city folk with nature in both his home country in the UK, and around the world. His talk will be an illustration of just how easy it is to connect with nature in an urban environment.

HEADLINERS

Elizabeth Hargrave

Wingspan: How A board Game Took the Birding World By Storm

THURS 11:30 AM-12:30 PM
INDIANA DUNES VISITOR CENTER



Diego Calderon

Birding with FARC: How Birds Connect People

SAT 11:30 AM-12:30 PM
INDIANA DUNES VISITOR CENTER



Dan Gardoqui

Talking with Birds: From Listing to Listening

FRI 11:30 AM-12:30 PM
INDIANA DUNES VISITOR CENTER



Dr. Ken Brock

Lake Michigan's Fall Funnell Affect and What You're Missing Out On

SUN 11:30 AM-12:30 PM
INDIANA DUNES VISITOR CENTER



WWW.INDUNESBIRDINGFESTIVAL.COM



LIFE IN THE FIELD:

SECRETIVE MARSHBIRDS

BY: LIBBY KEYES



Picture a marsh: your favorite one, if you have one! It's just before dawn, mostly dark, just a hint of orange and pink creeping over the horizon. Mist is sitting over the water, heavy enough that the reeds you're walking through are still soaking wet, and your cold pants are a little uncomfortable. The marsh is waking up around you. A half mile away, you hear Canada Geese honking, angry and upset, at a fox or other intruder. Tree swallows are tittering in a dead tree above you, just poking their head out of their hole. There's a splash to your right, ducks maybe, or a turtle. A Great Blue Heron stalks frogs along the shore. And then a call, the one you're here for, rings out over the marsh. It's not musical birdsong, but the whinny of a Sora. It's a declining and secretive marsh bird species, and since it's the bird you're here for, it's music to your ears!

Since 2016 my summer mornings often looked something like this, surveying for secretive marsh birds like the Sora somewhere in the Calumet region as the Secretive Marsh Bird Coordinator. Multiple partner organizations, including Audubon Great Lakes, Indiana Audubon, NIRMI, the Indiana DNR, and many others, contribute to this incredible program. It's no secret that many bird species are declining, and marsh birds drastically. The hemi-marsh habitat composed of 50% water and 50% vegetation that many species rely on is disappearing due to degradation, pollution, altered hydrology, climate change, and invasive species. Monitoring and restoring these important habitats can provide benefits not just to birds, but to other wildlife and people as well.

Our focus for the surveys was 18 vulnerable marsh bird species, like the Sora, that help us better understand how these wetland habitats are changing. But surveying for secretive marshbirds isn't easy! I, and other volunteers, used an approved protocol to utilize playbacks. Normally, and especially during the breeding season, birders want to avoid playbacks that can agitate birds, since this can cause stress and over use can even cause birds to leave nesting sites. In this case however, playbacks are one of the only



effective ways for individual human volunteers to survey. If these birds aren't vocalizing, we wouldn't even know they were there! Their secretive nature meant that there were plenty of surveys over the years when I didn't record a single bird. One survey began just like that, with a kayak route on Wolf Lake, quiet and cold. If you've heard any rumors or stories about Wolf Lake, then you can imagine that it's already a slightly creepy route, especially when the invasive carp are spawning and bumping the bottom of your kayak! I was almost through the entire route and hadn't recorded any of our focal species, when the recording we use started the Virginia Rail call. Out of the Phragmites ahead of me, a Virginia Rail erupted, squawking and flapping across the water, and landed on the front of my kayak! It stood slipping around for a second before ungracefully taking off back into the reeds, grunting the entire time. I had endless amounts of incredible, unexpected experiences during my time as the Marsh Bird Coordinator, but that takes the cake!

If you're interested in becoming a marsh bird volunteer, learn more at www.indianaudubon.org

NATURE JOURNALING

A DEEPER CONNECTION WITH NATURE

BY: JONI JAMES



Notable birders, naturalists, scientists, explorers, and artists have used nature journals for recording their observations and discoveries for hundreds of years. Many innovative observations were published from their journals. Henry David Thoreau, Charles Darwin, Aldo Leopold, Rachel Carson, Lewis and Clark, John Muir, and Robert Bateman are examples. What about you? How often have you been birding, nature sauntering, hiking, or gardening and have been filled with wonder, curiosity, and reflection pertaining to your encounters and discoveries outdoors? How often have you had unique and meaningful interactions with wildlife and wanted to preserve those experiences?

As a nature photographer since the 1980s, I was usually in the field with camera, multiple lenses, and a tripod documenting special moments. I would then head home to work with technology. These days, I don't enjoy being encumbered by the heavy equipment and technology tools. In those forty years I have also kept written journals to record my interactions with nature, but my process changed in 2015 when I discovered nature journaling through John Muir Laws' website. It has not been the same since. For me, nature journaling deepens my relationship with nature even more than photography and simplifies my time outdoors.

WHY NATURE JOURNAL?

1. Deepens observational skills, uses the senses, and connects you to nature
2. Stimulates curiosity, thinking, questioning, creativity, and

eye-hand coordination

3. Provides opportunities for focused mindfulness and relaxation
4. Provides opportunities to document/preserve your observations and experiences
5. It is a multi-disciplinary activity (science, language arts, visual arts, and math) to enjoy with family, friends, children, and students (and/or alone).
6. Improves your skills with sketching/drawing, colored pencils, watercolors, etc.
7. Leave a legacy. Journals are the most intimate, personal items you can leave behind for loved ones

BEFORE YOU BEGIN

There is a very important caveat before we go further. This is NOT about creating "pretty pictures" or artwork. It is about paying attention, being curious, and deepening your connection to your surroundings through words and sketches. I often have people kindly compliment my journal pages saying, "You're so talented." It is not talent. It's skills that I have developed over time by learning, and putting in the "pencil miles". *Anyone can do it and that includes you.*

Another important point to remember is there is no "right" way of keeping a journal. Your journal is YOUR journal to create as you want on any given day. You do not have to share it with anyone. You just have to make the effort. A good goal is 1-3 entries a week.

Photos: Nature journal entries by Joni James

SUGGESTED TOOLS

Nature journaling is not an expensive pursuit and is minimal in the amount of equipment needed. I have listed suggestions and examples of specific tools I prefer.

> **JOURNALS:** I recommend a hard or soft bound journal with paper heavy enough to handle watercolors (if you so choose to use them). Suggestions: John Muir Laws Sketchbook, Stillman & Birn Alpha Series- Hard or Softcover Bound Sketchbooks, Moleskine Sketchbooks. I do not recommend spiral bound notebooks—the pages will tear out. Choose a journal size you like. Personally I like the A5/ 8x5 plus sizes or 9x7.

> **PENS:** Micron Pigma .003, .005, .01, .08 (waterproof, archival ink)

> **PENCIL:** Any pencil will do—there are different hard/soft ones. Mechanical pencils, Pentel Twist-Erase 0.5 or 0.7

> **WATER BRUSH:** Pentel Arts® Aquash™ Large (18mm), Fine Point Water Brush (very convenient)

> **WATERCOLOR PAINT SET:** John Muir Laws Palette or Sakura Koi Pocket Field Sketch Box (24) or Winsor-Newton brands

> **COLORED PENCILS:** Faber-Castell Polychromos (24) or Derwent, or others

> **WATERCOLOR PENCILS:** Derwent

> **SHOULDER BAG:** For carrying your equipment, I recommend a shoulder bag with an adjustable strap. I don't recommend a backpack as this requires removing it each time you use your journal.

> **OTHER TOOLS:** Ruler/tape measure, magnifying glass/loupe, zip-lock bags, binoculars (wear around neck), old sock (upper collar cut off to wear around wrist to wipe paint from brush)

START YOUR JOURNAL

Always begin each entry with metadata. Metadata includes date, time, weather data, location, sunrise/sunset, and other observations of the day. Sketch/draw whatever subject or

encounter has attracted your attention. You can be as detailed as you wish or merely do gesture sketches. Add words—narrative, descriptions, reflections, questions, measurements, counts, etc. It often helps to use "Who-What-When-Where-Why-How" to get you started or use the prompts John Muir Laws suggests: "I Notice", "I Wonder", and "It reminds me of".

You can draw in the field and then add any color when you

get home or do it all in the field. My preferred process is to observe, study, measure, make notes, and photograph (usually with my phone) in the field. When I return home, I use my notes and photos to create my page. This works best for me but you may prefer to create your pages entirely on site. You can add poetry, rubbings, ink stamps, pressed flowers, and other items and ideas to your pages, too. There is no right or wrong way and no one method is better. Simply do whatever is convenient and rewarding for you.

WARNING

We all suffer from the "Inner Critic" who will try to tear you down and convince you to quit or tell you that your sketches are lousy, your page is not good enough, you can't draw, your writing is bad, or you'll never improve.

Don't let it win! Acknowledge it and then tell it to shut up! The more nature journaling you do, the better your skills will become. Remember it is about attention, curiosity, and growth.

RESOURCES

There are unlimited resources available for learning all about this rewarding adventure but your best source is John Muir Laws. John (Jack) Muir Laws is a leader and innovator of the worldwide nature journaling movement. Jack is a naturalist, educator, and author and is a prolific source for information. Jack has created an international community of nature journalers. You can join the Facebook group, Nature Journal Club. He is generous through his free blog posts, videos, and weekly workshops available on his website. I highly recommend two of his books: *The Laws Guide to Nature Drawing and Journaling* and *The Laws Guide to Drawing Birds*. He also has other resources and supplies available from his store at www.johnmuirlaws.com. I suggest purchasing books and supplies from his website in order to support him.

Get outdoors no matter the season and find birds, fungi, winter tree buds, leaves, stones, wildflowers, tracks, insects, landscapes, and clouds, that capture your attention, curiosity, and wonder! Then, record it in your journal. It is so enjoyable to revisit completed journals and relive those memorable events and magical moments in nature. Remember, the goal is not to create "pretty pictures" and your journal can be whatever suits you—minus the "Inner Critic". Carry your nature journal kit with you outdoors and begin preserving those special moments.

If you have questions or want to share your efforts, feel free to email me. Type Nature Journaling IAS in the subject line and send to heronwatch0@gmail.com.



PLANTING NATIVE PLANTS IS FOR THE *BIRDS!*

BY: SCOTT NAMESTNIK

(SNAMESTNIK@DNR.IN.GOV), BOTANIST AT INDIANA
NATURAL HERITAGE DATA CENTER, INDIANA DNR
DIVISION OF NATURE PRESERVES

The intricately woven web of life is easily observable in nature, if you know what you're looking for. Plants attract insects. Insects attract songbirds. Songbirds are hunted by birds of prey. You get the picture. So how can we use this simplified snippet of science to attract birds to our yards so we can improve their chances of survival and increase our likelihood of getting good views of them? From a botanist's perspective, the answer is simple ... plant native plants!

The definition of "native" can be debated, but basically a native plant is one that evolved and occurred naturally in a given region of the world. A plant like Queen Anne's lace (*Daucus carota*), which is ubiquitous in our disturbed landscapes today, is native to Europe and southwest Asia but was not known in North America until the 17th century; while it has become naturalized in Indiana, it is not a native plant in our area. Conversely, tall goldenrod (*Solidago altissima*), which grows in habitats similar to where Queen Anne's lace is found, is sometimes considered an aggressive weed, but it has been a part of Indiana's landscape since before European colonization of North America, and is therefore considered a native species. Because native plants and native insects have co-occurred here for so long, they have developed mutual relationships that are not present between non-native plants and native insects, to the point that the entire existence of some of our native insects relies exclusively on a single native plant genus or species!

With this relationship between native plants and insects in mind, and knowing that our native birds also are a part of this equation, at the most basic level, you really can't go wrong if you're planting native plants in your landscaping to attract birds. Having a variety of gardens with native trees, shrubs, woody vines, and herbaceous plants will provide the greatest habitat options for a wider range of bird species, but even planting a small area that fits your available space will prove beneficial.

Mature trees of all species obviously provide habitat for both nesting and migrating bird species, but planting oaks (*Quercus* spp.) provides the most bang-for-the-buck, as they support an impressive number of butterfly and moth species ... and what self-respecting bird doesn't like to eat caterpillars? Another good tree option is black gum (*Nyssa sylvatica*), which produces berry-like fruit called drupes that are devoured by species ranging from Swainson's Thrush to Wild Turkey. The trunks of birch (*Betula* spp.) trees are used by Yellow-bellied Sapsucker, which create horizontal rows of holes and then feed upon the resulting sap; birch seeds are eaten in the fall by Black-capped Chickadee, Carolina Chickadee, Tufted Titmouse, Pine Siskin, and American Goldfinch. Eastern red cedar (*Juniperus virginiana*), although it can invade native glade sites on limestone in the extreme southern part of the state, is a great choice for bird habitat, as it is evergreen and provides "berries" (they're actually fleshy cones) that are fed upon by Downy Woodpecker, Eastern Bluebird, American Robin, and Cedar Waxwing in the winter.

Shrub and small tree options are even more plentiful. The fatty and protein-rich drupes of dogwoods (*Cornus* spp.), such as flowering dogwood (*C. florida*), pagoda dogwood (*C. alternifolia*), rough dogwood (*Cornus drummondii*), and silky dogwood (*C. obliqua*), attract a number of bird species, including Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Red-eyed Vireo, Blue Jay, Black-capped Chickadee, Carolina Chickadee, Tufted Titmouse, Eastern Bluebird, Veery, Swainson's Thrush, Hermit Thrush, Wood Thrush, American Robin, Gray Catbird, Cedar Waxwing, Summer Tanager, Eastern Towhee, Song Sparrow, White-crowned Sparrow, and Rose-breasted Grosbeak. The same can be said for the sweet, juicy, berry-like pomes of serviceberries (*Amelanchier* spp.), which taste great if you can get to them before the birds clear them off the trees! Even the pomes of chokeberry (*Aronia* spp.), while not desirable to humans (as the name implies), are gobbled up by Gray Catbird, Cedar Waxwing, and Northern Cardinal.

If you have enough space in your landscape, you might be willing to give some of our native woody vines a chance. Virginia creeper

(*Parthenocissus quinquefolia*) and riverbank grape (*Vitis riparia*) both provide berries into the late fall that are fed upon by American Robin, Cedar Waxwing, and Northern Cardinal. If you're adventurous, you can even leave the eastern poison ivy (*Toxicodendron radicans*) that volunteers in your garden (you know how it got there ... a bird ate the fruit and moved the seed to your garden through its digestive system); this wonderful native plant produces white drupes that are gorged upon by Black-capped Chickadee, Carolina Chickadee, Cedar Waxwing, Yellow-rumped Warbler, and Black-throated Green Warbler.

By far, the greatest diversity of native plant options are herbaceous plants, and these will produce a more immediate result if planting to attract birds. Milkweeds (*Asclepias* spp.) consist of a number of species that grow in a variety of conditions, and thus provide a great choice. Milkweeds have been shown to support more than 450 species of insects, and you know who likes to eat insects! In addition, in the summer and fall, the fluffy coma attached to milkweed seeds is used as nesting material by a number of species. Plants in the sunflower family (*Asteraceae*) are particularly beneficial for creating desirable bird habitat. Many songbirds, especially Blue Jay, Black-capped Chickadee, Carolina Chickadee, Tufted Titmouse, American Tree Sparrow, Song Sparrow, Northern Cardinal, Pine Siskin, and American Goldfinch feed on the fruit of native plants such as sunflower (*Helianthus* spp.), blazing star (*Liatris* spp.), gray-headed coneflower (*Ratibida pinnata*), rosinweed (*Silphium integrifolium*), and asters (*Symphotrichum* spp., *Eurybia* spp.). Several of these species are also used as resting habitat by birds in the winter. And, of course, the flowers of a number of native plants are known to attract Ruby-throated Hummingbirds, including wild columbine (*Aquilegia canadensis*), trumpet creeper (*Campsis radicans*), blazing star (*Liatris* spp.), cardinal flower (*Lobelia cardinalis*), Virginia bluebells (*Mertensia virginica*), wild bergamot (*Monarda fistulosa*), foxglove beardtongue (*Penstemon digitalis*), and firepink (*Silene virginica*).

To round out your native gardens, don't forget the grasses and sedges. Grasses such as little bluestem (*Schizachyrium scoparium*) and Indian grass (*Sorghastrum nutans*) are great for full sun, and songbirds find nourishment in their fruit as well. In shade, beak grass (*Diarrhena* spp.) produces relatively large fruit that birds find desirable. Sedges (*Carex* spp.) are one of the most underused plant groups for native gardens, as at least one sedge species will grow in every possible garden condition, and they provide structure, texture, and variable shades of green to the landscape. In addition, the fruit of sedges are fed upon by Dark-eyed Junco and Northern Cardinal, as well as various sparrows and finches.

Although all of these plants provide our feathered friends with nectar and/or habitat and provide us with the splendor of color and interesting flower and foliage structure during the growing season, native plants and native garden habitat are also essential for our winter resident birds. In winter, if not cut back, native plants create cover for species including Mourning Dove, American Tree Sparrow, Fox Sparrow, Song Sparrow, White-crowned Sparrow, Dark-eyed Junco, and Northern Cardinal, and fruit and seeds are fed upon by these species and more. Supplement these natural food sources by putting up feeders and a water source in the winter, and you'll create the perfect bird habitat to watch from inside the warmth of your home on the coldest winter days.

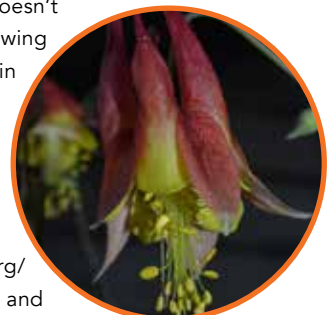
By now, you should have some ideas for native plants to put into your gardens this spring. But how do you determine what to plant, given

your location within Indiana and your specific property conditions? For location, as a purist, I don't like to plant species on my property that didn't occur naturally in or near my county of residence. One source that I use to find the currently known range of a given species is the Biota of North America Program (BONAP), which has maps showing county distribution for every plant species in the United States (bonap.org). A number of books, including Charles Deam's 1940 *Flora of Indiana*, and Gerould Wilhelm and Laura Rericha's 2017 *Flora of the Chicago Region*, can also be useful, but are more technical guides that are used to identify plants. With that said, planting a plant native to any part of Indiana is better than one that is not native to the United States, so you don't have to follow the guidelines of a purist like me to have a native garden that is productive for birds. An almost endless number of resources, both in print and online, can be used to determine what growing conditions are appropriate for a given plant species. It is important to consider your amount of sunlight, soil type, soil moisture, and soil pH before choosing native plants for your garden. As a botanist and plant ecologist, I like to take hints from nature. After visiting a number of natural areas that are protected by land trusts and/or that are part of the Indiana DNR Nature Preserves system, you will start to see what plants grow together in certain conditions. Nature doesn't make many mistakes, so if you see a plant growing in a prairie at a natural area, it will likely grow in full sun in moist to dry soils on your property. To make this easier, though, several websites, such as the NativeBrowser tool (nativespec.com/nativebrowser), the Native Plant Finder (nwf.org/nativeplantfinder/plants), and the Audubon Native Plants Database (audubon.org/native-plants) allow you to input your location and site conditions, and output a list of plants that may be appropriate for your particular setting.

Once you have your list of desired native plants, how do you figure out where to get them? A number of native plant nurseries are present around the state. The Indiana Native Plant Society (INPS) has a lot of useful information on this topic at indiananativeplants.org, and specifically at indiananativeplants.org/landscaping/where-to-buy.

Now is the time to start planning for your native gardens, which you can start planting soon. Spring and fall are the best times to plant, as they take advantage of natural irrigation during what are typically our wettest times of the year. Planting native plants can be addictive, but you will have years of enjoyment from them, and the birds will thank you.

References Located On Back Cover



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