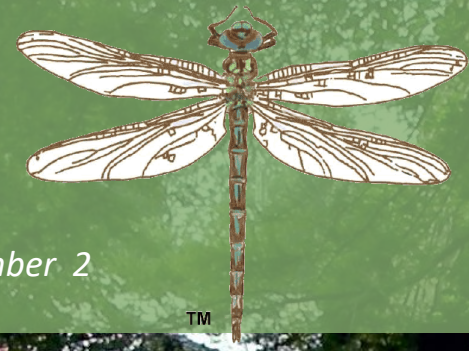




# Missouri Master Naturalist

Spring Issue 2018    Volume 8    Number 2



*Live simply,  
so others may  
simply live*  
— Mother Theresa

Red Monarda *Monarda didyma*  
Photo by ©Glen Horton

# Great Rivers Gazette

Spring 2018

Volume.8 Number 2

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Editor: Pam Wilcox  
Layout: Bob Virag

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## Front Cover

Red Monarda – Photo by Glen Horton

## Back Cover

Morning Dew on American bladdernut– by Vaughn Meister

## Great Rivers Chapter Officers

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Master Naturalist Logo Apparel-----	Kari Pratt



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## The President's Corner

Dear Chapter Members,



In the most recent issue of *Missouri Conservationist*, the Missouri Department of Conservation's Director, Sara Parker Pauley, outlines the department's new strategic plan. This plan has four goals, two of which Missouri Master Naturalists are an integral part.

Goal one is to "sustain and improve fish, forest, and wildlife resources". Missouri

Master Naturalists are active volunteers in many ecological restoration efforts that work to improve our natural resources, such as restoration efforts at Don Robinson State Park and Shaw Nature Reserve.

Goal two is to "enhance the relevance of conservation" and members of our chapter do this through their participation in citizen science projects such as Frog Watch and a strong focus on public education through organizations such as The Green Center.

This issue states that the new design "*is a plan to mitigate the relentless scrape and crunch of development. It is a chance for all Missourians to share in the safeguarding of a historic outdoor heritage.*"

Never doubt the significant impact that your actions as a volunteer have on the preservation of our beloved natural resources.

**Rachel Becknell**  
**President,**  
**Great Rivers Chapter**

View us on the web at [www.greatrivers.org](http://www.greatrivers.org)

View us on Facebook at [www.facebook.com/MMNGreatRiversChapter](http://www.facebook.com/MMNGreatRiversChapter)



You remember spring, don't you?

We think it happened sometime between

May 4 and May 10 this year!

Apologies for the delay in releasing this Spring issue.

It's just been too darn hot to work on it!

*The Management*





## Great Rivers Citizen Science – Spring 2018

# Airbnb for Birds *By Jack Hambene*

2018 is the one-hundred-year anniversary of the Migratory Bird Treaty Act of 1918, which protects songbirds from direct human caused destruction. It was a landmark international treaty for its time that helped stabilize migratory songbird populations from the type of wanton destruction that resulted in the extinction of the Passenger pigeon (1900) and the Carolina parakeet (1910). It is fitting that a strong coalition of scientific and conservation groups such as the National Geographic Society, the National Audubon Society, Birdlife International and the Cornell Lab of Ornithology are celebrating this landmark treaty by declaring 2018, **The Year of the Bird**.

All is not well in birdland, however, and by naming 2018 **The Year of the Bird**, it is hoped the publicity will help educate the general population to the precipitous decline in songbird numbers worldwide. Global warming and severe weather, loss of habitat to logging and agriculture, competition with non-native species for nest sites and food sources, predation by household pets (cats) and death by window pane, are routinely cited as contributing causes. Man may no longer be shooting songbirds for sport, but our footprint is all over this crime scene.

Do you sometimes feel helpless in the face of so many mega trends that negatively impact our native flora and fauna? The good news is we can all do our small part in helping stem the tide. To my mind, that is what being a Master Naturalist is all about.



I would like to highlight one program I have been involved in for about five years; monitoring **Purple Martin** houses in **Forest Park**. My initial involvement came about after meeting **John Miller** at a talk he gave to the first Saturday of the month bird watching group sponsored by **St. Louis Audubon Society** and **Forest Park Forever**. John Miller has dedicated himself to care of Purple Martins and currently monitors houses in Forest Park, MOBOT, Cahokia Mounds and Creve Coeur Park. Clearly John needed help. Thinking this would be a good father/son project for a teenage boy scout needing service hours, I donated the cost of a new house at the Hawthorne 9<sup>th</sup> hole at The Courses at Forest Park. Well, five years later, the Eagle Scout has flown the coop and dad is still taking care of the birds. This will sound familiar to parents whose kids promised to always take care of that puppy they so desperately wanted.



**Let me give you a few fun facts about Purple Martins:**

- Martins are the largest species of swallow in the US.
- Martins are voracious aerial insectivores eating dragonflies, moths, beetles and flies they catch in flight during the day, high above the ground. Contrary to popular belief, they eat very few mosquitos.
- Martins prefer to live in communal housing near humans and are the only species living east of the Rocky Mountains, *Progne subis subis*, relies almost entirely on human supplied housing.
- After fledging, Martins aggregate in large groups and migrate 5000 miles to Brazil for the winter (they speak excellent Portuguese) returning each year to the same nesting areas.
- Did I mention they are purple?



Being a landlord of Purple Martins is not very time intensive, about a half hour per week per 10 to 12 nest houses. The breeding cycle starts around Good Friday when you open the house and ends by mid-July. I usually wait until the weather cools in the fall to do a once a year house cleaning. Snakes, racoons and birds of prey are the natural enemies but can be held in check with predator guards. You really get up close and personal with the chicks over their month-and-a-half life cycle to fledging as the pictures attest. Mom and dad never seem to dive bomb you the way Bluebird parents do.

So, in my small way, I help about a hundred new birds a year (I am landlord for two houses soon to be three) complete their amazing life cycle. Martins actually like humans, or at least want to live near us, and the eastern species is completely dependent on us for nesting sites. Land lording Martins is one of the rare symbiotic relationships between humans and animals. If you are like me and do not have the yard to attract Martins, I am sure John Miller can use some more help. I would be happy to put you in touch.



# Purple Martin (*Progne subis*)

ORDER: Passeriformes

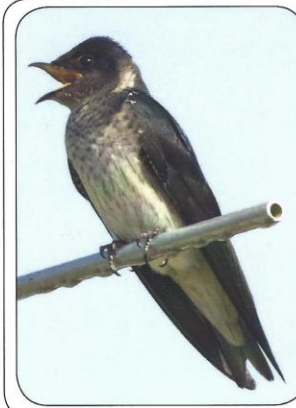
FAMILY: Hirundinidae



## Adult Male

ASY Male— (After-Second-Year)

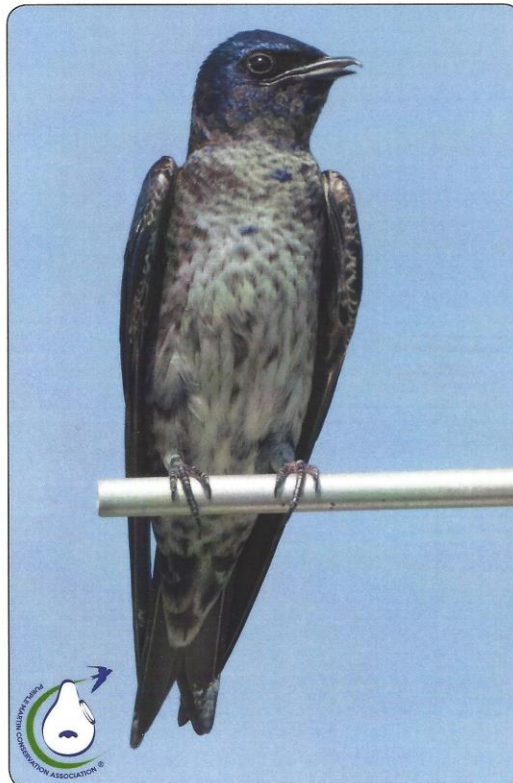
- Easiest to identify
- Only Purple Martin to have iridescent, purple feathers covering the entire body
- Martins with this plumage are two years or older



## Hatching Year

HY—(Juvenile)

- Sex of a hatching year bird cannot be determined by plumage
- Stubby tail—shorter than the wing feathers
- Dull brownish-gray color
- Mouth lining is bright yellow, turns pink about 10-14 days after young fledge



## Subadult Male

SY Male—(Second Year)

- Can be tricky to identify—easily confused with adult females
- Will have at least one, but may have many, solid-purple feathers either on chin, throat, belly or undertail. Back also has solid dark feathers
- Only males sing the common croak song—ends with a “krieeek” sound and is often accompanied by raised head feathers and a thrown-open beak



Light undertail similar to a SY female but purple feathers under the chin designate this martin as a SY male.



Typical male pose—at the cavity entrance, head thrown back





*Citizen Science (continued)*

# Missouri Butterfly Monitoring Network

In 2016, the Butterfly House began a citizen science project to monitor butterfly populations and ID species in the St Louis area.

The project was led by entomologist Tad Yankoski. Tad provided training for the volunteers.

True to form, many Great Rivers Members jumped at the chance to not only be out in nature, but provide valuable citizen science data on butterfly populations.

The following members have participated over the last two years. Reach out to them and hear about their experiences. I'm sure they will be happy to share.

Ann Earley, Carolyn DeVaney, Claire Meyners, Joan Park, Karen Zelle, Nancy Willis, Pam Fournier, Sharon Baldassare, and Sherri Schmidt.

If you would like more information on how to become involved, contact Tad Yankoski at [tad.yankoski@mobot.org](mailto:tad.yankoski@mobot.org) . He can put you on the list for next year's monitoring class.



Female black morph of the Tiger Swallowtail-in Queeny Park  
photo by Sherri Schmidt



*Citizen Science (continued)*

## Study of the biodiversity of the soil microbial communities

*When can our “stewardship” work be classified as “citizen science”? When your volunteer service helps a real scientist, of course, like our very own chapter president, Rachel Becknell!*

*Read all about the progress in her ambitious project in the Washington University newsletter below:*

### BREAKING NEW GROUND IN THE TYSON RESEARCH GARDEN

Rachel Becknell has been quite busy with some large machines as she sets up two bays of the research garden for her PhD dissertation project. Manipulating soil microbial communities at a large scale requires starting with a clean slate, meaning piles and piles of twice-sterilized soil. And that soil has to be moved into a common garden site and placed within a manageable experimental framework. For Rachel that means many days working with a backhoe and the soil steam sterilization equipment.



*Making sure the steam sterilizer is running properly*

When finished with the project set up, Rachel will have established 88 1m x 1m prairie plant communities with four different underlying soil microbial communities. There will be control plots with sterile soil and three sets of plots inoculated with soil microbial communities from elsewhere - one from an old pasture, another from a restored prairie at Shaw Nature Reserve, and the last from Tucker Prairie, a prairie remnant in Callaway County, Missouri.



*Digging perfectly spaced squares for experimental communities of prairie plants under differing soil microbe conditions*

Rachel is a graduate student in the Evolution, Ecology & Population Biology program at WashU and a member of Assistant Professor of Biology Scott Mangan's research group. Tyson has provided a \$2000 Graduate Research Award to support her work in the garden. She was also recently awarded the Webster Groves Nature Study Society Bo Koster Scholarship for Nature Study, providing her with \$2000 towards DNA metabarcoding to rapidly assess the biodiversity of the soil microbial communities in her project. She hopes that her experiment at Tyson will provide better understanding of feedbacks between plant species within a community and can inform prairie restoration practices to result in higher levels of biodiversity.





Many thanks to our Great Rivers volunteers who helped make this work go faster.



Digging the last of 88 holes!



Bob Virag, weeding



Michael Meredith, building the plastic liners



88 plastic liners



Placing the liners



Claire Meyners, weeding and more weeding



Vaughn Meister, Sterilizing the seeds



Kevin Barry, sterilizing the seeds



Rita Buckley, watering the seedlings



Growing the native plant seedlings



Rachel Becknell, gently relocating the black rat snakes



Filling the holes with sterile soil

Watch this space...To Be Continued!

It's not too late to sign up to help!



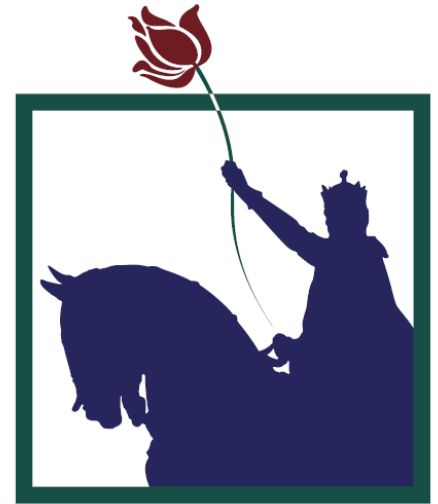
# Great Rivers Stewardship Projects – Spring 2018

## The Flora Conservancy

by Pam Fournier

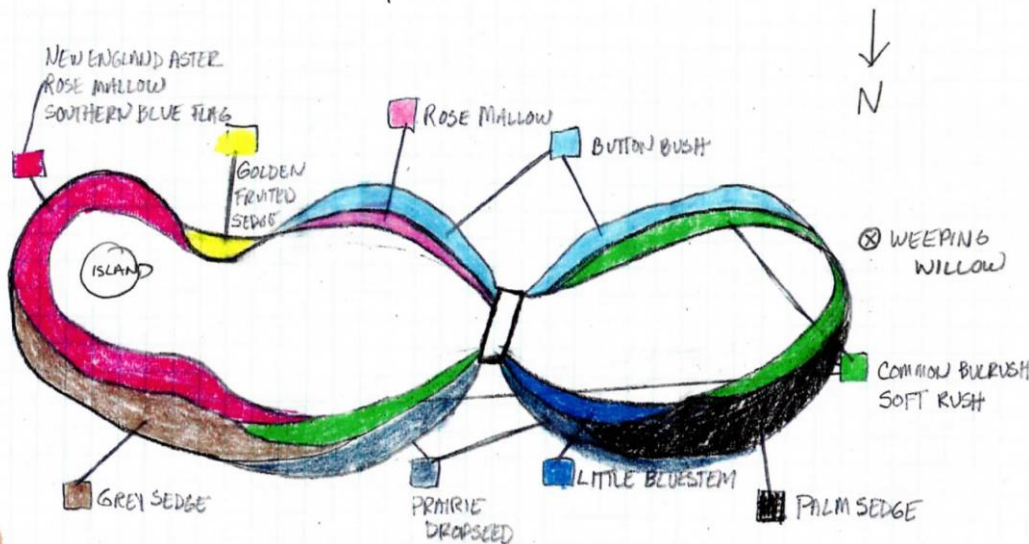
Many people are unaware of an important volunteer group operating in Forest Park. Yes, most people know of Forest Park Forever which is a group that has collected millions of dollars from deep pocket donors and many others. They do a great job of pumping many dollars back into Forest Park for needed repairs and improvements.

However, there is another important group, [The Flora Conservancy of Forest Park](#). This volunteer group was founded in 1999 to supply a supplemental volunteer force to plant the renovated gardens in the park. Volunteers are welcomed to contribute service on Tuesdays, Thursdays, and Saturdays from 9-11am. A hotline is kept current to tell volunteers with where the group will meet in the park for the work detail. By dialing, 53FLORA (533-5672), volunteers can join the group and participate in the day's activity without making any prior plan, reservation or any kind of commitment. In this way, Flora is ideal for those who have time available and want to contribute their involvement to Forest Park.



The Flora Conservancy

The Flora Conservancy developed "Meditation Lagoon," a landscaped planting of Missouri Natives. Master landscape architecture students from Washington University's program worked cooperatively to design landscaped garden beds at the lagoon. The Flora Conservancy spearheaded securing grant money, supplementing that money, prepping the beds and finally planting the area in 2010. Flora maintains the beds with help from various other groups such as the Fair St. Louis volunteers. During the maintenance sessions, volunteers are schooled in the need for planting natives and encouraged to take their experience back to their homes and neighborhoods.



The native landscape design plan is detailed in the drawing Flora used to plant the natives around the lagoon. The design is helpful in seeing the overall use of native plants in a garden-type setting. Meditation Lagoon, also called Jewel Box Lagoon, is on the grounds of the Jewel Box. It is located behind the Vandeventer Gates and the Korean War Memorial.



# Grand Opening of Schulze Nature Preserve

## Schulze Nature Preserve Grand Opening Recap



This month was a very proud and exciting day for Ozark Regional Land Trust as we celebrated the grand opening of the Schulze Nature Preserve!

Schulze Nature Preserve is a beautiful property owned by ORLT. It has been a focus of the organization, its staff and dedicated volunteers to create this nature preserve and open it to the public. On Saturday, May 5th, we did just that! The big ribbon was cut in the presence of many ORLT supports along with members of the Schulze family and friends. ([read more](#))



*Stewardship (continued)*

# The Spanish Lake Cleanup Crew *by Larry Conant*

On a rainy April morning, eight Great Rivers Master Naturalists removed a truck load of trash from Spanish Lake (in a pretty heavy rain). Those in attendance, other than myself, included Diane Goulis, Bob Virag, Donna Scott, Bob Ochs, Tom Fasl, Carl Davis, and Jack Hambene.

We worked two, maybe two-and-a-half, hours and made a dent in the rather atrocious mess there. We're still planning on this being a monthly event (the last Saturday of every month from 10:00 am to maybe 1:00 pm. If others wish to join us for the clean-ups, they should meet us at the Spanish Lake boat ramp at 10 am.



*Diane Goulis, hard at work in the rain at Spanish Lake Park*

My genuine appreciation to those hardy souls who made the first day of this program a success.

Thank you team!

--- Larry Conant



*Pickers, Carl Davis and Tom Fasl*



*Floaters, Jack Hambene and Larry Conant*



# Shaw Nature Reserve Ecological Restoration Volunteers Receive Recognition



*If there was any doubt that Great Rivers members contribute to the success of our local organizations, the article below will remove that doubt.*

*Congratulations to our current Missouri Master Naturalists who regularly volunteer at the Shaw Nature Reserve:*

*Amy Kilpatric*

*Don Frank*

*Robert Ochs*

*Ann Earley*

*Jack Hambene*

*Susan Orr*

*Brenda Christ*

*James Christ*

*Vaughn Meister*

*Deborah Frank*

*Rachel Becknell*

*Yvonne Von Der Ahe*

*Richard Lesage*

The **Ecological Restoration Volunteers** at **Shaw Nature Reserve** recently earned the ***Volunteer Group Excellence Award*** from the **Missouri Botanical Garden**.

Mike Saxton, Ecological Restoration Specialist at Shaw, received a congratulatory letter this spring from the Missouri Botanical Garden President, Dr. Peter Wyse Jackson.

In his letter, Dr. Wyse Jackson said *“the award is given every year to honor a group that has demonstrated effective team work through the completion of a special project, or a superior sustained effort which has contributed significantly to the mission of the Garden.”*



# Great Rivers Outreach and Education – Spring 2018

## Vaughn Meister Shares Her Knowledge of Daffodils with Fellow Volunteers



Earlier this spring, member Vaughn Meister, shared her extensive knowledge of Daffodils with her fellow volunteers at Shaw Nature Reserve. I'm sure everyone left with a new appreciation for this beautiful flower.





# Forest ReLeaf Tree Camp *by Tess Wasserman*



During the warm days of June 4-9th, the first inaugural “Tree Camp” was held among 20,000 trees at Forest ReLeaf’s Communitree Gardens Nursery in Maryland Heights. The camp provided 5th and 6th graders with the opportunity to learn about trees and wildlife connections with trees throughout the week.



On the first day, campers picked out their favorite tree in the arboretum and then named and tagged it. Some highlights of the first day included learning how to measure circumference, spread and height of a tree including their own. The also learned about diseases and environmental factors that affect tree growth by observing rings in a tree cookie and from examples in the nursery.



The second day was about tree-bird relationships. Campers were provided with binoculars and treated to a bird walk with Mitch Leachman and Mary Dueren with the St. Louis Audubon Society. Then Brenda Hente wowed them with an amazing presentation

and sharing of four spectacular owls from the World Bird Sanctuary. She presented a barred owl, spectacled owl, Eastern screech owl, and a beautiful barn owl while the kids voluntarily took notes. One owl, Mia, even ejected a pellet in her carrier that was shared with the kids which was the perfect introduction to them dissecting barn owl pellets as a follow up activity along with making birdhouses!

The third day was learning about the tree-pollinator partnership. Forest ReLeaf recently installed a beehive in their prairie which was a unique opportunity for the campers to don beekeeper hats and learn about honeybee hive dynamics. They also toured the property and found many pollinators in action and made bee hotels.

The fourth day was about outdoor skills. They learned to tie knots, read a topography map, use a compass to orienteer, leave no trace and used it all to complete a scavenger

hunt.

The last day of camp was spent learning about leaf structures and shapes with Tom Ebeling, Forest ReLeaf’s community forester. He basically taught a mini treekeepers/forestkeepers class. Thinking the information might be too complex, he was happily amazed when a camper replied, “bipinnately compound!” when he asked them to describe the structure of the tree being observed. The day ended with the campers getting dirty as they potted, fertilized, and transported hundreds of trees as the “service” part of camp. Some of them asked if they could come volunteer during the summer!

Saturday was family day which included lunch for parents and siblings. The campers led tours of the nursery pointing out a blue-gray gnatcatcher nest with 5 babies that had been discovered, the spot where a fawn had wandered in and settled down, and “their” trees that they had adopted.



Parents were amazed at the amount of learning that occurred, how much their kids enjoyed it and talked about it. It was exciting to hear the campers’ enthusiasm and respect for nature as well as seeing them become budding Master Naturalists.





MISSOURI  
BOTANICAL  
GARDEN

# Meet Me Outdoors

*The Missouri Botanical Garden held its' annual Meet Me Outdoors event on the weekend of April 7th and 8th. This year was slightly different in that the event was held at three separate Garden sites: The Butterfly House, Shaw Nature Reserve and the Gardens. The two-day event required lots of planning and a whole lot of volunteers. The chapter stepped up as usual and signed up for all three sites.*

*We are very grateful for the support of the following 23 Great Rivers members who participated:*

*Sharon Baldassare  
Sandy Brooks  
Barb Cerutti  
Brenda Christ  
James Christ  
Larry Conant  
Linda Cook  
Carl Davis*

*Carolyn Devaney  
Ann Earley  
Tom Fasl  
Diane Goulis  
Kathleen Evans-Kapayou  
Vaughn Meister  
Diana Miller  
Peggy Morrison*

*Kari Pratt  
Annie Russel  
Donna Scott  
Cindy Steinbruegge  
Evelyn Tullos  
Pam Wilcox  
Karen Zelle*

*The following is a thank you note from Betty Crites, Community Programs Manager for Missouri Botanical Gardens*

Good afternoon,

Thank you so much for joining us for Meet Me Outdoors last weekend at the Missouri Botanical Garden. I truly appreciate your flexibility with the weather, enthusiasm with our visitors, and what you do for the outdoor community of the region all year long.

I enjoyed meeting many of you for the first time and hope it won't be the last!

Enjoy the gorgeous weather today.

-- Betsy

**Betsy Crites**

Missouri Botanical Garden | Manager, Youth and Community Programs |





## Judge finds plant **GUILTY** of being a serious invader!



You've whacked it! You've cursed it! You've docked its roots and poisoned its stumps! What more can a human do, to deter Bush Honeysuckle?

Dale Dufer, an artist and woodworker, took this plant to Trial!

On the afternoon of April 4, a crowd filled the Rotunda of the historic Old Courthouse. Honorable Anna C. Forder, Judge of the St. Louis Circuit Court (retired), convened court proceedings.

Kathleen Henry, Executive Director of Great Rivers Environmental Law Center, stated the Prosecution's case. Dufer, as Plaintiff, testified from his personal experience removing this plant and educating others about why its invasion is such a problem.

Six expert witnesses testified on both sides of the issue. Prosecution called Theo Smith, of Forest Park Forever's

ecological restoration team, who dramatically described how hard volunteers must work to control this plant. Shaw Nature Reserve's Scott Woodbury and Carol Davit of *Grow Native!* both detailed impacts on our native ecology of such a supremely successful invader.

Testifying for the Defense, retired environmental planner David Wilson eloquently raised human morality concerns about eradicating any species and using potent herbicides in the process. Biology professor Matthew Bast described evolution's role in any one species becoming an environmental problem. Homeowner Patty Cook spoke emotionally about the largest and most beautiful plant on her small city lot.



Because this was, after all, an educational trial (creation of an Artist), the entire court enjoyed live music by the Augusta Bottoms Consort, pre-trial and during Jury deliberation. Gloria Attoun's original true-story song, "Diggin' Up That Honeysuckle," was the day's crowd-pleaser.

Ted Heisel, who has served as Director of the Missouri Coalition for the Environment, demonstrated due diligence as Defense Attorney for *Lonicera maackii* (potted for the occasion and cut up later) that was literally present in court. Defense was so compelling – as one would expect the work in such an honorable setting to be – that an outcome was not assured until the Jury returned what was, in fact, a unanimous verdict.

What's next for this effort? Thanks to a deeply appreciated partnership with National Park Service education staff at the Old Courthouse, documentation from this day will be compiled as a Mock Trial script, for use by both school and adult groups, and as an Invasive Species Trial "production kit" that can enable advocates in other communities to use this creative civics context to educate around whole perspectives on invasive and native plants.

And Great Rivers' Katy Henry is collaborating with Carol Davit and members of the Missouri Invasive Plant Task Force (MoIP) toward modification of state law that regulates noxious plant species.

Visit [www.woodworms.net](http://www.woodworms.net) to read Judge Forder's complete Verdict (which includes our species' responsibility in this issue!), and enjoy a slideshow from this landmark Trial of Bush Honeysuckle.



# Great Rivers Photo Contest

Once again, with the change of every season, Great River chapter members have the opportunity to present their prized photos for display on the home page of the chapter website. The event is curated by a panel of esteemed judges. Six photographs are selected for the website. These can be seen at [www.greatrivers.org](http://www.greatrivers.org) and are shown below. Please congratulate our Great Rivers photographers. Their outstanding work helps to further the Master Naturalist mission to improve public understanding of natural resource ecology and management by enhancing natural resource **outreach and education** activities.

## Website Photographs



Mallard chick, one-day old  
Sandy Brooks ©2018

**Mallard chick, one-day old**  
--- photo by Sandy Brooks ©2018



Bluebells in the Morning Dew  
Sandy Brooks © 2018

**Bluebells in the Morning Dew**  
--- photo by Sandy Brooks ©2018



Perseverance -  
Brown-eyed susans vs. Japanese Beetle  
Kari Pratt ©2018

**Perseverance—Brown-eyed susans vs. Japanese Beetle**  
--- photo by Kari Pratt ©2018



American painted lady butterfly  
on Tickseed Coreopsis  
Sean Tracy © 2018

**American painted lady butterfly on Tickseed Coreopsis**  
--- photo by Sean Tracy ©2018



Royal Catchfly, *Silene regia*  
Glenn Horton © 2018

**Royal Catchfly, *Silene regia***  
--- photo by Glenn Horton ©2018



Tiger swallowtail butterfly  
on a Purple coneflower  
Carl Davis © 2018

**Tiger swallowtail butterfly on a Purple coneflower**  
--- photo by Carl Davis ©2018



# Great Rivers Advanced Training Advanced Training Speaker Series – Spring 2018

## April 17, 2018 **Pollinators by Malinda Walter Slagle**

A very educational presentation by Melinda Walter Slagle and her adorable daughter Mae (Hylaeus Maeus 'Masked Bee Mae'), concerning pollinators in Missouri. The various pollinator species are bees, wasps, flies, hummingbirds, butterflies, moths, and bats. This presentation particularized bees. Due to the decline of the honeybee population in recent years, more information is now available concerning the importance of pollinators. There are over 500 bee species in Missouri. Melinda also reviewed the plant specimens that would attract the various bee species, i.e., carpenter bees, small carpenter bees, masked bees, leafcutter bees, miner bees, digger bees, sweat bees, and social bees (bumblebees).

For more information, follow the link to see [Malinda Slagle's "Bees and Pollination" Handout](#)

----- Review by Evelyn Tullos

## May 15, 2018 **Bokashi Method of Recycling –by Simon Warren,** *Education & Volunteer Coordinator @Earthways Center - Division of MoBot*

### **How to do mini-composting with every day food scraps that you've been throwing away!**

PROBLEM – An average person produces 4.5 lbs of waste a DAY!!

What can we do? Aside from the street side recycling that we ALL participate in, let's start in the kitchen with food preparation. All those peelings, pieces of bread that went bad, egg shells, veggie scraps and more can be composted in a container right in your kitchen. Simon really opened our eyes to how simple it can be. He showed us the entire process from set up to "burial"!!



**Why Use Bokashi?**

- no waste
- no stink
- no spoiling
- no more daily trips to the compost bin

Recommended reading if you REALLY get into it!!  
"Bokashi Composting"  
by Adam Footer

----- Review by Diana Miller

In the Bucket	Keep Out
<ul style="list-style-type: none"> <li>• All leftover food</li> <li>• Fruit and vegetable scraps</li> <li>• Coffee grounds, filters and tea bags</li> <li>• Cooked and raw meat and fish</li> </ul>	<ul style="list-style-type: none"> <li>• Liquids: milk, oils, soup, juices</li> <li>• Waxed packaging, glass, paper, plastic, plastic wrap, metal and polystyrene</li> </ul>



## Advanced Training Speaker Series 2018 Calendar

01/16/2018	Brenda Hente	Owls of Missouri
02/20/2018	Jean Ponzi	Home Recycling
03/20/2018	J. Richard Abbott, PhD:	An Introduction to Modern Botany.
04/17/2018	Malinda Walter Slagle	Pollinators
05/15/2018	Simon Warren	Bokashi Method of Recycling
06/19/2018	no speaker	Picnic
07/17/2018	David Bruns	Spiders of Missouri
08/21/2018	Ned Siegel	Rain Gardens
09/18/2018	Kevin Meneau, MDC	Fish of Missouri
10/16/2018	Steve McMurray	Introduction to Mussels
11/20/2018	no speaker	Volunteer Fair
12/18/2018	no speaker	Holiday Party



## Great Rivers Member Milestones

The Great Rivers chapter appreciates the hard work and consistent dedication to our mission of the following Members.



### Great Rivers Service Milestone Awards

Five awardees earned their wings in the past three months!  
Congratulations to all for their well-deserved honor!



#### 500-Hour Milestone Pin

Rita Buckley  
Pamela Fournier  
Peggy Morrison



#### 250-Hour Milestone Pin

Barbara Cerutti  
Sean Tracy



#### Rita Buckley - Congratulations on earning her 500 hour milestone award.

Rita Buckley has organically gardened with native plants for over 30 years. She joined the Great Rivers chapter in 2013 and has been a Master Gardener since 2011.

Rita volunteers in the Herbarium at the Botanical Garden weekly. There is a huge backlog at the garden of plant specimens that must be collated and filed in families. The families involved contain plants from MO, as well as around the world.

Rita currently serves Great Rivers Chapter as Chair of the Membership Committee. Rita previously served as Chair of the Advanced Training Committee. Thank you for all that you do, Rita!



#### Pamela Fournier - Congratulations on earning her 500 hour milestone award.

Pamela joined the Great Rivers Chapter as a Master Naturalist in 2010. Pamela is a very active volunteer for the Missouri Botanical Garden, where she monitors butterflies. She is also an avid native plant steward, where she's made major improvements to areas like Claire Gempp Davidson, Seibert Park, Brightside, River Des Peres Watershed, and The Green Center, to name a few.

Pam's greatest contributions and joy seem to be her work in The Flora Conservancy of Forest Park, where she focusses her time improving the grounds of the Pagoda and Meditation Lagoon. You can read of her adventures there in her full-page article on the topic in the Stewardship section of this edition of the Gazette. Thank you, Pam, for all your dedication and hard work!



#### Peggy Morrison - Congratulations on earning her 500 hour milestone award.

Peggy joined the Great Rivers Chapter as a Master Naturalist in 2013. Peggy is an avid citizen scientist, steward, citizen scientist, and a nature educator. As a citizen scientist, she monitors water quality for Missouri Stream. As a steward, she works on a variety of projects for City of Webster Groves, Forest Park, Forest ReLeaf, and dedicates most of her time restoring the habitats at the Litzsinger Road Ecology Center. But Peggy is also well known for her nature education skills with middle schoolers, where she excels in teaching at the annual MDC Eagle Days festivals and as a regular educator at The Green Center. She is also active on the chapter's Hospitality Committee. Thank you, Peggy, for making this world a better place!





*Great Rivers Member Milestones (continued)*



**INITIAL CERTIFICATION AWARDS**

**Congratulations to the twelve recent Missouri Master Naturalist interns on earning their Initial Certification Awards in 2018**

- |               |              |                |
|---------------|--------------|----------------|
| Barbara Brain | Bob Ochs     | Brenda Switzer |
| Carl Davis    | Abby Wilde   | Karen Zelle    |
| Don Frank     | Tom Fasl     | Larry Conant   |
| Diane Goulis  | Jack Hambene | Mary Kreppel   |



**ANNUAL RE-CERTIFICATION AWARDS for 2018**

**Congratulations to the thirty-two Great Rivers chapter members on recertifying as 2018 Master Naturalists this year. This year's pin is the Mead's Milkweed.**

- |                 |                   |                          |
|-----------------|-------------------|--------------------------|
| Renee Benage    | Michael Meredith  | Christopher "Sean" Tracy |
| Rita Buckley    | Claire Meyners    | Evelyn Tullos            |
| Barbara Cerutti | Diana Miller      | Bob Virag                |
| Brenda Christ   | Peggy Morrison    | Tessa Wasserman          |
| James Christ    | Kathy ONeill      | Cori Westcott*           |
| Carolyn DeVaney | Susan Orr         | Pam Wilcox               |
| Mary Dueren     | Kari Pratt        | Tom Fasl                 |
| Ann Earley      | Sherri Schmidt    | Jack Hambene             |
| Pamela Fournier | Michael Smith     | Brenda Switzer           |
| Eileen Hall     | Barbra Stephenson | Karen Zelle              |
| Vaughn Meister  | Geoff Stillwell   |                          |

(\* transferred)





# Naturalist's Journal

*As naturalists we should all strive to learn new things throughout our lives. Below are a few very informative links to nature related articles that I think you will enjoy.*

Sean Tracy shared the following link to the **Field Museum of Chicago** where you will find PDF's on **Plants, Animals, Amphibians & More.**

Note: (originally shared by Mike Saxton of Shaw Nature Reserve)

The **Field Museum in Chicago** has some really handy nature [PDF guides](#) that might be over interest to you. They create these for ecoregions all over the world but the link should take you to Chicago region flora/fauna. While there will be a few things that do not line up with our part of Missouri, there is considerable overlap. These are great, simple, easy to use guides. Enjoy!



Here is a link to a photo that will help you identify the subtle differences between **Poison Ivy, Poison Oak and Poison Sumac.**

<https://www.facebook.com/sanddhaskins7820/posts/10212485830687734>



***Have you ever considered planting Tropical Milkweed for use as a Monarch Magnet?***

### **Tropical Milkweed - a No Grow?**

There is a growing body of research that shows that tropical milkweed, a non-native species also known as bloodflower, is not the best plant to grow to help monarchs. It is known to harbor higher levels of a monarch-crippling parasite called OE than native milkweeds. The link below from the Xerces Society provides reasons for not planting the Tropical Milkweed, plus other important information about helping Monarchs.

<https://xerces.org/2018/04/19/tropical-milkweed-a-no-grow/>



Have you noticed a woodpecker in your yard and wondered "Is that a Hairy or a Downy? This link will help remove the confusion.

<https://www.audubon.org/news/how-tell-hairy-woodpecker-downy-woodpecker>



Left: Hairy Woodpecker.

Right: Downy Woodpecker.



## Naturalist's Journal

### Killdeer at Forest Releaf --- by Tessa Wasserman

On March 30th, another volunteer and I were walking out to the main nursery at Forest Releaf when an adult killdeer started fussing at us. I told him if it started acting like it had a broken wing, we should be careful where we stepped. Sure enough, the bird put on its wounded routine to try to lure us away from the area. We looked carefully around and found the nest with three eggs perfectly camouflaged on the cold hard gravel laid atop a



small tuft of weed grass in the midst of the soon-to-be filled 7 gallon pot rows. Any gator driven down this way would roll over the nest, so we put three gravel filled pots close enough to form a triangle around it and put stakes in the pots with caution tape to alert the rest of the staff and volunteers.



The next day was an off day for volunteers and it rained a driving cold rain that ended with snow flurries. I thought of the poor mother bird laying on top of those eggs in pouring rain, snow and colder than average temperatures for the next week on gravel and didn't give the eggs much hope.

When the next volunteer day came, I was happily surprised to see that Scott Francis, Forest ReLeaf's Forestry Programs Manager, had moved picnic tables to block off the driving path so the eggs would be saved. And despite the mother

constantly fleeing her nest when workers came too close, the cold temperatures and wicked weather, all three hatched and ran around the nursery like hyper little roadrunners until they could finally fly.

When you think about it, the tree nursery is a perfect killdeer nursery with its fence to keep out predators and acres of gravel and grass which suits their nesting preferences! Visit or volunteer at the nursery and you will be amazed at the bird diversity and are guaranteed an earful and eye-ful of killdeer making their homes with us!



## Naturalist's Journal

### A Mayfly Discovery --- by Sean Tracy

On the 15th of June, my brother Bryn and I were walking on the Lower Meramec Park, a part of the Meramec Greenway located in southern St. Louis County. This park borders the lower Meramec River, about eight miles from its confluence with the Mississippi River.

It was early morning and we stopped to enjoy a view of the river. My brother, being an aquatic biologist, looked at the vegetation near us and noticed the hatching of the giant mayfly (*Hexagenia limbata*). The branches of nearby vegetation were drooping due to the thousands of mayflies congregating there. Looking down in the river below the vegetation, we noticed a school of longnose gar circling below; I guess waiting for a meal. It was truly an amazing natural sight to behold.

For more information about the giant mayfly, see [https://en.wikipedia.org/wiki/Hexagenia\\_limbata](https://en.wikipedia.org/wiki/Hexagenia_limbata)







# MESSAGE FROM A PARTNER



## Ethics When It's Okay (or Not) to Feed Birds By Melissa Groo

*Providing food—for photography or simple enjoyment—can be a thorny issue.  
For guidance, ask yourself these three questions.*



Baltimore Oriole and Rose-breasted Grosbeak.  
Photo: Melissa Groo

Whether we identify as birders or photographers or both, we are always looking for ways to get closer to birds, or to bring them closer to us. Offering food—sating the hunger that is such a primal drive for all of us—is an easy way to do that. But knowing what kind of food is okay to supply, and when, and where, can be confusing. Over and over, in nature-photography forums and on social media, I see the following questions: “Isn’t all bird feeding harmful?” and “What’s the difference between [feeding birds at a feeder](#) and [feeding owls](#)” and “How can you be okay with handfeeding Gray Jays and opposed to feeding owls?” These are false equivalences that, in the end, only hurt birds. To paint every species with one broad brush is to ignore or deny the varying needs and circumstances of every kind of bird and the realities of its particular life—realities that depend on population status, habitat, physiology, and the unique challenges it faces. There is no one-size-fits-all approach.

### ***So how do we make sense of it all?***

#### ***The Three Questions***

When I was younger, a mentor of mine gave me this advice: Before speaking, ask yourself the following three questions: Is it true? Is it kind? Is it necessary? I sometimes fall down on the job, but I aspire to follow these as best I can. When thinking through this issue, it occurred to me that, similarly, three questions could be applied to any bird-feeding situation. And that the answers could help guide decisions in a way that is best for both birds and people.

#### ***1. Is this species at risk?***

Information on the status of a species is just a click away. Good sources include state and federal listings, the [IUCN Red List](#), and Audubon’s [Guide to North American Birds](#). Using these, we can easily discover how a species is doing in our states, provinces, countries, or worldwide. We may even find that the status of a species varies greatly from one place to another.

If a bird is classified as “threatened,” “endangered,” or “of special concern,” that means it is struggling to survive. We must exercise extreme caution when making decisions that might affect that bird. Even if we have the best intentions, what we think might benefit a bird might actually cause unintended negative consequences

A case in point: Florida Scrub-Jays. If you were to do a simple google search like “scrub-jay status Florida,” you would quickly find that this species is listed as vulnerable to extinction by the IUCN and as federally threatened. Fewer than 5,000 Florida Scrub-Jays remain.



Florida Scrub-Jay *Aphelocoma coerulescens*  
Photo: Melissa Groo



MESSAGE FROM A PARTNER: *When It's Okay (or Not) to Feed Birds* (Continued)

Their numbers have dropped by 90 percent over the past century, as the scrub and scrubby flatwoods they require have been fragmented and destroyed by development and agriculture.

Bird lovers quickly realized that Florida Scrub-Jays will come readily to the hand for peanuts. Unfortunately, studies have shown that jays fed by humans reproduce earlier in the year than those that are not. As a result, their fledglings hatch before the caterpillars they rely on for nutrition are available, leading to malnourishment and starvation. People also feed jays near roads, and collision with vehicles is a major cause of their death. Thus, it's now illegal to feed Florida Scrub-Jays unless you have a permit from the U.S. Fish and Wildlife Service.

Snowy Owls are also in precipitous decline. Although there are a number of reasons why offering food, such as pet-store mice, to owls [can be harmful](#), certainly the fact that this species is vulnerable to extinction, per the IUCN, makes feeding them particularly irresponsible and ill-advised.

In short, birds that have special population status due to their declining numbers should not be fed (unless, say, you're a researcher working with appropriate permits). This advice is in line with the American Birding Association's [Code of Ethics](#).

## 2. *Is the food appropriate and safely provided?*

The most common place we offer food to birds is, of course, in our own backyards. Fortunately, there is a wealth of information on how to safely set up and maintain bird feeders. [Providing feeders](#) means taking on a responsibility, as in addition to food they can present a whole host of risks, including the spread of viruses and parasites, a greater chance of window strikes, and increased vulnerability to cats and raptors. But if best practices have been followed, research shows that feeders may actually help birds to survive and reproduce.

Of course, the healthiest, most natural food you can offer to attract birds to your yard are native trees and shrubs, such as serviceberry or crabapples, which are a longstanding food source for them. Plant species native to each part of the country can easily be looked up in Audubon's [native plants database](#).

One of the least healthy foods is also one of the most popular, especially in parks with resident waterfowl. Bread has little nutritional value and may cause an unhealthy condition referred to as "angel wing." Opt instead for cracked corn or oats—in moderation, of course. Leftovers from overfeeding can contaminate water, spread diseases, and attract rodents.

## 3. *Is feeding this bird likely to change its behavior in harmful ways?*

Ask yourself: Might feeding this bird cause it to associate food with a particular place? Does it draw the bird closer to roads, for example, where it could be struck by a car? Feeding owls by the side of the road presents an obvious danger: Collisions with vehicles are a leading cause of death for owls, since they fly low over the ground and relatively slowly at times.

Feeding a bird might also lead it to trust people. Could that habituation eventually put it in danger? Does the bird migrate to a region where it's not well understood, or where it's hunted? The answer will be different for a bird of prey (possibly yes) than for a songbird at a feeder or for a chickadee hand-fed sunflower seeds in a preserve (probably no).

On the flip side, you should also ask whether feeding a bird might cause it to aggressively seek handouts from people. We've all seen gulls at the beach or swans in a park grab food out of someone's hand. Once these birds begin to associate people with easy food, they can become bold and pesky. This both creates a hassle for people and poses a danger to the birds, as they gain a bad reputation and eventually may be harmed. Local ordinances and regulations may not permit feeding expressly because of these issues. There are also laws regarding feeding that govern our national park system, where it's illegal to feed any wildlife.

You don't have to be a bird expert or conservationist to realize that birds today face a multitude of challenges. When thinking of offering food to birds, as nature photographers, birders, or nature lovers, each one of us can take a little time to do some research and to sensibly weigh the pros and cons of our choices. We can make informed decisions, and hopefully balance our desire to get the shot with what's best for the birds.



Snowy Owl *Bubo scandiacus*  
Photo: Melissa Groo



For more interesting articles on [ETHICS](#), check out these (and lots more!) on the [Audubon website](#):

Why Baiting Owls Is Not the Same as Feeding Backyard Birds

May 11, 2017 — Some people question the difference between the two. There is a distinction—and the lives of birds depend on it.



Can't Photographers and Birders Just Get Along?

March 2, 2017 — The rivalry needs to stop—for the good of the birds.



Why Closer Is Not Always Better When Photographing Birds

February 3, 2017 — The impulse to shoot your subject at close range can be powerful, but there are several reasons why that's not best for the animal—or the image.



Is Flash Photography Safe for Owls?

January 4, 2017 — Their big, round eyes make them alluring subjects, but impairing an owl's vision, even briefly, might have negative consequences.



Why You Shouldn't Feed or Bait Owls

December 16, 2016 — Some photographers use live mice or even cat toys to attract owls for an action shot. The photo isn't worth it—here's why.



Rare-Bird Sightings: Share or Shut Up?

October 25, 2016 — Before you post a photo on Facebook—or even take the shot in the first place—consider the bird's well-being.



Do's and Don'ts of Nest Photography

May 12, 2016 — You should always photograph birds responsibly. But you have to be extra responsible during nesting season.



How to Use Birdcall Apps

May 12, 2016 — Apps that play birdsong can be a terrific tool for birders and bird photographers—as long as they're used responsibly.



The Ethical Bird Photographer

April 26, 2015 — Some commonsense guidelines can help you get the shots you want while protecting the birds you love.



Too Close for Comfort

April 26, 2015 — In the desire to get the perfect shot, some photographers push the limits, jeopardizing the wildlife they adore. Can't we all just get along?





**For those Great Rivers members that missed the on-the-river watershed initial training event, here is another Advanced Training opportunity:**

*MDC is offering a two-day class to teach the basics of canoeing on Aug. 6 and 7. Day one will take place at Simpson Park Lake and cover the basics. Day two will be an actual float on a seven-mile stretch of the Meramec River.*



**MDC offers two-day basic canoeing class, including float on the Meramec River**

*Participants will not only learn the basics, but put them to practical use on a real float.*

**St. LOUIS, Mo.**—The Missouri Department of Conservation (MDC) wants to help newcomers to paddling discover nature on the water by offering a two-day Canoeing Basics course. The class is designed not only to teach the basics, but also give the opportunity to go on a river float to practice and develop paddling skills further.

The first part of the class is Monday, Aug. 6 from 9 a.m.-3 p.m. and will be held at St. Louis County's Simpson Park, 1234 Marshall Road. Participants will meet at the Blue Heron Pavilion next to the lake. The class will cover paddling equipment, paddling safety, and how to paddle a canoe on a lake.

The second half of the class will be the next day, Tuesday, Aug. 7 from 9 a.m.-4 p.m. Participants will take a seven-mile float on the Meramec River which starts at Pacific Palisades Conservation Area and takes out at Allenton Access. This will be a chance to put skills learned on day one into practice will enjoying a beautiful stretch of one of Missouri's most popular float rivers. Floaters must attend the Monday session to join the Tuesday float.

The class is free and MDC will provide all paddling and safety equipment. Participants need to bring their own water bottle, snacks, and lunch. All who attend the class must be able to swim and be nine years of age or older—and those under 16 must be accompanied by an adult.



**Online reservations required in advance to attend Basic Canoeing by going to <https://tinyurl.com/ybj3adbg>.**



# Missouri Master Naturalists Great Rivers Logo order: Spring 2018



50/50 fleece  
(kelly green)  
men or women \$33

microfleece no hood  
(aqua green)  
women \$35

women's bright green  
tee \$15

khaki/hunter ball cap  
\$17



Kiwi short sleeve tee  
\$14.00

military green hoodie  
\$23.00

tan long sleeve tee  
\$16.00

expandable drawstring  
backpack (blue/red/black) \$25

We can bring in our own items to be embroidered for \$8.50 each item.

Member's Name:

Phone Number:

Name of item	size (s/m/l/xl)	quantity	total

Contact: Kari S. Pratt

[kpratt@lindberghschools.ws](mailto:kpratt@lindberghschools.ws)

636-391-2901

A close-up photograph of a branch of an American bladdernut tree. The branch is dark brown and runs diagonally across the frame. It is covered with vibrant green, serrated leaves and clusters of small, pale yellow flowers with orange centers. Numerous small, clear dew droplets are scattered across the leaves and flowers, catching the light. The background is a soft-focus view of more green foliage and a clear blue sky with a few wispy clouds.

*No Winter lasts forever;  
No Spring skips its turn.*

*— Hal Borland*

Morning Dew on the American bladdernut  
Photo by © Vaughn Meister