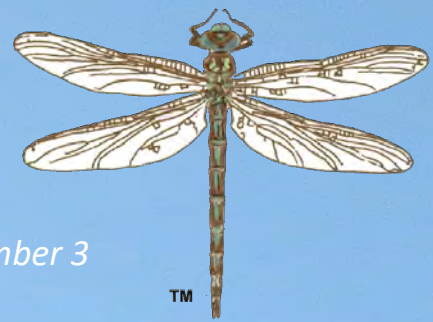




# Missouri Master Naturalist

July-August-September 2019 Volume 9 Number 3



*In order to see birds  
it is necessary  
to become  
a part of the silence.*  
— Robert Lynd



FEATURED ARTICLE

## *Ready or Not, Here We Come!*

*The southern migration  
has begun*

by Brenda Hente  
with photographs  
by Danny Brown  
Page 22

*Little Blue Heron,  
Egretta caerulea,  
in the City of St. Louis, MO*

©2019 Brenda Hente



# Great Rivers Gazette

July-August-September 2019 Volume 9 Number 3

Published by the Missouri Master Naturalists - Great Rivers Chapter

Co-Editor: Bob Virag  
Co-Editor: Lori Purk

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### Front Cover

Little Blue Heron – Photo by Brenda Hente

### Back Cover

Brown eyed susan – Photo by Glenn Horton

### Great Rivers Chapter Officers

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- Vice President----- Bob Virag
- Secretary ----- Diana Miller
- Treasurer ----- Eveyln Tullos
- Board Member-at-Large ----- Michael Meredith
- Board Member-at-Large ----- Sherri Schmidt
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- Partners and Projects----- Pam Wilcox
- Communication----- Bob Virag
- Membership----- Sherri Schmidt
- Hospitality----- Tessa Wasserman
- Master Naturalist Logo Apparel----- Kari Pratt

## The President's Corner

Dear Chapter Members,

Just how exuberant and tireless are our Missouri Master Naturalist-Great Rivers Chapter volunteers?

A thorough reading of this Gazette issue will answer that question with a resounding “We are the champions, my friend!” Yeah, sing the rest of the lyrics in your head and it still applies to all of you.



This issue showcases Great Rivers volunteer work on a host of important activities. Helping our previous chapter president’s research on how plants and soil microbes coexist shows their love and dedication to nature. Chapter volunteers promoted citizen science with their various efforts, including the Bee Blitz. The surprise in the St. Louis Central West End Rookery and the ensuing rescue work was helped by our chapter volunteer effort. Parkway Southwest Middle School now has a couple of acres cleared of invasive plants with trees now growing in their place thanks to our volunteers. The many wonderful nature education and advanced training activities conducted by our volunteers is a testament to their support of the program mission. Check out the awesome featured article in the Nature Journal section on migrating birds in the area. And you have to ‘read between the lines’ to notice the large effort made by our Gazette co-editors for this issue, in addition to their efforts at other various events.

I need a separate paragraph for a special call-out to Pam Wilcox for her 2,500 hours of dedication to the Missouri Master Naturalist program. Yeah, that is double zeros there!

As always, the Gazette is worth a cover to cover read. It will get your blood pumping to read about all the great work our members do. You will need to keep that circulation going for the important and fun events between now and next Spring

**Bob Ochs**  
**President,**  
**Great Rivers Chapter**



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



[www.facebook.com/MMNGreatRiversChapter](https://www.facebook.com/MMNGreatRiversChapter)  
and [www.facebook.com/groups/150751118803379](https://www.facebook.com/groups/150751118803379)



# SUMMER of 2019

versus

birdandmoon.com





# Great Rivers Citizen Science – Summer 2019



## Towards process-based ecological restoration: the critical role of plant-soil interactions in community assembly and coexistence

Rachel Becknell's hard work in her research garden, with the help of Great Rivers chapter members among others, is starting to pay off this summer. She reported that all of the grass species in the research gardens were in bloom now and are amazingly beautiful and unique.



Before



After



## **Washington University Tyson Research Center summarized her work this summer:**

Plants and their symbiotic soil microbes interact with one another in important ways that influence ecosystem function. Rachel Becknell, PhD student in the [Mangan Lab](#), is investigating how these interactions lead to either plant species coexistence or ecological communities with few dominant species. At Tyson, Rachel is conducting an experiment to investigate interactions between prairie species and their species-specific soil microbes. The long-term goal of her research is to improve the sustainability and efficacy of ecological restorations.



## Bee Blitz aims to let volunteers help researchers via citizen science

### Jack Hambene participated in this summer's Bee Blitz at Forest Park

Here is what St. Louis Post Dispatch said about the summer-long event:

*By Robert Patrick St. Louis Post-Dispatch Jul 30, 2019*

ST. LOUIS — Dozens of volunteers have spent hours this summer in Forest Park, trying to photograph every bee that passes through homemade two-meter square grids.

Known as a “BeeBlitz,” it’s an experiment in citizen science that researchers hope will allow them to collect detailed data on area bee populations.

“The project is important,” said volunteer and aspiring ecologist Abi Gorline, 17, of Sunset Hills, who attended a blitz on a recent weekend despite sweltering conditions. “I really like bees.. I like ecology.”

Bees pollinate \$15 billion worth of U.S. food crops, contribute to the production of one-third of the human diet, and keep ecosystems across the world alive. But scientists across the country have said that mites, pesticides, disease and food shortages have led to dramatic declines in bee populations in recent years, furthering deep concerns over the future of pollinators, agriculture and nature. Events like "BeeBlitz" have popped up across the region and country in a sometimes-desperate attempt to track bee numbers and better pinpoint reasons for the bee deaths.

About 45 people have participated in local bee blitzes over the last two months, said one of the organizers, Webster University Biology Professor Nicole Miller-Struttman.

Volunteers set up a grid using PVC pipe and string, photograph any bees that enter during a 10-minute period, then upload the results online. Their work helps researchers track bee populations, and is also being used to gauge whether data from so-called “citizen scientists” matches those from trained professionals.

The first goal is to see what species of bees are in Forest Park. The next is to see how that population is changing over time.

If the data proves to be comparable, Miller-Struttman said volunteers could do surveys in their backyards, over larger



Participants conducted photo surveys of bees that will be used to help track bee populations in the area. Photo by Christine Tannous-STL Post Dispatch

areas or for longer periods of time.

That data then could be used to analyze the effects of pesticides and concrete on bee populations in a ZIP code.

“There’s been a big push for citizen science,” she said.

It’s the third year of the surveys, and the first in which they are being conducted throughout the summer. So far, Miller-Struttman said, the data compare well with what she and colleagues obtain by collecting bees with nets.

Thanks to the surveys, researchers have been able to track seasonal changes in bee species, although they don’t know what is causing those fluctuations. Miller-Struttman said they have not seen an overall drop in bee numbers in Forest Park, where there are lots of floral and nesting resources.

In addition to helping out, bee blitz volunteers learn about bee biology and ways in which they can support wild bees.

Miller-Struttman estimated that nine out of the 20 volunteers originally signed up for the most recent blitz, earlier this month, showed up despite an excessive heat warning and a heat index topping 100.

The bee blitz continues through the summer with events on Aug. 17 and Sept. 14. They are free and open to anyone over the age of 10.

To register groups of four or more, email Miller-Struttman at [nicolem42@webster.edu](mailto:nicolem42@webster.edu) or call her at 314-246-7628.

Volunteers can also document bees in the area via [BeeSpotter.org](http://BeeSpotter.org).

*Joel Currier of the Post-Dispatch contributed to this report.*



# Great Rivers Stewardship Projects – Summer 2019



## Herons in the City of St. Louis: Heroic Rescue of the Central West End Rookery

Missouri Master Naturalist-Great Rivers Chapter members **Brenda Hente, Jennifer Holder, Sue Forquer, Abby Wilde, Karen Zelle, and Bob Virag** helped dozens of St. Louis birders identify, rescue and feed herons and egrets. The birds fell from their nests during an errant tree trimming operation on July 4, 2019 in the city.

Here is the report from the Birdwatching journal:



### St. Louis heron rookery has more than 230 nests — and counting

By [Matt Mendenhall](#)

Published July 10, 2019

More than 20 birders conducting a nest survey of an extraordinary heron rookery in the heart of St. Louis on Sunday, July 7, counted 237 active nests and many others in progress. The rookery [attracted widespread attention](#) last week when about 15 of the trees in which the birds were nesting were cut down or trimmed.

One nest containing four young herons fell to the ground. They were taken to [Wild Bird Rehabilitation](#) in the city, and later were placed in a makeshift nest and returned to a tree in the rookery. But when no adult birds took care of them, the center’s executive director Joe Hoffmann and his team brought the birds back to the center.



A Little Blue Heron at the rookery in the Central West End of St. Louis.

Photo by Lisa Saffell



A Great Egret carries a stick for its nest.

Photo by Lisa Saffell

The chicks were first thought to be Black-crowned Night-Herons but have now been identified as Little Blue Herons.

“They will continue to be cared for and then released back into the wild,” Hoffmann says. “They are doing great. They’re big eaters, and we are feeding them lots and lots of minnows. We have large flight cages where they will have exercise as they get older and develop their feathers. They will learn how to hunt and will be released.”

The city’s fire department sent a fire truck with a tall ladder to help the bird rehabbers while they looked for any active nest with chicks of similar ages. “There were a lot of eggs, and there was only one nest with four babies,” Hoffmann says. “We did not check out the entire area. It was great to have the fire department for an hour or so. After that I didn’t want to waste any of their time. We wanted to find a nest to add the chicks to.” Since “herons cannot count,” he notes, the adults would have accepted extra babies in the nest.

(continued next page)



### Heron nest survey

According to St. Louis birder Lisa Saffell, who organized the survey, the **237 nests are of the following species: 147 Little Blue Heron nests; 40 Great Egret nests; 24 Black-crowned Night-Heron nests; 8 Snowy Egret nests; and 18 unidentified nests.**



A Black-crowned Night-Heron in a nest in the rookery. Photo by Lisa Saffell

“With all of the activity we noted today these numbers are likely to rise daily,” she wrote on Sunday. “This was a monumental effort completed in less than three hours with no complaints or problems from the residents.”

Most of the trees in the rookery are on the property of Westminster Place Apartments, and the trees were marked for removal long before the birds moved in. Its insurance company mandated that trees be removed because of root damage to walkways and buildings. Westminster’s leasing manager reached out to various agencies for guidance before the cutting began but “they were the wrong agencies who gave her some bad advice,” says Saffell.

The plan is to wait until the nesting season concludes before resuming the cutting. The original date to have all the trees removed is August 8, but [St. Louis Audubon](#) and federal agencies are working with the apartment company to get an extension from its insurance company.

The rookery is located in the Central West End neighborhood, in an area bordered by N. Sarah St., Vandeventer Ave., McPherson Ave., and Washington Blvd. About 55 nests are nearby on the property of a retreat center owned by Saint Louis University, and a few nests are on abandoned property on Olive Street next to a community garden of corn and sunflowers.

“I believe the area is popular with these birds because they build rickety nests on the tops of the trees,” says Hoffmann. “All of these trees are interconnected, and during a storm they would hold together well. They are all also the same height, which is very easy to defend for these parents.”

Birder Kim Bousquet wrote a heartfelt message on the state’s birding listserv praising her fellow birders and everyone who helped the herons: “I’m so glad we have such a great local network of birdwatchers and care givers. Local activism in action (and those willing to help) saved a whole community of rare and beautiful birds who are part of our ecosystem. We are all connected.”

### Here is the report from the Wild Bird Rehabilitation Center on the **13 herons** they rescued:



So far this year we have admitted thirteen herons. Here are our most recent.

The Herons you’ve seen previously are now at Wild Bird Rehabilitation eating minnows (lots) and one of the volunteers is bringing in crawdads for them!

There is a “rookery” near St Louis University where these herons were nesting along with hundreds of other birds of different species. Unfortunately the property owner began cutting down all the trees. At this point the tree removal has been temporarily suspended until after nesting season.

Sea birds nesting in the middle of St Louis? Actually it’s not far for the parents to fly to the Mississippi or the River Des Peres to grab minnows to feed the family.

If you would like a definition of “rookery”, here is an explanation from The Spruce: *A rookery is a communal nesting ground for gregarious birds consisting of anywhere from just a few nests to hundreds of nesting pairs in a relatively small area, where nests may be only a few feet or even just a few inches apart. While birds do not share individual nest duties, the collection of nests in a small area gives nesting birds and vulnerable chicks extra protection and advantages.*

**See more on the [Wild Bird Rehabilitation Facebook page](#) (WILDBIRDSTL)**



# Parkway Southwest Middle School Honeysuckle Extraction

**Students and staff worked to remove two acres of invasive honeysuckle and replanted with native tree species. --- By Barb Cerruti**

On May 2, 2019, 122 seventh graders at Parkway Southwest Middle school, relentlessly cut out honeysuckle on this hillside. Thank you to the dedicated teachers for instilling stewardship and to Manchester Public Works for mulching all the cuttings.

-\\_(~")\\_/-  
life is good







## Missouri Bluebird Society 2019 True Blue Service Award goes to.....

Bob Siemer and Ann Earley!

July 13, 2019

At the annual Missouri Bluebird Society conference, President Steve Garr presented the 2019 True Blue Service Award to the meeting hosts and board members **Bob Siemer and Ann Earley**.



*From the Gateway Gardener:*

The award is bestowed upon a member(s) who has demonstrated outstanding service to the support of the Missouri Bluebird Society as an organization. Bob and Ann are long time members and became the very first members to take advantage of the Society's Lifetime membership level as soon as it became available in 2013. They have volunteered at conferences throughout the years whenever they are needed, have presented programs to the Society, and became board members in 2017. They were the 2019 Missouri Bluebird Conference chairs when the event was held in St. Louis this summer, and have promoted the Missouri Bluebird Society to the other conservation organizations in which they are involved.



Eastern Bluebirds - Photo by Adam Betuel



# Great Rivers Outreach and Education – Summer 2019



## The Green Center

By Kathleen Kapayou



September 11, 2019

The past 3 school days have been dedicated to outdoor field experiences with the School District of University City!

We worked with all of the 6th graders from Brittany Woods Middle School to study ecosystem habitats during their science class on Friday.

On Monday and Tuesday, all of the school district's 2nd graders studied pollination in our tall grass prairie (a lot of bees, moths, butterflies, and birds this time of year!) and visited our wetland and forest habitats in search of how everything is connected and works together in nature.

A special thank you to all of education volunteers who helped make these programs possible! **Missouri Master Naturalist - Great Rivers Chapter** members **Pam, Cindy, Marypat, Geoffery, Dennis, Lisa and Melissa**. As well as Kathy and Ginny!





## Endangered Wolf Center

Project Leader: **Karen Zelle**, Missouri Master Naturalist

July 28, 2019

Hundreds of visitors, young and old, ventured out to the Endangered Wolf Center for a fun filled day of hands on MESSY play this summer. Activities included sand exploration, mud and dirt fun, water play, watercolors, face painting, homemade nature crafts, and a mini tour of our animal's habitats. **Missouri Master Naturalist-Great Rivers volunteers** helped guide the visitors through the many stations at the event.

Thank you, **Karen Zelle**, for planning this event!

# Messy Play Day



**Barb Cerutti and Bob Virag** introduce a budding limnologist to stream dynamics on a very small scale.



Messy Play Day Master Naturalists **Sandy Brooks and Tara Morton** get crafty



**Tara Morton** helps a visitor make a crafty perennial



**Lisa Picker** introduced the visitors to the fun of 'messy' in Messy Play Day



**Bob Virag** helped the visitors catch their first tadpoles, minnows, crayfish and macro invertebrates.



The mini stream table was at nearly full capacity all day.



**Barb Cerutti** demonstrated the mini stream table.



## Nature Experience Field Day for The Village Boys Club at Audubon Center at Riverlands

August 10, 2019

Missouri Master Naturalist-Great Rivers Chapter volunteers **Mary Mierkowski, Geoff Stillwell, Lisa Picker, Don Knobbe, and Bob Virag** had the opportunity to help their partner organization [Mississippi River Water Trails Association](http://Mississippi River Water Trails Association) provide a nature-oriented field day for The Village boys club. Activities included first-hand experience with aquatic ecology and beautiful afternoon learning how to kayak on the Mississippi River near the Audubon Center at Riverlands.

We salute the valiant efforts of [The Village](http://The Village) organization to make a difference in the young lives of these kids in everything they do. We were overjoyed to be a small part of that for one day. If you have an interest in their mission and activities, take a look...[www.TheVillage314.com](http://www.TheVillage314.com)





August 24, 2019

Our most generous partner, Greenway Network, once again held an outstanding Race for the Rivers event, thanks to help from **Missouri Master Naturalist-Great Rivers volunteers Barb Cerutti, Carolyn Devaney, Diana Miller, Vaughn Meister, Geoff Stillwell, and Bob Virag.**



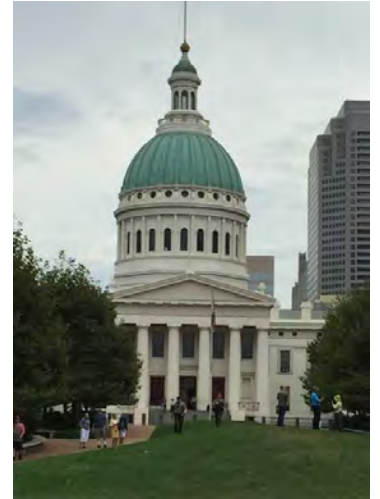
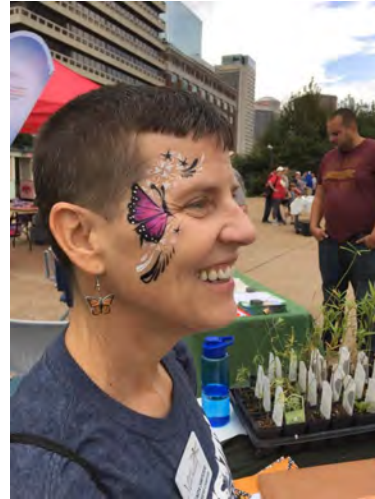
This year the venue was changed at the last minute due to flooding conditions on the Missouri River. The new location, at Blanchette Landing in the French Town District of the City of St. Charles, was about a mile north of the previous location at Frontier Park in the old Main Street District. The park was four times smaller but that didn't keep away the crowds. Hundreds of families stopped by our educational displays of "What is It?", animal furs, fossils, clean water chemistry, aquatic insects, and a stream table.





# Great MonArch Migration Festival

by Pam Wilcox



Missouri Master Naturalist-Great Rivers Chapter volunteers **Brenda Switzer, Michael Wohlstadter and Pam Wilcox** at the City of St. Louis annual MonARCH Migration event

A great day at the Monarch Migration event at the arch. Great Rivers members **Michael Wohlstadter, Brenda Switzer, and Pam Wilcox** talked to dozens of visitors about the benefits of native plants. We gave away almost 132 plants courtesy of MDC. We had great weather and were visited by a large number of baseball fans and Arch goers.



## SciFest by Pam Wilcox

October 12, 2019

**Tom Fasl and Pam Wilcox** provided an education table at the Science Center's SciFest On October 12th. We enjoyed talking to a wide variety of people of all ages and used a habitat game to entice the kids to the table. The majority of participants really enjoyed the game and were thrilled when they completed it. We talked to many people about native plants and they were very receptive to the concept. It was a very enjoyable day. Here is a thank you from Ruth Watt regarding the event:



Missouri Master Naturalists Pam Wilcox and Tom Fasl at the St. Louis Science Center's 2019 SciFest Festival

Hello, all – Thanks for being a part of our SciFest: The Great Outdoors Expo this past Saturday. I know the day started out rather slowly, but In case you needed attendance numbers, we had 4,655 visitors for the day, which is 1,500 more than we expected!

**Ruth Watt**  
Manager of STEM Events | SEE  
Saint Louis Science Center



# Great Rivers Photo Contest

Once again, with the change of every season, Great Rivers 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.

- Two photos were selected for the front and back cover pages of this issue of the Gazette.
- Six additional photographs were selected for the website Home Page Slideshow. These can be viewed at [www.greatrivers.org](http://www.greatrivers.org) and are also shown below.

Please congratulate our Great Rivers photographers. Their outstanding work helps to further the Missouri Master Naturalist mission to improve public understanding of natural resource ecology and management by enhancing natural resource **Outreach and Education** activities.

## Website Photographs



Woodchuck (Groundhog), *Marmota monax*, at Wild Acres Park, Overland MO, ©2019 Brenda Hente



Juvenile Little Blue Heron, *Egretta Cawrulea*, in the City of St. Louis MO, ©2019 Brenda Hente



Indigo Bunting, *Passerina cyanea*, at Shaw Nature Reserve ©2019 Sean Tracy



Monarch butterfly on swamp milkweed, at Shaw Nature Reserve, ©2019 Sean Tracy



Tiger Swallowtail, *Papilio glaucus*, on Joe Pye weed, St. Louis County ©2019 Reneé Benage



Prairie dandelion, *Nothocalais cuspidate*, at Star School Hill Prairie Conservation Area ©2019 Barb Cerutti



# Great Rivers Advanced Training Advanced Training Speaker Series – Summer 2019

**July 16, 2019**

**Hummingbirds, by Lanny Chambers**



Lanny showed an impressive video story of the life of Rae and Zin! It started with how momma built the nest, lovingly, with her long beak and patting it down with her feet. We were surprised to find that hummingbirds also used spider webs for their nests. She then laid 2 eggs, the size of coffee beans. But the cameras were SO up close and personal, you had no idea that they were so small! When the birds were born, (we got to see the whole cracking of the shell and their emergence) the owners of the house thought they looked liked raisins, hence, Rae and Zin! It was fascinating. You can buy the video at [Hummingbirdstory.com](http://Hummingbirdstory.com)



Lanny Chambers, a master hummingbird bander, examines a hummingbird during a banding event at Onondaga Cave State Park on Saturday, Aug. 31, 2019. Photo by Jerry Naunheim Jr. St. Louis Post Dispatch

Lanny Chambers, a master hummingbird bander, captures a hummingbird during a banding event at Onondaga Cave State Park on Saturday, Aug. 31, 2019. Photo by Jerry Naunheim Jr. St. Louis Post Dispatch

After the 45-minute video Lanny answered a lot of questions for us. He has been a hummingbird bander for over 20 years. He started by training with a master bander and then served an apprenticeship through the US Geologic Survey. He reports any banded birds he catches in his pond netting. He then bands the hummingbirds that he catches. The netting has to have very small openings to be effective. The USGS sends him the bands as strips of aluminum which he cuts and files smooth. Of course, they must also be small enough not to fall off the teeny tiny leg of the bird. On average, hummers arrive in Missouri by mid-April. But hummingbirds are always passing through, stopping only long enough to nourish themselves to continue their flight from Mexico to Canada. They generally have 2 broods per summer. Again, staying long enough after their birth (7-10 days) to nourish them until they can fly on their own and find food.

We also learned that hummers can't walk. Their legs are not positioned on their bodies for effective walking, they actually shuffle sideways, and as we all know, are experts at flying!

**Check out Lanny's information on the web:**  
[Hummingbirds.net](http://Hummingbirds.net)  
[Hummingbirdstory.com](http://Hummingbirdstory.com)

**Also, see Lanny's story on a recent edition of St. Louis Post Dispatch:**  
[A citizen scientist from Fenton has become a national authority on hummingbirds](#)

**August 20, 2019 Owls of Missouri, "There Must Be Some Myth Understandings, by Benda Hente, Missouri Master Naturalist-Great Rivers**



Brenda Hente, Owl Expert Extraordinaire and one of our Great Rivers All Star Educators, stepped up to the plate for the August meeting as a pitch hitter at the last moment for another speaker. Then...She knocked it out of the park! Brenda gave us a treat this time: a "two-fer" by telling us all about Owl myths and the scientific facts that dispel them. She recounted myths started by the Greeks and Egyptians and those that still linger to this day: Owls do not hoot to ward off danger. They are not the harbingers of death, evil, or bad luck. They can



seem wise, but instead, as an apex predator, they are engineered to seem that way. Quiet beyond perception...capable of adjusting their irises independently for sharper focus and depth of field...immobile eyes for better vision stability...hyper-distensible neck vertebrae, arteries and veins to allow a whopping 270 degree head rotation in either direction...vise-grip locking talons when stepping on prey or a branch. Remind me never to wear my Davy Crockett raccoon tail cap anymore while hiking!

Thank you, Brenda, for your stellar and very interesting presentation.  
----- Review by Bob Virag





Advanced Training (continued)

September 17, 2019 **Soils, by Sandra Arango-Caro**  
**MO-DIRT Coordinator**  
**Donald Danforth Plant Science Center**



We got the “dirt” on dirt! I mean Soil! Did you know soil is made up of air, (yes, 25%!), water, 25%; solid matter, 45%; and organic matter, 5%? Sandra spoke on many topics of soil: texture (clay, loam soil), structure, color (from white-sandy to black-organic), nutrients (phosphorus, nitrogen, and potassium), etc. She showed many slides, talked about carbon . . .it got very scientific!

Soil pH is a measure of the acidity and alkalinity in soils. pH levels range from 0-14, with 7 being neutral; below 7 acidic and above 7 alkaline.



There are also lots of organisms in soil: earthworm, slug, snail, bacteria, fungi, etc.

She also spoke about the citizen scientists all over the world that report the results of soil sampling.

**Sandra donated a soil test kit to the chapter!** Learn more at [modirt.missouriepsc.org](http://modirt.missouriepsc.org)

Soil is a non-renewable resource – stop destroying our topsoil! The process to replace topsoil takes years. It is formed from the weathering of rocks and subsequent addition of organic material from decaying plants and animals. This enriches the soil and adds the essential nutrients for plant life.

Dr. Sandra Arango-Caro works with the MO DIRT (Missourians Doing Impact Research Together) project in all aspects of its implementation including the design and development of the soil science curriculum, soil surveys, data management strategies, evaluation plan, public relations, etc.

It was a great presentation! We were lucky to hear such valuable information.

For more information, see Sandra’s interesting presentation on the chapter website here:

[20190917 Sandra Arango-Caro-What is Soil and How Can We Study It](#) Secured file. Use password listed in YELLOW font.

--- Review by Diana Miller



Advanced Training Speaker Series  
2019 Calendar

January 15, 2019	Tom Ebeling	Tree Identification
February 19, 2019	Sandy Brooks	Nature Photography
March 19, 2019	Kevin Dietsch	Weather Spotter
April 16, 2019	Chris Hartley	Native Bees, Bumble Bees
May 21, 2019	Yvonne Homeyer	Dragonflies
June 18, 2019		PICNIC
July 16, 2019	Lanny Chambers	Hummingbirds
August 20, 2019	Benda Hente	Owls
September 17, 2019	Sandra Arango-Caro	Soils
October 15, 2019	James Faupel	Litzsinger and the MSD Deer Creek Storm Water Project
<b>November 19, 2019</b>		<b>ORIENTATION</b>
<b>December 17, 2019</b>		<b>HOLIDAY PARTY</b>



Advanced Training (continued)

# Tri-Chapter Kayak Field Day and Advanced Training on the Mississippi River --- by Bob Virag

Thirty-one intrepid Missouri Master Naturalists, advanced training speakers, and safety boaters braved the Mississippi River on Sunday, September 29, 2019. Many thanks to our speakers from the **Missouri Department of Conservation**, Fisheries Biologist Travis Moore and Education Consultant Kathi Moore. They drove-in from Hannibal and spent the weekend on the water teaching us about the spectacular diversity of mussel species present in our Missouri waterways. Their demonstration of the braille method to survey mussels was a real treat. Also, a special thank you to Jean Favara, Vice President-Conservation at the **St. Louis Audubon Society** for pointing out the many migrating birds in the waterway. We are eternally grateful to our hosts and partners from **Mississippi Water Trail Association**, **St. Louis Canoe and Kayak Club**, and the **Alpine Shop** for outfitting us and guiding our way safely. A wonderful time was had by all! Enjoy our photo journal. [Even more photos on FACEBOOK](#)



Intrepid Missouri Master Naturalists on the Tri-Chapter Kayak Field Day



Our MDC trainers, Travis and Kathie Moore



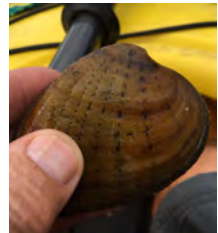
Our MRWTA hosts Joan Twillman and Mary Mierkowski



Jean Favara-VP Conservation STL Audubon



Our outfitter, MMN Perry Whitaker, Alpine Shop, Kirkwood MO



Mussel samples collected by Travis Moore



**MRWTA President Joan Twillman added:** It was our pleasure! What a fun way to further our mission of appreciation of the Mississippi through safe recreation! Anyone who wants to know more about the [Mississippi River Water Trail](http://www.mississippiriverwatertrail.org) can check out our new website at [www.mississippiriverwatertrail.org](http://www.mississippiriverwatertrail.org) for detailed maps and more information on our woefully underpublicized but nationally recognized National Water Trail. [You can also check us out on our Facebook page.](#) If you are interested in volunteering for us and especially if you would like to head up a committee, I would love to hear from you. Thanks for a great day!



# Great Rivers Member Milestones

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

## Awards and Recognition

### 2019 3rd-Quarter Results

#### As of September 26, 2019

- 9 major milestone pins earned in 2019
- 7 Initial Certification pins earned in 2019
- 48 Great Rivers Chapter members recertified in 2019

NOTE: 1 member was an intern who also earned an Initial Certification Award in 2019

#### CHAPTER FACTOID:

TOTAL 3<sup>rd</sup> Quarter YTD HOURS  
 as of September 26, 2019  
**Volunteer Service:**  
**6,936.2 Hours**  
**Advanced Training:**  
**1,040.6 Hours**



Pam Wilcox



**Silver Dragonfly**  
**2,500 Hour**  
**Milestone Pin**



Sherri Schmidt  
eoff Stillwell



**Gold Dragonfly**  
**1,000 Hour Milestone Pin**



**Initial Dragonfly**  
**Certification Pin**  
*Earned in 2019*

- Jan Castanis
- Patty Clarke
- Barb Davidson\*
- Bev Kriesky
- Chris Hull
- Melissa Leech
- Mary Risberg

\* Also earned 2019 Recertification Award in the same year as Initial Certification



Jack Hambene  
Karen Zelle



**Pewter Dragonfly**  
**500 Hour Milestone Pin**



Sue Forquer  
Ann Eggebrecht



**Bronze Dragonfly**  
**250 Hour Milestone Pin**

Brenda Switzer  
Peggy Parr





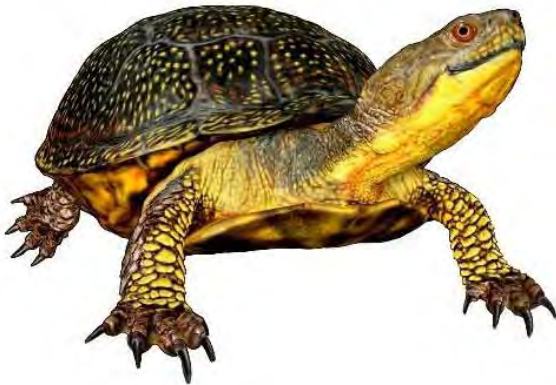
## ANNUAL RE-CERTIFICATION AWARDS for 2019

Congratulations to the 48 Great Rivers Chapter members that earned their annual recertification as Missouri Master Naturalists by the 3<sup>rd</sup> quarter this year.

The 2019 annual award pin is the Blanding's Turtle.



2019 3<sup>rd</sup> Quarter  
RESULTS!



**Missouri Master Naturalist**  
**2019 Certification Pin**  
**Blanding's Turtle**  
*Emydoidea blandingii*

- |                   |                     |
|-------------------|---------------------|
| Sharon Baldassare | Vaughn Meister      |
| Renee Benage      | Michael Meredith    |
| Barbara Brain     | Claire Meyners      |
| Barbara Cerutti   | Mary Mierkowski     |
| Brenda Christ     | Peggy Morrison      |
| James Christ      | Bob Ochs            |
| Larry Conant      | Kathy O'Neill       |
| Barb Davidson     | Susan Orr           |
| Carl Davis        | Peggy Parr          |
| Carolyn DeVaney   | Kari Pratt          |
| Mary Dueren       | Ann Russell         |
| Ann Eggebrecht    | Sherri Schmidt      |
| Tom Fasl          | Donna Scott         |
| Sue Forquer       | Michael Smith       |
| Pamela Fournier   | Barbra Stephenson   |
| Diane Goulis      | Geoff Stillwell     |
| Jack Hambene      | Brenda Switzer      |
| Brenda Hente      | Sean Tracy          |
| Glen Horton       | Evelyn Tullos       |
| William Hoss      | Bob Virag           |
| Al Koebbe         | Tessa Wasserman     |
| Jeanne Koebbe     | Pam Wilcox          |
| Mary Kreppel      | Michael Wohlstadter |
| Debra Maurer      | Karen Zelle         |





## **Member Spotlight** *Sharing members accomplishments*

# Pam Wilcox, Founding Member, Class of 2007, earns her 2,500 hour Milestone Award

**Congratulations, Pam, on earning your well deserved award.  
You are the second volunteer in the chapter to have earned such a prestigious award.  
You are a true inspiration to us all!**

## The Long Road to 2,500 hours -- by Pam Wilcox

When I joined the Missouri Master Naturalist organization way back in 2007 I didn't give much thought to accumulating a high number of hours. I did the best I could to always get my 40 hours of service and 8 hours of advanced training.

I enjoyed every minute of earning these hours. From backbreaking honeysuckle removal, to trash pick up and the very enjoyable education portion. As time went on, I found that my true calling was to educate children about the wonders of nature and the benefits to be found outdoors.

In addition to volunteering with the MMN's I spent 10 years volunteering with the Missouri Department of Conservation. I provided numerous educational programs to children of all ages who really wanted to be there and were enthusiastic about learning about nature.

At the same time, I joined the volunteer education team at Litzsinger Road Ecology Center. This too was very satisfying. Each day local schools bring students to the site to learn about the various habitats within the center. I stayed with Litzsinger for seven years.

As if this wasn't enough, I found myself joining the Education Team with St Louis Audubon. Their education team provides curriculum based programs at Rockwood Schools, Parkway, Libraries, Scout Groups, nurseries and any other organization that requests our programs.

I suddenly realized that I could not maintain the commitment all of these entailed. Although I enjoyed them all, I knew I had to cut back. As time consuming as it was, it was very hard to eliminate something from my schedule. I ended up withdrawing from MDC and Litzsinger to concentrate on the Missouri Master Naturalists and St Louis Audubon activities.

So twelve years later I now have 2,500 hours with MMN. I'm proud of my accomplishment but the reason I stay with MMN is the amazing members and the knowledge that I'm helping the environment in some small way. It's not about the hours, it's about doing the right thing for the planet.

***"Study nature, love nature, stay close to nature, it will never fail you" John Muir***



Missouri Master Naturalist Pam Wilcox planting trees in Eberwein Park, City of Chesterfield MO  
– photo by Dan Zarlenga, MDC



Featured Article

# Naturalist's Journal

## "Ready or Not, Here We Come!"

by Brenda Hente – photographs by Danny Brown

As autumn approaches, many bird species who spend their spring and summer breeding in the Northern parts of North America and Canada, begin their southward journey towards warmer climates. Our feathered friends have good reason to migrate and navigate such great distances. If they stay in the North they will most likely face harsh, subzero temperatures and starvation come this winter. Let's take a closer look at some of these bird species who spend time in Missouri during migration, and who also spend the winter here in the "Show-Me State" to a greater or lesser extent. All of the photos featured in this article were taken in Missouri during the winter.

### # 1. The *Common Goldeneye (Bucephala clangula)*

will return in late fall after spending the summer nesting in tree cavities in the boreal forest of northern North America. Here in Missouri they are a common migrant and winter resident living on rivers and lakes. Being a diving duck, they will forage for aquatic invertebrates, crayfish, fish, and plants in fairly shallow waters of less than 20 feet deep.



Common Goldeneye - Marais Temps Clair Conservation Area

### #2. The *Short-eared Owl (Asio flammeus)* is an uncommon

winter resident and migrant to our state. They forage over the grasslands on the wing at dawn and dusk, feeding primarily on voles and other rodents. They begin making their appearance to Missouri by the end of October, and can frequently be seen through the end of March. BK Leach Memorial Conservation area is a great place to view these magnificent raptors.



Short-eared Owl – BK Leach Memorial Conservation Area

### #3. The *Yellow-bellied Sapsucker (Sphyrapicus varius)*,

an uncommon migrant to our state, will begin arriving in the Southern two-thirds of Missouri in September, where it will spend its time foraging for insects, fruits, nuts, and berries. These woodpeckers have a strong attraction to birch and maple trees where they are known to drill out neatly aligned rows of sapwells, licking the sap and eating any insects available to them. Hummingbirds, other birds, bats, and even porcupines will frequent the sapwells as well, drinking the sweet sap from the trees.



Yellow-bellied Sapsucker – Shaw Nature Reserve

### #4. After breeding in dense stands of fir and spruce trees in

the far North, the *Golden-crowned Kinglet (Regulus satrapa)* will return to Missouri by the end of September. These small birds are often seen in shrubs and deciduous forests in flocks, along with chickadees, titmice, woodpeckers, and nuthatches. Although they are not much bigger than a hummingbird, this small bird can live in -40 degrees Fahrenheit temperatures at night during the winter.



Golden-crowned Kinglet – Blue Springs Creek Conservation Area



“Ready or Not, Here We Come!” (continued)

**#5.** The *White-throated Sparrow (Zonotrichia albicollis)* is a common winter resident and often a favorite of many birders with their beautiful white throat, and yellow, black, and white facial markings. They are often found foraging on the ground for insects and seeds. These strikingly beautiful birds tend to cross breed with the Dark-eyed Junco and are a common visitor to our backyard birdfeeders during the winter.



White-throated Sparrow – August A. Busch Memorial Conservation Area

**#6.** The *Dark-eyed Junco (Junco hyemalis)* are among the earliest to arrive in Missouri, signifying that winter is nearly here. Many birders anticipate their return each year because they are regular visitors to backyard bird feeders in the winter. Gathering in small flocks, along with song sparrows and white-throated sparrows, they forage on the ground and enjoy any seed available to them. Their feathers can vary greatly in differing shades of black and gray, which makes them easily identifiable. Watching these little snow birds are sure to chase away the winter blues.



Dark-eyed Junco – August A. Busch Memorial Conservation Area

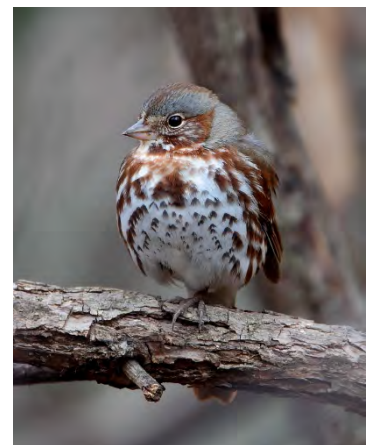
**#7.** Endangered within our state, the *Northern Harrier (Circus cyaneus)* is an uncommon migrant seen across Missouri’s prairies, marshes, and hayfields foraging for rodents, snakes, birds, and insects during the winter. Helping them to successfully hunt, these birds are very owl-like, in that they use their flat facial disk and stiff facial feathers to concentrate and direct the sound of prey into their ears. These birds



Northern Harrier – August A. Busch Memorial Conservation Area

have a long, slim tail with a white patch at the base, and their wings are held in a V-shape. The male is white and gray in appearance and is nick-named the *Gray Ghost*. The females are browner in appearance and are much larger than the males. At dawn and dusk, you can often find Northern Harriers and Short-eared Owls hunting together in competition on the same hunting grounds.

**#8.** The *Fox Sparrow (Passerella iliaca)* is a beautiful bird with rusty brown colors on its rump and tail, and is heavily streaked with rusty-colored triangular shapes, that cluster in large blotches on its upper breast. Its head is made up of a gorgeous rusty-gray cap of feathers. The fox sparrow is often seen kicking among dead leaves and ground litter in wooded undergrowth and brush, acting very Towhee-like. Their song is very musical with short clear notes and sliding whistles. They love ground cover and rarely venture far from it. This winter, you may be lucky enough to find them visiting your backyard and kicking around for some food.



Fox Sparrow – Tower Grove Park



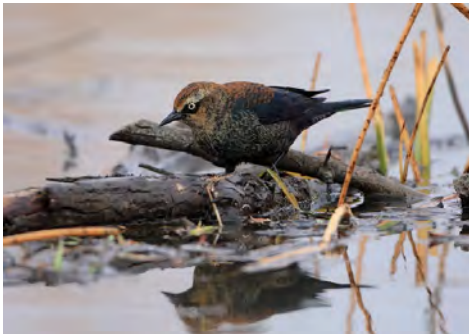
“Ready or Not, Here We Come!” (continued)

**#9.** The **Yellow-rumped Warbler (*Setophaga coronata*)** is the only warbler species that make Missouri and most of North America their home during the winter. Because of their ability to digest the wax coating on berries, these warblers can remain as far north as New England, Seattle, and sometimes Newfoundland during the cold winter months. These brown, streaky birds with their flash of yellow rumps are often seen in berry thickets, brush, open woods, gardens, and lowland habitats mainly feeding on berries and insects. You can try attracting them to your backyard this winter by putting out sunflower seeds, raisins, suet, and peanut butter.



Yellow-rumped Warbler – Franklin County

**#10.** The **Rusty Blackbird (*Euphagus Carolinus*)** spends its winter in the eastern half of the United States, traveling in small flocks. They are a little larger than the red-winged blackbird and are easy to identify with their distinctive rusty feather edges, their pallid yellow eyes, and a bold eyebrow. They spend the winter feeding on insects, plant matter, and sometimes they will even attack and eat other birds. Over the past 40 years their population has greatly decreased for unknown reasons.



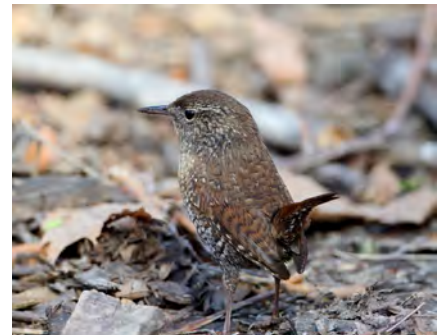
Rusty Blackbird – Audubon Center at Riverlands

**#11.** Large numbers of **Snow Geese (*Chen caerulescens*)** can be seen flying and falling out of the sky during migration and during the winter, across Missouri and the United States. These large, white-and-black geese can be found in open fields, on bodies of water, or high in the sky as they fly overhead. In large feeding flocks, lookouts will watch for eagles and call to the others, where-after they may all heed the warning and take flight. If these geese are nearby, you can't hardly miss them as they will appear in large flocks making a cacophony of honks, and resemble a carpet of snow on their feeding grounds. These geese have made a tremendous come back in numbers ever since 1975, when they were once again, allowed to be hunted.



Snow Geese – Warren County

**#12.** The **Winter Wren (*Troglodytes hiemalis*)** can be described as being a plump, round ball of feathers with a short, stubby tail. They have a very thin, small bill and is overall brown in appearance with brown barring on their wings, tail, and belly. They have a pale, tan eyebrow stripe above their eyes and wear a plain brown cap. This winter resident can usually be found bobbing its entire body as it hops short distances on the forest floor, overturning roots, vegetation, and downed logs searching for food. One can usually find this loud songster not far from streams of water.



Winter Wren – Tower Grove Park

I hope that by learning a little bit more about these twelve different bird species who visit us here in Missouri, motivates you to do some birding in the approaching days of fall and winter. Be prepared by dressing appropriately for the weather, go to places where bird's needs of food, water, and shelter are being met, and bring birds to you by setting out birdseed and fresh water in your own yard. By following these easy steps, you may find the coldest season to be the hottest one for birding!





## Naturalist's Journal - continued

# Audubon's New Climate Report

## Survival by Degrees: 389 Bird Species on the Brink

*From the St. Louis Audubon Society Tale Feathers, October 2019 issue Contributed by Pam Wilcox*

Over the last five years, Audubon has used the latest climate models and more than 140 million bird records—including data collected from bird lovers like you—to assemble a new, ground-breaking report forecasting the survival of North American birds through the end of the century in extraordinary detail.

Our science shows that 65% of North American bird species are at risk of extinction from climate change. Even common birds like the American Robin and Northern Flicker will experience declining populations and radically different ranges in the near future.

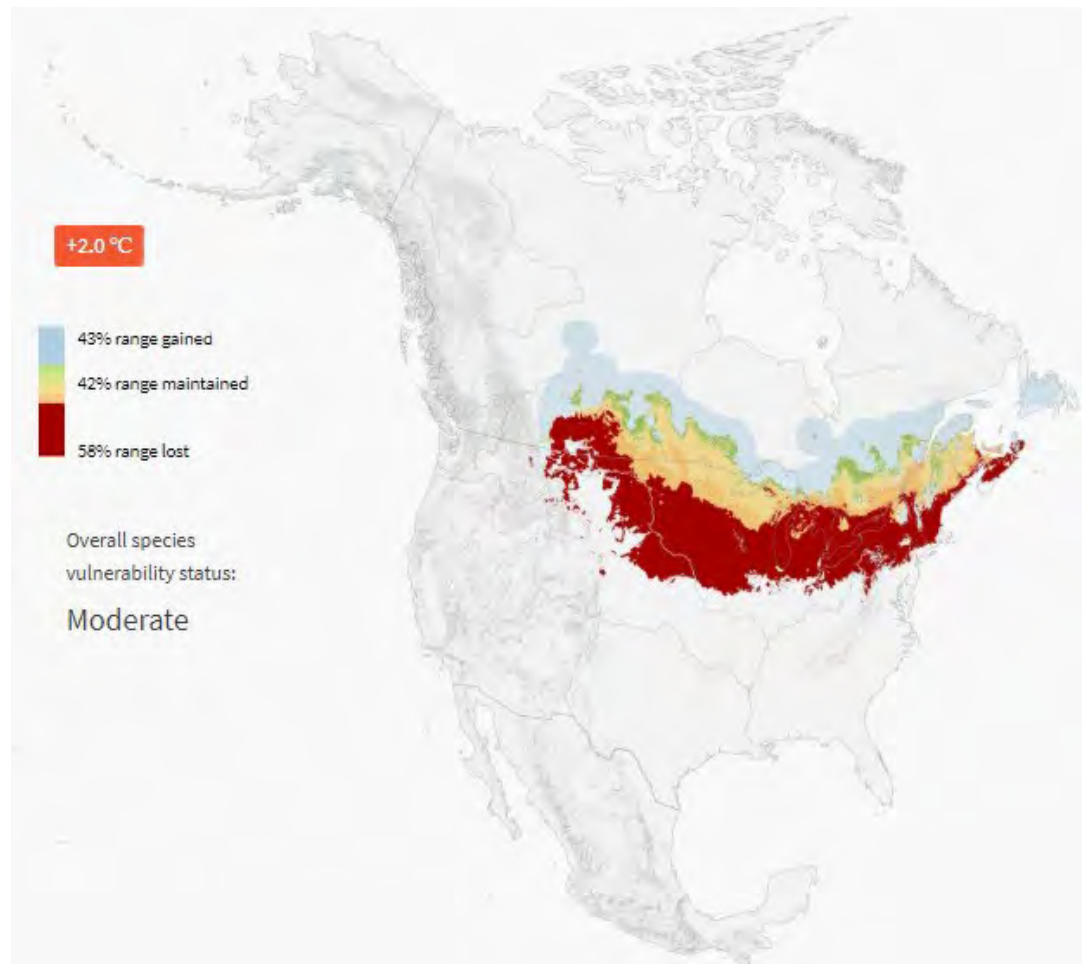
But as the threat of climate change grows, so does Audubon's work.

This report not only illustrates how our warming planet will impact the birds we all love but also shows us that if we act, there is still time to create a brighter future for birds and people. And we already have a lot of the tools we need to reduce the effects of global warming. Read the report to learn what birds have been telling us for years: it is time to act.

[Read the Report](#)

### [\*Survival by Degrees: 389 Bird Species on the Brink\*](#)

Two-thirds of North American birds are at increasing risk of extinction from global temperature rise.





# Naturalist's Journal - continued

## TreeSnap



CITIZEN SCIENCE APP

--Contributed by Reneé Benage

This app lets you record trees and share the data with scientists. Scientists are looking for healthy specimens of white oak, American elm, Ash, and American Chestnut. You can help by recording info in the app – a few photos and answering some questions – uploading the info, and you're done! Questions on the white oak, for example, were about quantity of acorns, approximately how far off the ground the first branch was, the tree diameter, etc.

You can find more information at [www.treesnap.org](http://www.treesnap.org). The App can be downloaded for free on either Apple or Android. You need to register yourself as a user once you have downloaded.

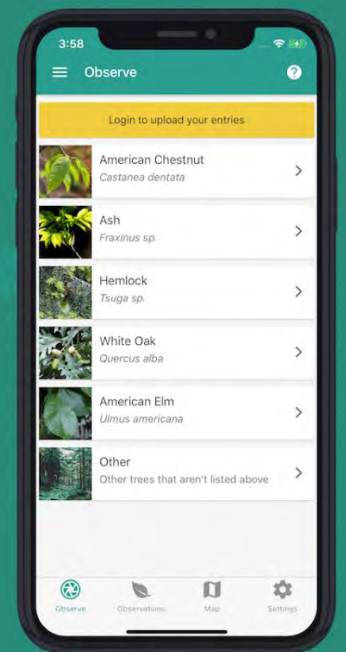
You can also record information about any tree species you want, for yourself or to share with others.

AVAILABLE NOW

## Help Our Nation's Trees!

Invasive diseases and pests threaten the health of America's forests. Scientists are working to understand what allows some individual trees to survive, but they need to find healthy, resilient trees in the forest to study. That's where concerned foresters, landowners, and citizens (you!) can help. Tag trees you find in your community, on your property, or out in the wild using TreeSnap! Scientists will use the data you collect to locate trees for research projects like studying the genetic diversity of tree species and building better tree breeding programs.

Meet the scientists that use TreeSnap data





## Naturalist's Journal - continued

### Wild Edibles

-- by Tara Morton (Class of 2017)

## A Refreshing Late-Summer Foraged Treat: Sumac-ade

This season's foraged recipe is a very simple one, and might even be familiar to some of you! In late summer (typically in August), you'll begin to see large shrubs (ranging 3-10 feet tall) with red conical bundles of berries dotting the landscape. Shrubs are visible along highways and found at the edges of woodlands. When these berries turn a deep shade of red, they are ripe, and can be used to make the perfect drink to combat the summer heat: **sumac-ade!** These lovely berries are coated in oils that release into cool water, making a deliciously tart substitute for lemonade.

### Sumac-ade

4-6 cones of sumac berries, unwashed, and harvested after a few dry days

8 cups of COLD water (hot water makes it turn bitter!)

Fresh mint, local honey, and/or sugar to taste

### Instructions:

1. Place your sumac berry cones in a large bowl or pitcher.
2. Pour cool water on top of berries
3. Let berries soak in water for a minimum of 30 minutes, or as long as one day. More flavor will release with a longer steep, and you can also release more flavor by breaking apart berries with your hands.
4. Taste at intervals, and when you are happy with the taste, strain off berries through a cheesecloth or fine colander.
5. Finish off with a fresh sprig of mint, your favorite local honey, or whatever you choose. I added a bit of Ozark Forest brand Elderflower Cordial to mine, which I picked up at my local farmer's market, to enjoy a truly locally foraged drink!





# Logo Wear Order Form Fall 2019



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



**microfleece no hood**  
(aqua green)  
women  
\$35



**bright green tee**  
women  
\$15



**khaki/hunter ball cap**  
\$17



**kiwi short sleeve tee**  
\$14.00



**military green hoodie**  
\$23.00



**tan long sleeve tee**  
\$16.00



We can also 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

**SAVE, then EMAIL and ATTACH COMPLETED FORM TO:**

Kari S. Pratt

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

636-391-2901



*Things perfected  
by nature are  
better than those  
finished by art.*

*--Cicero*

*Brown-eyed susan, *Rudbeckia triloba* ©2019 Glenn Horton*