



Missouri Master Naturalist



January-February-March 2023 Volume 13 Number 1

The moon is a friend for
the lonesome to talk to.

~ Carl Sandburg



Charles, the Forest Park Owl
in the Moonlight

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Read the sad story on page 15.



Great Rivers Gazette

January-February-March 2023 Volume 13 Number 1
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Co-Editor: Bob Virag
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The President's Corner

Dear Chapter Members,

A Norse proverb states, "There is no such thing as bad weather, just bad clothing." This issue shows that the members of the Great Rivers chapter are ready for anything!



Neither snow nor rain nor a half hour before sunrise (see Trumpeter Swan Watch) keep Missouri Master Naturalists from their mission! And in getting out there, we get to experience the special camaraderie of friends working side by side to do good work. It's no wonder that the photos in this issue show so many groups of smiling people!

The Great Rivers Chapter is so fortunate to have such varied opportunities to fulfill our mission of Citizen Science, Education, and Stewardship. Whether you like to be in the woods, on the water, in the water, in the classroom, or in the classroom on the water, there is place for you here!

Lisa Picker
President,
Great Rivers Chapter

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Front Cover Photo

Charles, the Forest Park Owl – *Mark H.X. Glenshaw*

Back Cover Photo

Ice Treasures – *Barb Cerutti*

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Stewardship – Winter 2023

Spanish Lake Park Restoration

by Larry Conant

January 29, 2023

Bright as the bobcat’s eyes in the beam of your flashlight, and bushy-tailed as the flying squirrel, you didn’t see gliding above you head last night, seven of your very favorite GRMMNs (and three of their friends) worked, enthusiastically, at yesterday’s Spanish Lake Fun Day, gleefully hacking numerous giant, invasive honeysuckle (and other invasives), while also bashing trash, from beautiful, sunny Spanish Lake County Park.

The ever-present merriment that reliably permeates this dedicated group of jolly laborers was obvious throughout the morning.

Please be sure to join us for Spanish Lake Fun Day: 9:00 to 11:00 AM, on the last Saturday of every Fall and Winter month. I can guarantee a rip-roaring good time (or I will double your pay from my own pocket!)



Barbara Stephenson, Donna Scott, Larry Conant, Carl Davis, Jo Howard, Frank Breitenstein, Tessa Wasserman, Elizabeth Simons, (and Ike Jacobs and Pat Behle – not shown), gleefully toiled tirelessly to make proud the Great Rivers Chapter of Missouri Master Naturalists.



Emily Horton thought it’s likely a *Crocus sativus*, the saffron crocus (usually very late fall), or just a random global-warming



Before



After--Bob Ochs, observed that “it is wonderful what a group of seniors can do on a Saturday morning.”



Michael Meredith in the Spotlight

Open Space Council AND Conservation Federation of Missouri

January 30, 2023

Open Space Council #MeetUsMonday spotlights two OSC Community Stewardship Alliance Ambassadors, **Michael Meredith of Creve Coeur Park**, and Laura Yates of Lower Meramec Park.

Our CSA Ambassadors are dedicated and trained volunteers who serve as the backbone of the program, building a community of stewardship around the county parks' natural areas to safeguard their future.

Learn more about our hardworking ambassadors in our 2022 CSA Annual Report, found on our website at

<http://openspacestl.org/programs/the-community-stewardship-alliance>

Learn more about Community Stewardship Alliance at Creve Coeur Lake Memorial Park at

https://volunteer.openspacestl.org/agency/detail/?agency_id=137683



February 2, 2023

Conservation Federation of Missouri elected **Michael Meredith** to the CFM Affiliate Board, representing the Missouri Master Naturalist Great Rivers Chapter.

His first official work on the board was to write a resolution to ban the sale of invasive plants within the state of Missouri. Very impressive start.

Congratulations, Michael. Thank you for all that you do!



CFM Election Results Announced

Conservation Federation of Missouri's Affiliate Board and Board Elections were held over the month of January, and votes closed on January 31st. Thank you to the CFM membership for your vote. Your voice has been heard. We appreciate everyone that ran for these positions. Here is the list of the winners for the 2023 CFM Election:

Secretary: Benjamin Runge

Executive Committee: Lisa Allen and Tom Westhoff

At-Large Board Members: Jim Low, Ralph Duren, Ryan Verkamp, Steve Jones

Affiliate Board of Directors:

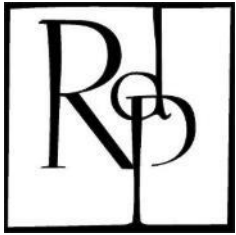
Laurie Wilson with Forest and Woodland Association of Missouri (3-year term)

William Hall with Missouri Disabled Sportsmen Inc (3-year term)

Alex Scott with Ozark Fly Fishers (3-year term)

Michael Meredith with Missouri Master Naturalists – Great Rivers Chapter (3-year term)

Jeff Meshach with World Bird Sanctuary (2-year term)



River Des Peres Watershed Coalition Recognizes Great Rivers Chapter Members

February 8, 2023

River des Peres Watershed Coalition (RdPWC) is much more than an ordinary Missouri Stream Team Association. Its mission is to “is to improve, protect, and maintain the River des Peres, its tributaries, and its watershed as a vital natural and cultural resource in the St. Louis metropolitan area.” The way it accomplishes this is to focus on much more than the river by “Greening Thirty-Six Neighborhoods” within the watershed. In that sense, its mission overlaps with that of our Great Rivers Chapter. So, it’s only “natural” for their Board and membership to be populated by Missouri Master Naturalists.

Recent projects included their annual Clean Stream Program trash bash and local many rainscape gardens.

At the most recent annual meeting, Great Rivers members Bob Ochs (now RdPWC Vice President) and Michael Wohlstadter (RdPWC Board Member) were spotlighted for their work in supporting the mission. Great Rivers Brenda Switzer received the coveted 2022 Watershed Hero Award for her Stream Team water quality monitoring and restoration work in the community.

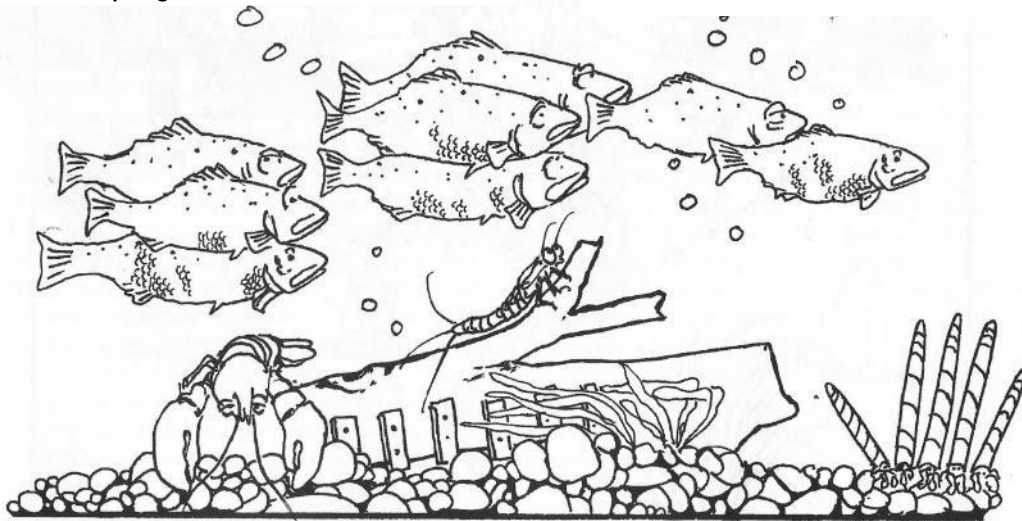
Congratulations to all!



Great Rivers Bob Ochs and Michael Wohlstadter (both on the left) in the Board of Directors and Officers spotlight.



Great Rivers Brenda Switzer (right) receives the 2022 Steve Nagle Watershed Hero Award from RdPWC President, Dr. Zoe Geist.





Pollinator Paradise Fun Days At Givens Elementary School, Rock Hill by Lisa Picker

March 10-15, 2023

Pollinator Paradise is a school pollinator garden in Rock Hill that includes a small prairie and two beds. We have plenty of opportunities for the students to help maintain the garden by removing invasive and aggressive plants.

Bee specialist, Nicole Miller-Struttmann, and I explained the importance of prescribed burning in the maintenance of prairies. The students at Givens Elementary then took a walk in the prairie, collected some seeds, and found an invasive species. With the help of Chris Hull, the weather was closely watched, and the prescribed burn took place on March 14 on the school prairie.



Don and I returned the next day to remove the pesky honeysuckle, Siberian elm, and grapevine that the fire didn't get.



Chris Hull volunteering at the prairie burn at Givens School as students observed.



Forest ReLeaf

by Lee Phillion

March 17, 2023

Anybody know what the wind chill? Colder than a WTIABB for sure! Nevertheless, a stalwart group of Missouri Master Naturalists showed up to pot. I left at break time, which was being enjoyed in the toasty greenhouse, so I don't know how many seedlings were potted.



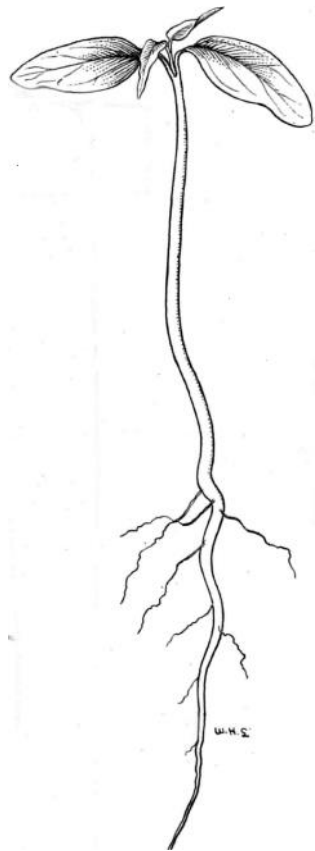
Photos by Lee Phillion



Forest ReLeaf (continued)



Quercus sp.



Cornus sp.



Longtime Forest ReLeaf volunteer and GR Chapter MMN Renee Benage had the honor of potting the first seedling of 2023 at the nursery. Forest ReLeaf counts on potting assistance from area Master Naturalists to help pot thousands of trees.



Forest ReLeaf Executive Director Meridith Perkins and Volunteer Tessa Wassermann show off the "how to pot a seedling" signage. Spring potting at Forest ReLeaf is a highlight of the year.



Peggy Parr weeds 15-gallon size trees at Forest ReLeaf of Missouri's Nursery in Creve Coeur Park.



Tessa Wassermann and Peggy Parr carry the ubiquitous yellow cat litter cans to the nursery's tree lot to weed larger trees.



Arborist Dan Billman (right) leads a break-time educational workshop for volunteers at the Forest ReLeaf nursery.



Great Rivers Greenway and St. Louis Aquarium Revamp the Riverfront

by Elizabeth Simmons



March 23, 2023

In an effort to improve water quality in the St. Louis region and downstream, Great Rivers Greenway and the St. Louis Aquarium Foundation are partnering on a monthly Revamp the Riverfront event series from March through September 2023. Volunteers are invited to join in to help prevent plastic pollution in our region from entering the Mississippi River and eventually the ocean.

The many creeks and streams throughout the St. Louis region all flow into the ocean via the Mississippi River. Plastic litter that falls on our sidewalks and streets get carried into our waterways when it rains. The plastics break down into smaller pieces called microplastics as they travel down the Mississippi River and into the ocean. These microplastics increase as they are passed up the food chain.

The Revamp the Riverfront volunteer events are part of a larger effort to improve the health of the waterways that connect us all.

To find out about upcoming volunteer events with Great Rivers Greenway, visit www.GreatRiversGreenway.org/Events.

To find out more about the **Mississippi Greenway Park Master Plan**, download the file here: greatriversgreenway.sharefile.com/share/view/s28f8e7cafc14fb59



Images Source: St. Louis Aquarium Foundation



Citizen Science-Winter 2023 Great Rivers Trumpeter Swan Watch 2022-2023 Results & Summary by Pat Lueders

INTRODUCTION

The 2022-2023 Great Rivers Trumpeter Swan Watch was the eleventh watch conducted at Riverlands Migratory Bird Sanctuary (RMBS), St. Charles County, MO, by community science volunteers under a partnership of the following agencies:

- Audubon Center at Riverlands
- Missouri Birding Society
- St. Louis Audubon Society
- Trumpeter Swan Society (TSS)
- U. S. Army Corp of Engineers, River Project Office



Frozen Ellis Bay, December 26, 2022. - Photo by Pat Lueders

HISTORY: Trumpeter Swans (*Cygnus buccinator*) first arrived at RMBS in good numbers during November 1991, returning each subsequent year to winter in the marshes and river until late January. At the request of the national Trumpeter Swan Society, the Great Rivers Trumpeter Swan Watch was created in 2012 to collect and share information regarding this introduced species with the TSS and the general public including their numbers, locations, and behavior.

PROCEDURE: From the arrival of the swans in November until their departure in January, every two weeks trained and experienced community service volunteers arrive at their assigned locations throughout the refuge ½ hour before dawn. As soon as possible, the number of roosting swans is counted by the observer and noted by the recorder, including additional waterfowl in the same area. The temperature and wind speed are recorded, and the totals of all the locations are tallied.

SWAN COLLARS: In order to track the success of the reintroduction of the Trumpeter Swan, neck collars, yellow with black codes, were placed on cygnets in their nests by the Wisconsin Department of Natural Resources beginning in 2002. During the last 11 years, 94 collars have been sighted during the watch, and the codes were reported to the Federal Bird Banding Lab by the observers. During the 2022-2023, one collar was spotted but could not be read. A collared swan would be 10-20 years old.

RESULTS & SUMMARY

2022-2023 TRUMPETER SWAN WATCH DATES:

November 15, 2022	December 27, 2022
November 29, 2022	January 10, 2023
December 13, 2022	January 24, 2023

DATE	Temp	Trumpeters	Adults	Cygnets	Tundra
November 15, 2022	37°	392	351	41	0
November 29, 2022	46°	976	862	114	51
December 13, 2022	35°	500	442	58	61
December 27, 2022	12°	1225	1080	145	60
January 10, 2023	30°	13	8	5	
January 24, 2023	33°	16	16	0	



Trumpeter Swan Watch (continued)

SUMMARY

Until the middle of December, the winter of 2022 was mild, resulting in a vast amount of habitat available for the swans at RMBS for roosting. The first watch of the season was held on November 15th when 392 swans were counted, a good number for the first watch. During previous years, the most popular marsh has been Heron Pond. However, because of habitat improvements at RMBS, swans were fairly evenly distributed in three marsh areas throughout the season. During the November 29th count, forty Tundra Swans were also counted in lower Heron Pond, all roosting together, and a group of up to 60 remained the entire season.

The evenly scattered number of roosting swans, and the mild winter temperatures, continued until the middle of December, when very cold temperatures resulted in the freezing of all of the marshes and most of Ellis Bay. As in past years, the largest number of swans was counted when only a small strip of open water existed in the middle of Ellis Bay. With a temperature of 12°, the count on December 27th resulted in 1,225 Trumpeter Swans and 60 Tundra Swans as well as a large variety of other waterfowl including Greater White-fronted Geese roosting together in the small area of open water.

During the first two weeks of January 2023, temperatures rose, and by the January 10th count, it was 55° on the refuge. Surprisingly, only 13 swans were now roosting on the refuge. This trend continued with 16 swans counted on the January 24th watch.

A number of deductions can be made when analyzing the results of the 2022-2023 Great Rivers Trumpeter Swan Watch. The availability of a larger area of acceptable habitat resulted in the swans being widely disbursed over the refuge that is healthier for the population. The percentage of the number of cygnets in the population was consistent throughout the season, averaging 12%. When the marsh habitat in the general area is frozen, the previously scattered swans gather in the only open water which is in Ellis Bay, providing a fairly accurate count of the total number of swans in the area during the season.

The top three previous highest watch counts are listed below:

2016-2017	1,022
2017-2018	1,377
2018-2019	1,295

Interestingly, the largest count during the 2016-2017 was on the December 20, 2016 count, another season with almost identical mild temperatures as the 2022-2023 season until the middle of December.

In conclusion, the number of wintering Trumpeter Swans counted during the Great Rivers Trumpeter Swan Watch seems to remain steady, averaging around 1,200 in the last 7 years. Their migratory behavior seems to be predicted by the temperatures each winter in the area. Warm, winter temperatures result in early departure dates for the breeding grounds, freezing January temperatures result in late departures.

THANK YOU to the volunteers that make this project successful every year. Also, thank you to the staff of the Audubon Center at Riverlands for providing their support, a warm gathering location, and additional swan activities throughout the winter!

Pat Lueders, Audubon Volunteer Coordinator



Counting Trumpeter Swans through the early sunrise fog at the Migratory Bird Sanctuary at Riverlands, January 10, 2023, was a challenge and a bit surreal. Photo by Bob Virag



Great Backyard Bird Count 2023



The results are in!

Thank you to everyone that contributed.

Birds unite the world each February for the Great Backyard Bird Count. Collectively, worldwide, the program found 7,538 species of birds— 2/3rds of the known 10,960 species we share the planet with. More than 200 countries came together to share bird sightings, making our global submission map light up for four consecutive days.

Local St. Louis Area results are just as compelling.

Here is how our region scored:

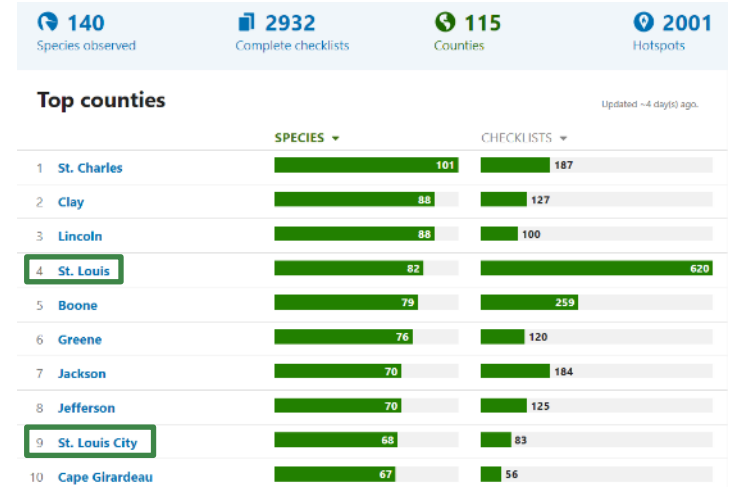
Click on the links on the right for more information.

- **St. Louis County and St. Louis City came in 4th and 9th** respectively in the state for the greatest number of species observed. Had they been combined; they would have ranked 1st with 150 species observed.
- **Top St. Louis Hotspots** included:
 - #1 Columbia Bottom Conservation Area
 - #2 Creve Coeur Park-Mallard Lake
 - #3 Creve Coeur Park-Little Creve Coeur Lake
 - #10 Creve Coeur Lake Memorial Park
- **Top St. Charles Hotspots** included:
 - #1 Riverlands Migratory Bird Sanctuary
 - #4 Riverlands Migratory Bird Sanctuary – Ellis Island

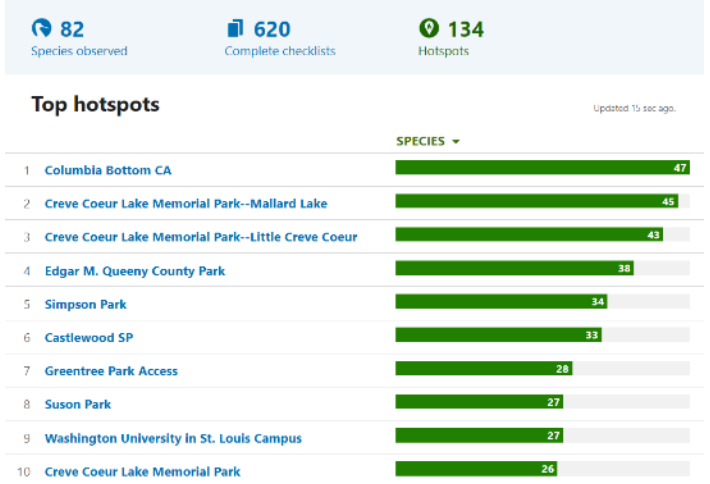
Missouri Master Naturalist observers ranked well within the region Top 100 bird spotters (apologies if I missed anyone).

- **St. Louis City Region:**
 - #4 Kris Monahan (Great Rivers Chapter), 23 species
- **St. Louis County:**
 - #64 Cori Westcott (Miramiguo Chapter), 20 species
 - #74 Carl Davis (Great Rivers Chapter), 19 species
 - #85 Mary Dueren (Great Rivers Chapter), 18 species
- **St. Charles Region:**
 - #9 Gail Gagnon (Confluence Chapter), 32 species
 - #54 Renee Benage (Great Rivers Chapter), 13 species

TOP COUNTIES IN MISSOURI



TOP ST. LOUIS HOTSPOTS



TOP ST. CHARLES HOTSPOTS





Education and Outreach – Winter 2023

MDC Eagle Days 2023

at the Audubon Center at Riverlands

February 9-11, 2023



Hi Everyone,

I wanted to send a final email to all of you to say a big “Thank You” for making the 2023 Eagle Days Event at the Audubon Center at Riverlands a success. **We had 405 students attend the school days and over 1,500 participants attend the public event. You all played a pivotal role in making the event run smoothly.**

I wanted to pass on to you all that the Director of the Audubon Center at Riverlands sent a positive email to the Director of the Missouri Department of Conservation stating that they enjoyed hosting the events at their location and collaborating with staff and volunteers. Thank you all for helping to make Eagle Days a positive experience for everyone.

Finally, thank you all for making my last Eagle Days on the planning committee a memorable one.

Dennis Cooke

Conservation Educator
Missouri Department of Conservation
Powder Valley Conservation Nature Center





New Signs for Chapter Events!

Attention Group Event Leaders

Do you ever have community members walking by, asking what you are doing? Our chapter now has six signs to use during group events that encourage them to ask questions and learn more about our organization.

These signs are for all to use! They include heavy duty stands that will withstand many uses. There is even a QR code that links to our chapter website.

Extensively field tested by pros. Proven to stop the public in their tracks and stand in line to learn more.

Spread The Word!





Forest Park Owls

A Chapter Ends Too Soon and A New Chapter Already in Progress

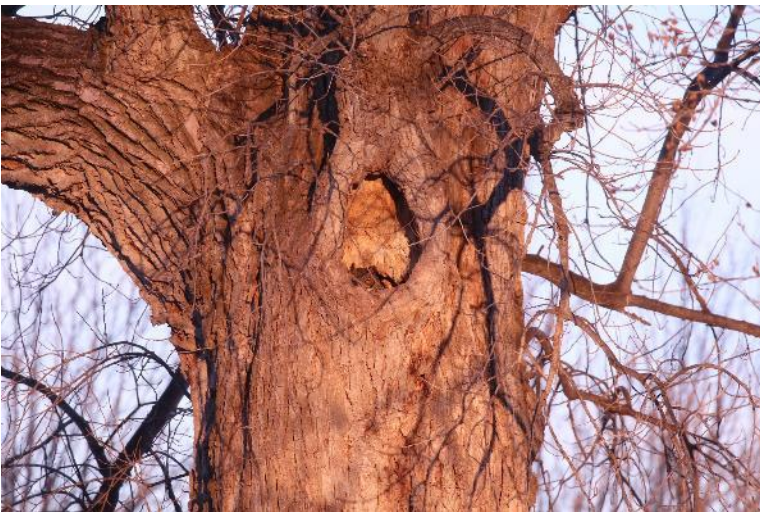
by Mark H.X. Glenshaw

February 25, 2023

I am afraid I have sad news about the Great Horned Owls I study in Forest Park. The female owl, Virginia, has died and the eggs she laid did not make it. She was only in the area for just shy of three months and she and Charles were a mated pair for six weeks when she passed. Charles is courting with a new female but the window for nesting and owlets has closed for this year. You can read all about all the aspects of these developments in this post on my blog. Thank you! 😞

When I posted on December 24, 2022 about Virginia, Charles's new mate, and how she was nesting, I had no idea that this would be the last day I would see her. The complete lack of observations of Virginia for over two months now and the progression of Charles's behavior in this time makes it all too clear that Virginia has died. We do not know if she became ill or was injured and we are so far unable to check the nest for any possible insights into her demise. Adding sadness to sadness, without being incubated and rotated by Virginia, the eggs she began to lay in mid-December did not make it either. After the excitement of a new mate and the start of nesting with the hope of owlets, the loss of Virginia and her eggs is a very sad development. As always though, life continues on. Charles has been courting with a new female for well over a month now. The window for mating and nesting has closed for this year but I hope that this courtship is the draft phrase of a new chapter with a new mate for Charles.

On December 24, I went to the owls' territory and quickly found Virginia in the nest.



Virginia nested in a frequently used nest site. Sarah first nested in this site in 2008 having three owlets-Bart, Lisa, and Maggie- and then again in 2012 with two owlets-Christopher and Velvet.

Samantha nested there valiantly but unsuccessfully in 2020. Sophie nested in this hollow successfully in 2021 with two owlets-Neil and Lyle and again in 2022 with two more owlets-Betty and Sidney.

I was happy to see Virginia, both in general and because I had not seen her come out of the nest the night before, December 23, for one of the few brief breaks that a nesting female Great Horned Owl takes. She and Charles had a good duet that night-hooting together for quite a while but not seeing her go out of the nest for a break was unusual and unsettling. Virginia had been regular in taking breaks after sunset and frequently heading to The Three Trees, where a growing spread of her whitewash (droppings) was taking shape. On both December 23 and 24, I waited well past sunset for the sight of her taking a break, but it was not to be. My fears and concerns were somewhat allayed by the fact that it was bitterly cold and that she may have been especially conservative with her breaks. Simultaneously, my concern grew because on December 24, Virginia did not hoot back to Charles, who was his usual nesting season self and was quite vocal even hooting, as he often does, directly across from the nest. As my time in their territory came to a close on December 24, I wished them both well and hoped the next day would bring more answers and positive ones at that.

I returned on December 25, and I did not see the female in the nest, but she had shown that she was very good at staying low in the nest, demonstrating her PhD in hunkering down. I could not find Charles, but some helpful folks had found him and pointed him out to me.

Once I saw him, I was not surprised that I had not found him on my own! Charles was in an especially unprecedented and very weird spot immediately north of the nest.

(Continued next page)



Forest Park Owls (continued)

I have seen him perch in low spots many times, but I had never seen him in this tree, which is in quite an exposed spot. Here he is this spot in mid-hoot



I did not like seeing him in this tree as it is very close to a busy intersection of the park's roads and being so low in this tree made this location even more dangerous. Charles eventually transitioned out of this spot safely, but it was still scary to watch. So far and thankfully, Charles has not reused this tree. That night Charles was vocal but again I did not hear her and after a long wait in the freezing cold, I did not see her leave the nest either. I was concerned but again the bitter cold was my explanation for not observing Virginia at all.

Over the next few nights my owl friends/mentees and I continued not to see or hear Virginia. Charles varied his perch and roost sites sometimes perching in a low spot in The Middle Tree directly across from the nest, which is something he had already done in the last several weeks prior to this. Charles was vocal to very vocal during these nights and I waited well past sunset in the biting cold but still no sight of or sound from Virginia. My concerns grew with each night, but hope remained.

Greater clarity and less hope about Virginia were to be found on December 30 and an unexpected development blew my mind! I was leading an owl prowl that night and I found Charles in The Middle Tree. We were soon joined by my friend and owl mentee Brenda Hente. Charles demonstrated the incredible opportunism of Great Horned Owls when hunting when he blasted off flying low and to the north some twenty minutes before sunset. Brenda and I turned to each other and said, "Predatory attempt." We all followed him, and I soon found him on the ground about 100-150 yards north of The Middle Tree and the nest. No sooner had I found him than he came flying towards and past us with prey in his talons. Brenda saw that it was a songbird, but it was too obscured to identify further than that. Charles landed about 20-30 yards away from the nest and hooted proudly declaring his predatory prowess.

Charles did not take the prey immediately to the nest but when he did so he hooted intensely at the edge of the nest and then he went into the nest with his hooting continuing at an intense rate. But we did not hear Virginia return any of his hoots. When a male Great Horned Owl delivers prey to the nest and hoots the female hoots back in return often for many minutes. To not hear Virginia hoot back to her dedicated mate bringing prey to the nest and so early too was very disconcerting.



Charles dropped off the prey and flew out of the nest landing in The Northwest Span Tree when an unexpected development occurred, and the start of the next possible chapter began. Charles was hooting when a female came flying in from the north and landed in the branch above him. They began to hoot together, and I was not sure if it was Virginia or not. While the hoot of each owl is unique some hoots are more distinct than others and in the heat of the moment it was hard to tell from the hoots if this was Virginia or not. The female's behavior soon made it clear that she was not Virginia. She and Charles spent the next hour or so flying around his territory and duetting. The duets were intense and confusing. Several times it seemed like they might mate but then Charles would fly off in his playing-hard-to-get manner, but it became clearer that he was not interested in this female. In a later stage of this whole process, he landed in a new spot, and she landed right next to him, and he took off immediately. I have seen Charles do this with all of his mates and potential mates but there was something about his behavior that made me think that he really was not interested in her and still holding out hope for and about Virginia. All of this action made for one of the most intense nights of owl activity I have ever seen since I began to study owls in December 2005. It was a mix of excitement and sadness though as it was clear that this female was not Virginia but a new and different female.

(Continued next page)



Forest Park Owls (continued)

I was more than confident that this was not Virginia because we had not seen her leave the nest or return to the nest. Furthermore, a nesting female would not be out of the nest and flirting with her mate for well over an hour for on a bitterly cold night putting the eggs at risk to predators and/or the cold. While watching Charles and this female I also noticed that this female was especially large. Virginia was bigger than Charles but not a huge female like Sarah and Danielle and this new female was a huge one. Subsequent analysis of the hoots of Virginia and this female demonstrated that this female was not Virginia. The new female ends her hoots with 1-2 especially long notes which Virginia did not.

Over the next few nights, we continued to not see or hear Virginia. We saw the new female on December 31 and right in the core of the territory on January 1. On January 3 we saw a behavior from Charles that sadly underlined the passing of Virginia. That night, Charles went to the nest and **took prey out of the nest**. A male Great Horned Owl would not do this if all was well with his nesting mate.

My owl friends/mentees and I have wanted to work with one or more agencies/organizations like the World Bird Sanctuary, Forest Park Forever and the Missouri Department of Conservation to take a close look into the nest for possible signs of Virginia and insight into her demise. We have been unable to do so because Charles often perches close to the nest, and we do not want to disturb him. By now, if Virginia had died in the nest there would be very little in the way of remains left to examine but some information would be better than the little we have.

Virginia was only in the area for less than three months and she and Charles were a mated pair for just six weeks. This is the shortest length of time I have seen with one of his mates.

Despite this short time, Virginia made a big impact on Charles and all those who watch and love the owls of Forest Park. We love and miss you, Virginia and thank you for letting us observe and document you and you and Charles together!!

Charles and this new female continue courting but we have not seen them mate. Furthermore, while Charles has shown her the nest several times, she has not inspected it. We have only seen her perch twice in the core of the territory: on January 1 and January 13. We will have days in a row of not seeing the female and then days in a row of seeing the female. We see the female in two ways: Charles runs into her when he flies out west-northwest or north OR she comes from the north into The Arena-one of the core spots of Charles's territory. We have not found her perch/roost sites, but this is an area needing more time and work. We have also had two nights of the female and a second female, January 13 and just last night February 24. Never a dull moment studying owls!

Since Great Horned Owls nest so early as their young take an incredibly long time to mature and we are almost in March, the window for Charles and this new female to pair up, mate and nest has closed for this year. It is too bad that there will not be owlets, but we have had years without owlets before this. Charles and company are more than fascinating and beautiful to observe and document without owlets even though we delight in those fluffy, fuzzy, and silly youngsters. I have seen Charles pair up with new females in the spring well after that year's nesting window and well before the next year's nesting window. He did this with Samantha in April 2016 and Danielle in April 2019. If it becomes clear that Charles and the new female are a pair, I will name her then but not before that. As always, I will keep observing and documenting and working with my owl friends/mentees to try and understand as much as we can.

Thank you for reading and for your interest and support!



Forest Park Owls
Mark H. X. Glenshaw

Observing and describing the lives of a mated pair of Great Horned Owls and the amazing range of wildlife found in Forest Park in St. Louis, Missouri.

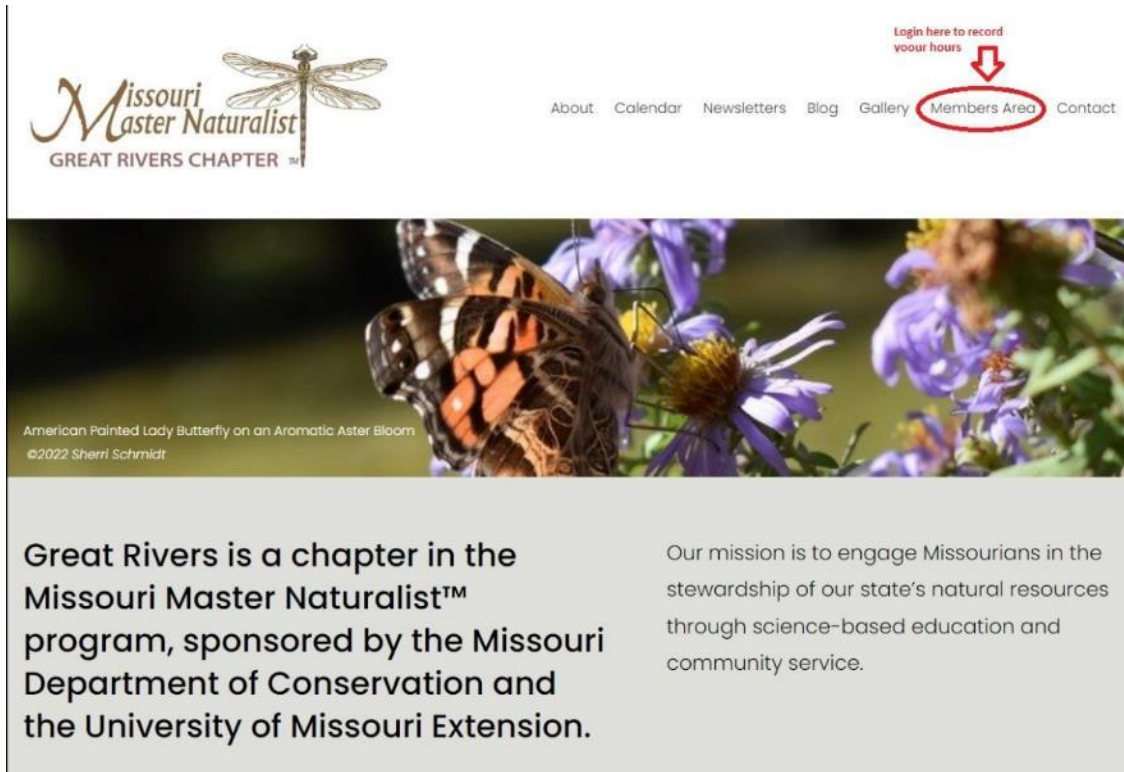
Read more about the life and adventures of Charles and the Forest Park Owls on Mark's blog site here: <https://forestparkowls.blogspot.com/>



New Look for the Chapter Website

New host. New layout. New features!

...but same web address and Members Area login link



Our past chapter website served us well for the past 10 years, but the technology has moved on and it was time to change. Web Creator, **Tara Morton**, worked her magic and brewed up a new format using Squarespace as the web host.

Thank you, Tara!

Check out the new site here at the same greatrivers.org web address as before. The look and feel are different, but much of the content should still look very familiar. As before, log in to the Members Area by selecting the link in the upper right hand corner menu.

Exciting new features include a photo Gallery and Blog sections, where chapter members can display their projects and volunteer efforts. Also new, is an easier to use and view device-friendly format that adjusts to phones, pads, laptops, and desktops.

This rollout is still a work-in-progress. Many of the pages will grow soon with rich new information on chapter member accomplishments and plans. Please send in your suggestions on how this website can be further improved. This is your opportunity to showcase the chapter as a true Force of Nature!

Thank you, Great Rivers members, for all that you do!



Advanced Training Speaker Series-Winter 2023

February 21, 2023, summarized by Chris Hull

Teaching Evolution - Part 1 (Evolution, or the Biological Response to Ecology)

Dr. Geoff Stillwell, geoffrey.stillwell@gmail.com Missouri Master Naturalist-Great Rivers Chapter

Geoff Stillwell began his overview of evolutionary thought by referencing the work of Rachel Carson and William Stapp. Carson was a marine biologist and naturalist who, in her book “Silent Spring”, brought the message that humankind was part of the food web, and that nature can present unexpected and difficult conditions in response to our actions. William Stapp invented Environmental Education with the goal of environmental literacy for everyone, the capacity to know about and take action on environmental problems on their own behalf.

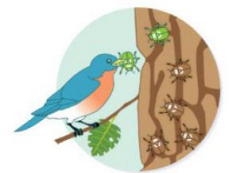
Geoff stressed that education of naturalists should also include ecology and evolution of the natural world. By being aware and learning about evolution, perhaps we can make better decisions, be more self-aware, and lead future generations to a better legacy.

Geoff explained that Natural Selection is a process that acts on a population, and he listed the following requirements for evolution and adaptation:

- The struggle for existence
- Geometric population growth
- Differential survival of the people in the struggle for existence
- Population genetics and genome
- Variation in traits
- Sexual selection
- Heritability
- Differential reproduction



If all these requirements are met, natural selection will cause a change in gene frequency within an isolated population and after passage of time possible speciation of that population. An evolutionary change in a species that helps a species to survive or reproduce is an adaptation.



To further illustrate evolution, Geoff showed an animated video which considers a small group of people ship-wrecked on an island (<https://www.youtube.com/watch?v=5NdMnlt2keE>).

Throughout the 1920s-1960s Scientists around the world, through literature and personal communications added population genetics and Mendel’s genetics to Darwin’s theory of natural selection. This is “Modern Synthesis” or Neo Darwinism. It is also the content of the NextGen Science Standards of teaching evolution, roughly K-12. Another name for this content is microevolution, and it is what has been litigated in the courts. Two examples of adaptations (Sickle Cell Anemia and ecological effects of the “Great Oxidation Event” from stromatolites and other photosynthetic organisms were given. Geoff closed with a recitation from Sand County Almanac (Marshland Elegy).

If you wish to view this presentation, please visit the **Members Area – Advanced Training Presentations** folder. You may also contact Geoff at geoffrey.stillwell@gmail.com .



August 16, 2022, summarized by Chris Hull

Teaching Evolution - Part 2 (Evolution, or the Biological Response to Ecology)

Dr. Geoff Stillwell, geoffrey.stillwell@gmail.com Missouri Master Naturalist-Great Rivers Chapter

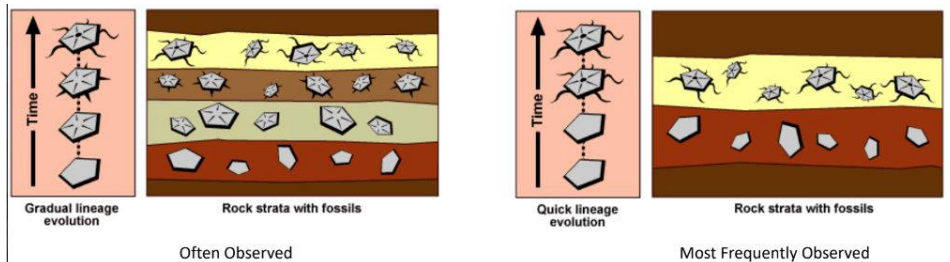
The “Modern Synthesis”, presented in the first session, spanned from roughly 1920-1960 and was the synthesis of Charles Darwin’s theory of evolution (Gradualism) and ideas of Heredity. Geoff emphasized that the material currently taught in schools was forged in the 1950’s and it has not changed, despite the existence of new science.

Geoff named several Population/Species Refuges in Missouri, such as Hickory Creek and Pickle Springs. These refuges offer rare microclimates in the present, such that species of mosses and ferns may exist far from their current ranges.



Geoff then described a more modern description of Macroevolution and paleobiology. He explained that fossil records show that “Punctuated Equilibrium” occurs more often than Gradualism. That is, rather than showing gradual evolution between rock strata, the results show that evolution often occurred more quickly and that after speciation, most species do not change to any great extent. This science has been explained by Elisabeth Vrba, Niles Eldredge and Stephen Jay Gould.

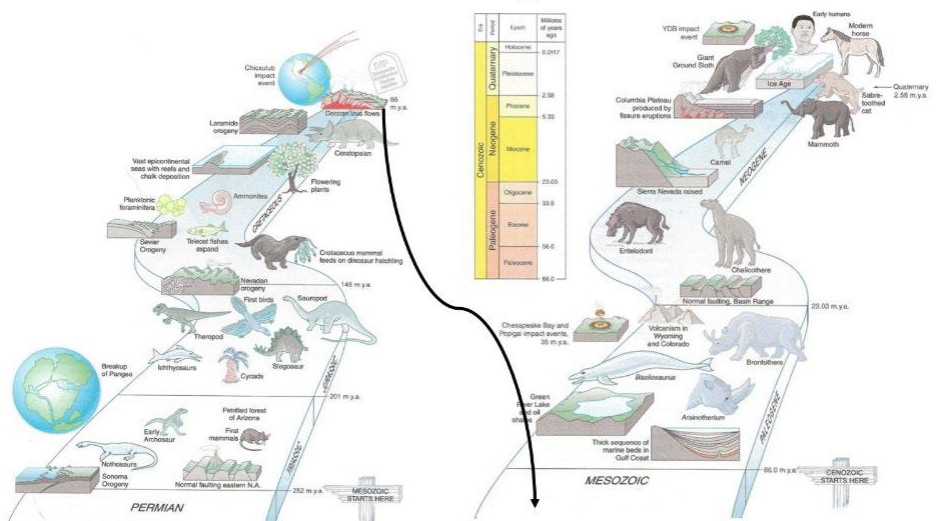
Geoff next presented the existence of several mass global extinctions which have occurred on our planet, including one which coincides with the Chicxulub Impact in the Yucatan. Fossil records show that this impact precipitated the extinction of the dinosaurs, and this provided the opportunity for mammals to evolve, and some dinosaurs (birds) as well. He also showed a timeline of life on earth and wove the ecological and evolutionary events together between mass extinctions, adaptive radiations, and stasis.



Geoff also explained some simple aspects of the “Red Queen Hypothesis” and Vrba’s “Pulse Hypotheses” for driving evolution during periods of stasis. Modern ideas about genetics and evolution were briefly discussed driving towards (but not arriving at) species selection, epigenetics, and evolutionary/developmental ideas.

The session was then guided towards a critical view of Frederick Clements idea’s about communities, and the problems with our ideas about manifest destiny, its effects on indigenous peoples, and the dustbowl. Geoff ended by explaining that we have choices as we follow our own journeys in life. Throughout the presentation the value of content was related to Environmental Literacy.

Some Time Paths With Some Ecology (Figure from The Earth Through Time, Levin et. al, 11th edition)



If you wish to view this presentation, please visit the **Members Area – Advanced Training Presentations** folder. You may also contact Geoff at geoffrey.stillwell@gmail.com.



Teaching Evolution – Additional References

Geoff Stillwell PhD

Primer on Macroevolution and Punctuated Equilibria from Evolution 101 Understanding Evolution (2021), and a few others are a trusted teacher resources

- [Charles Lyell and Uniformitarianism](#)
- [Speciation Processes](#)
- [Micro to Macro Evolution](#)
- [The Big Issues](#)
- [Mass Extinctions](#)
- [How to Survive a Mass Extinction](#)
- [More on Punctuated Equilibrium](#)

Primer-Read Chapter 11 of The Tangled Bank 2nd Edition (Zimmer, 2014) In older editions macroevolution may be chapter 10.

Primer-PBS-Video, [Are We Causing the Sixth Extinction?](#)

Understanding Evolution. (2021). Different Topics with Links in Primer. UC Museum of Paleontology, University of California-Berkeley

Read Digital Atlas of Ancient Life (2020) for a slightly deeper dive into the Fossil Record, Punctuated Equilibrium, Context from Evolutionary Paleobiology (There are some interesting features and tools at this site for teachers.)

- [Speciation](#)
- [Punctuated Equilibria](#)
- [Macroevolution](#)
- [Newer Concepts in Macroevolution](#)

Another Fun Link (Paleo history of Missouri) <https://pennsylvanianatlas.org/geology/>

Hendricks, J.R., E.J. Hermsen, and E. Hauf. (2020). The Digital Encyclopedia of Ancient Life (DEAL)
An open access paleontology textbook. Geological Society of America Abstracts with Programs 50(6).
<https://doi.org/10.1130/abs/2018AM-318607> or <https://www.digitalatlasofancientlife.org/>

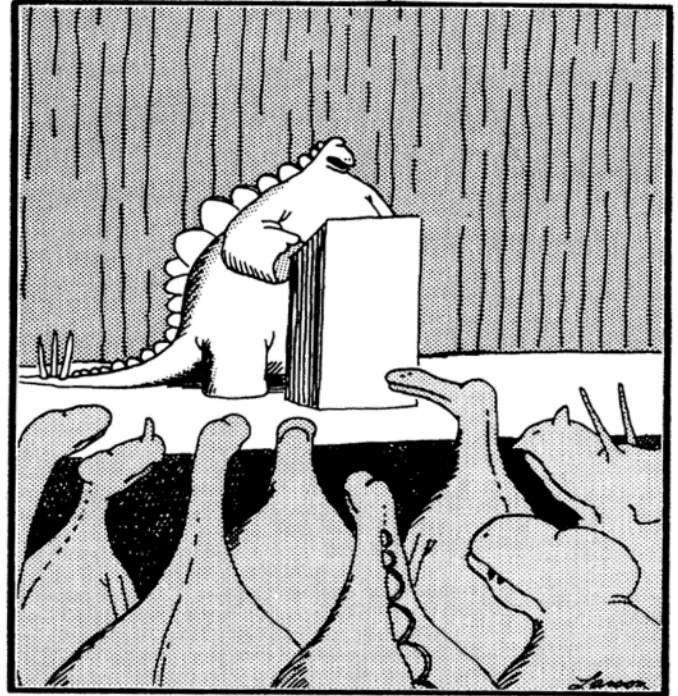
Evolution Education and Outreach is a digital journal for education about evolution where download is free. You can find it at <https://evolution-outreach.biomedcentral.com/>. You can usually download the pdf source. Download Kevin Padian's article, "How to Win the Evolution War: Teach Macroevolution!" .

Notes

Punctuated Equilibrium was a co-publication by Niles Eldredge and Steven Gould. The actual article was a previous article that Gould rewrote and updated with Eldredge as the senior author. Here is a 5-minute video of Eldredge explaining his work. [Niles Eldredge on Punctuated Equilibria \(2015\)](#)

Another video about **Punctuated Equilibrium**, Reaction and Acceptance. Speciation example at end is mostly what we discussed in first month (>15.01 minutes). [Burger on What is Punctuated Equilibria? \(2015\)](#)

We did not get to species selection which was a later construct of Gould, Eldredge, and Vrba. In this scheme the species is selected, not the individual in an isolated population. Vrba, who was the savvy one on this topic, called it species sorting. Her thought is woven throughout the Digital Atlas of Ancient Life readings.



"The picture's pretty bleak, gentlemen. ... The world's climates are changing, the mammals are taking over, and we all have a brain about the size of a walnut."



Monthly Advanced Training Opportunities



Advanced Training Speaker Series 2023 Calendar

1/17/2023	New member orientation	Lisa Picker, Michael Meredith, Carl Davis, Bob Virag, Kari Pratt
2/21/20223	Teaching Evolution - Part 1	Geoffrey Stillwell PhD, MMN-Great Rivers Chapter
3/21/2023	Teaching Evolution - Part 2	Geoffrey Stillwell PhD, MMN -Great Rivers Chapter
4/18/2023	Ants-Systemic Meanderings	Victoria Brown-Kennerly, PhD Associate Professor, Webster U
5/16/2023	Native Fish in Missouri	Bob Hrabik, Ichthyologist, MDC
6/20/2023	Summer Solstice Picnic	Becky Robertson, MDC, Discover Nature Program
7/18/2023	Conservation Legislation	Kyna Iman, Missouri lobbyist and duck hunter
8/15/2023	MDC -Where We Are	Sarah Parker Pauley, Director, MDC
9/19/2023	Why Prairies Matter	Carol Davit, Executive Director, Missouri Prairie Foundation
10/17/2023	Dark Skies	MMNs Jean Nock and Jake Ronecker
11/21/2023	Stream Teams United	Stream Teams United
12/19/2023	Winter Holiday Party	



New Year!

New Meeting Location!

Effective with the January 17th meeting, all future meetings will be held at Powder Valley Nature Center in the double classroom space. The time will remain the same- 6:00 PM- 8:30 PM.

Address:
11715 Cragwold Rd, Kirkwood, MO 63122





Great Rivers Member Milestones 2023 Awards and Recognition

Year-to-date announcements as of March 31, 2023

The Great Rivers chapter appreciates the completion of challenging work and consistent dedication to our mission of the following members:



Silver Dragonfly
2,500 hour Milestone Pin

Lee Phillion



Gold Dragonfly
1,000 hour Milestone Pin

Mary Kreppel
Kari Pratt



Pewter Dragonfly
500-hour Milestone Pin

Carl Davis
Peggy Parr



Bronze Dragonfly
250-hour Milestone Pin



American Burying Beetle
2023 Recertification Pin

Tom Fasl	Barbra Stephenson
Sue Forquer	Geoff Stillwell
Jack Hambene	Bob Virag
Mary Kreppel	Tessa Wasserman
Michael Meredith	



Initial Certification
Dragonfly Pin

Class of 2022
Vanessa Cowart-Oberle
Rachel Odman

Advanced Training—Other Certifications



March 4-5, 2023

Brandon (B. Britton) Forrester earned his Wilderness First Aid Certification with the legendary American Canoe Association instructor, Tom Burroughs. Congratulations, Brandon!

“Great class last weekend! Wilderness first aid through **Sierra Rescue International** and **Missouri Whitewater Association**. Lots of information. I can't recommend this class enough!”



Missouri
Master Naturalist



2023 Certification Pin

American Burying Beetle



Scientific & Common Names

Nicrophorus americanus & giant carrion beetle

Family

Silphidae (carrion beetles) in the order Coleoptera (beetles)

Description

The American burying beetle is a bright, shiny beetle with an orange-and-black pattern on its wing covers. To tell this species from other members of its genus (which look very similar), look for a distinctive reddish-orange mark on the shieldlike plate (pronotum) just behind the head (its similar-looking relatives have black pronota). There are orange marks on the face and antennae tips, as well. Like other burying beetles, the wing covers are wider in back than toward the front, and they are not long enough to cover the tip of the abdomen. In flight, they seem like bumblebees.

Because reintroduction efforts are under way, you may hopefully start to see this species in the wild. Meanwhile, you are much more likely to see other burying beetles, such as the tomentose burying beetle (*Nicrophorus tomentosus*). There are about 15 species in the genus *Nicrophorus* in North America.

Habitat and Conservation

This species once lived in 35 states but declined as habitat changed and natural communities were disturbed. By 1923 they were dwindling, and when they were placed on the Federal Endangered Species List in 1989, they had disappeared from all but four states. Today the species remains in only a handful of states and had been extirpated from Missouri. In 2012, about 300 pairs of zoo-bred beetles were released at Wah'Kon-Tah Prairie in Cedar and St. Clair counties.

Because of national conservation effort and to the success of partnership-driven efforts to restore this interesting beetle to native habitats, in 2020 the species' federal status was changed from "endangered" to "threatened."

Life Cycle

Adults typically emerge late in the summer and feed until fall, when they bury themselves in the soil to overwinter. In Missouri, they reemerge in May and begin mating. The male and female both assist in burying the carcass of a mouse or other small animal. The female then lays 10-30 eggs near the carcass. Assisted by both parents, the larvae feed on the carcass until they mature, then emerge as adults to feed on other carcasses until winter. This species is nocturnal.

Food

These beetles eat dead animals – mice, birds, or other creatures. Using organs located on the tips of their antennae, the beetles can smell dead animal carcasses from far away. They fly to the carrion, crawl beneath it, then dig the soil out from under it. The dead animal eventually is buried as soil piles up around it. After further preparation of the corpse, the adults lay eggs nearby. The adults remain, guarding their young, and feed them regurgitated carrion.

Human Connections

This beetle is of great interest to science. It is one of the few beetles in which both parents care attentively for the young. It is also useful to study its response to changing ecosystems. By competing with fly maggots for food, they can help reduce populations of annoying flies.

Ecosystem Connections

These little scavengers perform a valuable if not glorious service to the natural community by burying dead animals and then consuming them. They help return nutrients to the soil and, by lessening possible contact with decaying animal tissues, reduce disease among the living. Their visual similarity to stinging insects (buzzing heavily like bumblebees in flight, plus the bright red-and-black coloration), no doubt help these harmless beetles to evade predators.



Member Spotlight *Sharing members accomplishments*

Tribute to Former President, Bob Ochs

by Lee Phillion

2017 was a momentous year.

- Bob Dylan won the Nobel Prize for Literature.
- Donald Trump originated the term “covfefe.”
- Bob Ochs became a Missouri Master Naturalist.

The significance of that last bullet cannot be overstated, because two years later, in 2019, Bob Ochs became president of the Great Rivers Chapter. Elected for a second term in 2021, his leadership spanned the pandemic—a time when volunteer and training opportunities withered, and in-person meetings stopped.

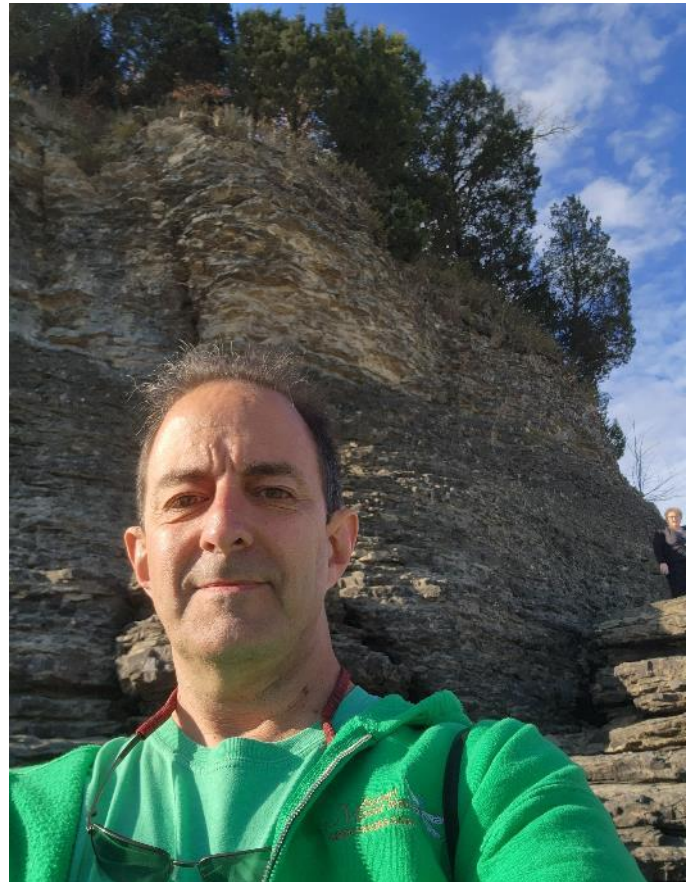
As an IT professional, Bob immediately moved Chapter meetings to Zoom and worked hard to maintain member interest and keep spirits high.

As a self-described “easily distractible kinda guy,” Bob fills his non-work hours by learning new things and/or pursuing ideas to improve the natural world; preferably doing both at the same time. It was an idea to turn an “interesting drainage system” at some property Bob owned in Jefferson County into an attractive nature space that prompted him to sign up for Missouri Master Naturalist training.

While he initially sought out the Master Naturalist program to gain a deeper understanding of nature, Bob said he kept coming back for the camaraderie. “It was the class of 2017, you know, the best ever,” said Bob with his signature grin. His fellow 2017 classmates remember Bob as one of the class standouts.

“Is *standout* a synonym for goofball?” joked fellow Class of 2017 Carl Davis. “I don’t want to say we were disruptive...but we had a good time.” Classmate Karen Zelle said, “Bob made us all feel like we had known him forever and were friends. His enthusiasm for the program was infectious. To this day, he makes me feel a part of something special when he jokes about 2017 being the greatest Missouri Master Naturalist class ever.”

One of Bob’s favorite Missouri Master Naturalist volunteer activities is the Spanish Lake Restoration Project led by Larry Conant. “We leave as sore from laughing as from hacking honeysuckle,” said Bob. He has also volunteered at Eagle Days and Stream Team and serves as Board Vice President of the River Des Peres Watershed Coalition.



Bob visited Tower Rock during the Mississippi River low in 2022.



Born in Bel Nor, Bob attended Lindbergh HS — home of the “Flyers.” He was, and still is, a flyer, having achieved his pilot’s license 25 years ago. He currently owns and is restoring a 1954 Piper Tri-Pacer plane with a 135hp engine. “The plane hadn’t been flown in a decade, so it needs some work before I take it up.”

Not lacking for ways to keep busy when not at his IT job with Spire, Bob plays guitar and harmonica as well as “a little ukulele and mandolin—very little,” he notes. He credits his wife Diane with starting his interest in the guitar with one she purchased at a pawn shop in the early 1980s. Today Bob owns five guitars (including an electric Fender Stratocaster) and a three-string cigar box guitar made from an old porcelain urinal (an acoustic “Stratocrapper”).

Bob said his wife already has a plan for when he retires from his job, and that is to visit all of Missouri’s State Parks. He’s fine with that, as long as he can still hack honeysuckle at Spanish Lake.

“The coolest thing about being part of the Great Rivers Chapter is also the most intimidating,” said Bob. “Our members have incredible knowledge and expertise...especially the Class of 2017. I love this chapter.”

xxx



Captain Bob in his 1954 Piper Tri-Pacer before he began restoring the plane.



The Spanish Lake Restoration Crew in 2021.



Kayaking at Riverlands in 2020



Member Spotlight *Sharing members accomplishments*

Gratitude to Dave Richardson

by Cindy Lueder

This special Member Spotlight is written with great gratitude for our multi-talented and gracious Dave Richardson, who coordinated and provided our meeting space for the past decade!

Wow! A huge Great Rivers THANK YOU, DAVE!!

Dave is a lifelong Kirkwood resident. He said he felt it was necessary to give something back to the place that shaped his life, so at age 14 he went to work for the city as a roller rink guard.

During his college years studying accounting and economics, he also worked for the sanitation and street departments. Currently Dave works for the Kirkwood Parks Department, and also for the Water Department on an emergency basis.

Using his finance skills, Dave has served on the Employee's Pension Board for the City of Kirkwood. He's so skilled he prepares taxes.

Dave became interested in the Missouri Master Naturalist program through a former member Tim Dale. They took the classes to build more knowledge of our natural surroundings here in the suburbs. When Dave found out the program was much more than identifying trees, plants, animals and soils he chose to delve deeper into the course and apply what he learned into his work.

Although he does many hours of honeysuckle removal through his work at Kirkwood Park, his favorite thing is to replant the areas with native plants and trees. Dave said this gives him the feeling that he is actually doing something to create and revitalize the habitat in which he feels privileged to have grown up. Most of Dave's hours are acquired through work in the Kirkwood Parks system. This is because he is the person there that has the most knowledge and is physically capable of doing the tasks required to achieve the desired results. He can't take credit for many of the volunteer hours he works because he is performing in an employee capacity, but it allows him to operate equipment that volunteers cannot.

A special interest area for Dave is animal behavior and habitat, for the mere purpose of keeping people in the parks safe and improving the population of animals in our park system. Dave said the Parks Department comes in contact with a lot of people and animals as well, so they take it upon themselves to educate the public so that both can share the land.

And as if that all isn't enough, Dave also likes to travel and explore these great United States, while getting to visit family. **Dave, thank you!!**



Dave Richardson, enjoying Rocky Mountain National Park



Naturalist's Journal

My Missouri Master Naturalist Volunteerism

by Chris Hull

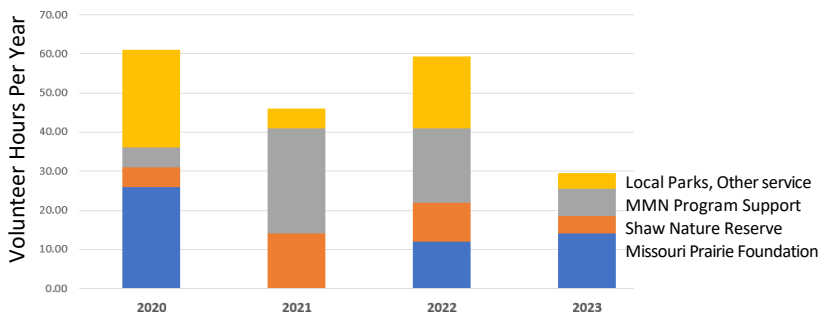


STL County McDonnell Park
Spot-Spraying
Sericea Lespedeza

Missouri Prairie Foundation
Prescribed Burning with Jerod Huebner



Shaw Nature Reserve
Pickin' Seeds and Killin' Weeds with Mike Saxton



Missouri Master Naturalist Great Rivers Chapter Meeting Minutes
November 15, 2022
In Person Meeting

Attendance: Thirty-five (35) Great Rivers Members and Interns attended this meeting.

Advanced Training: (one hour)

Saint Louis Zoo Wildcare Park, Jo-Elle Mogerman

Jo-Elle Mogerman leads the Zoo's new North Campus, a 425-acre property located in north St. Louis County in the city of Spanish Lake. Having previously held leadership positions at Shedd Aquarium, the Brookfield Zoo, and the Illinois Nature Preserves, she now oversees the creation and the development of this new and exciting attraction for the St. Louis community and tourists.

The Wildcare Park, which is currently planned to open in 2027, will work to increase the population of endangered ungulates (large animals with hooves) while also providing a phenomenal guest experience. The park will have breeding herds of Zebra, Addax, Bongo, and Roan Antelope, Somali Wild Ass, and Przewalski's Horse. The large size of the tract of land, including 24 acres of lakes, allows planners to divide the land into distinct components that are specific for woodlands, wetland, savanna species, and for Conservation and Animal Science. The planners believe that the animal density and distance from humans will be sufficient to minimize stress on the animals.

Visitors will have a choice of attractions, including an 11-story observation tower, safari tours, the Wallaby Walk, the 'Zoozeum', and upscale lodging cabins. Dr. Mogerman emphasized the many

Missouri Master Naturalist Program Support
as Great Rivers Chapter Secretary



Naturalist's Journal

Winter Valentines

by Barb Cerutti

As I hike to find and soothe my soul, I take notice in the ways nature surprises my senses, and I am tickled with delight in the ways humans interact with Mother Nature. Wherever I go I find little treasures. My advice to you, my fellow Missouri Master Naturalists, is to get outside. Outdoor life is good!



Bluebirds enjoying my heated birdbath during the deep freeze.



Ice treasures



Wonder who created this pattern at Shaw Nature Reserve



Mother Nature's art



Valentine's day should be every day.



Powder Valley treasure



Happy Valentine's Day



Oh My! This is heavy and so, so cold!



Naturalist's Journal

What I Did on my Winter Vacation

by Mary Dueren

I really hate getting up at three in the morning to catch a plane, but that's the nature of traveling these days. This was a birding trip and I will do just about anything to see birds. I was also returning to an area I had birded with friends about 12 years ago. I wondered how much had changed. In the end, quite a lot.

The nine-day itinerary for the Rio Grande Valley trip was put together by Pat Lueders who is also a member of St. Louis Audubon Society (SLAS) as well as an employee for Naturalist Journeys. Our co-leader is Bill Rowe, the current president of SLAS. This trip was a test to see if SLAS can get back to doing bird eco-trips. In the 1990s, the late Paul Bauer led multiple trips to Africa for SLAS. A portion of the fee went back to SLAS as was the case for this current trip as well. Including the two leaders, fourteen folks traveled south from February 1 - 9.

When we arrived in Corpus Christi, the temperature was 37 degrees and the wind chill made it feel like 27. Brrr...this is Texas? As the group loaded up the van and minivan, the first bird of the trip was sighted: a Loggerhead Shrike! That was the first of many Loggerheads we found. We headed north out of Corpus Christi, stopping on the beach at Packery Channel Jetty, Leonabelle Turnbull Birding Center, and Port Aransas Jetty. A total of 51 species of birds were noted despite the cold and windy weather. We were off to a good start!

The second day included Goose Island State Park and a trip to Aransas National Wildlife Refuge by boat. It was still very cold: upper 30s, low 40s, rainy and windy. Whooping Cranes were found feeding crab to their very large offspring. We warmed up below the observation deck with Mexican Hot Chocolate and wine.

As our excursion headed south to Brownsville, the temperatures moderated. There were stops along the way at city parks and even at a rest area in Sarita where Brewer's Blackbirds are residents. Over the next 7 days, we visited a number of well-known birding hotspots: Laguna Atacosa National Wildlife Refuge, Sabal Palm Sanctuary, South Padre Island World Birding Center, Estero Llano Grande State Park, Oliviera Park, Santa Ana National Wildlife Refuge, Salineno Sanctuary (along the Rio Grande), Falcon Dam State Park, Rancho Lomitas (private tour), Benston-Rio Grande Valley State Park, and on the last day, the National Butterfly Center and the Edinburg Scenic Wetlands. In the final tally, we observed 166 species.

Here's a link to our eBird trip report that includes pictures:

<https://ebird.org/tripreport/108011>

Nine days in all. We stayed in three different hotels. The last was the quirky Alamo Inn Bed and Breakfast. Each room is decorated differently. Our meals were covered in our fees. I was never concerned about the illegal migrant situation. We only saw border patrol twice. Once along a highway where two trucks were parked. The second time, border patrol was assisting at Benston State Park with a Senior Olympic bicycle time trial. There were 350+ seniors on bikes traveling throughout the morning we were hiking. Our group went through the "wall" at least three times to visit sanctuaries or parks without any issues. Most of the time, there was construction going on. At Sabal Palm, National Guard were present.

The area has grown in population. Many seniors enjoy the warmer climate. Many Canadians spend the winter in South Texas. The area has changed since I last birded there. The Rio-Grande Valley is friendly place to visit especially if you are birding .



Whooping Cranes



Roadrunner



Arkansas boat trip



Green Jays



Naturalist's Journal

If You Plant It, They Will Come

by Tessa Wasserman

When I heard the native plant gurus promise, "if you plant it, they will come," I never expected that to include wild turkeys!

I live in a pretty busy neighborhood with all the usual dogs, cats and kids, but I am lucky to be surrounded by mature trees and Sugar Creek flowing not too far away. There is a watershed across the street that is still a little wild, too.

A mature male and female turkey with their one offspring showed up last winter (2021) and occasionally visited the area around a bird feeder. I was amazed at their size! My native shrubs and plants were stripped of their seeds and fruit by this time. Then I didn't see the trio all spring and summer. Thinking they had moved on, I was happy to see them again last fall when they now were four in number.

I found out they had nested in the backyard of my neighbor's house and had 15 eggs. They hatched but because of predation, only 1 survived. Just like the Missouri Department of Conservation speaker last year told us was the average.

(Continued, next page)



Tom stretching. Photo by Tess Wasserman



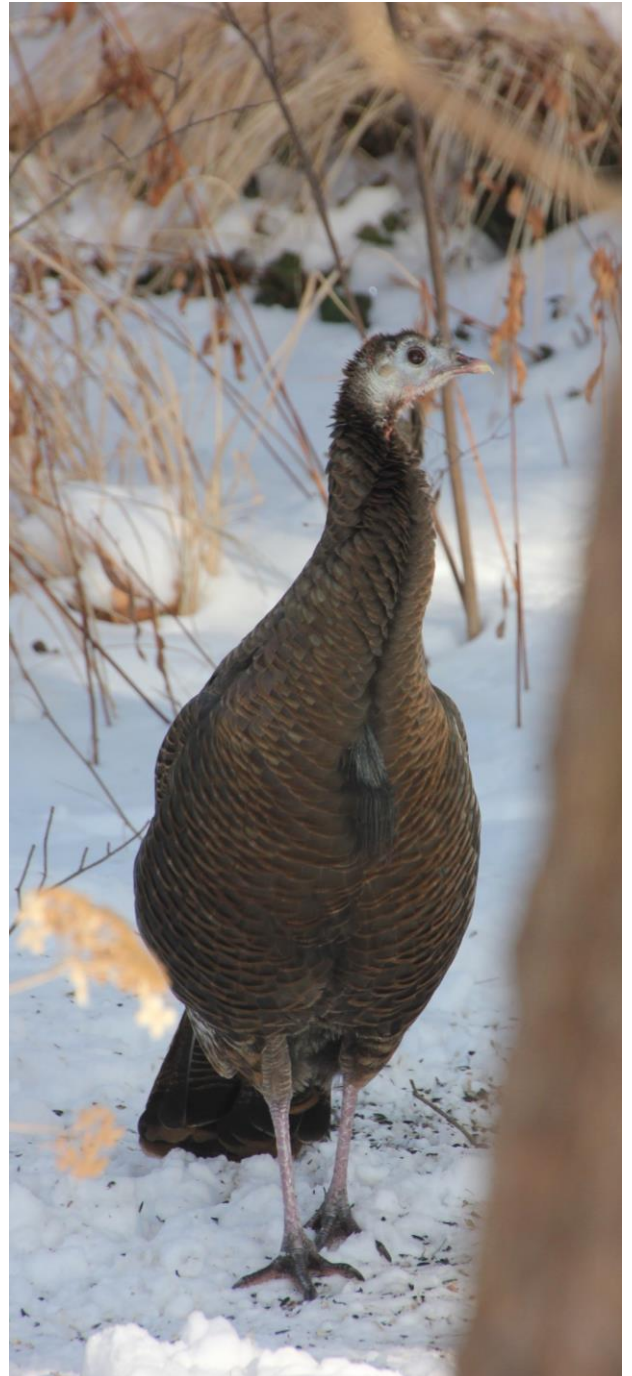
Chickens and a young turkey. Photo by Tess Wasserman



Naturalist's Journal

Turkeys (continued)

The family of turkeys have now been visiting my yard two times a day like clockwork. Right after sunup and an hour before sunset. The youngest is especially interested in my chickens and follows them around when they are free ranging. My hens aren't so thrilled. The size difference is funny, but I think the baby feels happy there are other "littles." Tom has begun his showing off and the mature female has disappeared to be on her nest. He keeps track of the young ones by herding them around when he's not with his mate. I don't know if they will stick around this summer, but they will have plenty to eat if they do!





Naturalist's Journal

Good Omens

by Peggy Parr

Native American tribes believed **Northern Cardinals** were good omens. The bird represents devotion and love. They have a funny habit of getting into fights with their own reflections. If they look like they are kissing, it's probably the male feeding the female.

This lovely lady has her feathers puffed out because it was December 22, 2022 when winds were gusting, and chill factors were nearing -30 degrees, so she was trying to keep warm.



It's a January cold snap and this lady is all puffed up to stay warm.



Bluebirds loving the heated birdbath on my deck.

The **Eastern Bluebird** was adopted as the Missouri state bird in the 1920s and what a delightful addition they are to our backyards.

This photo of three males was taken on my deck. They love the heated birdbath and I see them most frequently in the winter.

The bluebird is an omnivore most of the time but will eat various vegetation during the fall and winter. They will take advantage of mealworms, even dried, so feel free to put them in your feeder.

When the female selects a nest site, the male examines its suitability and then the female does most of the construction work. Females lay between 4 to 7 eggs and nest through July. The parents share the feeding of the hatchlings and cleanup is a team effort as they both carry away fecal sacks. The chicks leave the nest after 15-20 days.

The Eastern Bluebirds are very social and communicate through songs and dance. When males want to show off their prowess to females, they often sing with their beaks closed. Bluebirds are the symbols of spring, happiness, love, and hope.



Naturalist's Journal

It Was a Soft Day at Mallard Lake...

by Bob Virag

March 8, 2023

...as my Irish friends would call the cold drizzle that dampened the hike my wife and I enjoyed around the wetland today. We were curious if the Bald Eagle nest was active (it wasn't) but there were plenty of other winged carnivores enjoying the last days of a wet winter.

We were greeted by a pair of American Kestrels mousing over the prairie between the Café parking lot and road. Soon after, we walked under a Red shouldered Hawk that was annoyed at our distraction. A Double-crested Cormorant basked in the rain in the middle of the lake waiting for lunch to swim by. As true sign of Spring, two angry mated pairs of raucous Canada Geese were arguing up a storm over property rights the entire time we hiked around the lake.

No wonder there were no Bald Eagles to be seen nearby.



American Kestrel



Double-crested Cormorant



Two angry mated pairs of raucous Canada Geese arguing over property rights



Red shouldered Hawk



Bald Eagle nest



Naturalist's Journal

Field Garlic by Tara Morton

Many of us have fond memories of finding the strong-smelling "onion grass" in our yards as children. Even more of us grew up to be adults that found *Allium Vineale* to be a pesky weed, shooting up in clumps around our yard and creating quite a fragrance when mowed. If you're already spending time pulling these plants out of your yard, why not eat them?

Commonly known as field garlic or wild garlic, *Allium Vineale* is notable for its tiny bulbs and round, hollow chive-like stems, both of which are completely edible. You can enjoy this plant by pulling up bulbs and all if you'd like to prohibit regrowth, or simply trimming the leaves if you'd like to keep them around. The plant can be enjoyed in many ways, subbing the leaves out for anything you'd normally use chives in or even a nice bowl of wild garlic soup. I used the plant to make a simple and flavorful loaded toast.

Wild Garlic Toast



Wild Garlic cleaning and chopping

Ingredients:

- Field Garlic Leaves & Bulbs (about 7 per toast slice)
- Bread of choice
- Goat cheese
- Cherry or Grape tomatoes (about 6 per toast slice)
- Olive oil
- Salt & Pepper

Preparation

1. Gather leaves and (optional) bulbs of field garlic. Wash thoroughly and remove the brown leaves. Pat dry with a towel.
2. Chop into 1–2-inch pieces, removing and discarding roots.
3. Heat a frying pan with olive oil over medium heat. Once heated, toss in chopped garlic and season with salt and pepper.
4. Heat for 5 minutes, stirring frequently.
5. While field garlic is cooking, turn on broiler in oven. Move rack to top, closest to broiler.
6. Place cherry or grape tomatoes on a cooking sheet with a lip. Drizzle with olive oil, and season with salt and pepper.
7. Broil tomatoes for 5 minutes, or until blistered with a slight char.



Frying Field Garlic



Field Garlic



Toast

8. Heat bread in toaster, toaster oven, or frying pan.
9. Spread goat cheese on toast. Layer on roasted tomatoes and field garlic, and drizzle with more oil if desired.
10. ENJOY!



New MMN-Great Rivers Logowear Dozens of New Styles and New Color Choices!



Hello Chapter Members,

Alison Robbins with A & H Embroidery Services will now provide all Great Rivers embroidered logowear. Alison is past-president of Missouri Master Naturalist-Confluence Chapter, where she embroidered their clothing for over a decade. She has now agreed to do the same for the Tri-Chapters and welcomes us into her fold. Samples were on display at the March chapter meeting, and they were a great hit! They will go on sale again at a meeting this Fall.


ORDERING INSTRUCTIONS:

1. **A catalog** of styles, colors, and pricing and an order form will be emailed to all current members of the Great Rivers Chapter this Fall. Download the order form and add your selected catalog number, size, and color choice.
2. **Alison Robbins** will display samples of the logowear at the meeting following the announcement. She will answer your questions there and collect your order form and payment.

Thank you for all that you do!

Kari Pratt

MMN-Great Rivers Logowear Committee Chair



It is the life of the crystal,
the architect of the flake,
the fire of the frost,
the soul of the sunbeam.

This crisp winter air
is full of it.

~ *John Burroughs*

Ice Treasures
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