



Missouri Master Naturalist

Spring Issue 2019

Volume 9 Number 2



*The Earth LAUGHS
in flowers.*

~ Ralph Waldo Emerson

*Blood Root Sanguinaria canadensis
Photo by © Glen Horton ©2019*



Great Rivers Gazette

Spring 2019

Volume 9 Number 2

Published by the Missouri Master Naturalists - Great Rivers Chapter

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Front Cover

Blood Root – Photo by Glen Horton

Back Cover

Barred Owl – Photo by Sean Tracy

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The Missouri Master Naturalist™ program is a community-based natural resource education and volunteer service program for adults, sponsored by the Missouri Department of Conservation and the University of Missouri Extension.

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The President’s Corner

Dear Chapter Members,

We have all heard the adage “do something that you love and you will never work a day in your life.” Maybe this is why Missouri Master Naturalists pour so much of our hearts into the work that we do.



Our chapter is providing to Syd Hime (MDC) and Bob Pierce (MUE) a 6-month report on volunteer hours. With almost 5000 hours of dedication through our 50+ partner organizations and projects so far this year, you can see where your efforts show your enthusiasm for all that we accomplish.

Some member naturalists put all of their hours to one organization. Other naturalists have many favorites and help when someone is in a pinch for extra help. Some members are in that upper tier that every organization has that involve themselves almost as much as a full time job. Some members give what they can due to interests and commitments outside of the Missouri Master Naturalists (yeah, we all have outside stuff, too).

Whether you serve your 40 hours of service and 8 advanced training hours needed for recertification each year or you give some more or many more hours, please know that you are a valued contributor for our accomplishments within our communities.

It sure doesn’t feel like work when you are having this much fun and loving what you do.

Bob Ochs
President,
Great Rivers Chapter



View us on the web at www.greatrivers.org



www.facebook.com/MMNGreatRiversChapter

and www.facebook.com/groups/150751118803379



SPRING of 2019

There has been no lack of water this spring.

Here are few reminders:

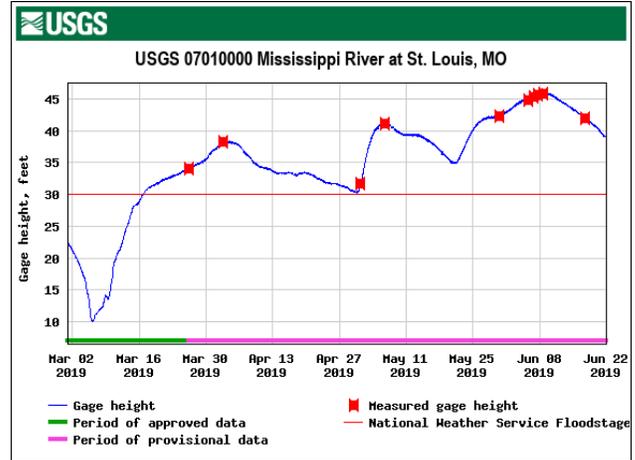
Not everyone feared the nearly continuous spring rainfall. The cheers of the chorus frog seemed to call for more --

And for documented proof of our biblical floods, here is the Flood Stage History of our great rivers, Spring 2019

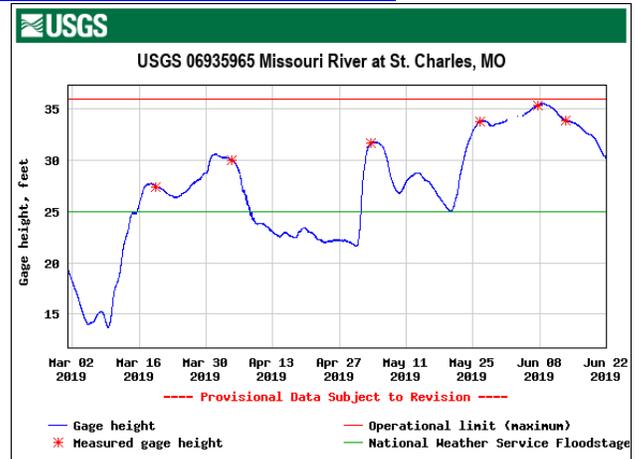


Chorus Frog Photo by Jeff Biggler

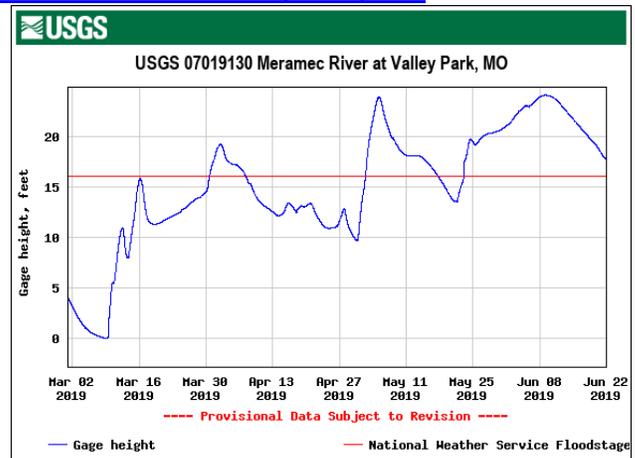
Mississippi River at St. Louis MO



Missouri River at St. Charles MO



Meramec River at Valley Park, MO



Missouri Prairie Foundation



If you haven't heard the call of the chorus frogs yet, you will hear them soon. The frogs make their homes in ephemeral pools on prairies and other locations.

"Chorus frogs, like many of Missouri's amphibians, require a small body of water for breeding, laying eggs, and tadpole development. They also require terrestrial habitat for living out their adult lives. The best way to ensure they have both is to protect and manage high-quality habitat everywhere, but especially around natural wetlands," says Brian Edmond, who serves on the MPP Board of Directors. [Listen to one of Brian Edmond's recordings of chorus frogs here.](#)

Source: Pam Wilcox contributed this clip from a Missouri Prairie Foundation email.



Great Rivers Citizen Science – Spring 2019



April 26-29, 2019



The [iNaturalist City Nature Challenge](#) is an international event where people find and document plants and wildlife in cities across the globe. As a bioblitz-style competition, metro areas are in a contest against each other to see who can make the most observations of nature, who can find the most species, and who can engage the most people.

In the four days of the City Nature Challenge April 26-29, **159** world-wide cities motivated more than **33,605** people to upload **963,773** observations of **32,424** species of nature in their urban areas to iNaturalist.

In the leaderboard, the St. Louis Metro area ranked an amazing **13th in participants** and **21st in observations** among the 159 cities that participated.

Missouri Master Naturalist-Great Rivers and Confluence chapter volunteers made a very respectable showing in the [St. Louis Metro area results](#) as well.

Of the 800 observers in St. Louis, Missouri Master Naturalists ranked:

<i>Member</i>	<i>Chapter</i>	<i>Rank</i>	<i>Observations</i>	<i>Rank</i>	<i>Species ID</i>
Michael Wohlstadter	Great Rivers	<i>5th</i>	354	<i>2nd</i>	172
Renee Benage	Great Rivers	<i>25th</i>	89	<i>31st</i>	46
Deb Grupe	Confluence	<i>65th</i>	39	<i>40th</i>	34
Bob Virag	Great Rivers	<i>108th</i>	27	<i>53rd</i>	26
Glen Horton	Great Rivers	<i>188th</i>	16	<i>121th</i>	12
Joan Park	Great Rivers	<i>281st</i>	9	<i>181st</i>	7

(Apologies if I missed your very creative ID. Only those with obvious discoverable ID's are noted above.)

There is nature all around us, even in our cities! Knowing what species are in our city and where they are helps us study and protect them, but the **ONLY** way to do that is by all of us - scientists, land managers, and the community - working together to find and document the nature in our area. By participating in the City Nature Challenge, not only do you learn more about your local nature, but you can also make your city a better place - for you and other species!

The City Nature Challenge is organized by the citizen science teams at the Natural History Museum of Los Angeles County and the California Academy of Sciences.

Interested in becoming a member of iNaturalist?

Michael Wohlstadter presented a very informative tutorial on how to use the online app. For detailed instructions, log on to the chapter website and download the PDF file of his presentation here on the Chapter's Advanced Training-Speaker Presentations page : [20190416 Michael Wohlstadter--iNATURALIST](#) NOTE: Secured file. The password is listed on the webpage.



Missouri Stream Team 2019 Introductory Workshops

April 6, 7, and 27, 2019

Missouri Master Naturalist-Great Rivers members **Carl Davis**, **Melissa Leach**, and **Bob Ochs** joined the ranks as certified Missouri Stream Team Volunteer Water Quality Monitors at the Spring Introductory Workshop this April. The new recruits join the 18 other chapter members who provided volunteer service to the Missouri Stream Team in the past year: **Claire Beaudoin**, **Larry Conant**, **Ann Earley**, **Tom Fasi**, **Sue Forquer**, **Deborah Frank**, **Don Frank**, **Jack Hambene**, **Richard Lesage**, **Cynthia Lueder**, **Debra Maurer**, **Claire Meyners**, **Kari Pratt**, **Susan Orr**, **Michael Smith**, **Geoff Stillwell**, **Brenda Switzer**, and **Bob Virag**.

Since its inception in 2005, at least **57 Great Rivers Chapter members** have dedicated over **2,500 volunteer service hours** in support of the Missouri Stream Team program mission.

Thank you, team, for helping to keep Missouri's creeks, streams, and rivers "fishable, swimmable, and drinkable" for generations to COME!



Missouri Stream Team MDC Program Coordinator, Chris Riggert (center), instructing **Carl Davis** and **Bob Ochs** (right) on the finer points of aquatic macro invertebrate identification.



Bob Ochs and **Carl Davis** (left) intently timing stream discharge float balls in Bonhomme Creek using a very accurate aviator chronometer.



Melissa Leach on her first Volunteer Water Quality Monitoring event, here on Creve Coeur Creek



Missouri Stream Team Introductory Workshop Class of April 6, 2019 in Bonhomme Creek near Babler State Park, Wildwood, MO



The Lakes of Missouri Volunteer Program

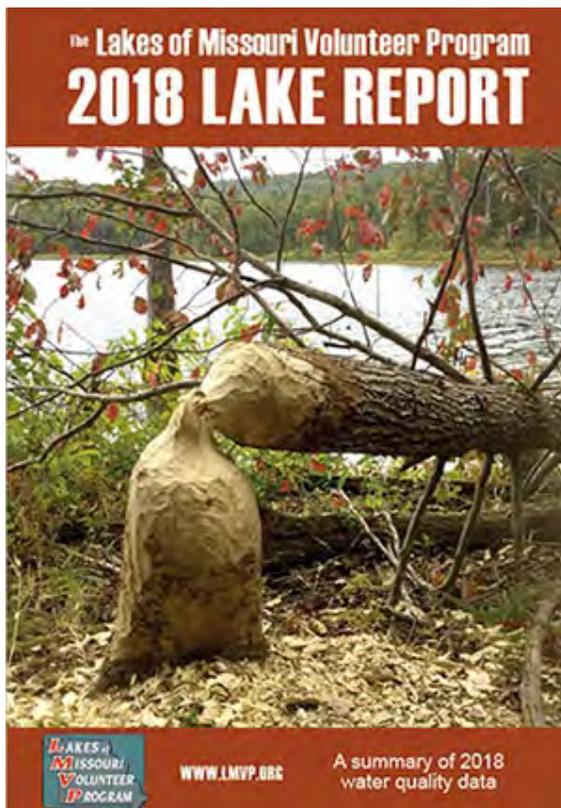
Lakes of Missouri Volunteer Program (LMVP) welcomes Missouri Master Naturalist-Great Rivers Chapter Member **Brenda Switzer** as the latest volunteer to the state-wide citizen science project. Brenda began monitoring her favorite lake, Lake Carondelet in St. Louis County this spring.

Bob Virag monitors two lakes in St. Louis County for LMVP. Predictably our most heavily used urban lakes, Creve Coeur Lake and its stormwater settling pond Mallard Lake, scored poorly among the 40 lakes summarized in the state 2018 Lake Report for clarity, chlorophyll, total nitrogen, total phosphorus, and suspended sediment. Creve Coeur Lake is Missouri's largest "natural" lake. Almost all the rest in the state are dammed-up river pools. As an oxbow lake remnant of the Missouri River, both of the local lakes regularly receive sediment and nutrients from Big Muddy flooding events and heavy storm water runoff from the growing urban developments in the upstream Creve Coeur Creek watershed.



Missouri Master Naturalist **Brenda Switzer** prepares a sample of Carondelet Lake water for chlorophyll concentration testing via filtration onto a membrane.

[2018 Lake Report is now available online:](#)



The Lakes of Missouri Volunteer Program (LMVP) enlists volunteer scientists to track the effects of nonpoint source pollution in Missouri's lakes by measuring a variety of water quality elements. Using volunteer generated data, we document water quality and patterns over time.

When pollution problems occur, lake managers will use the information to apply remedies and measure the effectiveness of their efforts.

LMVP volunteers monitor at 3-week intervals from late spring to early fall. Samples are processed in the volunteers' homes using laboratory equipment provided by LMVP. The processed samples are stored in volunteers' freezers until picked up by LMVP staff. Samples are subsequently analyzed at the University of Missouri's Limnology Laboratory following accepted standard methods.

LMVP data are "research quality" and have been used in several scientific journal articles. One study* shows LMVP data to be of comparable quality to data collected by employees of the University of Missouri. The LMVP data set provides 27 years of quality data for some of Missouri's most popular lakes.

*D. Obrecht, M. Milanick, B. Perkins, D. Ready and J. Jones. 1998. Evaluation of data generated from lake samples collected by volunteers. *Lake Reserv Manag.* 14, pp 21-27.



Great Rivers Stewardship Projects – Spring 2019

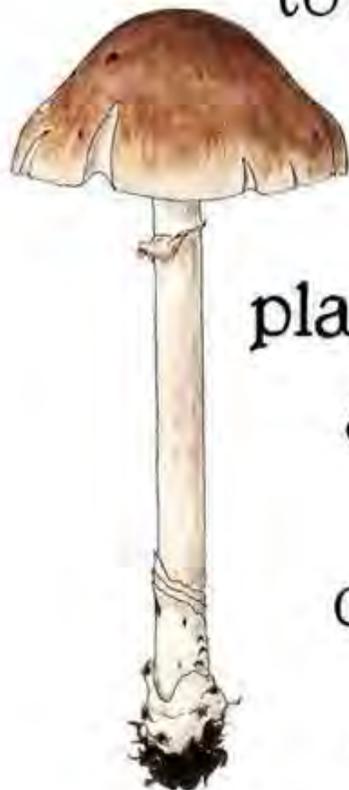
"We are all
meant to be
naturalists,



each in



his own degree,
and it is **inexcusable**
to **live** in a **world**



so **full** of
the *marvels* of
plant & animal *life*
and to *care* for
none
of these things."

~ Charlotte Mason



Forest Park – Lowland Forest Tree Planting

On March 14, 2019, Ten eager Great Rivers volunteers: **Cindy Lueder, Deb Maurer, Carolyn Devaney, Sean Tracy, Jack Hambene, Don Knobbe, Chris Garhart, Carl Davis, Bob Virag** and **Glen Horton** joined the intrepid Forest Park Forever volunteers to repair a forest. They planted over **180 trees** from Forest ReLeaf in the freshly cleared (and very wet) lowland forest between Carr Lane and McKinley Drive west of the Jewel Box.



Yellow marks the spot, about 4 acres



Forest Park's Josh Wibbenmeyer preps the volunteers for the work ahead



Chris Garhart and Josh Wibbenmeyer discover what a wetland is all about.



Cindy Lueder



Deb Mauer



Don Knobbe



Note that Carl Davis is the only one hard at work!



Sean Tracy



Carolyn DeVaney



Jack Hambene



Bob Virag



Glen Horton

Nature is an open book for those who care to read. Each grass-covered hillside is a page on which is written the history of the past, conditions of the present and predictions of the future. Some see without understanding; but let us look closely and understandingly, and act wisely, and in time bring our methods of land use and conservation activities into close harmony with the dictates of nature.

– John Weaver, *North American Prairie*, 1954

Contributed by Pam Wilcox



Spring Is Here And It's Time To Cut Honeysuckle

By Susan Pang



Spring is here and it is noticeable that the first shrub to leaf out are often invasive bush honeysuckles. Leafing out first crowds out light and nutrients to native forbs that benefit our native pollinators.

Leafing out first and dropping its leaves last is how bush honeysuckle has proliferated.

Bush honeysuckle is also known to be allelopathic to make matters even worse.

Chemical treatments to eradicate bush honeysuckle don't jibe well with everyone. It might be useful to know that there are tools and methods available for clearing, and other ideas on how to use the wood, once it is dislodged or cut from the ground.

Jay Doty, a specialist in bush honeysuckle removal, uses a technique known as 'root docking' and it's done with tools versus chemicals. He has been working on a several acre parcel near our home. Jay says, "Root docking helps you to know your land and soils and the flora and fauna of your property better, making you the best land steward you can be. He uses tools like the Pulaski (the beast) by Rogue Ho to root dock. He also carries with him a reciprocating saw, loppers, pruners, and a folding saw. Small plants can be pulled out easily especially if the soil is damp.



After the bush honeysuckle is cut out of the ground, Jay has a rather ingenious idea of stacking the cut-up trunks and limbs into very neat piles that serve as habitat for small mammals and song birds. Especially in an infested forest, these piles serve as a life line as the property might not have much else on it once

the invasive plant down. Termites eat the wood and over the next few years the piles will degrade.

Jay recommends starting your debris piles on a log or surface that's not soil - just in case!

Some of the debris can be chipped and wood left on site for trails.

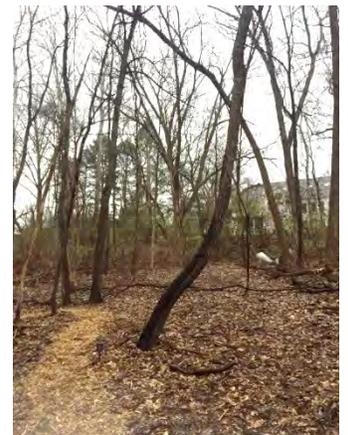


Another creative use of the material can be found on the website, www.woodworms.net. This website is packed with information on everything from the relationship between bush honeysuckle and mosquitoes to an eye feast of beautiful furniture pieces all built by Dale Dufer out of bush honeysuckle material.

Another method we are going to try on this parcel is cut and cover. We'll cover the cut stumps with black plastic bags for a year. Non-chemical treatments open up areas for humans, song birds and wildlife immediately. Sometimes woodland seeds that lay dormant for years will wake up too. You might want to seed or buy trees and shrubs from the conservation department to add competition as bush honeysuckle will try to come back persistently once it has infested an area.

The shrubs we are going to put back onto the land are species that compete against bush honeysuckle.

Suckering plants like elderberry and smooth sumac might work well. We'll send a piece in the future detailing what shrubs worked the best on this parcel!





The Hawk That Wouldn't Let Go

by Christopher Hull

After beginning the MMN training program in 2018, I began volunteering to remove bush honeysuckle in Stacy Park in Olivette and at the Shaw Nature Reserve. I also have an interest in prairie management, so I am a member of the MO Prairie Foundation and I have taken the MDC Landowner Burn Class. Olivette established a small prairie at Stacy Park and it is a great

The designated burn boss, Gerald, appeared to have experience in these matters. There was one other volunteer besides myself. This fellow was a teacher in the Clayton school district so I suspect that, like myself, he also wanted so badly to be part of this event that he did everything within his ability to make it happen.



Controlled Prairie Burn at Stacy Park



Rabbits were moving everywhere, and a hawk dove down and caught one

refuge for rabbits and birds. However, it is also at risk of being overtaken by woody vegetation, a threat which is best controlled through prescribed burning. I was aware that Olivette had conducted at least one burn in previous years. After I began volunteering, I learned from the Parks and Recreations Director, Beverly Tucker-Knight, that they were planning to conduct a burn in the spring. I was looking for more burn experience and this was practically in my back yard, so I really wanted to support this.

The burn date of March 22 was set three weeks in advance. Given that prescribed burns are constrained by wind direction, wind speed, humidity, mixing height, and especially RAIN, it seemed to me highly unlikely that they would be able to conduct this burn on the chosen date. Because my work schedule usually doesn't provide me much flexibility, so I was doubtful that I would be able to participate. The time was later set at 10:00 am.

Surprisingly, when the date arrived, the weather conditions were favorable. I had a couple hours between meetings, so I slipped out of work and suited-up in appropriate clothing. (As a side note, after supporting a burn, one's clothing can be covered in fine, oily black ash and smell really smoky. Machine washing is about 80% effective.) When I arrived at the park, it was clear that the Olivette Park's employees were the primary support crew. They had sufficient people and equipment.

Once Gerald made the decision to commence, two employees with drip-torches started at the down-wind corner of the patch and slowly worked outward. The teams working fire-brooms ensured that the fire moved inward and not outside the fire lines.

At some point, the decision was made to increase the rate by moving the burn into the interior, so things intensified. While working the line, I and several others were surprised by an immediate dive of a hawk into the interior. As we moved closer, it was clear that it had landed on a rabbit. Several minutes went by with no movement by the hawk. As several people slowly moved closer to the hawk, it tried to fly with the rabbit, but could only drag it. Flames were now perhaps 20 feet from the hawk, so we became a little more assertive in moving the hawk. It eventually left the rabbit and landed on an adjacent power pole to watch. Gerald used a fire-broom to move the rabbit underneath the pole. During this time, I witnessed several other rabbits bolting from the area. Several were very large and gray, so they did not appear to be a native variety.

The Missouri Master Naturalist program has provided such a tremendous opportunity for me to learn more about the natural world and to connect with people of similar interests. This burn was just one of the great experiences that I have had, and hope to have in the future.

Christopher Hull, Missouri Master Naturalist Intern



April 24, 2019

Kudos to **Cindy Lueder**,
who just was named the new

Tree Steward of Webster Groves!

Congratulations from all of us at Great Rivers. Very well deserved!



Chapter Factoid

The skilled, hardy and dedicated Great Rivers Chapter volunteers have invested over **3,600 service hours** since 2005 to **control bush honeysuckle and other invasive non-native plants** in the St. Louis area.

If one assumes it takes an average of 10 minutes to remove one bush, that means that **we have removed over 21,600 invasive plants** in the **last 14 years**. Keep up the good work!

WHICH TEAM ARE YOU ON?



BIRDS CAN'T SURVIVE
WITHOUT INSECTS AND
NEITHER CAN WE.
MAKE THE RIGHT CHOICE.



Hosting Purple Martins at the Green Center

March 27, 2019

The Green Center is now the home of a purple martin bird house! We can't wait to see them!

Special thanks to **Jack Hambene**, a member of the Missouri Master Naturalist-Great Rivers chapter, for installing it in our front yard!



Seed Collecting in Forest Park

By Glen Horton

June 18, 2019

Three of the Tuesday Nature Reserve Crew volunteers were tasked with harvesting seed heads from *Tradescantia ohioensis*, Ohio Spiderwort.



In the Deer Lake area

A 30-gallon trash can full of seed heads. The seeds collected will later be spread onto other areas of the Nature Reserve.





Spring Numbers

15,000 seedlings potted
450 trees up-potted

Current Lot Inventory:

21,000 three gallon trees
119 seven gallon trees
836 fifteen gallon trees

Another Successful Spring Season at Forest ReLeaf



Members of Missouri Master Naturalist Great Rivers and Confluence Chapters helped pot the 41 different species of seedlings now growing at the nursery.

Farewell to Community Forester Tom Ebeling



Volunteers bid a fond farewell to Tom Ebeling (at wheel) and wished him well in his move to Chicago and Masters program at DePaul University. Tom began as an intern in 2014, and joined Forest ReLeaf full-time in 2016.



Pollinators In The City

Southampton Neighborhood Association

--- by Michael Wohlstadter

Check out the vital work of dedicated Missouri Master Naturalist volunteers who plant and care for native plants in small urban gardens, called 'wedges', at the crossroads in the City of St. Louis's Southampton Neighborhood Association. These spring blooms help beautify the city and provide much needed habitat for our urban pollinators, the bees and butterflies.

Many thanks to Michael Wohlstadter and his team of stewards that help make this neighborhood one of the most popular stop-over destinations for our migrants.

As the cool Spring temperatures give way to warmer days, we are reminded that the season will transition into Summer. In concert with these changes, the blooms in the Southampton Naturescapes transition as well. The previously mentioned Eastern Bee Balm and Woodland Spiderwort in the shady areas fade and the full sun species such as Missouri Primrose (*Oenothera macrocarpa*) begin to bud and open.

Missouri Primrose is a low growing, full sun plant that is native to Missouri glades. Because it naturally occurs in small pockets of soil amongst bare rock, it is a good candidate along sidewalks which are an appropriate analog to glade limestone. While it will bloom into August, the next few weeks will be the peak of its bloom season.



The best times to view Missouri Primrose are evening and early morning. This species is moth pollinated and thus the blooms are most vibrant at night when the moths are active. (As a side note, the blooms of Missouri Primrose open very quickly – about 90 seconds from start to open - and can be watched with the naked eye. Google “*Oenothera macrocarpa* bloom video”.)

Other plants, such as Foxglove Beardtongue (*Penstemon digitalis*) are just now starting to bud and will help to bridge the transition from Spring to Summer blooms; providing the food source so necessary to support a healthy population of pollinators such as bees and butterflies.

In the images are:

A morning view of Marie's Wedge from the corner of Wherry Avenue and Itaska Street. Plants in bloom in the image include; Rose Verbena (*Glandularia canadensis*) purple bloom in the foreground, Lance-Leaf Coreopsis (*Coreopsis lanceolata*) yellow blooms on stems, Eastern Bee Balm (*Monarda bradburiana*) lavender blooms towards the right, Missouri Primrose (*Oenothera macrocarpa*) nestled on the other side of the Coreopsis.

One of the more mature Missouri Primrose plants displaying a bloom surrounded by foliage.



[For more information, click here to see the Southampton Neighborhood Association FACEBOOK page](#)



Calvary Cemetery Prairie Restoration

The Chapter's Next Big Project

April 22, 2019



ARCHDIOCESE OF ST. LOUIS
Catholic Cemeteries

Under the lead of Great Rivers Chapter member Jack Hambene, a small group of Missouri Master Naturalists surveyed what may become the chapter's next big stewardship project: Calvary Cemetery Prairie Restoration. Attendees included **Tom Fasl, Bob Ochs, Pam Wilcox, Jack Hambene**, and MDC Urban Wildlife Biologist, Erin Shank.

The site, near Bellefontaine Cemetery, at 5239 West Florissant Avenue, St. Louis, MO 63115, has been supported by chapter volunteers in the past. MDC, under the direction of Erin Shank, completed a major redesign of the prairie, and it now needs stewardship and maintenance.

See St. Louis Today article for details complete with sights and sounds (Hint: turn up your device loudspeakers!): [St. Louis Today - Prairie restoration project is in bloom in north St. Louis](#)

Also see the St. Louis Today video with nice drone shots of the controlled burn on December 10, 2018: [Controlled burn of prairie in Calvary Cemetery](#)

Erin Shank has given site access permission to Great Rivers Chapter members for restoration anytime they are available. She added "The cemetery is open from 8- 5 every day. You would not need to let them know prior to arriving, as we have open access to the area during regular business hours. I would let the Superintendent know about the Missouri Master Naturalist involvement prior to beginning any volunteer work out there, and that is all we need to do for notification." It's best to check with project leader Jack Hambene for the Superintendent's contact information first. Erin Shank can also be reached at her office at Powder Valley Conservation Nature Center.



Erin Shank, an urban wildlife biologist with the Missouri Department of Conservation, stands in a walking path in the Calvary Cemetery Prairie. --- St. Louis Today photograph



Flowers provide a burst of color on a 25-acre swath of Calvary Cemetery in St. Louis where native prairie plants have been allowed to grow on what is thought to be virgin soil on Tuesday, Sept. 25, 2018. The area is thriving with grasses, flora, wildlife and bees but threatened by invasive plants. --- St. Louis Today photograph



Great Rivers Outreach and Education – Spring 2019

Litzsinger Road Ecology Center

by Ann Eggebrecht and Bob Virag



Kids celebrating Spring at LREC on top of a sycamore stump

Litzsinger Road Ecology Center (LREC) is a place where adults and children inspire each other by interacting with nature.

I am a volunteer educator and guide to the 34 acres that is LREC, where a variety of classes of students visit with their teachers. We might observe and discuss the difference between erosion and weathering. We might turn over stumps to discover worms. We might skip stones in the creek. We might discuss the life cycle of a prairie plant.

My favorite ages are 3-6 year olds, who come from many different school partners in the community. LREC encourages place-based education.

--- Ann Eggebrecht

Throughout the winter some programs move indoors, like the Missouri Botanical Gardens ECO-ACT “ecology in action” environmental leadership program for juniors and seniors in high school. Here, student teachers apply what they have learned about the environment during weekly teaching sessions and field trips with local fourth graders.

I am a volunteer educator that guides these student teachers and their classes through an understanding of our great rivers. Using LREC’s 8-foot stream table model, I teach about the water cycle and its affect on erosion, deposition, meandering, and flooding of our creeks, streams and rivers.

By the end of each session, all students are chanting with me “When I say rivers, you say CHANGE!” with big smiles on their faces.

Great fun!

--- Bob Virag



ECO-ACT students learning about river behavior on the LREC Stream Table



Meet Me Outdoors Festival

--- by Tom Fasl

Meet Me Outdoors took place over three weekends in early April. The events were at the Missouri Botanical Garden, the Sophia M. Sachs Butterfly House and Shaw Nature Reserve.

Missouri Stream Team, the Missouri Conservation Commission, The National Great Rivers Research and Education Center, Great Rivers Master Naturalists and dozens of other outdoor organizations participated in the Meet Me Outdoors weekends.



Great Rivers Master Naturalists **Pam Wilcox, Vaughn Meister, Mary Dueren, Chris Garhart, Joan Park, Linda Cook, Sharon Baldassare, Annie Russell, Peggy Morrison, Linda Cook, Peggy Parr, Carl Davis and Tom Fasl** staffed our chapter's information tables at the three locations answering a variety of questions from the hundreds of outdoor enthusiasts who attended the events.

More details online, here: <http://events.missouribotanicalgarden.org/meetmeoutdoorsSTL>

A great time was had by all!



Missouri Master Naturalists Tom Fasl and Carl Davis staff the Great Rivers Chapter table at the Missouri Botanical Gardens "Meet Me Outdoors" festival at Sophia M. Sachs Butterfly House in Chesterfield, Missouri on April 13, 2019



The Green Center

The fourth graders from the University City School District participated in field experiences at The Green Center April 29-30, 2019. Despite the weather, the students were able to explore our wetland habitat and investigate all of the spring changes in Ruth Park Woods. Great Rivers members **Kathleen Kapayou**, **Peggy Morrison** and **Pam Wilcox** once again skillfully guided the students through the “new and improved” wetland. native prairie, bird corridor and Ruth Park woodland habitats. Thank you for supporting outdoor education in your school district, [School District of University City!](#)



The wetland is wet again, thanks to a cost-sharing grant from MDC to repair the dam last year. It's so beautiful that a male and female mallard duck have made our wetland their home this spring!





Owl Prowls in Forest Park

March 30, 2019

FOREST PARK
OWLS:
Hiding in Plain Sight

March 30 / 1-2:30 p.m.
Kingshighway Library
2260 S. Vandeventer Ave.



Missouri Master Naturalist Owl experts, **Mark H.X. Glenshaw** and **Brenda Hente** are on the prowl again



Some photos from the March owl prowl in Forest Park lead by Mark H. X. Glenshaw. Thanks also to Edward Crim for his wonderful photo essay.



CommuniTree Gardens Nursery

TREE CAMP - Campers (and Parents) Loved It!

June 3-8, 2019

Middle School campers attended Tree Camp at the nursery, which was held June 3 through June 8 from 9:00 am to 1:00 pm. Campers learned about trees, soil, birds, water, pollinators and orienteering over the six-day course. Kudos to Liana Kopp and **Tessa Wasserman** for organizing and running this special and unique camp. Thanks also to Lisa Wallace, Anna McAtee, Joey Kopp and **Geoff Stillwell** for helping.



Camp ended with map skills, orientation with compasses and a scavenger hunt that reviewed all the material covered in camp throughout the week with trivia questions. The questions had to be answered before the next compass degree and paces could be started to find the next point.

Guest speaker **Geoff Stillwell**, engaged the campers. Geoff is a Missouri Stream Team member, nature educator and Missouri Master Naturalist-Great Rivers Chapter member. He led them through fun hands-on activities of water pH testing, catching macro invertebrates from the nearby flood waters that had crept up into the nursery, using a running water stream table to learn about erosion/flooding, and using yarn to create food webs.

Many thanks to Forest ReLeaf and their newsletter editor, Lee Phillion, for permission to clip this article from their recent newsletter.

You can read it here. [The CommuniTree Gardens Nursery BARK](#)



Missouri Department of Conservation Summer Camp at Forest Park

Robyn Parker, MDC Assistant Manager at Powder Valley Nature Center, and her staff organized a 3-day summer camp for St. Louis City middle school students June 12-14, 2019 at Forest Park. Nearly 150 kids, ages 9-13 from two STL organizations participated in the camp: Unleashing Potential and Mid-Town Community Center.

Three different areas of the park were utilized: Kennedy Forest, Post-Dispatch Lake, and the MDC Hatchery Lakes. Activities included fishing, pond study, canoeing, map and compass, knot tying, archery, geocaching, insect study, birding, tree ID, animal tracks ... and lunch!

Robyn's team consisted of Missouri Master Naturalists and MDC Volunteers (several of whom were also MMN's). Great Rivers Chapter was well represented with **Barb Cerutti**, **Jerry Esselman**, **Mary Risberg**, **Bob Virag**, **Amy Wilkinson**, and **Karen Zelle**. The weather was great and everyone had a wonderful time.

Photos by Bob Virag



Jerry Esselman, fish fryer



Amy Wilkinson, canoe instructor



First time paddlers on Post Dispatch Lake



Barb Cerutti, pond study



Catching crayfish



Monitoring macro invertebrates



First Fish!



First Fish!



First Fish!



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 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



Southern Coal Skink, *Plestiodon anthracinus pluvialis*, Al Foster Trail --- photo by Renee Benage ©2019



Swan Count Survey Morning Sky, Audubon Center at Riverlands --- photo by Jack Hambene ©2019



Albino Leucistic Squirrel, South St. Louis County --- photo by Sherri Schmidt ©2019



Bluebells, *Mertensia virginica*, Glassberg Conservation Area --- photo by Renee Benage ©2019



Red Admiral Butterfly, *Vanessa atalanta*, Al Foster Trail --- photo by Renee Benage ©2019



Green Frog, *Lithobate clamitans*, Pickle Springs Natural Area --- photo by Barb Cerutti ©2019



Great Rivers Advanced Training Advanced Training Speaker Series – Spring 2019

March 19, 2019 Storm Spotter Training, by Kevin Deitsch, National Weather Service



Kevin Deitsch, Warning Coordination Meteorologist at National Weather Service-St. Louis, shared some very important information with us concerning weather. Weather affecting our area and the entire country plays an extremely important role in our lives;



everything growing in and above the ground, our streams, as well as our transportation. As Naturalists, we understand how rain and wind are necessary for all living things in our fields, our forests, and our streams. So, too, do high winds, hail, and tornadoes affect the same things but not always beneficially.

For more information, see Kevin’s riveting presentation (without multimedia) on the chapter website here: [20190319 Kevin Deitch NWS STORM SPOTTER-no multimedia](#) Note: Secured file. Use password listed in YELLOW font. ----- Review by Evelyn Tullos

April 16, 2019 Native Bees, Bumble Bees, by Chris Hartley, Sophia M. Sachs Butterfly House



Chris Hartley, Coordinator of Science Education, The Sophia M. Sachs Butterfly House, spoke to our chapter regarding bees. Chris informed us that bees are the world’s most important of all pollinators. He had an interesting slide presentation showing plants pollinated vs. plants not pollinated by bees. There was a vast difference in quantity. There are only five plants not pollinated by bees and roughly 89 plants pollinated by them. Chris defined the Honey Bee life cycle and shared the findings regarding the cause of the recent diminished bee population.



For more information, see Chris’s interesting presentation on the chapter website here: [20190416 Chris Hartley--BENEFICIAL BEES](#) Note: Secured file. Use password listed in YELLOW font. ----- Review by Evelyn Tullos

May 21, 2019 Dragonflies, by Yvonne Homeyer. North American Butterfly Association



Yvonne Homeyer presented a very interesting program about dragonflies. Yvonne’s slide presentation of 93 species of dragonflies illustrated the variety of descriptive features to look for in order to identify the males and females of each species. Yvonne did not have time to speak about damselflies. Perhaps she would return to educate us on these interesting and beautiful insects.



For more information, see Yvonne’s beautiful presentation on the chapter website here: [20190523 Yvonne Homeyer DRAGONFLIES OF THE STL AREA](#) Note: Use password listed in YELLOW font. ----- Review by Evelyn Tullos



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 & Terry Woodford-Thomas	Soils
October 15, 2019	Elizabeth Hasenmueller PhD	Effects of Ground Water in Urban Creeks
November 19, 2019		ORIENTATION
December 17, 2019		HOLIDAY PARTY



Advanced Training (continued)

Mushroom Foray at the Horton's

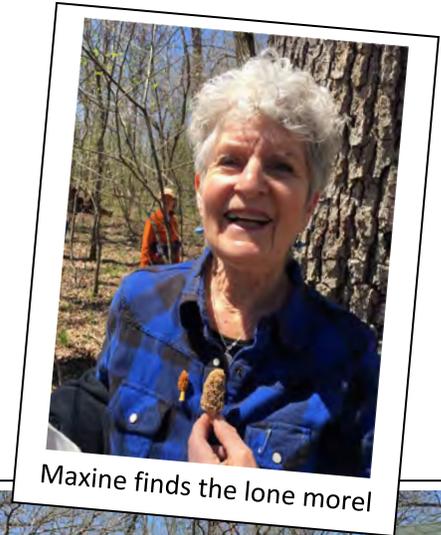
A Photo Essay by Jack Hambene



The elusive morel



The Gracious Host,
Emily Horton



Maxine finds the lone morel



Bluebells in Horton Wood



Horton's morel foray



Lunch at the Horton's



View from the Horton's cabin



Pre foray lecture



Great Rivers Annual Picnic

Larson Park Pavilion, Webster Groves, Missouri

June 18, 2019

Our Great Rivers Annual Picnic took place at the Larson Park Pavilion in Webster Groves. The Parks Manager lead a tour of the rain garden and surrounding area with native plant IDs.

Members brought a side dish to share with everyone. The picnic and wonderful music entertainment by the Downstream Duo, Pat Frank and Terri Brandt, made for an enchanting evening.

Thank you to everyone that joined us for the Annual Great Rivers Picnic! It was a beautiful night with great friends and amazing food!
-- Kathleen Kapayou

Grown adult naturalists waiting in line to hug the Liberty Tree at Larson Park. This wide, sturdy and much weathered oak tree dates from the 1776 American Revolution and is in the riparian area of Shady Grove Creek.



[The Downstream Duo](#)
Pat Frank and Terri Brandt
[Singing "Time to Say Goodbye"](#)
about Calamity Jane saying goodbye
to Bill Hickock





Great Rivers Member Milestones

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

2019 MID-YEAR RESULTS !

Awards and Recognition

As of June 27, 2019

- 4 major milestone pins earned by mid-2019
 - 4 Initial Certification pins earned by mid-2019
 - 31 Great Rivers Chapter members recertified in 2019
- 1 member was an intern who also earned an Initial Certification Award in 2019

CHAPTER FACTOID:

TOTAL MID-YEAR VOLUNTEER AND TRAINING HOURS as of June 30, 2019:

Volunteer Service:
4,757.9 Hours
 Advanced Training:
812.0 Hours



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

Sherri Schmidt



**Initial Dragonfly
Certification Pin
Earned in 2019**

- Jan Castanis
- Patty Clarke
- Barb Davidson*
- Bev Kriesky

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



**Pewter Dragonfly
500 Hour Milestone Pin**

Jack Hambene



**Bronze Dragonfly
250 Hour Milestone Pin**

Sue Forquer



Brenda Switzer





ANNUAL RE-CERTIFICATION AWARDS for 2019

Congratulations to the 31 Great Rivers Chapter members that earned their annual recertification as Missouri Master Naturalists by mid-year.

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

2019 MID-YEAR RESULTS !

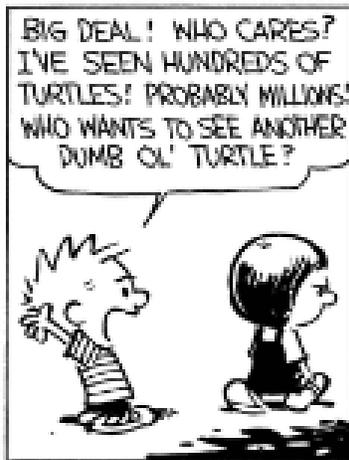


**Missouri Master Naturalist
2019 Certification Pin
Blanding's Turtle**
Emydoidea blandingii

- | | |
|-----------------|--------------------------|
| Renee Benage | Vaughn Meister |
| Barbara Brain | Michael Meredith |
| Barbara Cerutti | Claire Meyners |
| Larry Conant | Bob Ochs |
| Barb Davidson* | Susan Orr |
| Carl Davis | Sherri Schmidt |
| Carolyn DeVaney | Donna Scott |
| Ann Eggebrecht | Barbra Stephenson |
| Tom Fasl | Geoff Stillwell |
| Sue Forquer | Brenda Switzer |
| Pamela Fournier | Christopher "Sean" Tracy |
| Diane Goulis | Evelyn Tullos |
| Jack Hambene | Bob Virag |
| Al Koebbe | Tessa Wasserman |
| Jeanne Koebbe | Karen Zelle |
| Mary Kreppel | |



CALVIN and HOBBS by Bill Watterson





Naturalist's Journal

Wild Edibles

-- by Tara Morton (Class of 2017)

I've never submitted to the Gazette, so I don't know how the process works, but I am interested in submitting the information and recipe below, with attached photos of what I've made! I always do seasonal foraging, so maybe it could be fun to keep this up as a regular contribution, with suggested recipes for each season. Anyway, here is my submission for this edition. Enjoy!

Foraging in Your Backyard: Wild Violets

When I first started foraging for wild edibles years ago, everyone would ask what my favorite spots were to forage. I think when folks picture foraging, they imagine some secret spot hidden away in the woods far from the public eye. But often our backyards are full of plentiful and easily identifiable wild edibles like purslane, dandelion, and my favorite, wild violets!

While many look at wild violets as an unwanted weed, I love when these delightful little flowers start popping up in my yard in the springtime. Not only do they paint the yard with brilliant shades of purple, but they are also high in Vitamins A and C, making them quite nutritious.

Every year I try eating these flowers and/or leaves in a new way, either by tossing them in a salad, making an infused vinegar, or creating a lovely simple syrup, among many other things. This year, I used the wild violets to decorate some cookies I made, and I've included the recipe below (adapted from an online recipe).



Wild Violet Simple Syrup

Wild Violet Lemon Ricotta Cookies with Lemon Glaze

INGREDIENTS

Cookies:

- 2 1/2 cups all-purpose flour
- 1 teaspoon baking powder
- 1 teaspoon salt
- 1 stick unsalted butter, softened to room temperature
- 2 cups sugar
- 2 eggs
- 1 (15-ounce) container whole milk ricotta cheese
- 3 tablespoons lemon juice
- 1 lemon, zested

Glaze:

- 1 1/2 cups powdered sugar
- 3 tablespoons lemon juice
- 1 lemon, zested
- Freshly harvested wild violets*
- *I recommend harvesting after a rain, as wild violets do not hold up well to rinsing in the sink. Harvest only the flower, at the very top of the stem.



Freshly harvested wild violets

INSTRUCTIONS:

1. Preheat oven to 375 degrees.
2. In medium bowl, whisk together the flour, baking powder, and salt. Set aside.
3. In a large mixing bowl, combine the sugar and butter. Use an electric mixer to beat the butter and sugar until light and fluffy, about 3 minutes. Add the eggs, 1 at a time, beating until incorporated. Add the ricotta cheese, lemon juice, and lemon zest. Beat to combine. Stir in the dry ingredients.
4. Line 2 baking sheets with parchment paper. Spoon the dough (about 2 tablespoons for each cookie) onto the baking sheets. Bake for 15 minutes, until slightly golden at the edges. Remove from the oven and let the cookies rest on the baking sheet for 20 minutes.
5. Make the glaze by stirring together the powdered sugar, lemon juice, and lemon zest in a bowl until smooth.
6. Once cookies have cooled, move to a drip rack. Press stem of wild violet into the tops of the cookies to lay them flat. Add glaze to cookies (about 1/2 tsp. per cookies) by spooning on top, then use a brush to glaze the violets petals flat to the surface of the cookie.
7. Let glaze harden for about an hour, then enjoy!



Wild Violet Lemon Ricotta Cookies



Naturalist's Journal - continued

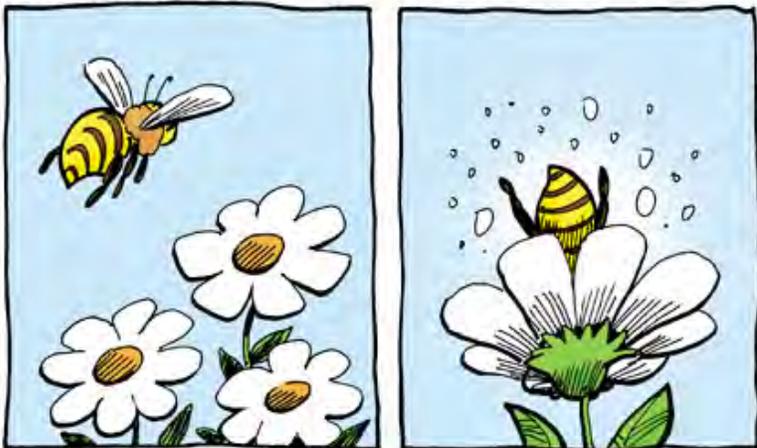
Blue Orchard Mason Bee (*Osmia lignaria*) emerging

--- by Jack Hambene

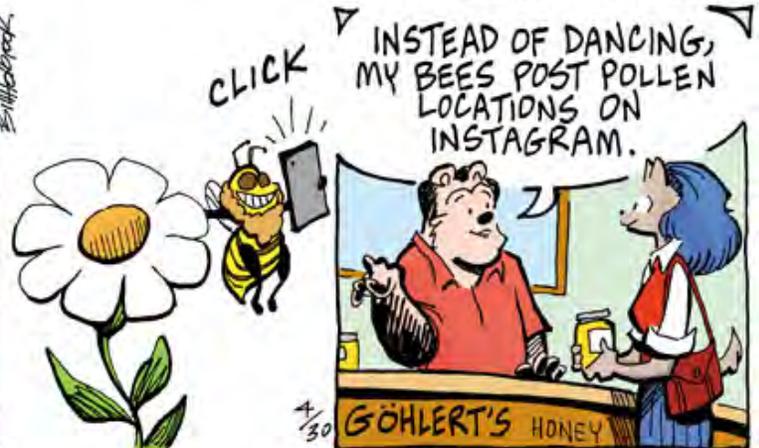
I made the nest box but the bamboo tubes were purchased with live bees to add to my population.



Kevin & Kell



©2016 Bill Holbrook





Naturalist's Journal - continued



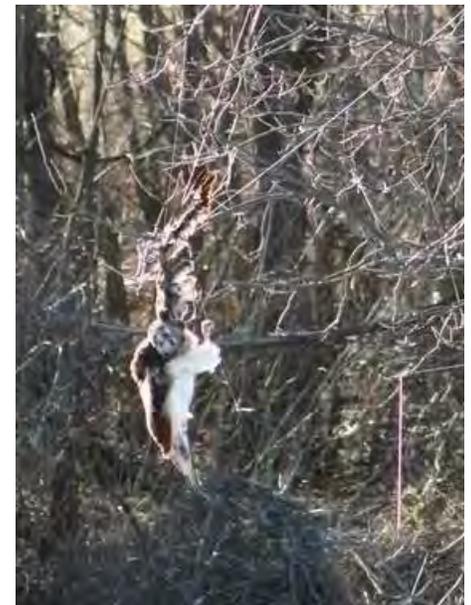
MDC REMINDS ANGLERS TO PROPERLY DISCARD USED FISHING LINE

--- by Bill Graham



The ice will thaw, days will lengthen, and anglers will find good late-winter and early-spring fishing. Walleye will make spawning runs, the spoonbill snagging season will begin. As fishing picks up, the Missouri Department of Conservation (MDC) reminds anglers to properly discard used or broken off fishing line. Besides preventing unsightly litter, careful anglers will also be protecting wildlife.

A recent case of a hawk entangled in fishing line is a reminder of why keeping old line out of Missouri's waters is important. The hawk was spotted by a citizen entangled by fishing line snagged on a limb high in a tree on the bank of the Osage River at MDC's Taberville Access, north of El Dorado Springs. The injured hawk could not be rescued and had to be euthanized.



"This is a sad reminder that even a small strand of line, when used improperly, can cause a large impact on the health of the fish and wildlife in the area," said Michael Allen, MDC fisheries management biologist.

Monofilament and fluorocarbon fishing lines do not degrade readily. They can pose hazards long after they are left in the water.

Anglers are reminded to properly dispose of used fishing line. Wildlife can become entangled and harmed by old line left in the water or bankside, like this hawk recently found in a tree near the Osage River in St. Clair County. Photo courtesy of Linda Brewer Smith.

The line that entangled the hawk at the Taberville Access may have washed high into the tree during a flood, Allen said. Or the line may have originated from an errant cast and hang up, or perhaps a bird lifted it into the tree as nest material. Sometimes retrieving lost line after a snag is difficult. But whenever possible, old line should be retrieved and properly discarded in trash bins. Never change line and leave the old monofilament bankside.

Fishing line disposal bins are available at many of the state's boat ramps and popular fishing spots. Missouri Stream Teams and conservation partners provide the bins. The line is recycled in a partnership with Berkeley Pure Fishing.

For more information, visit the Monofilament Recovery Recycling Program section at the Missouri Stream Team web site, <http://www.mostreamteam.org/activities.html>.

Information about Missouri's abundant fishing opportunities is available at <http://mdc.mo.gov>.



MDC Monofilament Recycling Bin with a cover to keep curious birds out.



Logo Wear Order Form 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



Sorry. No longer available



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

636-391-2901

A close-up photograph of a Barred Owl perched on a branch. The owl has a light-colored body with dark brown horizontal bars. It is looking directly at the camera with large, dark eyes. The background is a dense network of bare, thin branches, creating a natural, textured setting.

Barred Owl

Photo by Sean Tracy ©2019

*There is always a hidden owl
in "knowledge" --- E.I. Jane*