



Missouri Master Naturalist



Fall Issue 2017 Volume 7 Number 4

TM



“The care of the earth is our most ancient and most worthy and, after all, our most pleasing responsibility.

To cherish what remains of it, and to foster its renewal, is our only legitimate hope.”

– Wendell Berry, *The Art of the Commonplace: The Agrarian Essays*

Photo Courtesy © Roger Ottwell

Great Rivers Gazette

Fall 2017

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Front Cover

Snowy Owl - The Audubon Center at Riverlands
Photo Courtesy Roger Ottwell – See page 37 for more information

Back Cover

Bluebird at the Bird Feeder-photo by Pam Wilcox

Great Rivers Chapter Officers

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The President's Corner



Dear Chapter Members,

As someone who has struggled with depression for most of my adult life, figuring out how to live my life in a way that is both fulfilling and meaningful has been an acutely difficult task. It is incredibly easy for me to sink deeply into all of the work that it takes to jump through the hoops necessary to get through graduate school, and, in the process, lose touch with the

passion that brought me to this path in the first place. While I am working on an advanced degree in ecology, I am under no illusion that I am any more knowledgeable than many of the amazing members of our chapter who put their hearts into all of their volunteer work and their pursuit of knowledge of the natural world. *You are all truly naturalists.* Lately, my mind keeps returning to one exquisite summer spent mostly in the Missouri Outdoors that ended with my heart and mind filled with joy and my skin flushed pink with what only redheads can call a tan. I have since come to the important conclusion that I must live my life as an exploration of what brings me the most joy. Looking through this issue I see how our members' efforts flourish when they follow their joy in their volunteer pursuits. I know that we have a number of members both new and old who may not feel quite settled in what their volunteer interests may be. I implore you all to tap into those feelings that spurred you to sign up for our program in the first place and follow your joy to find those volunteer pursuits that truly make you feel fulfilled at the end of the day. Please remember that I and the other members of the board are here to help you find volunteer opportunities that are right for you. Call me. Send me an email. Grab a cup of tea with me. I am here to help. I want for each member to be able to step back after a day of hard work with that satisfaction in their hearts that only comes from doing something that fills you to the core with joy.

Happy Volunteering!

Rachel Becknell

– President, Great Rivers Chapter

*Find out where joy resides, and give it a voice
far beyond singing. For to miss the joy is to miss all."*

– Robert Louis Stevenson



GREAT RIVERS HOLIDAY PARTY

Congratulations to the Great Rivers Hospitality Committee for, once again, organizing a splendid Holiday Party for the chapter.

This year the party was held at Cyrano's Restaurant in Webster Groves. Cyrano's has always been a fine restaurant and has been in operation for many years. How many? I went there in high school! We had a private room which was very comfy and elegant. The food was excellent. We had over 60 attendees, including spouses and friends.

The Holiday party allows members to mingle and converse with others in the chapter who they may not have met yet. It appeared people were enjoying themselves and it seemed the evening came to a close way too soon.

A big thank you to Kathleen Kapayou, Cindy Lueder, Tess Wassermann, Pam Fournier, Joan Park and Peggy Morrison for all their hard work planning this amazing event.

Also thank you to Sean Tracy for being so thoughtful for bringing in nature related books to share with the members. Very nice of you Sean.



Seth Lindsey, Rachel Becknell, and Wyatt,
with Jack Hambene in the background



Great Rivers Holiday Party (continued)



Peggy Parr, Annie Russell, Pam Fournier,
Linda Cook, Joan Park



Craig Mierkowski, Mary Mierkowski, Dennis Honkomp,
Diana Miller, Kari Pratt



John Vandover, Michael Meredith, Sue Meredith, Lori Purk



Cindy Steinbruegge, Tim and Barb Cerutti



Lori Purk, Marcia Wilderman, Bill Hoss, Vaugh Meister



Michael and Sharon Smith



Great Rivers Holiday Party (continued)



Kathleen Kapayou and Diana Miller



Renee Benage, Sharon Baldassare



Sherri Schmidt, Marypat Ehlmann



Bob Virag, Sean Tracy



Sherri and Dick Turner



Tess Wasserman, Emily Horton, Glen Horton



Great Rivers Volunteer Fair – Fall 2017

The Great Rivers Chapter held its first Volunteer Fair on November 21st at the Kirkwood Community Center. We invited our most active partners to participate in an informational evening where members could learn more about what volunteer opportunities were available. Based on partner and member feedback the event was a huge success. We appreciate all those involved taking their time to spend an evening with us, especially since it was very close to Thanksgiving. Don't be surprised if this becomes a yearly event.



John Vandover and Emily Horton planning the future of Forest Park Forever



Annie Russell speaking to Lisa Nansteel of St Louis Audubon Education Team



Kathleen Kapayou and Laura Street represented the Green Center.



Great Rivers Greenway display presented the value of connecting the region with trails and green spaces.



Bob Virag and Greg Poleski, Vice President-Greenway Network



Bob Ochs speaks with Mary Voges and Leslie Memula from Litzsinger Ecology Center



Great Rivers Volunteer Fair (continued)



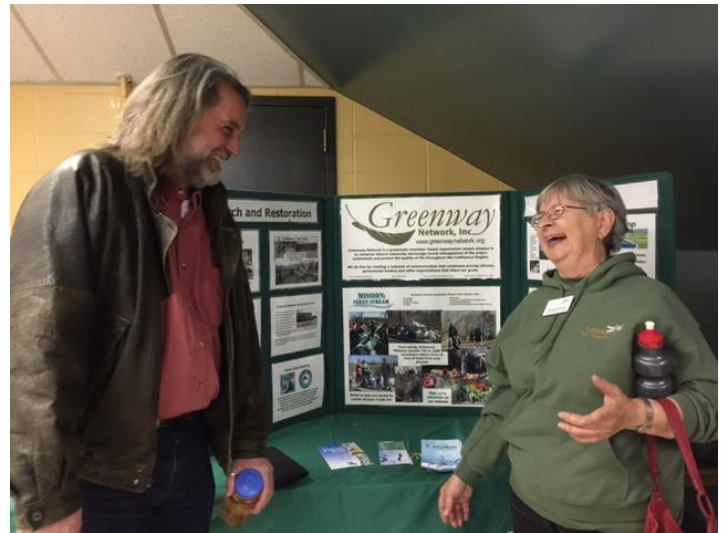
Sherri Schmidt and Marypat Ehlmann at the Endangered Wolf Center booth



Mitch Leachman planning the next project with Bill Hoss at the St. Louis Audubon Society exhibit



Rich Lesage showcased the Shaw Nature Reserve exhibit



Michael Wohlstadter and Vaughn Meister having fun at the Greenway Network booth



Barb Cerruti with Mary Voges and Leslie Memula from Litzsinger Ecology Center



Rich Lesage presents the merits of volunteering to the St. Louis Audubon Education Team to Carolyn Devaney and Donna Scott



Great Rivers Volunteer Fair (continued)



Yvonne Van Der Ahe listened to Bill McIlwee and Jay Fish as they shared the exploits of the River Des Peres Watershed Coalition



The wolf pelts were a big draw at the Endangered Wolf Center booth



Bob Ochs with Jean Favara and Mary Dueren at The Audubon Center at Riverlands exhibit



Volunteer Coordinator Kylie Christanell shows off all the wonderful work at Kirkwood Parks Assistance Corps



Laura Street at The Green Center booth shares a moment with Geoff Stillwell



Amy Wilkinson showcased the work of the Volunteer Naturalists at Missouri Department of Conservation



Great Rivers Volunteer Fair (continued)



John Schaefer of World Bird Sanctuary shows off Oliver the screech owl



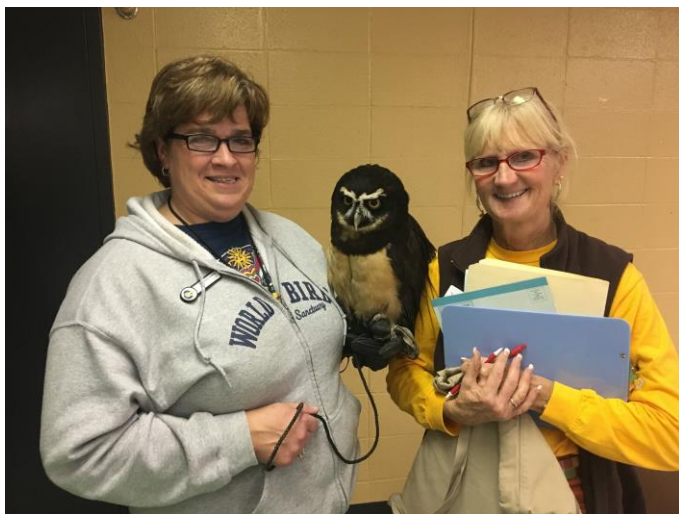
Oliver, the World Bird Sanctuary screech owl stole the show!



John Schaefer of World Bird Sanctuary shows off Oliver the screech owl



Brenda Hente introduced everyone to Mia, the resident Spectacled Owl at the World Bird Sanctuary



Brenda Hente and Diana Miller donned their spectacles to make Mia the Spectacled Owl feel at home



Brenda Hente introduced everyone to Mia, the resident Spectacled Owl at the World Bird Sanctuary



Great Rivers Volunteer Fair (continued)



Brian Waldrop displayed his debris of life collection at the Missouri Stream Team table. These oddities were collected at from the many rivers, streams, and floodplains from across the St. Louis Region. It is fun to find new treasures and hard to believe items. That is one of the many joys of Stream Teaming.”



Sarah Wright-Aholt, Missouri Department of Natural Resources Water Pollution Control Environmental Specialist, talked about the effects of urban storm water pollution at the Missouri Stream Team table





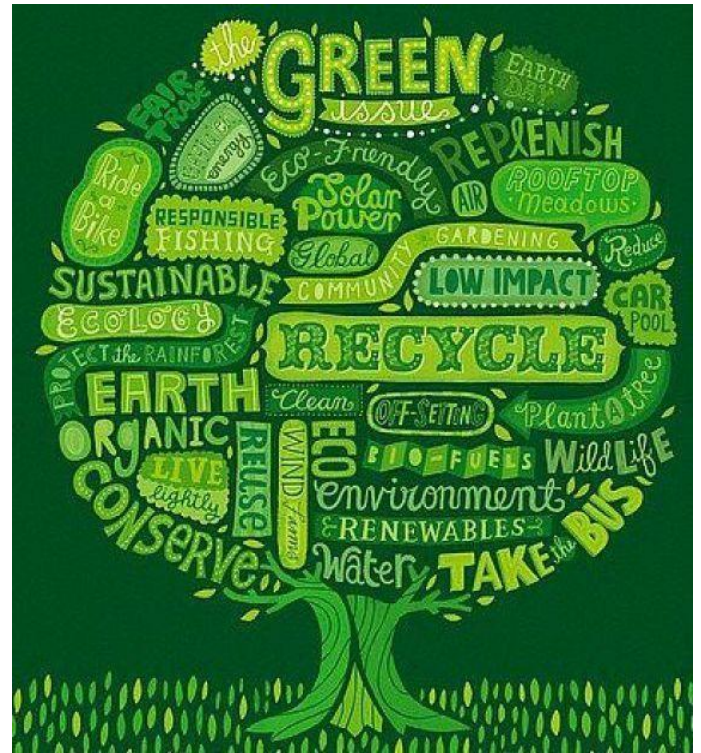
Great Rivers Stewardship Projects – Fall 2017

SPOTLIGHT ON STEWARDSHIP

-- by Pam Wilcox

Stewardship is something Great Rivers members take very seriously. Members uphold the MMN mission statement on a weekly basis (weather permitting). A quick check of our volunteer hours for the year will show just how many hours are devoted to environmental stewardship.

In 2017 Great Rivers Chapter volunteers provided 3,583 hours – just over a third of total chapter time for the year - in various stewardship capacities, from planting trees (Forest Releaf), removing invasives (County Parks), restoring prairies, managing controlled burns, to improving habitats by adding native plants, butterfly gardens and rain gardens. We also contribute many hours to trash removal, a most worthy cause in Missouri Stream Team to make sure Missouri's streams, creeks, and rivers are safe and unpolluted.



Why do we do this? Because we care. Everyday we show our partners and our communities that we are committed to improving our environment, one plant, one invasive, one piece of trash at a time. Below are quotes from historic naturalists who are far more eloquent on the subject than I could ever be. Read their words and take them to heart. I am proud to be a member of the Great Rivers chapter. I'm equally proud of the dedication, and persistent hard work of our membership. We are a great team.

*The earth will not continue to offer its harvest, except with faithful **stewardship**. We cannot say we love the land and then take steps to destroy it for use by future generations."*

John Paul II

*Stewardship – (continued)*

“No settled family or community has ever called its home place an “environment.” None has ever called its feeling for its home place “biocentric” or “anthropocentric.” None has ever thought of its connection to its home place as “ecological,” deep or shallow. The concepts and insights of the ecologists are of great usefulness in our predicament, and we can hardly escape the need to speak of “ecology” and “ecosystems.” But the terms themselves are culturally sterile. They come from the juiceless, abstract intellectuality of the universities which was invented to disconnect, displace, and disembody the mind. The real names of the environment are the names of rivers and river valleys; creeks, ridges, and mountains; towns and cities; lakes, woodlands, lanes roads, creatures, and people.

And the real name of our connection to this everywhere different and differently named earth is “work.” We are connected by work even to the places where we don’t work, for all places are connected; it is clear by now that we cannot exempt one place from our ruin of another. The name of our proper connection to the earth is “good work,” for good work involves much giving of honor. It honors the source of its materials; it honors the place where it is done; it honors the art by which it is done; it honors the thing that it makes and the user of the made thing. Good work is always modestly scaled, for it cannot ignore either the nature of individual places or the differences between places, and it always involves a sort of religious humility, for not everything is known. Good work can be defined only in particularity, for it must be defined a little differently for every one of the places and every one of the workers on the earth.

The name of our present society’s connection to the earth is “bad work” – work that is only generally and crudely defined, that enacts a dependence that is ill understood, that enacts no affection and gives no honor. Every one of us is to some extent guilty of this bad work. This guilt does not mean that we must indulge in a lot of breast-beating and confession; it means only that there is much good work to be done by every one of us and that we must begin to do it.”

— Wendell Berry

“...the care of the earth is our most ancient and most worthy and, after all, our most pleasing responsibility. To cherish what remains of it, and to foster its renewal, is our only legitimate hope.”

— *Wendell Berry, The Art of the Commonplace: The Agrarian Essays*

Never doubt that a small group of thoughtful, committed citizens can change the world;
indeed, it's the only thing that ever has.

Margaret Mead

*Stewardship – (continued)***Claire Gempp Davidson Memorial Conservation Area** *by Sherri Schmidt*

We are beginning a project at Claire Gempp Davidson (CGD) Memorial Conservation Area to potentially increase the number of birds observed in the area. As a start, we wanted to survey the birds currently seen at CGD and I asked Karen Meyer, a member of St. Louis Audubon if the organization could help.

On November 25th Bill Hoss and I met with 3 St. Louis Audubon members (Mary Dueren, Sue Gustafson, and Mike Thelen), to discuss surveying birds currently found in CGD. As a result, the St. Louis Audubon members plan to do the following:

- Four Audubon team members will independently conduct at least one survey each month for the next 12 months starting in December 2017. This will give the project a minimum of 48 (4x12) data sets for the entire year spanning all 4 seasons.
- At the beginning of each month the Audubon members will email me to let me know when they are planning to do their surveys.
- The Audubon members will enter the results in eBird, so the data can be shared. For example, during the survey on November 25, 2017, 23 species of birds were observed and the results were entered into eBird. Here is a link to the eBird page for CGD (is it listed as Davidson Memorial Wildlife Area): <http://ebird.org/ebird/hotspot/L2146120>

One of the members of St. Louis Audubon suggested we do a bird survey after dark, to determine what nocturnal species may exist at CGD. The owl mating season was beginning, so they did an owl prowl on Wednesday, December 20th from 3:30 to 6:30 pm. Brenda Hente, from our Chapter led the prowl and we observed a Barred Owl. A Barred Owl was also observed during a morning survey on December 14th.



Barred Owl was one of 23 bird species surveyed at Claire Gempp Davidson Memorial Conservation Area in 2017. Photo by Brenda Hente

Our Master Naturalist Chapter members are welcome to participate in the surveys. Going forward, I will let Pam Wilcox know the dates & times Audubon members will be performing surveys at CGD each month, so she can notify our Chapter members. If possible, please let me know if you are planning to attend a survey, so I can let the Audubon member know. Several Chapter members participated in the surveys so far - Sean Tracey attended the morning survey on December 14th, and Jack Hambene attended the morning survey on December 20. Bill and I attended the Owl Prowl, and learned a number of interesting things. For example, when I pointed out a stand of Shortleaf Pines in the area, Brenda told us Saw-whet Owls seem to prefer those types of trees.

We appreciate the involvement and expertise of the St. Louis Audubon society. With their help the surveys are much more accurate. Bill and I noted they have observed more species during the last few surveys than we have seen over the past years we have been involved at CGD!

Please let me know if you have any questions or would like additional information about the project.

---- *Sherri Schmidt*



Stewardship – (continued)

Don Robinson State Park Restoration Project -- by Cori Westcott

When Confluence's Bob Coffing asked me if I'd be interested in leading a Great Rivers Chapter project to introduce native Missouri forbs and grasses to the garden spaces near the late Don Robinson's home at the new Don Robinson State Park, I accepted the responsibility.

I pulled Gary Schimmelpfenig in on the plans. I determined the plants based upon sun, soil aspects and what is documented to grow there naturally. I introduced Gary to the park manager, DNR's Erik Otto. Erik agreed to purchase 800 plants that Gary would start up in his greenhouse.

There have been a little more than a half dozen of us that planted and continued to water while weeding the beds through last spring and summer. There's been some annoying populations of non-native irises and yuccas out there to try our patience. All in all, the plantings have been a success. That's in a large part due to our dedication to drive 30-40 minutes, water for a couple hours and go home, often in early mornings of high heat days. I consider it an honor to join in to the ecological restoration process already supported by Miramigoua and the Confluence chapters.

Living St Louis's Segment on DRSP

It may be of special interest to you volunteers who have worked out at the Don Robinson State Park to see this segment from a recent Nine Network's Living St. Louis. Producer Anne-Marie Burger revisits the 2009 interview with Don Robinson and follows up with the opening of the Don Robinson State Park.

www.ninenet.org/blogs/living-st-louis/november-20-2017



Nine Network Producer Anne-Marie Burger on the opening day of Don Robinson State Park

*Stewardship – (continued)***Center for Native Pollinator Conservation** *by Ed Spevak*

Location: Missouri and worldwide
Project Manager: Ed Spevak
Flagship Species: Bumble bee
Priority: High

Background

Pollination is the cornerstone of most ecosystems. Eighty percent of flowering plants need the help of animals to move pollen for reproduction. In addition, around 25% of birds and many mammals from bears to squirrels feed on the fruits and seeds produced through pollination. Seventy five percent of crop plants grown worldwide for food, beverages, fibers, condiments, spices, and medicines are pollinated by animals. Many people take ecosystem services, like pollination, for granted believing that they are invulnerable and infinitely available. However, our actions through conversion of natural habitats, pollution, misuse of pesticides, and the introduction of alien species and diseases have impacted many species and the service they provide.



In North America bumble bees, sweat bees, carpenter bees, leafcutter bees, and the rest of the 4,000+ species of bees, along with European honey bees, are the most important group of pollinators. Though the disappearance of honey bees has made headlines, we may be experiencing a loss of native bees on a greater scale than honey bees. Franklin's bumble bee was last seen in 2006 and may be extinct. Several other species of bumble bees, masked bees, mason bees and digger bees in the U.S. have disappeared across their ranges. These species may be disappearing due to pesticides, loss of habitat and the introduction of diseases.

St. Louis Interest

The Center for Native Pollinator Conservation (CNPC) works to save pollinators on several levels - from backyards to the far corners of the world. In 2008, the Center, with the University of Illinois-Urbana-Champaign, produced the first guide of bumble bees in Illinois and Missouri. The CNPC is committed to producing additional identification guides for local and regional bumble bees and other native bees for students, researchers, farmers, and citizen scientists. The Center conducts bee surveys within the St. Louis area to examine bee diversity and abundance and identify possible areas of conservation concern. At the community level, the CNPC is beginning work with community garden groups, like Gateway Greening, to educate individuals about native bees and develop best bee practices for local gardens.

In 2010, the CNPC teamed up with the Xerces Society for Invertebrate Conservation and the Missouri Department of Transportation to begin developing pollinator rights-of-way. This plan involves improving roadsides by planting them with native plants for pollinators and to develop pollinator gardens at rest areas and welcome centers to help visitors learn about the importance of pollinators and what they can do to help.

Nationally, the Saint Louis Zoo organized and hosted, with the Xerces Society, University of Illinois, and USDA-ARS Bee Research Laboratory, a Species Conservation Strategy Workshop for North American Bumble Bees. Experts from across North America, Europe and Japan representing universities, government agencies, and conservation organizations, met to develop a comprehensive conservation and research action plan for North American bumble bees to help direct the conservation and research efforts of the CNPC as well as the work of other organizations dedicated to bumble bee conservation.



Stewardship – (continued)

Internationally, the Center helped establish and organize the IUCN/SSC Bumblebee Specialist Group (BBSG). Our first initiative is to organize a world-wide network of bumble bee researchers to undertake the task of examining all 250 species of bumble bees to establish their conservation status. This will help focus conservation efforts on the bumble bee species of greatest concern.

Goal

The Saint Louis Zoo's WildCare Institute Center for Native Pollinator Conservation (CNPC) was initiated to focus on the importance and diversity of native pollinators, especially native bees, for the maintenance and survival of wildlife, ecosystems and agriculture. The goals of the Center include:

- Educating people about the importance of pollinators for the plants and wildlife around them and in their own lives
- Developing and supporting local, national and international collaborations to develop pollinator conservation programs and research
- Advancing our understanding and appreciation of native bees and other pollinators.



A male blueberry bee was identified and photographed in 2012 at Missouri Botanical Garden by Ed Spevak of St. Louis Zoo. This is the first reported sighting of these bees since the 1930s.

Bumble bees, next to honey bees, are probably the most recognizable bee and are the flagship species of the Center. Worldwide there are 250 species with around 50 species in North America. These large and attractive bees are integral to the survival of many plants, the wildlife that depends upon them and the pollination of many of our crops.

Conclusion

Bees are keystone species and vitally important to the proper functioning of ecosystems as well as to maintaining the beauty of nature around us. And yet we know little about the behavior, ecology, distribution, and conservation status of most bee species.

To help save the bees, it is necessary to think about how we interact with the environment around us. The Center for Native Pollinator Conservation is working through collaborations, research and education to expand our and the public's knowledge about the importance of bees and other pollinators, working to develop conservation actions that will help them, and ultimately, us.

SOURCE: Extracted from the St. Louis Zoo WildCare Institute website at

www.stlzoo.org/conservation/wildcare-institute/center-for-native-pollinator-conservation



Stewardship – (continued)

Shaw Nature Reserve Volunteer Appreciation *by Cori Westcott*

On December 5th, the staff of Shaw Nature Reserve put on a delightful afternoon of refreshments, gifts and camaraderie. The nature photographer Danny Brown, astounded us with his amazing photographs of creatures he’s taken over time within the boundaries of SNR.

The event was held at the Dana Brown Overnight Center. Past and present volunteers and staff also attended, including newly retired Helen McCallie, and recently retired director John Behrer. It was a fun time.

In the photo are Great River’s members: Cori Westcott, Ann Earley, Vaughn Meister and Yvonne Van Der Ahe.



Missourians for Monarchs *Master Naturalists & Master Gardeners*

A statewide partnership to provide plentiful and high-quality habitat for monarch butterflies and other pollinators

As Monarchs lose more and more of their habitat on agricultural lands, our backyards have become increasingly important, as well as monarch waystations installed in and around the St Louis Area. The following Missourians for Monarchs newsletter contains valuable information for gardeners, naturalists and community spaces. The Great Rivers chapter has done a great job with establishing monarch gardens all across the city and county.

For more information, follow the Missourians for Monarchs blog site:
<http://missouriansformonarchs.blogspot.com/>

To join Missourians for Monarchs-Master Naturalists & Master Gardeners and view their current newsletter, call Bob Lee at 314-496-5332 or email at mo4monarchs@gmail.com.

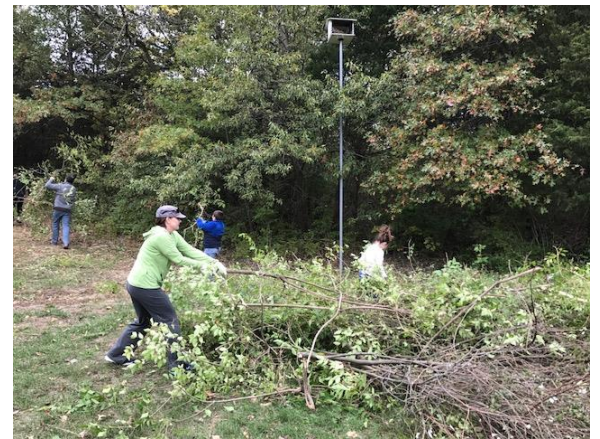




Stewardship – (continued)

Uthoff Valley Elementary School Honeysuckle Hack by Tessa Wasserman

On Sunday, October 29th, students, scouts, parents and Missouri Master Naturalists came together to tackle bush honeysuckle at Uthoff Valley Elementary School in the Rockwood School District. Fifth grade teacher, Jennifer Soetaert teamed up for the second time with Tessa Wasserman and Bill Hoss to continue progress made from last year. Bushes were marked to help first timers and tools were shared from Greenway Network’s borrowed kit. Peggy Parr also lent a very helpful hand from Great Rivers as well as Bill felling two big autumn olive trees.



Bush Honeysuckle (*Lonicera maackii*)



Stewardship – (continued)

Webster Groves Make a Difference Day *by Tessa Wasserman*

On October 28th, it was Make A Difference Day in Webster Groves. Vaughn Meister, Bill Hoss, and Tessa Wasserman helped guide community members along with the Parks Department to plant over 240 trees from Forest ReLeaf of Missouri. New trees and shrubs were placed in Deer Creek Park to restore habitat lost from the total elimination of bush honeysuckle that took 5 years!





Stewardship – (continued)

Forest Releaf by Liana Kopp

A huge thanks to everyone who came out to our hoop house workday on November 13, 2017! We had 30 people come out to help and we got the work done really quickly. If you want to check out some of the great photos Lee took follow this [link!](#)



The nimble crew of volunteers at Forest Releaf barely looks out of breath after construction and filling of the hoop house this fall.

We also had 2 more successful planting projects over the weekend. Saturday, November 11, we put 20 trees in the ground in the Jeff VanderLou neighborhood as part of our Ward 5 Ash replacement project. On Saturday, 30 trees were planted at Fairground Park. Thanks to everyone who came out to plant tree with us!

Liana Kopp
Volunteer Programs Coordinator
Forest Releaf of Missouri
www.moreleaf.org



Great Rivers Outreach and Education – Fall 2017

Outreach and Education efforts of Great Rivers chapter members are important cornerstones of the Missouri Master Naturalist program that support its mission month after month. As shown in the last edition of the Gazette and again here, members prove that education is a priority.

Volunteer nature educators work with local schools, communities, and the media to teach the value of preserving habitat and the flora and fauna that it supports. Their educational activities span a wide range of interests, some of which can be seen in this edition – from owl prowls and bird walks, serving as guides in local nature centers and sanctuaries, mentoring classroom Stream Teams, and supporting the MDC Discover Nature program as instructors and coaches.

We can make a difference, and I believe we are doing that in a most effective way.

Cheers to Great Rivers members for all of your hard work and dedication to the cause.

Missouri Master Naturalist Mark Glenshaw -- Enjoy Beginner Bird Walks and classes in Birding Basics with experts from Forest Park Forever!

Beginner Bird Walks are led by Forest Park Forever Park Ecologist Amy Witt and volunteer Mark Glenshaw ("the owl man"). Co-sponsored by Forest Park Forever and St. Louis Audubon Society, these walks highlight some of the best urban birding in St. Louis. Known as one of St. Louis' great migrating passerine hotspots, Forest Park also provides a home to many other bird species that breed or overwinter in Missouri. Join us on our walk outdoors as we find birds together in various areas in Forest Park's Nature Reserve.

- All ages and birding levels are welcome
- Free and open to the public
- No special equipment needed
- Please wear comfortable walking shoes and dress appropriately for the weather

More information at

www.forestparkforever.org/bird-watching/





World Bird Sanctuary

Member Brenda Hente spends many hours volunteering at the *World Bird Sanctuary*. She just received a 2017 Volunteer of the Year award from World Bird Sanctuary and it's easy to see why she would be recognized. Brenda has over 1,500 hours of volunteer service-over 600 hours in this year alone- which includes bird banding, presenting owl programs, working special events, writing curriculum, planning summer camp activities and being a member of the Fete Du Feather fundraising committee. Whew! Brenda is shown in the picture with Dawn Griffard, Interim Director of World Bird Sanctuary.

Congratulations Brenda!





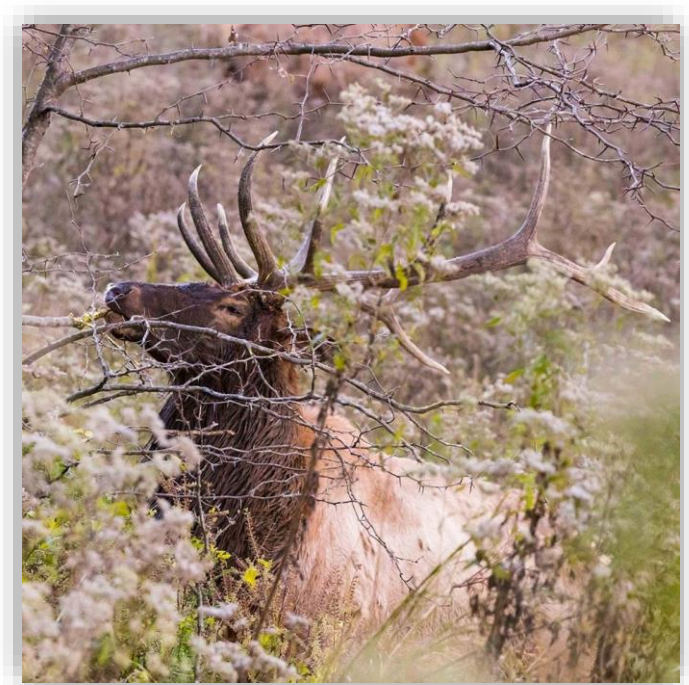
Hidden Gems of St Louis County Parks

by Sandy Brooks

Great Rivers “artist in residence”, Sandy Brooks, started a natural history calendar project earlier this year. Several Great Rivers members joined Sandy in her efforts. Below is her update.

If you wish to participate, please contact Sandy at the email address below.

Thank you to my photographic volunteers who attended the training session in October in preparation of creating artistic and accurate images to help the public identify native plants and animals as well as where they are located in the county park system. The St Louis County Parks is currently working with the Parks IT Department and the calendar should be ready soon. To see it is the meantime, check this [link](#). The calendar includes a link from the floral or fauna to information about it on the MDC website, a link to the directions to the parks where it can be found, a link to botanical artwork if appropriate and a link to MoBot Kemper Center for home gardening for those interested in adding the plant to their garden. Our group will be adding the close up photos so one can actually identify the plant as well as environmental/habitat photos. Attached is a close up image similar to the style we are using.



The lone elk at Lone Elk County Park
---photo by Sandy Brooks

Once the calendar is on the Parks website, I will be contacting schools and other programs and a notice to the public will be on the Parks website to invite everyone to participate in the Hidden Gems Scavenger Hunt. The Scavenger Hunt is the invitation to the public to explore, find and learn about our environment through the events calendar and the County Parks. Those who choose to take photos are welcome to upload them to the [Hidden Gems Facebook page](#). Once a month, the best image for that month will be selected for a prize at Schiller's Camera Company. In October, we will host a photo exhibit of the best images from the parks.

Anyone interested in participating, please email me!

Sandy Brooks Ed D PPT PCS

1511 Mason Hill Ct

St. Louis, Mo 63131

314 965 4975

<http://www.academyofnatureandwildlifearts.org>



Outreach and Education (continued)

Missouri Stream Team with Montessori Adolescent Program Students

This fall two classes of students at Chesterfield Montessori School and St. Louis Montessori Adolescents Program joined forces to monitor the water quality of their site on Bonhomme Creek. Bob Virag, who recently certified as Level 3 Volunteer Water Quality Monitor and Stream Team Mentor, guided the two groups through the event. Here is what the students reported on their school’s website. The greatest honor is the selection of a favorite occupation as STREAM TEAM!

The Amazing World of Macro -Invertebrates!

Twice a year the students in the Chesterfield Montessori Adolescent Program monitor the water quality of the Bonhomme Creek located on the MAP Land Campus. On October 19th, we did the first of these monitors. There, we examined such things as the acidity of the creek, the clearness of the water, and the wide variety of (tiny) wildlife in this underwater habitat. We are happy to report that our creek has received an excellent water quality rating. Levels are low but life is plentiful!

Thanks Bob Virag, our local Missouri Stream Team expert, and MAP St. Louis for joining us. We had a great day!



Week in Review- Friday, October 20

Mathematics: Proportional reasoning, ratios and percents, quadratics, exponential functions

Language: Introduction to Gothic Literature, *A Rose for Emily* by William Faulkner, *The Haunting of Hill House* by Shirley Jackson, identifying literary elements, creative writing

Occupations: STREAM TEAM!!!!!!!!!!!!!!!!!!!!

Humanities: Model UN, *The Romani* seminar

Expressions, Visual Arts projects, Intro. to bike maintenance (how to change a tire and fix a chain)

Micro-economy: Pumpkin Hunt planning and prep

See more at: cmsadolescentprogram.com/2017/10/20/the-amazing-world-of-macro-invertebrates/



Montessori teacher Melissa Urspruch (center) and her class of St. Louis MAP students and teacher Mike Hill (right) and his class of CMS students joined forces this fall to monitor the water quality of Bonhomme Creek.

-- photo by Bob Virag



Even with very dry conditions and low water levels, the diversity of the 10 species of macroinvertebrates in Bonhomme Creek had a weighted score of 24 – Excellent.

- photo by Bob Virag



Missouri Department of Conservation – Discover Nature – Fishing Program FISH St. Louis CUP Competition -- by Kevin Meneau, MDC Fisheries

Kevin Meneau, MDC Fisheries Biologist at August Bush Memorial Conservation Area, organized a high school level fishing competition for schools in the St. Louis area. Qualifying rounds for the FISH STL CUP competitions will take place in the spring 2018 and the final playoffs are planned for the spring of 2019. This fall student teams were provided the opportunity to practice for the competition on two occasions at lakes in Bellefontaine Conservation Area and August A. Bush Memorial Conservation Area. MMN-Great Rivers member Bob Virag served as a coach and referee among the group of eight other MDC volunteers that supervised the events.

The following is Kevin Meneau’s summary of the two practice events:

Below is a summary of our November 19th FISH STL Cup competition which should also be making it to MDC’s FACEBOOK page soon. Thanks for your help during 2017 and I look forward to your help in 2018! I’m sure the attached dates will change, but here is what I’m thinking for 2018.

On November 19th, the FISH STL Cup fishing competition continued at the August A. Busch Memorial Conservation Area’s lakes 1, 2, and 15. This second event saw 34 high school-age St. Louis City and County anglers from 8 teams participate. Congratulations to Chaminade, Kirkwood, Marquette, Lindbergh, Parkway West, and St. Louis University high schools for fielding teams to brave a severe cold front which presented challenging conditions for fishing. However, the cold didn’t stop the Lindbergh 1 team from catching a legal limit of largemouth bass worth 182.3 points for first place! Lindbergh’s Team 3 took second place with 114.1 points, while Chaminade High School placed third with 80 points. The Lindbergh 3 team also caught the big bass of the day – at 17.3”. MDC welcomes more teams to join us and compete during the spring 2018 FISHSTLCup qualifying rounds. The championship tournament for the fishing cup will occur in spring of 2019, to celebrate the 50th anniversary of St. Louis Urban Fishing Program. Use hashtag #FISHSTLCUP to follow the competition and fun!

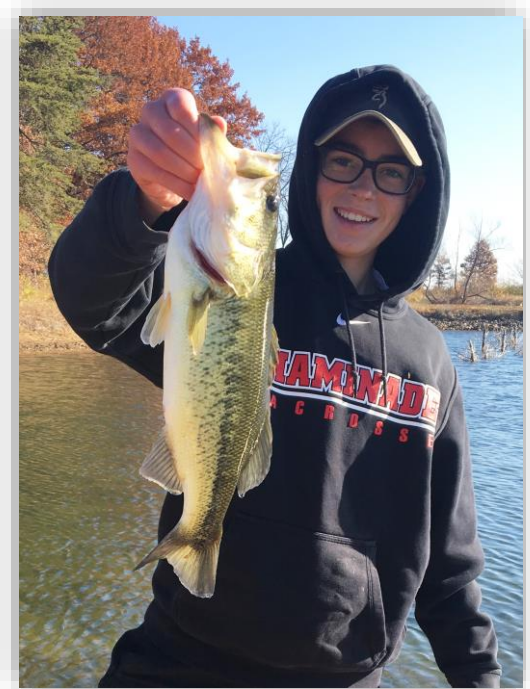
See more on MDC’s Facebook pages at

www.facebook.com/moconservation/posts/10155977388152962

www.facebook.com/moconservation/posts/10155812099527962

FISHSTLCup Qualifying Round Events - 2018

<u>Date</u>	<u>Species Event</u>	<u>Location</u>
March 18, 2018	Trout	Boathouse Lake in Carondelet Park
March 25, 2018	Bass	January-Wabash Park Lake in Ferguson
April 1, 2018	Panfish	South Lake in Willmore Park
April 15,-2018	Bass	Boathouse Lake in Carondelet Park
April 29, 2018	Catfish	South Lake in Willmore Park
May 4,-2018	Panfish	Bellefontaine Conservation Area



Chaminade High School Senior Blake Hardy with one of his two prized largemouth bass catches during the practice session at August A. Bush CA
-- photo by Bob Virag



Great Rivers Photo Contest

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

Fall Website Photographs



– Photo by Barb Cerutti



---Photo by Renee Benage



Hoar Frost--Photo by Glen Horton



Trumpeter Swans – Photo by Sandy Brooks



Trumpeter Swan – Photo by Sandy Brooks



Trumpeter Swans – Photo by Sandy Brooks



Great River Citizen Science – Fall 2017

The Audubon Center at Riverlands – Trumpeter Swan Survey 2017/2018

– by Michael Meredith

This year’s count of the migrating trumpeter swans got off to a record breaking start with 1,089 recorded by the team of volunteers from St. Louis Audubon Society and the Missouri Master Naturalists (Mary Dueren, Jack Hambene, Bob Virag and Michael Meredith among them). Then that record was eclipsed on Jan 2, 2018 when we counted 1,377! When you consider that just 15 years ago there were only 5 migratory visitors, that’s a remarkable validation of the habitat rehabilitation work that’s been performed by the U.S. Army Corps of Engineers, Missouri Department of Natural Resources, the Department of Conservation and other partners... often with volunteers from the Master Naturalists.



Trumpeter Swan pair departing Heron Pond for a predawn breakfast in the nearby fields --- photo by Michael Meredith



Trumpeter Swans at Heron Pond during the predawn survey -- photo by Michael Meredith

This represents citizen science at its best! Native plantings and the ongoing eradication of invasives have created an ideal habitat for the trumpeters; and volunteers willing to brave the cold and dark before sunrise gather the data used to monitor the rebounding population.

All you need to participate is a keen eye and a willingness to get up early in the morning... very early.

It helps to have a spotting scope or telephoto lens, but volunteers are always paired up with a spotter (and their scope) and recorder. Extensive birding knowledge not required. The Cornell Lab of Ornithology receives and maintains the data for use by scientists and conservationists around the world.

If birds are your thing, consider the diversity that Riverlands attracts: Canada Geese, Snow Geese, Greater White-fronted Geese, Mallards, Ring-necked Ducks, American Coot, Northern Pintail, Green-Winged Teal, Gadwall, Canvasback, Lesser Scaup, Common Goldeneye, Hooded Merganser, Red-breasted Merganser, Ruddy Duck, Horned Grebe, Pied-billed Grebe, American White Pelican, Great-blue Heron, Northern Harrier, Bald Eagle.

It’s much more than cold early mornings out in nature. In my case there is the indescribable joy that I feel when I get out of my vehicle and hear the noise that hundreds of trumpeters make, and the chills that travel up my spine when I hear the incredible sound of wings beating the air as some of them take flight. In my humble opinion, this is what being a Missouri Naturalist is truly about.

Below is a thank you note from Trumpeter Swan Survey Project Leader Pat Lueders of St Louis Audubon Society.

Hello everyone: Thanks for the great response and turnout we had for the December 5th watch. We welcomed back typical Riverlands weather, very cold and windy! Again, all of the roosting swans were in Heron Pond and its lower extension. We had fewer swans than the last count, which we could tell would be the case from the visual survey at dawn

Thanks again to Jean Favara for having a nice pot of hot coffee waiting for us at the Audubon Center. We had a visitor from Guyana, birding tour guide Leon Moore, who helped with the count and the field trip. He talked with us about the shorebird situation in Guyana and South America. He’s pretty sure it was the coldest day he’s ever been out birding. During our field trip, we got scope views of the continuing Red-throated Loon and his buddy, a Common Loon, at Lincoln Shields.

---Pat Lueders



Citizen Science (continued)

Lakes of Missouri Volunteer Program --- by Tony Thorpe, UM Coordinator, LMVP

The Lakes of Missouri Volunteer Program (LMVP) enlists volunteer monitors 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.



University of Missouri

Missouri Department of Natural Resources



Secchi Disk monitoring of water clarity -- Photo by Tony Thorpe

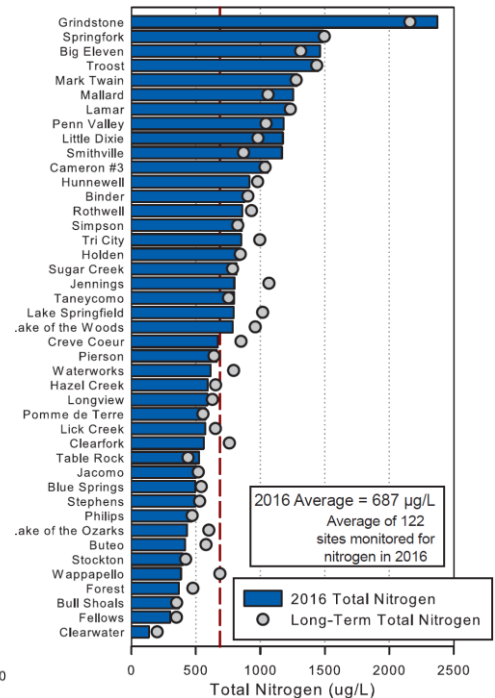
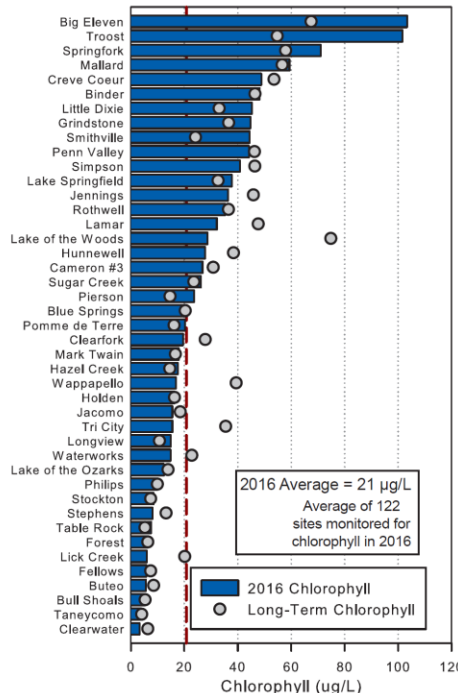
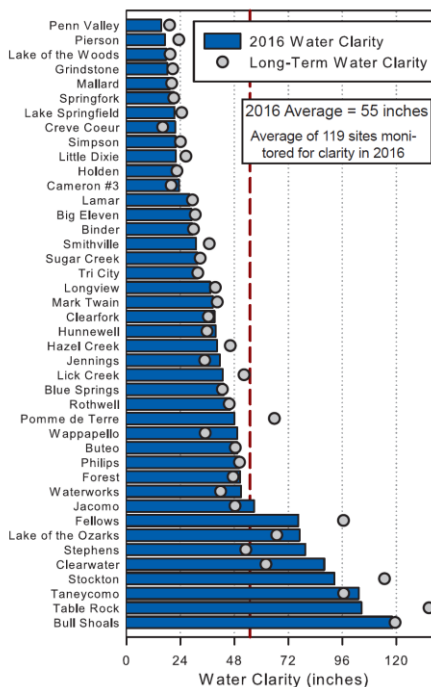
LMVP volunteers monitor at 3-week intervals from late spring to early fall. Samples are processed in the volunteers' homes using laboratory equipment provided by LMVP. The processed samples are stored in volunteers' freezers until picked up by LMVP staff. Samples are subsequently analyzed at the University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



Bob Virag monitors water clarity of Creve Coeur Lake and Mallard Lake using a Secchi Disk --- photo by Tony Thorpe

LMVP data are "research quality" and have been used in several scientific journal articles. One study (Obrecht et al. 1998) shows LMVP data to be of comparable quality to data collected by employees of the University of Missouri. The LMVP data set provides 25 years of quality data for some of Missouri's most popular lakes.

Here is a sampling of ranked summary data from 40 popular lakes in Missouri for clarity, Chlorophyll, and total Nitrogen.



For more detailed information see the LMVP website at www.lmvp.org To join this important program, contact the University of Missouri LMVP Coordinator, Tony Thorpe, at 1-800-895-2260 or email tony@lmvp.org



Missouri Stream Team – St. Louis Region Winter Chloride Project -- by Bob Virag

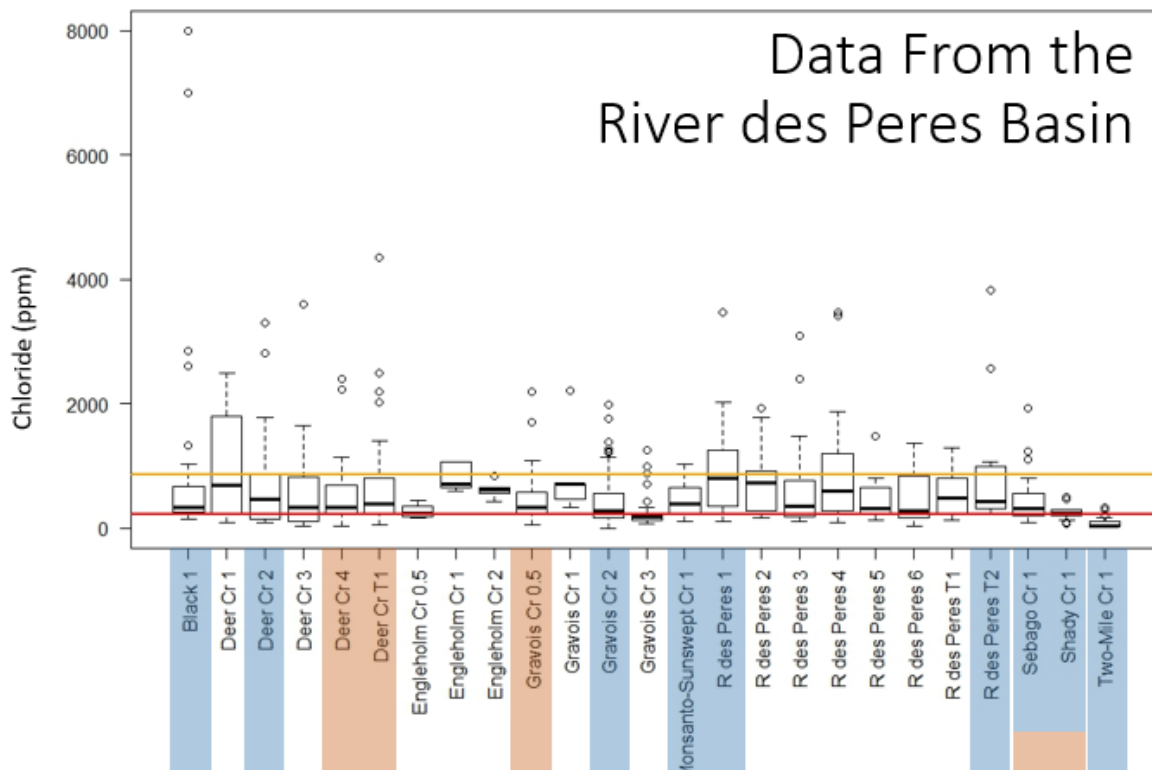
Yeeow! The weather turned cold and icy again. You know what that means! Pour on the ROAD SALT! I wish it weren't so, but that's what scores of Missouri Department of Transportation trucks and hundreds of private contractors are doing right now...on every inch of hard road surface in the county. As important as this is to help reduce the winter traffic accident rate, all those thousands of tons of road salt applied in the winter will eventually end up in a ditch, then a creek, then a stream and eventually into our Big Rivers.

The physiology of fresh water inhabitants of our creeks and streams is not well adapted to elevated concentrations of Sodium Chloride and for some the stress is far too great. That's why **Danelle Haake**, PhD Candidate, St. Louis University and MoBOT Restoration Ecologist, proposed a massive study of the chloride concentrations in St. Louis County streams nearly 10 years ago and won several grants to study it.

On December 4th, Danelle called again for volunteers in what may be the last season of Winter Chloride monitoring project. Over 30 volunteers donated their time to the project, including 8 intrepid Master Naturalists: Claire Meyners, Rich Lesage, Susan Orr, Brenda Switzer, Shawn Thomason, Bob Virag, and Cori and Al Westcott from Great Rivers chapter, and Glen Bish and Steve McCarthy from Confluence chapter. Everyone is expected to trudge out to their local creek sites on a weekly basis – regardless of weather- to sample the water for chloride concentration, pH, conductivity, and temperature. Data are logged in a central database and Danelle summarizes the result.

Here are the 5-year data summaries from 2012 to 2017. There are several creeks with extremely high levels of chloride, greater than the EPA fresh water short term acute toxicity limits (>860mg/L shown as a **YELLOW line**) and long term chronic toxicity limits (230 mg/L, shown as a **RED line**) For more information on the project, follow Danelle Haake's blog at www.dhaake.weebly.com or follow this link to [Danelle Haake's 2016-2017 protocol](#).

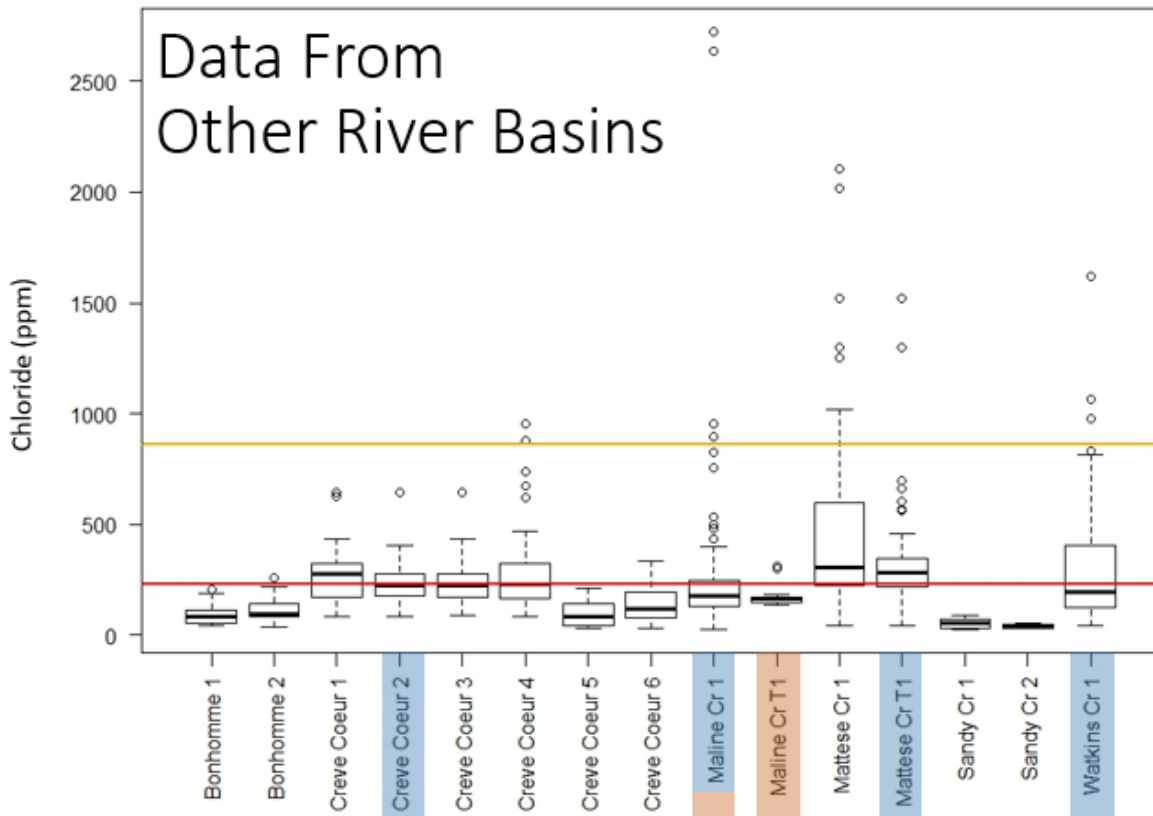
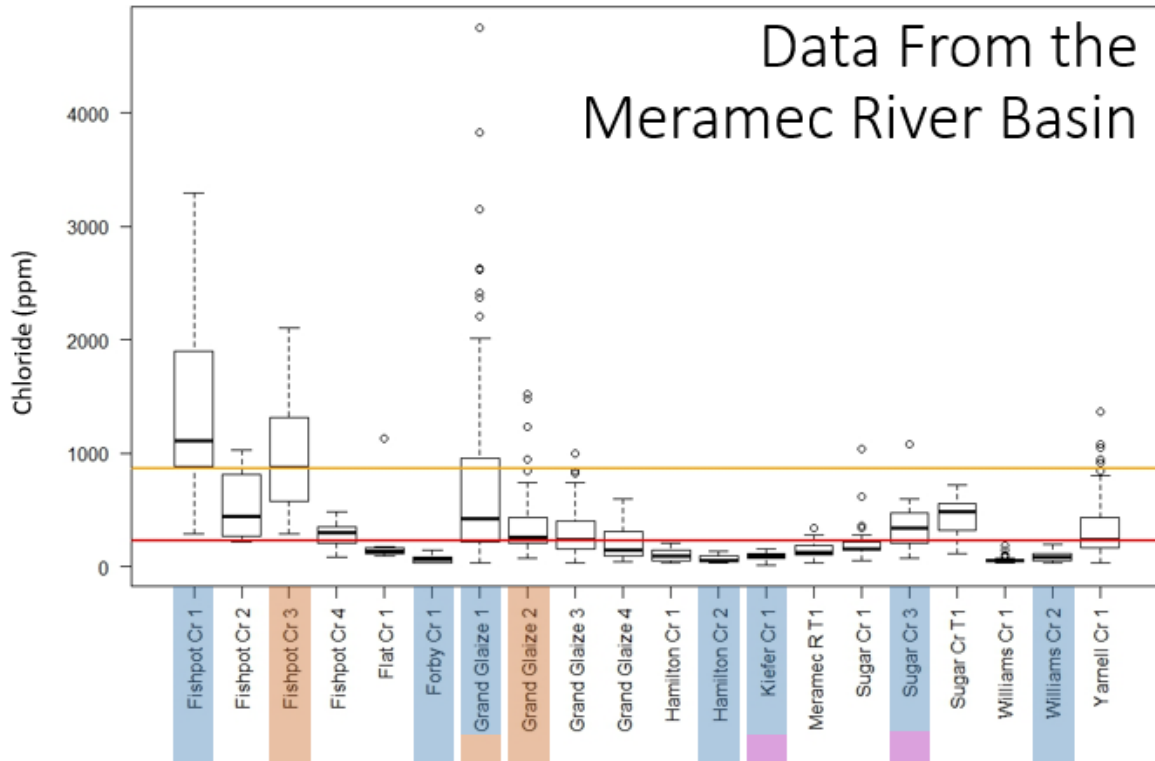
Winter Chloride Box Plots 2012 to 2017





Citizen Science (continued)

Winter Chloride Box Plots 2012 to 2017 (continued)



If you wish to learn more about this important program or join as a monitor for the remaining streams, contact Danelle Haake at danelle.haake@gmail.com



Great Rivers Advanced Training Advanced Training Speaker Series – Fall 2017

October 17, 2017

“Thinking like a River Valley: Riparian Area Conservation in an Ecological Civilization”



Presentation by **Jay Fish**, Great Rivers Ecology Instructor and Director of Campus Honors Environmental Research Program at University of Missouri – St. Louis

Jay Fish spoke of the Missouri River as an example of how our culture can transform our relationship to our rivers to move into a future of ecological healing. He gave us a deeper look at how we can take on this challenge and the roles we can play as watershed citizens.

In a recent evaluation of the Missouri River Basin, the watershed received a C on its report card. The good news is that its riparian area ecosystems got a C+; but America’s Watershed Initiative indicated that the Missouri River Basin and its riparian ecosystems are facing significant challenges as we move forward toward a healthy river system that harmoniously serves people, communities, wild nature.

The great work of changing from an industrial civilization along our great rivers to an emerging Ecological Civilization will not be accomplished by professional ecologists, river managers, or conservation agency resource managers. The great task of bringing about an ecological civilization will need to engage a much broader section of American society.

A first task for river advocacy networks is to help people think like a river valley and develop Aldo Leopold’s ecological consciousness. The ability to think like a river valley will enable citizen ecologists to effectively work with river managers and natural resource professionals to imagine how people, human communities, migrating birds, sturgeon populations, and wild ecosystems can live creatively, dynamically, and harmoniously in the Missouri River Basin.

November 17, 2017 No Advanced Training - VOLUNTEER FAIR

December 21, 2017 No Advanced Training - HOLIDAY PARTY



Advanced Training Speaker Series 2018 Calendar

01/16/2018	Brenda Hente	Owls of Missouri
02/20/2018	Jean Ponzi	Home Recycling
03/20/2018	Malinda Walter Slagle	Pollinators
04/17/2018	TBA	
05/15/2018	Simon Warren	Bokashi Method of Recycling
06/19/2018	no speaker	Picnic
07/17/2018	David Bruns	Spiders of Missouri
08/21/2018	Ned Siegel	Rain Gardens
09/18/2018	Kevin Meneau, MDC	Fish of Missouri
10/16/2018	TBA	
11/20/2018	no speaker	Volunteer Fair
12/18/2018	no speaker	Holiday Party



Great Rivers Member Milestones

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



Cori Westcott

Congratulations to Cori Westcott on earning her 5000 hour milestone award.

When I finished initial training and joined the Great Rivers chapter back in 2010, the three chapters' calendars led me down a smorgasbord of conservation/education adventure! I simply transferred to my own calendar advanced training and service opportunities that tickled my fancy.



Our class had a field trip to Shaw Nature Reserve. We were split up. The director John Behrer led one team. My team followed a high-energy and enthusiastic biologist named Dr. James Trager. I was hooked. Woods and prairie and all resident creatures has always pulled me in. I

immediately signed up to volunteer under Dr. Trager. Once a week, I devote a morning to do all kinds of activities including killing stuff (more invasives than your average bush honeysuckle although there's plenty of that too), collecting, cleaning, processing or sowing seed, attending prescribed burning events (I'm a certified fire manager.) and ant curator. It never gets old.

The ants have served their purpose and we're clearing them out. Dr. Trager finished a paper reclassifying the Polyergus family of ant species. While he worked on the paper, I transcribed all the data on the labels on each specimen pin. At one point, we had to re-label the specimens to reflect their new classifications that Dr. Trager discovered. I then packed them up and returned

them to various natural history museums and universities around the world. He had to study Polyergus specimens from all known sources around the world in order to reclassify the individual species which includes Missouri's.

At the same time, I discovered the bird banding study at World Bird Sanctuary. They run 40 foot long by 8 feet tall nets with inch squares all made of black all-purpose thread. They set up about fifteen at a time along a woodland trail and visit them every fifteen minutes. Records are taken on what birds are found, many are migratory songbirds such as warblers that only seasonally pass through our state. I soon left this service but not without offering to take home their nets in need of repair in the off-season. Many MMN volunteers from all three chapters joined me in this effort. We provided a valuable support to their research for a few years.

I began leading an ecological restoration of the city of Manchester's Seibert Park in 2011. Once we cleared the park of honeysuckle, the city learned the park had more land than they realized! There's been more invasives to control. When you have a creek, you have the results of seeds deposited by the water from sources upstream. We've cleared garlic mustard, white and yellow sweet clover, crown vetch, tree-of-heaven, mimosa, Japanese honeysuckle (a vine), Japanese hops, wintercreeper, vinca minor, Johnson grass. We've introduced redbud, Ozark witch hazel, silky and roughleaf dogwood, arrowwood, spicebush, ninebark, American beauty berry, New England aster, cup plant, common milkweed, wild senna, purple rocket, palm sedge, river oats, American beakgrain. Much of this comes from our harvesting seed from our home gardens and sowing in the park.. I used a



\$200.00 cash stipend to seed two large butterfly gardens taking roughly 3,000 square feet. There's several habitats there. There's prairie, riparian corridor, bluff, forest. We've cleared maple saplings that inhibit sunlight from the forest floor. We plant trees and shrubs from George O. White nursery. Seibert continues to evolve. More and more native additions take hold. I see more and more animals than before. We do keep an inventory of plants, birds, mammals, insects and reptiles. What a diversity for not quite three acres! Recently, a fellow earning his Eagle Scott status has built a kiosk near the first butterfly garden. He's installed four stepping stones representing the stages of a monarch's life cycle. The kiosk will hold laminated posters teaching the public what is happening in the garden that time of year. The spring poster could alert the visitors to look for monarch caterpillars. The winter poster will explain the value of leaving the gardens stems to stand for beneficial overwintering insects.

There's a new opportunity to reach out now. Manchester puts out a quarterly newsletter. The editor asked me if I'd be willing to write a 175-word article related to natural happenings in Seibert. It will end with a line to invite anyone to learn more by calling the office and joining in the restoration efforts. I hope it eventually engages the residents to become involved in sustaining their own parks and building more habitat in their own landscapes.

Now, our work with the city of Manchester has expanded to their larger park where their community pool and their new office building is located, the Paul A. Schroeder Park.

Years ago, anyone starting out in Missouri Stream Team had a mentor to help them become familiar with the monitoring process. Her name was Darlene Haun. She has since moved to Springfield, MO. It's because of her that I have coordinated the monitoring of eighteen sites within the Grand Glaize Creek watershed in the Grand Glaize Creek Assessment Project. She and Bob Jung began the project and ran it for five years. I've continued it for another five years. Most of the confluences of tributary and main channel are represented by those eighteen sites. I remind volunteers of what elements to cover and when. They text photos to me that I name the files and

email to DNR. They send the forms to me. I transcribe the data into a spreadsheet and share with the participating volunteers and landlords who give us permission to walk their properties. Claire Beaudoin, husband Al, Susan Orr, Michael Smith and Richard Lesage are all Great Rivers members who participate in the team of nine. According to DNR's Karen Westin, the GGCAP is the only one of its kind in the state. I also collect weekly chloride readings on the Grand Glaize creek in Seibert Park for Danelle Haake's study of the affects of road salt on the region's waterways. I understand this will be the last year for collecting this data. I'm looking forward to her findings when all the years' data are in. This is her graduate study.

I learned about the interdependence of Missouri's plants and animals through the St. Louis Audubon Society's Bring Conservation Home. Mitch Leachman and Dave Tylka gave our chapter a presentation on their new program, Bring Conservation Home. The idea of neighbors visiting a neighbor's home and consulting them on what Missouri habitats could be introduced in their landscapes to invite wildlife activity at home thrilled me! I am fascinated with the myriad of interplay within Missouri's natural communities. We are lucky to live in a state with so many diverse ecosystems. I have visited 110 homes and written that many reports. I've compiled a list of Missouri's plants that host Lepidopteron species for Missourians for Monarchs. Their growers are seeking to add more host plants to the extensive monarch-supporting habitats they're installing statewide. That has led to me writing articles on critter and host plant pairs, interesting wildlife encounters, etc. They get published sometimes in the Gazette, the Bring Conservation Home blog, the St. Louis Wild Ones, the Shaw Nature Reserve Plant School newsletter and others.

Our UME chapter advisor Nathan Brandt asked if I would mind monitoring chapter members' hours and ordering pins and certification kits in early 2012. I was happy to do it. It's been my objective to learn members' names so that when each one reached a milestone or certification, I could reach out to them, hand them their award and congratulate them. We all know what it takes to reach those milestones. It's effort and dedication. It's important



to me that they don't have to wait long to receive that recognition. Sometimes, there's a snag with a badge order in the Jefferson City office. On rare occasions, the vendor has lost the order. I need to review my orders to keep in mind what doesn't show up and continue correspondence until the badge arrives.

Years ago, we had a calendar that could only be managed by a single individual. I started a Google calendar that is still used today. I put stuff on there but so do other members now. Remember that I relied upon the three chapters' calendars to learn what opportunities there were. I know or at least I hope there are other members who haven't found their special niche yet who find opportunities to try on these calendars.

Once our website was migrated, it became more user-friendly. I wanted it to continue to appear as a "living" document. That's when I began the seasonal photo contest. Six new images are posted in the slideshow background each season. The Gazette staff are now

finding ways to utilize images not selected for website use.

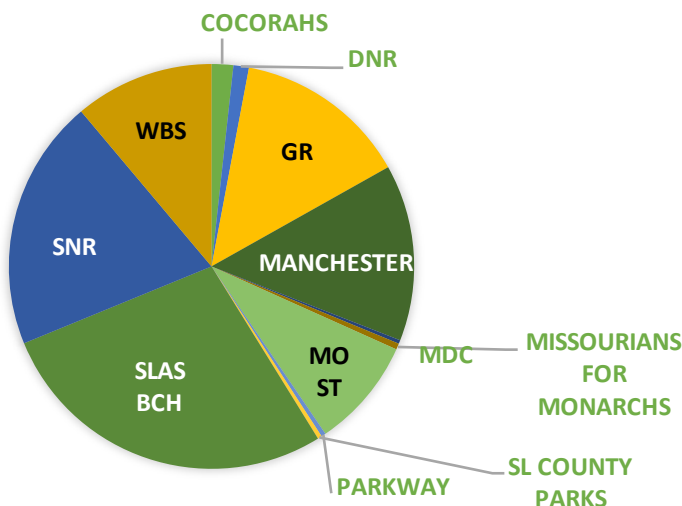
I served two terms as president of the chapter. All service on committees and the board are all reportable hours. It was an honor to serve and a fun adventure, too!

I've logged contributing hours to Community Collaborative Rain, Hail and Snow Network (COCORAHS), Department of Natural Resources (state parks), St. Louis County Parks, Parkway School District and MDC.

All these projects began with an idea! Don't discard those ideas. Nurture them along. Submit them to the projects and partners committee. It could be just the thing that other members having been waiting for!

I hear now from Nathan Brandt and Amy Wilkinson that the state is considering a 7500-hour milestone pin. Rumor suggests it is holding a tiny sapphire. Hm. The pins are nice but what's most rewarding of all are the friends you cultivate along the way. I can't imagine my world before you folks enriched it!

CORI'S HOURS DISTRIBUTION



Hours	Organization
87.25	COCORAHS
62.00	DNR
699.00	Great Rivers
710.00	Manchester
14.50	MDC
24.50	MO for Monarchs
442.00	MO Stream Team
18.00	Parkway
17.00	SL Cty Parks
1,390.00	SLAS
1,011.00	SNR
560.00	WBS
5,035.25	TOTAL





Great Rivers Member Milestones (continued)



Glen Horton

Congratulations to Glen Horton on earning his 1000 hour milestone award.

Obviously, Glen is passionate about nature and does all he can to give back and improve various locations in the St Louis Area.

First I was a Missouri Nature Knight

A teacher at Mint Springs #36, a one-room grade school in Douglas County, sparked my interest in the natural world. Miss Agee was what today we would call a progressive teacher. Even though our family farm was a daily parade of nature her introduction of the Missouri Nature Knights program sponsored by the Conservation Commission was informative. Thinking back on that program that I participated in some 65 years ago was actually the beginning of becoming a Missouri Master Naturalist.



Glen Horton sorting seeds at Forest Park Forever

When we moved from the Ozarks to St. Louis in late spring of 1956 we lived in a six family apartment not far from Forest Park. Almost daily my brother and I would hike over to the Park with packed lunches and explore the park. Forest Park became to us the farm that we had to move from, though much larger.

Today I am a member of the Tuesday crew of the Nature Reserve Team of Forest Park Forever. Participation in the Master Naturalist program and volunteer work with the Forest Park Forever Nature Reserve Team is a small way of giving back for all that Forest Park gave me.



Great Rivers Member Milestones (continued)



Renée Benage

Congratulations to Renée Benage on earning her 1000-hour milestone award.

When Renée wanted to fulfill a need by volunteering outdoors, the Missouri Master Naturalist program seemed a perfect fit. You'll find her most Wednesdays at Forest ReLeaf. She loves the organization's mission and she finds a welcome flexibility of volunteering hours there. As a gardener, Renée has been interested in native plants for many years.



She has served on the board of the **Grow Native!** organization for many years now. Much of her service time is "...furthering the work of that organization."

Through the years, Renée has developed strong friendships with many of her fellow Great Rivers members.

By working hard for Forest ReLeaf and Grow Native, Renée has been one of our chapter's leading habitat builders! We're proud to know you, Renee! Congratulations and thanks for your thousand hours of service!



Naturalist's Journal

An Interview with Jo Alwood – Local Wildlife Videographer

-- by Cori Westcott

Member, Cori Westcott, wrote an interesting article on nature photographer/videographer, Jo Alwood. The article was published by St. Louis Audubon Society's Bring Conservation Home blog. You can view it here:

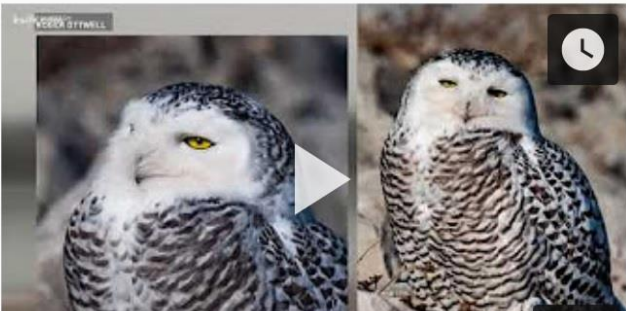
<http://stlouisaudubon.org/blog/jo-alwood-pt1/>

Cori became fascinated with the amazing nature You Tube videos posted by Jo and decided to find out more about her and her husband Connie. Connie was a regular contributor to the "Gateway Gardener" magazine. Enjoy!



Local nature photographer/ videographer, Jo Alwood, in her thriving backyard video studio.

Snowy Owls at The Audubon Center at Riverlands



KSDK - Snowy Owl Appears in St. Louis County features photos by Roger Ottwell

KSDK recently featured the work of a local St. Louis nature photographer, Roger Ottwell, and his beautiful cover photo of the Snowy Owl at The Audubon Center at Riverlands.

KDSK interviewed Ken Buchholz, Riverlands Center Director, who described the excitement created by these rare sightings. See the KDSK YouTube video here:

<https://www.youtube.com/watch?v=9XCoTu0puRM>

The rare sighting of this female Snowy Owl brought out many photographers who took advantage of the opportunity to snap beautiful photos.

Here, photographer Bill Pierce captured the owl perched on one of its favorite roosts in the Riverlands.



Female Snowy Owl at Audubon Center at Riverlands -- --photo by Bill Pierce



Naturalist's Journal

Geoff Stillwell's Fall 2017 Master Naturalist Report

Editor's Introduction: Geoff Stillwell, Missouri Master Naturalist - Class of 2014, recently transferred to our Great Rivers Chapter and, by way of introduction, wrote the following journal report of his recent volunteer training and activity. Welcome, Geoff!

During the last year I have worked with DNR as a volunteer on a CSI (cooperative stream investigation) to study headwater streams. These small streams may be intermittent, ephemeral, or perennial. They are also an overlooked component of the landscape and adjacent ecosystems. What is the diversity of streams that are dry part of the year? Do some dry completely while others retain pools in the channel and how does that effect their ecology and diversity?

After working on these streams, I found a mission for my stream team activity: to try and establish linkage with other people interested in the ecology of wilderness streams and their protection, and to provide educational outreach on

the topic. My interest started with urban streams and their restoration. Ecological restoration is an act of restoring a previous ecological state. Many restoration projects are actually ecological transformation. In restoration you try to maintain the restoration and guide it to some semblance of the successional dynamics that existed in the native landscape; the previous ecological structure and function. If at some future time we decided to restore urban streams, what could be used as examples of this structure/function if that resource was gone in a thirsty world? A friend expressed it best, "save the best, fix the rest". Examples of my stream projects include Upper Castor River, two unnamed tributaries of Labarque Creek, Pickle Creek, Paddy Creek, and Hickory Creek.



Upper Castor River in Amidon Natural Area



Upper Castor River in Amidon Natural Area



Hickory Creek in Hickory Canyons Natural Area



Hickory Creek in Hickory Canyons Natural Area



Naturalist's Journal – Geoff Stillwell's Report (continued)



Un-Named Tributary-Labarque Creek in LaBarque Creek Conservation Area



Paddy Creek in Paddy Creek Wilderness Area

Field work, such as monitoring and documenting water quality is part of the answer to the larger question. There is little data on these streams and many of these sites have been abandoned for 5 and more frequently 10 years. Another part of the task is education and outreach. Last year I took a class at the Watershed Center (Springfield) from the Leopold Foundation called "Land Ethic Leaders". It was a structured methodology on organizing lessons, presenting lessons to a group, and engaging that group in discussions and reflection. This workshop taught many valuable skills about how to handle and present to groups, and led to me to join MEEA (Missouri Environmental Education Association). I have been to many presentations that were billed as environmental education that were actually environmental advocacy and not based on science. Imagine being able to talk to a group about warming that is factually based, maintaining calm and respect, and at least

conveying the model instead of reaching a bad-mannered impasse. I am not there yet. True environmental education is when you have the science right, and you can convey the environmental science point of view that leads people on a voyage of factual knowledge and self-discovery. Not all of your audience will agree but they will have something to think about, and when the reality winds change, they may be willing to change also. Otherwise you are just another person expressing a passionate opinion, maybe right, maybe wrong. I represented the Chapter at the MEEA Conference and gave a short presentation about certification. Certification is really about how to do environmental education and what the goals of that education are; to empower everyone with the knowledge of natural/anthropomorphic change and how to act with that knowledge for their own self-interest.



Jan Weaver (MEEA Director) Leading Session on MEEA Certification (Photo Courtesy of MEEA)



Geoff Stillwell, Recipient of Certification Recognitions. (Photo Courtesy of MEEA)



Naturalist's Journal – Geoff Stillwell's Report (continued)

Randy Sarver of DNR Stream Team offered advanced training to Stream Team monitors that are working on the headwaters project. The topic was how to identify macroinvertebrates to the order or family level using a stereomicroscope and key. This was essentially a lab version of the Stream Team Academy EPT Workshop.

This is a skill many of the state entomologists require to do a professional analysis of macroinvertebrates at a monitoring site. After having done it for one day, I realized how the method was better than my skills with a kick-net and macroinvertebrate ID in the field.



Dave Michaelson (DNR Lab), Eric Otto (Naturalist-Don Robinson State Park), and Geoff Stillwell working scopes



Eric Otto and Geoff Stillwell at Days End

The experiences I have had in the last two months as a new member of Great Rivers have been the culmination of events I have planned for about one and a half years. I transferred here from the Miramiguoa chapter due to health issues my older siblings were having. I simply could not make the meetings there very often. Miramiguoa gracefully arranged the transfer and I thank them. I want to thank everyone in Great Rivers for their hospitality I have received, and I am very pleased to be here. Please feel free to ask me any questions about these activities. While we do much good in our conservation volunteer activities, it could have a much larger impact if we could communicate its importance to others within the communities that we live in and with which we share the world. Environmental education is our opportunity to have that greater impact or our aggravating detail to neglect and waste. I will be opening a stream team Facebook group soon to better describe and coordinate these projects.

-- Geoff Stillwell



Naturalist's Journal

- [THE WILDLIFE VALUE OF A MESSY GARDEN](#)

by Becca Rodomsky-Bish, Cornell Lab of Ornithology HABITAT NETWORK

Bill Hoss found this informative and captivating article from Cornell Lab of Ornithology's HABITAT NETWORK website on "[The Wildlife Value of a Messy Garden](#)" and thought it would be helpful to share with all chapter members. After reading this wonderful article you too might be motivated to take the "Pledge to be a Lazy Gardener" below. Thank you, Bill, for giving us a guilt-free 2018!



TAKE THE PLEDGE TO BE A LAZY GARDENER.

Just click this pledge button to start



Gardens are havens for wildlife—even at the *end* of the growing season. Overgrown grassy reeds, dried flower stalks, and shrubby fruit-filled branches provide food, cover, and protection in the fall and winter for animals big and small. Take our [Pledge to be a Lazy Gardener](#) and join thousands of other gardeners who vow to not clean-up their gardens until spring 2018.



Naturalist's Journal

The best memories can't be stored in a box

by Susan Pang,

reprinted courtesy [St. Louis Audubon Society-Bring Conservation Home](#)

Goodbyes are difficult, but inevitable, as time changes everything.

While preparing to move, memories swirl your mind as you go through photos, trophies or great grandma's dishes.

The pursuit of acquiring and storing tangible remnants of years' past is ordinary. We can't let things go until the moment arrives when you realize you can.

The hardest thing to let go, as we depart, will be our outdoor space. It is the space that many homeowners are happy to see changing of the guard. It's not a manicured lawn, pretty flowers or finely trimmed hedges that we'll miss.

In 2010, we began the process of converting our lawn into gardens filled with native plants. All kinds of Native trees, shrubs and forbs were planted or sowed over many seasons.

It is now 2017. The spaces outside changed many times and we hope google scanned us on a good year.

It wasn't the plants, themselves, that inspired so much fondness for the outdoors. It was the other kinds of life that came forth from or were attracted to the natives.



It was astounding to see spicebush swallowtails after we planted spice bushes. Like how did they ever find us?

Counting the Monarch caterpillars or to-see their metamorphosis was an enchantment beyond words. And bees will come if you plant what they co-evolved with over the vastness of time.

I always appreciated mom and dad robins feeding their juveniles for the first week or so after they fledged. Hopping around the yard, carefree of pesticides and other toxins, that might harm them in a neighboring yard. These creatures are pure themselves just wanting the tiniest sliver of our yard to carry on with another generation in tow. We decided we could foster for them an organic yard and oblige the window nest in

exchange for their beautiful songs.

There were nights when we saw or heard the great horned owl or a bat coming out of the bat box we put out. The hawks and migrating birds reminded us that spring was here or winter was nigh.

So to all the fascinating life forms in our erstwhile outdoors, we say goodbye and thank you. Thanks for those memories, so in the present, that they couldn't manifest themselves in a box. Thanks to the native vegetation that made this life possible.



To learn more about *where* to learn about native plants, visit the St. Louis Audubon Society's our new [Continuing Education page](#) for a list of community opportunities.

Happy new year and cheers to more gardens!!!

Susan is an activist, writer, general contractor, gardener and she loves doing restoration work outdoors. Nothing is more rewarding than creating habitat! She is grateful to BCH for connecting her with St. Louisans who are environmentalists and Conservation-minded people.



Naturalist's Journal

Drama at our Backyard Birdfeeders

by Bob Virag

We've taken "feeding the birds" to a whole new level.

A few days before Thanksgiving there was a loud, sadly familiar, THUD on our kitchen window. A new tuft of feathers glued to the glass pointed to a stunned female Northern Cardinal quivering below on the floor of our patio deck. She was one of our neighborhood regulars who frequented our four backyard bird feeders. Something probably spooked it and, in the confusion, it flew headlong into the window seeing what looked like an escape path in its lethal reflection.

I waited a few seconds, hoping that she was just dazed and would fly off. But suddenly a hawk swooped in and stomped on her. If the Cardinal was dazed, it didn't have a chance.

The hawk executed the maneuver with the precision of a professional. It quickly flew to the nearest deck railing with prey firmly in claw and then paused – striking a noble pose- and looked at my slack-jawed face behind the window seeming to say "Well, what are you waiting for?"

The hawk stood by as I scrambled for my camera in another room, but there was no need to hurry. The hawk just stood there, patient and proud. It gave me plenty of time to mount the lens, load the battery and disk, adjust the exposure and focus the camera...watching me intently behind the window the whole time. It was almost as if it was saying "Take my picture, already!" And then it flew off with a flurry of Cardinal feathers trailing behind. It was good day for the hawk – not so good for the Cardinal.

Predictably, we didn't see many other birds at our feeders for the next two days. They clearly got the message..... and so did I. I needed to attach decals to the windows long ago. If I had, maybe this particular Cardinal would have had a chance to live another day. But then, **Sharp shinned Hawks** like this one are well known to frequent birdfeeders in Missouri. When they do they prefer a much heartier fare....and this 'sharpie' was a professional.



*Sharp-shinned Hawk with a female Northern Cardinal prey firmly in claw.
Photo by Bob Virag*



Throughout the year, the Missouri Dept. of Conservation produces many timely and informative articles.

Below are a few examples.

MDC/St. Louis Zoo endangered beetle reintroduction earns national recognition

Efforts to restore the American burying beetle recently won an award from the Association of Zoos and Aquariums.

St. LOUIS, Mo.—The American burying beetle recovery program, a partnership project between the Missouri Department of Conservation (MDC) and the St. Louis Zoo, among others, has achieved national recognition.

The program received the 2017 North American Conservation Significant Achievement Award this fall from the Association of Zoos and Aquariums (AZA). AZA is the non-profit, accrediting organization for the top zoos and aquariums in the U.S. and seven other countries. According to AZA, the annual award recognizes exceptional efforts toward regional habitat preservation, species restoration and support of biodiversity in the wild.

The American burying beetle is the largest of a class of carrion beetles and used to be found in 35 states, including Missouri. Now federally-endangered, their populations still exists precariously in less than seven states.

The recovery partnership, which includes the U.S. Fish and Wildlife Service (USFWS) and The Nature Conservancy (TNC), began in 2012. The St. Louis Zoo breeds the beetles at their Monsanto Insectarium from stock acquired in Arkansas. The beetles are re-introduced onto TNC's Wah'Kon-Tah Prairie, located near El Dorado Springs in the southwest portion of Missouri. MDC St. Louis Regional Natural History Biologist Andrea Schuhmann is continuing an associated study to determine the success of the effort.

“Endangered species conservation and recovery can only be successful and sustainable through partnerships,” Schuhmann, who headed up MDC’s efforts in the project, said. “The American burying beetle project embodies this principle and I am thrilled to be working with so many passionate partners that have worked tirelessly for more than a decade to bring this beetle back to Missouri. What an honor it is to be a part of the team and to have this national recognition.”

“All the partners share in this recognition,” said Bob Merz, Director of the St. Louis Zoo’s Center for American Burying Beetle Conservation. “This is truly a project where every partner organization plays to their strengths by utilizing their unique expertise and resources. I’m thrilled that this cooperative approach is being recognized by our peers with such a prestigious award.”

The American burying beetle gets its name from the practice of burying dead animals, like small mammals and birds, which it eats. They can tunnel up to a foot underground, where they strip the carrion off fur and feathers using their pincers and secrete an anti-bacterial substance that slows down decomposition. The male and female burying beetles raise their young as a mated pair—a characteristic unusual in the insect world—and feed the carrion to them.

Schuhmann said she hopes that ultimately the restoration effort can produce and maintain a self-sustaining American burying beetle population in Missouri, possibly serving as a model for other states interested in bringing the beetles back to landscapes where they were formerly extirpated.

For more on the American burying beetle, go to <https://nature.mdc.mo.gov/discover-nature/field-guide/american-burying-beetle>.

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Partners in the American burying beetle recovery project pose with the 2017 North American Conservation Significant Achievement Award from the Association of Zoos and Aquariums (AZA). From left to right are Dan Ashe, AZA; Andrea Schuhmann, MDC Natural History Biologist; Bob Merz, St. Louis Zoo; Scott Hamilton, US Fish & Wildlife Service.



Naturalist's Journal

Missouri Department of Conservation

MDC issues forest health alert for Emerald Ash Borer

Tree-killing pest has spread to 42 Missouri counties, suspected in more locations.

COLUMBIA, Mo. – Forest health professionals with the Missouri Department of Conservation (MDC) advise Missourians to watch for damage from an invasive tree pest in winter months. The Emerald Ash Borer (EAB) is a small, metallic green beetle native to Asia that attacks and kills ash trees.

EAB attacks all species of ash trees, and kills nearly every tree it infests. At approximately a half-inch long, the green adult beetle feeds on leaves and does very little damage to trees. However, in its larval stage, the insect kills ash trees by feeding on the water- and nutrient-conducting tissues just under the bark.

The destructive insect has been confirmed in 42 Missouri counties, as well as the City of St. Louis, and is suspected to be present in several more locations.

MDC encourages Missourians to watch for signs of this invasive pest during winter months. While birding, watching wildlife, hiking, or enjoying other outdoor pursuits this winter, keep an eye out for bark blinding on ash trees. Bark blinding is caused by woodpeckers removing a tree's outer bark while searching for insect larvae. On ash trees, this feeding activity reveals a white inner bark that is highly noticeable. Ash trees with bark blinding may not have EAB, but it is certainly worth reporting these trees for a closer look by trained foresters.

"EAB is estimated to cost Missourians more than \$180-million in tree treatments, removals, and replacements over the next 20 years," said MDC Forest Entomologist Robbie Doerhoff. "If you have a healthy, high-value ash tree in your yard, it can be treated with insecticides that will protect it from EAB. However, these treatments can be expensive and must be applied every year or two to guarantee protection. For some ash trees, the best option is removal and replanting with a different species such as an oak native to Missouri."

MDC encourages Missourians to help prevent the spread of this destructive pest by learning to identify signs of EAB and reporting possible infestations in counties where EAB has not yet been confirmed. For more information on insecticide treatments for ash trees, consult the *Emerald Ash Borer Management Guide for Missouri Homeowners* at short.mdc.mo.gov/ZSq.

For a map of EAB's spread across Missouri, detailed information on identification, and a guide on insecticide treatments, visit eab.missouri.edu. Report suspected EAB damage in new counties to a local MDC forester, call MDC's Forest Pest Hotline at 866-716-9974, or email forest.health@mdc.mo.gov.

MDC works with you and for you to sustain healthy forests, fish, and wildlife.

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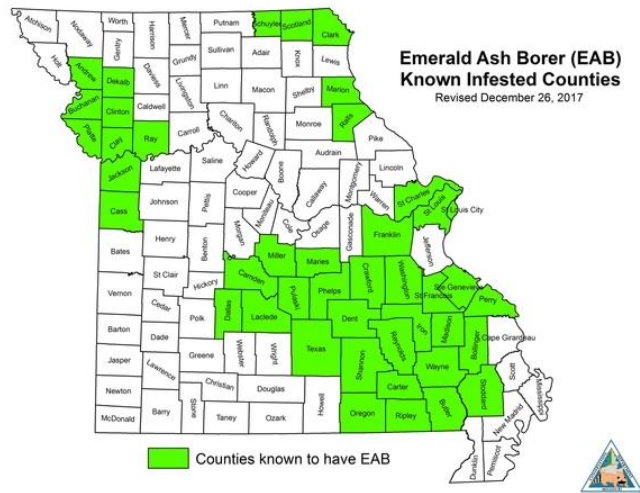
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Bark blinding on ash trees caused by foraging woodpeckers can be an indicator of Emerald Ash Borers (EAB).



Emerald Ash Borer (EAB) has been confirmed in 42 Missouri counties, but is suspected to be present in more locations.

Learn more about how to identify this invasive pest at eab.missouri.edu.



Naturalist's Journal

On the Perils of Tall Thistle

Why There Will Always Be Thistle***By Maxine Kumin****from The Long Marriage. © W.W. Norton, 2003*

*Sheep will not eat it
nor horses nor cattle
unless they are starving.
Unchecked, it will sprawl over
pasture and meadow
choking the sweet grass
defeating the clover
until you are driven
to take arms against it
but if unthinking
you grasp it barehanded
you will need tweezers
to pick out the stickers.
Outlawed in most Northern
states of the Union
still it jumps borders.
Its taproot runs deeper
than underground rivers
and once it's been severed
by breadknife or shovel
—two popular methods
employed by the desperate—
the bits that remain will
spring up like dragons' teeth
a field full of soldiers
their spines at the ready.
Bright little bursts of
chrome yellow explode from
the thistle in autumn
when goldfinches gorge on
the seeds of its flower.
The ones left uneaten
dry up and pop open
and parachutes carry
their procreant power
to disparate venues
in each hemisphere
which is why there will always
be thistle next year.*

TALL THISTLE *Cirsium altissimum*

Family: Asteraceae (daisies)

Description: Tall, branching biennial or short-lived perennial. Stems hairless or sparsely hairy, sometimes with patches of white felty hairs; lacking spiny-edged wings. Flowerheads many, solitary at the branch tips, pink-purple or reddish purple, rarely white. Outer involucre bracts with a dark spot; all bracts end in a weak prickle. Blooms July-October. Leaves unlobed, toothed or wavy, with marginal prickles only (none on the leaf surface), woolly-hairy beneath. Upper stem leaves narrowly lance-shaped with longer spines.

Similar species: Missouri has nine species of *Cirsium*. Some are invasive exotics. Others, like tall thistle, are native. Tall thistle is closely related to field thistle (*C. discolor*), and the two can hybridize where they grow near each other. Most or all of the leaves of field thistle are deeply lobed. Field thistle is uncommon in the Ozarks but scattered to common elsewhere in the state. It is more common in upland habitats and disturbed places.

Size: Height: to 10 feet.

Photo and text Source: MDC Discover Nature – Field Guide



Bluebird at the backyard birdfeeder
--Photo by Pam Wilcox

The Bluebird carries the sky on its back"
.-Henry David Thoreau