

Your Key to Discovering the *Natural Missouri*

November 2018, Volume 12, Issue 04



From
Our President



As I write my final President letter on this snowy morning I am reminded how fortunate I am to have been able to be the President of your chapter.

I have had the opportunity to work with many of you and get to know your passions. There are some outstanding friends of nature in this chapter and I encourage you to become active in its leadership and projects. You will be so much richer for it.

There is something for everyone's interests. from birds,

water, native plants and butterflies. Leaders of the groups will be very happy to have you participate.

You are an outstanding chapter and I look forward to finding other ways to serve you.

See you at the next monthly gathering.

Happy
Loving Nature Day To You.

(Can you tell
I just made up that day?)

Alberta

Alberta McGilligan
President, Confluence Chapter



IT IS NOT HOW BUSY YOU
ARE, BUT WHY YOU ARE
BUSY—THE BEE IS PRAISED, THE
MOSQUITO IS SWATTED. ~



--AUTHOR UNKNOWN

One kind word can warm three
winter months.

~Japanese Proverb



Missouri
Master Naturalist
2018 Certification Pin
Mead's Milkweed
Aclepias meadii



A partnership of the [Missouri Department of Conservation](#) and [University of Missouri Extension](#)
To engage Missourians in the stewardship of our state's natural resources through science-based education
and volunteer community service.

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Milestones, Certifications, Annual Pins, and Other Recognitions



October:



Gary Wester presented annual certification awards to Lee Phillion, Ann Finklang, Malcolm Royce, Scott Barnes, Bob Lee, Ken Benson, and Jean Crinean.



Elaine Browning received the bronze achievement award for 250 volunteer hours.

November



Gary Wester presented annual certification awards to Tom Holt, Jim Middleton, Deborah Grupe, Mark Williams, and Jim Biehle.



Donna Bourisaw received the bronze achievement award for 250 volunteer hours.

2018
Donald M. Christisen
Prairie Volunteer of the Year Award

Ann Earley and Bob Siemer

This dynamic couple was recognized for outstanding volunteer outreach efforts to educate citizens about the importance of prairie conservation and use of native plants, at festivals, conferences, and other venues around the state, as well as to develop and present programs on monarch butterfly conservation to various groups.



Congratulations to Missouri Master Naturalists
Bob Siemer & Ann Early
for their long time excellent stewardship!



The Confluence Chapter
of Missouri Master Naturalist
presented its first
Lifetime Achievement Award
to Bob Coffing
on November 13, 2018.

MN Lee Phillion



*For outstanding leadership in
protecting and improving Missouri's
natural environment.*

Chapter Vice President Rob Merriman presented the award and read statements from many individuals who have worked with Bob.

Ben Grossman said, "I was fortunate enough to be part of the original steering committee when the MN program was being brought to the St. Louis Region, and Bob epitomizes why those conservation professionals worked so hard to get this program off the ground."

Bruce Schuette said, "Bob proposed the idea of helping Cuivre River State Park with savanna restoration efforts, and he and his crew helped bring back one of the best examples of Missouri's rare savanna habitat in the entire St. Louis region."

"If you want to understand more about the natural world, Bob is the man to look to." —Sam Hodge.

"Bob Coffing is respected by professionals and amateurs alike for his vast knowledge of the natural world, his skills in working to preserve and improve it, and for his obvious love of Missouri woodlands, grasslands and

streams as well as the creatures that inhabit them." —Larry Berglund.

"Spend two or three workdays with Bob Coffing and you'll never look at forests the same way. What Bob Coffing can do is analyze settings in nature where they need to be helped or improved for the type of ecosystem they were... or could become. Then he implements." —Bob Lee

"Bob Coffing is the most dedicated and experienced naturalist in the areas of forest ecology and land management that I have ever known or heard of." —Phil Rahn

A capacity crowd of over fifty members thanked Bob for his leadership and service.

Bob was the unanimous choice to receive the chapter's first Lifetime Achievement Award.

We salute Bob and acknowledge his great contributions to our chapter, the Missouri Department of Conservation, Department of Natural Resources, and to the St Charles County Parks.





Meet Your Fellow Master Naturalists

By *Wm Lee Phillion*

During the four years Alberta McGilligan has led Confluence, participation, projects and learning opportunities have increased dramatically. Everyone knows Alberta as the efficient, organized, dedicated and visionary driver of one of the largest Master Naturalist chapters in Missouri. She's also known as one of the chapter's prime talents when it comes to native plants and garden design.

What you may *not* appreciate is that Alberta can milk cows like a pro and understands the finer points of butchering hogs. "I grew up on a farm near Union, Washington and Pacific Missouri," said Alberta. *Near* is a relative term, because high school was an hour-long bus ride (each way) for Alberta, who milked her cow before school every day. Growing up on a farm with three brothers may be the root of Alberta's interest in the outdoors, or at least explains why tree-climbing was part of her childhood skill set.

Climbing (the ladder of success) began after graduating from Maryville University with a degree in Information Systems Management—a milestone reached after rearing her four children, who have thus far blessed her with five grandkids and a great grandson.

The stars aligned in the early '80s when Alberta accepted a job at Boeing working on a "secret clearance required" project involving personal computers. With an independent study in personal computers under her belt, Alberta's academic credentials coupled with her innate capabilities made her a valuable addition and set her on a career path in technology management.

"Then IBM bought us from Boeing," said Alberta, "which was the best thing, career-wise, that could have happened to me." At IBM, Alberta quickly rose to managing pro-



jects and people around the country and around the globe. She enjoyed that challenging and hectic work right up to retirement in 2007.

Retirement can be difficult for someone who thrives on problem-solving, people management and achievement. "After a decade, I still miss the frenetic pace of work," said Alberta, "but I've truly enjoyed being part of what the Confluence Chapter has accomplished."

We're *all* happy Alberta climbed trees as a kid and took a backpacking class as an undergraduate, because all that led her to sign up for MN training as retirement was approaching.

Key activities Alberta has been involved with as a Master Naturalist include:

- * Ten years as a weekly volunteer at Shaw Nature Reserve
- * Four years as an Audubon Society *Bring Nature Home* surveyor
- * Designer of the Babler native plant garden and Towne Park's Nature Explore native garden
- * Tri-Chapter Field Days planning committee

Some of the 500 or so hours she devotes to Confluence Chapter activities every year also go toward volunteering at various chapter projects such as Hays-Matson, Schultz Nature Preserve, the St. Charles Main Street Rain Garden, and toward leading kids programs at Towne Park. In 2018, Alberta seized an opportunity to acquire free native plants and led an effort to grow around 1600 native plants using facilities at MN partner Forest ReLeaf.

"I don't understand retirees who have difficulty finding things to do," says the woman who has expanded the native gardens in her own backyard from a 10x10 plot to almost *2,000 square feet of native prairie plantings*.

In her "spare time," Alberta manages to do a heap of traveling and read approximately 200 books per year. "I read a lot of mysteries during the winter months when I can't get outside, and I'm a fast reader."

Now that Alberta is once again a fresh retiree (from her role as chapter president), we can't wait to see what organization or activity will benefit next from Alberta's energy and capabilities!





World Soil Day

December 5th



We need to take the time to protect the soil. In the period it took to form 1 inch of soil, innumerable important events took place, not the least of which were John Cabot's discovery of Newfoundland in 1497, the invention of the toothbrush by a Chinese dentist

in 1498, and Edmund Halley's observation of the Great Comet (which is later named for him) in 1682. These are just a few of the major events; the list is almost endless.

If you want to learn more about what was happening while an inch of soil was being made, you can get a free copy of the poster at this link.

<https://nrcspad.sc.egov.usda.gov/DistributionCenter/product.aspx?ProductID=192>

Did you know that:

- The American Midwest has the largest area of prime farmland soils in the world
- Essentially, all life depends upon the soil ... There can be no life without soil and no soil without life; they have evolved together.
- About 20% of the land in the U.S. is used to grow crops.
- A tablespoon of soil contains more micro-organisms than the number of people on earth.
- The U.S. has more than 20,000 soil series.
- Clays, the smallest particles making up soil, are less than 1/12,000 inch in diameter. A single teaspoon will hold more clay particles than there are

people on the earth.

- In some cases, soil can be dangerous. One hazard is human sickness caused by soil-borne pathogens. Valley fever is a disease caused by a fungus that lives in hot, dry, salty soils. The fungal spores are released by ground-disturbing activities and can be carried by the wind. Symptoms generally range from none to flu-like but the disease may cause death in those with compromised immunity. The soil and climatic conditions suitable for the fungus are common in California's San Joaquin Valley and in the valleys around Phoenix, Arizona. A system, or model, that uses the soil survey database has been developed to locate areas where the fungus may exist. The maps are detailed enough that likely hotspots can be identified. The model also predicts isolated niches of soils and climates that are suitable for the fungus, some of which are far from where the disease commonly occurs. ([Link: Modeling and Mapping of *Coccidioides* Soil Habitat](#))
- Soils differ from each other based on color, mineralogy, age, depth, and lateral boundaries with neighboring soils. But soils also differ for utilitarian purposes. Some soils have a greater ability than others to produce high crop yields, provide firm building foundations, purify contaminated water, or sequester carbon dioxide from the atmosphere.
- Did you know that each state has its own State Soil? A state soil is a soil that has special significance to a particular state. Each state in the United States has selected a state soil,

twenty of which have been legislatively established. These "Official State Soils" share the same level of distinction as official state flowers and birds.

• Links: [State Soils factsheets](#)

[Smithsonian interactive version](#) (This one is really neat—check it out!)

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/?cid=stelprd1236841#list>

MENFRO MISSOURI STATE SOIL

Menfro soils are used for corn, soybeans, small grain, and forage crops and for specialty crops of tobacco, grapes, vegetables, and fruits. These soils are desirable building sites.

Most of the steeper areas support deciduous hardwood timber.

These soils occur on about 780,000 acres in Missouri.

The first State Capitol building in St. Charles, the present State Capitol building, and the Governor's mansion were constructed on Menfro soils.

The home of Daniel Boone and the first settlement west of the Mississippi River are in areas of Menfro soils.

Hannibal, the home of Mark Twain, and Hermann, the historic German community, also are on Menfro soils.

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/?cid=stelprd1236841#list>





Soil Colors of the Continental United States

The color of soil is one of the few things in nature that is arguably of equal interest to both natural resource scientists and children at play. Successful soil scientists and surveyors appreciate the tremendous quantity of information that is typically related to soil color variation in depth and space. While not always entirely quantitative, soil color supports a practical, qualitative scaffolding for our understanding of a landscape's recent and long-term history, clues about dominant mineralogy, a striking picture of where organic matter has accumulated, and many other factors that affect our use and understanding of the soil resource. Given the right context, soil color and its interpretation can be effectively used as a narrative for educating people about "what

types of soils are where, and why?" To communicate this part-art and part-science topic, Soil Science Division staff have recently created maps and images displaying soil colors in both the vertical and horizontal dimensions. Enjoy this unique opportunity to see how soils and geologic features are inextricably linked and vary across the landscape.

Soil Survey Division staff have recently created a series of maps and images turning 100+ years of soil survey into maps and images communicating stories that vary in space and depth.

Sound interesting? Come take a look.

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcseprd1423827>

The seemingly chaotic colors of soil are really a mosaic only nature could paint. Come explore parts of the country you are familiar with, or better yet, go explore the patterns that just look interesting and investigate the questions:

Where is this, what is this and why is it here? Is this art, science, or both?

You decide.



Healthy soil gives us clean air and water, bountiful crops and forests, productive grazing lands, diverse wildlife, and beautiful landscapes. Healthy soils are vital living ecosystems that sustain plants, animals, and humans. We must manage our soils so that they are healthy for both ourselves and for future generations.

Only "living" things can have health, so viewing soil as a living ecosystem reminds us that we must care for our nation's soils. Soil is teeming with billions of bacteria, fungi, and other microbes that help us grow food and drink clean water.

The ABCs of Soil Health will walk you through some of the amazing facts about soil's role in supporting life on this planet, and what we can do to make sure our soils are healthy.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils/health/>

<http://nrcs.maps.arcgis.com/apps/MapJournal/index.html?appid=03b097c17a514c1e816904a1919ccd69>

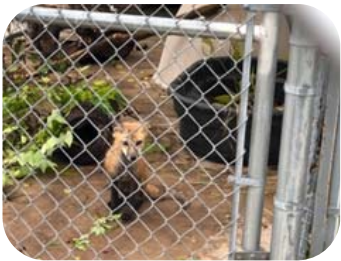
Enough about soil!





Master Naturalists in Action

Wildlife Rescue Center
Honeysuckle Hack



Me?
I just want to go home!

Planting milkweed at Quail Ridge:



Blue Birds
House Installation



Our Stream Team
October 2018

Gary Wester, Cliff Parmer, Mark Zupec,
Paul Crombie, and Elaine Browning.
It was a beautiful day on the stream!



The stick seems pretty darned effective. These dudes from our chapter have done a heap of good stuff. :)



Nobody slacks off on Alberta's watch!





Missouri Bluebird Society Goes "Wild for Monarchs"

By Ann Earley

On July 14, at their annual conference in Jefferson City, more than 100 members of the Missouri Bluebird Society heard the "Wild for Monarchs" presentation by Bob Siemer and me. This presentation is given on behalf of several organizations, including the Wild Ones St. Louis Chapter, Missouri Master Naturalists (Great Rivers and Confluence Chapters), Missourians for Monarchs, and the Grow Native program (part of the Missouri Prairie Foundation). Conference attendees represented five states and were very interested in learning more about the current population status of monarchs and what we can all do to help these special butterflies. Society members were eager to pick up the informational handout materials we provided, along with native nectar plant seed packets which were furnished by Grow Native. After our program, several Society members from around the state inquired about having us give the presentation to organizations in their communities.

Established in 2006, the Missouri Bluebird Society's main goal is to encourage the development, maintenance, and monitoring of bluebird trails in Missouri and to encourage the



Hummingbird bander Veronica Mecko holds a female hummer she has banded.

use of safe and appropriate nesting boxes for bluebirds to use. This is especially important to us Missourians, as the bluebird is our state bird; as most of you are aware, it is pictured on our auto license plates. Locally, Master Naturalist chapter members monitor bluebird boxes at various locations, including Forest Park, Creve Coeur Park, several St. Charles County Parks, and Shaw Nature Reserve.

Missouri Bluebird Society's annual conference is held each summer; in even-numbered years it is held in Jefferson City, and in other years it rotates

around the state to different venues. This year's conference speakers included: Matt Miles, sharing nature photos from his book Missouri Wild and Wonderful; Mike Doyen, discussing The Great Missouri Birding Trail, and Steve Smith, with a Q and A session about Basics of Bluebirding. The conference also included a nest box and baffle building workshop coordinated

by Society members. A conference highlight was a field trip to the property of Society members just outside of Jefferson City, where members identified 19 different bird species and enjoyed watching licensed hummingbird bander Veronica Mecko band and record data for several Ruby-Throated Hummingbirds.

We enjoyed being part of this year's conference and meeting several Missouri Master Naturalists from around the state who are members of the Missouri Bluebird Society. Planning is underway for the 2019 annual conference, which will be held July 12-14 in the St. Louis area. You are invited to attend, and we will share more information as it becomes available.

A blooming patch of Purple Coneflowers welcomed Society members at the conference field trip.



A female Monarch butterfly nectars on Butterfly Milkweed during the conference field trip.



A Painted Lady butterfly nectars on a Purple Coneflower during the conference field trip.





Wildlife Protection Keeping It Simple: Easy Ways to Help Wildlife Along Roads

Dummy Eggs Replace Peregrine Eggs in Bridge- Painting Preparations

Necessity was the mother of a simple invention on a bridge site in western Washington. When crews from the Washington State Department of Transportation (WSDOT) observed peregrine falcons and pelagic cormorants starting to nest on the bridge, they installed noise-makers and light deterrents to prevent the birds from nesting there.

The strategy worked

for the cormorants, but the peregrines began nesting directly under a manhole—the only access to the under-bridge maintenance walkway and a location in need of repainting.

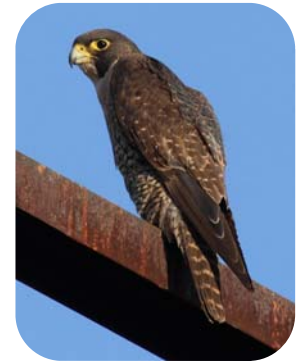
Since the work would have disturbed the hatching process, the peregrine eggs were removed from the nest and dummy eggs substituted. The peregrine eggs were taken to the Portland Zoo, where one egg was successfully hatched and fostered into a wild peregrine nest by the Portland Audubon Society.

And the mother? She remained on the dummy eggs for more than thirty days until WSDOT removed them to paint the bridge.

As for the cormorants—they reoccupied the bridge as soon as their chosen nesting spots had been repainted.

Doing the right thing—
simply

https://www.fhwa.dot.gov/environment/critter_crossings/



Picture of a Peregrine Falcon by Christopher Watson, commons.org/licenses/by-sa/3.0



Monarch Madness and Pollinator Festival

- ∞ Event statistics:
- ∞ 75 Monarch tagged (a huge thanks Angel, her team, and MDC)
- ∞ 700 attendees (biggest year yet)
- ∞ Lots of native plant sales
- ∞ Tons of cute kids smiling with crafts, passports, and magnifying glasses





FROM THE WILD AND NATURAL SIDE



This scary cute baby arctic fox is at the Alaska Maritime National Wildlife Refuge. Arctic foxes are found in two color phases: white and blue. White-phase foxes appear brown in the summer and pure white in winter. Blue-phase foxes appear gray in the summer and a lighter gray in the winter. Blue-phase foxes are uncommon, so this photo is a rare treat. Photo by Ryan Mong, U.S. Fish and Wildlife Service.

Learn more about some of the different bat species in the United States: <https://on.doi.gov/2JfdGmS>. Photo by National Park Service. No, the lesser long-nosed bat isn't normally yellow. This one is covered in pollen after a busy night of drinking nectar. Photo by National Park Service.



More often seen than heard, owls are amazing birds. The eastern screech owl has some of the best camouflage—even the sharpest eye might not see it in the trees. It tends to roost in a hollow or in dense foliage near the trunk, and its colors range from gray to reddish brown. Its call is a long quivering whistle, so keep your ears open even if you can't spot this owl. This one was photographed at New York and New Jersey's Walkill River National Wildlife Refuge, which is home to grassland birds, migrating waterfowl and wintering raptors. Photo courtesy of Herb Houghton.



Did you know that the turkey vultures we see in the summer are long distance migrants? These birds travel as far as South America for the winter!
Photo: Turkey vulture in flight courtesy of Gordon Garcia



What do you call a moose with no name? Anonymoose
It seems like this moose at Grand Teton National Park loves to laugh. Pic by C. Adams, National Park Service.



Pictured here is the small but mighty lesser long-nosed bat, which is key to maintaining fragile desert ecosystems by pollinating both the saguaro cactus and agave (which is used to make tequila). It's also a conservation success story. In 1988, there were fewer than 1,000 of these nectar-feeding bats, but today, there are an estimated 200,000 bats at seventy-five roosts in the Southwest and Mexico.



Photo of a baby mountain lion in the Grand Canyon by National Park Service.



Discover what makes bats so amazing. Check out some of the bat species found in the U.S. Hope you enjoyed hanging out, U.S. Department of the Interior



This and That ...

Guide to Bumble Bees of the Eastern United States

Advice for those who work maintaining gardens:

Feel free to deconstruct your own mental/spiritual/physical blockages while pulling weeds.

Chant, sing, or be quiet and listen to the plants, birds, insects, and frogs. Replace mental chatter with the soothing voices of nature. This is your moment in the sun, and life in the garden is good. Appreciate it now. Don't overexert. Soak up the sun and drink water. In this way, you aren't really much different from a plant.

Talk to your plants. Exhort them to do their best. Think of those who will eat the plants or use the medicine made from their roots, leaves and flowers. Think of those who will plant the seeds again.

Pray earnestly that your efforts will benefit all beings.

Richo Cech
In his book *The Medicinal Herb Grower*



It has been said that trees are imperfect men and seem to bemoan their imprisonment rooted in the ground. But they never seem so to me. I never saw a discontented tree. They grip the ground as though they liked it, and though fast rooted they travel about as far as we do. They go wandering forth in all directions with every wind, going and coming like ourselves, traveling with us around the sun two million miles a day, and through space heaven knows how fast and far!

~John Muir, July 1890



Download free at:

<https://www.fs.fed.us/wildflowers/pollinators/documents/BumbleBeeGuideEast2011.pdf>



White and albino squirrels may have an advantage when it comes to blending in with the snow, but they stick out most of the year. This can make them easier for us to spot, but also an easy target for predators! Photo: Albino squirrel eating a flower courtesy of Funk Dooby/Creative Commons. <https://flic.kr/p/28NodPP>



Found at Quail Ridge

Black Blister Beetle



This is one of the many blister beetles and is the *Epicauta cinerea*. They mostly eat flower parts and sometimes leaves.



Blue jays aren't afraid of a little competition when it comes to peanuts. Did you know they hunt for food beyond your feeder? In the winter months, these omnivores also seek out overwintering tent caterpillar eggs and other kinds of insect larvae.

Photo: Dive bombing blue jay at feeder courtesy of Winter Returneth/Creative Commons.

<https://flic.kr/p/2cQ4DhF>



A Theory

As scientists explore how industrialized agriculture is affecting the U. S. weather and climate, an MIT study offers one notion.

It says corn belt climes are changed by the corn itself—millions of acres of plants that take in carbon dioxide, then expel water, causing lower temperatures and more rain.

Source:
National Geographic Magazine,
September 2018





From Our Members...

MN Lee Phillion's Pollinator Garden



O'Fallon Rain Garden
Asters and Goldenrod
By Elaine Browning



Quail Ridge



Blue Sage



Prairie
Dock



Prairie
Blazing
Star

All by Elaine Browning

O'Fallon Rain and Wildflower



Heath Aster
Ann Finklang



Bear Tongue, Sweet Coneflower,
Heath Aster, and some
machinery
By Elaine Browning



MN Fran Dvorak had a new avian
visitor in the creek behind his
house one morning





Thank You!



♥ To all MN who submitted items for our newsletter!

♥ Thank you to all MN veterans for our freedom and your dedication. Learn more about some of the veterans who help us conserve fish, wildlife, plants and their habitats: <https://go.usa.gov/xPvCs>.



♥ Phil Rahn for his brilliant inventions sustaining our Milkweed.

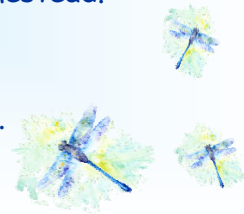
♥ Bob Lee for his endless communications with federal, state & local officials on behalf of our butterflies & pollinators.

♥ Tara Wallace for helping with chapter projects while building a new homestead.

♥ Mark Williams for his patience with project leads.

♥ Steve McCarthy for his commitment to bicycling with chapter members.

♥ Lee Phillion for her excellence in writing and ridiculous wit.



Our Leadership

- President—Alberta McGilligan
- Vice President—Rob Merriman
- Secretary—Jane Porter
- Treasurer—Alison Robbins
- Advanced Training—Deborah Moulton
- Volunteer Coordinator—Jim Biehle and Mark Williams
- Membership Services—Martha Hessler
- Communications—Leslie Limberg
- Web Site—Rick Gray
- Photography—Dave Lemoine
- Newsletter—Carmen Santos, Peg Meyer, Leslie Limberg and Elaine Browning

Advisors

- MDC, Colleen Scott, Colleen.Scott@mdc.mo.gov

Project Leaders:

- Confluence Chapter Stream Team #3612—Cliff Parmer
- Babler State Park—Alberta McGilligan and Bob Coffing
- Lewis & Clark Boathouse and Nature Center—Leslie Limberg
- Quail Ridge Prairie Demo and Rain Garden—Carmen Santos
- Bluebird Monitoring—Connie Campbell and Leslie Limberg
- Nature Explore Classroom Education—Connie Campbell
- O'Fallon Public Works Project—Carmen Santos
- Missourians for Monarchs—Bob Lee
- Birding Club—Gail Gagnon
- Capstone Broemmelsiek Park Prairie Seeding—Phil Rahn

- Main Street Garden Martha Hessler and Tom Nagle
- Wild Bird Rehabilitation Sue Stevens
- Daniel Boone Hays—Bob Coffing
- Matson Hill Park—Bob Coffing
- Cuivre River and Don Robinson State Park—Bob Coffing
- Past Presidents—Scott Barnes, Connie McCormack, Jerry Lindhorst, Leslie Limberg, Cliff Parmer



The Confluence Chapter was founded in 2005 as the fifth Master Naturalist chapter in Missouri.

The chapter was formed by twenty-four individuals from St. Charles County, St. Louis County, and St. Louis City after completing the Missouri Master Naturalist™ training program. We share a common interest in nature and in volunteering to help protect, preserve and restore Missouri's natural heritage. Most of our members live in the region west of the Missouri-Mississippi Confluence and from both north and south of the Missouri River.

We operate according to the bylaws and operating handbook of the Missouri Master Naturalist Program developed by the Missouri Department of Conservation and University of Missouri Extension. Visit us at <http://www.mmnconfluence.org/>