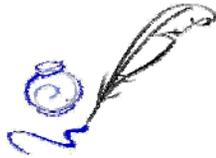




Your key to discovering the *Natural Missouri*



From Our President

A great big Welcome to our new Interns. We are delighted you decided to join the Confluence Chapter in our goal to make the world a better place by our volunteer efforts.

One excellent way to get acquainted with all of us is, of course, to attend our monthly meetings to get information about the many volunteer activities we have. Our Volunteer Coordinator sends a note every month or so also outlining activities and contacts.

In January we will be asking all Interns, and whatever current members who wish to attend, to come together and choose a Capstone Project to work on for 2018. Capstone is a dedicated project designed to give all the new people a chance to work together, to get to know each other and experience the joy of a project well done. In the Capstone, you will be joined by experienced members of the chapter so you can be incorporated into our activities.

As winter approaches many of our project activities slow down and we all rest and get ready for the spring resurgence of work on our many projects. Be prepared for March, April, and May to be packed with requests for help.

Enjoy the winter and have safe and happy holidays

Alberta

Alberta McGilligan
President, Confluence Chapter



Photo by A. Volk
Horned Grebe—A rare visitor to Missouri spotted by Allison Volk at the Riverlands Migratory Bird Sanctuary

Where is Connie?



Photo by Allison Volk

Where is Lee?



Who are The Green Gems?



2017 Volunteer Service Pin



Bumblebee.





Milestones, Certifications, Annual Pins, and Other Recognitions

August-September-October 2017



Gary Wester has taken over responsibility for the member recognition duties, as chapter member Paul Robbins will be moving to India for one year.



Annual pins were awarded to: Leslie Limberg, Cliff Parmer, Bob Lee, Steve McCarthy, Pat McCoy, Don Moyer, Malcolm Royse, Sue Stevens, Mark Williams, Jean Harmon, Donna Bourisaw, Elaine Browning, Deborah Grupe, Alison Robbins, Carmen Santos, Barbara Thomas, Steve Thomas, Allison

Volk, Pam Walsh, and Gary Wester. Lifetime Achievement bronze pins for 250 volunteer hours was awarded to Jim Middleton.



The Pewter Pin for 500 volunteer hours was awarded to Bob Siemer and Barbara Thomas.



Service biologist Shauna Marquardt tests new technology to count hibernating bats. Photo by USFWS

It's a challenge—counting bats during hibernation when they're sensitive to disturbance. Every two years scientists head into caves, mines and other hibernation sites to count endangered Indiana bats with as little intrusion as possible. Hibernation sites are dark and bats are too—adding to the challenge. Surveyors quickly take photos of clusters of hibernating bats and then examine the photos later, counting bat noses to determine population numbers. But the process is time-consuming and requires teams of surveyors using flash photography. Some **new technology** may make this biannual effort a little easier.

U.S. Fish and Wildlife Service biologists are trying out a new ground-based scanning system called **LiDAR**. The technology is used to scan hibernation sites while bats are present,

and then again when they're absent. LiDAR determines the difference in volume between the two scans. The difference represents the volume and number of hibernating bats.

LiDAR operates by scanning three-dimensional point clouds. While it's necessary to enter hibernation sites to set up and conduct LiDAR scans, the disturbance is minimal and the scans produce high-resolution images of habitat and of roosting bats. LiDAR also provides three-dimensional models of entire caves or caves passages.

It is hoped that further testing of LiDAR will lead to a more streamlined—and accurate—way to count bat noses.



Do you know this plant?

Please let Allison Volk and Carmen Santos know.



Where is Lee Phillion (and her husband)?



Mammoth Cave. Lee says, "I liked the above ground hikes waaaaay better than going underground. The smile on my face is not sincere. I just wanted OUT of that cave!"





Flying Free In the Cypress Swamp

Confluence Chapter Master Naturalists joined members of the Great Rivers Chapter for a private tour of the Saint Louis Zoo's Cypress Swamp in August. The habitat is located in the Zoo's iconic bird flight cage that was originally constructed for the 1904 World's Fair.

The Smithsonian paid more than \$17,000 to construct the cage in 1904. After the World's Fair ended, the City of St. Louis purchased it for a mere \$3,500. The City then spent an-



other \$27.50 for a pair of Mandarin ducks and four Canada geese. Subsequently, the zoo added a variety of colorful species and the cage underwent several minor renovations to accommodate the collection.

In 2003, thanks to support from the Edward K. Love Conservation Foundation, the flight cage interior was transformed into a cypress swamp resembling the wetlands in southeastern Missouri and southern Illinois. An underground facility to hold birds over the winter months was added below the cage during the renovation.

Creating the Cypress Swamp



marked the flight cage's third renovation. The first was in 1967 when a boardwalk was installed. In 1996, the super-structure of the birdcage was refurbished.

Today the flight cage houses between sixteen and eighteen species of birds

that can be found in the wetlands along the Mississippi River, and visitors view them via pathways, bridges, and an observation area within the enclosure.

Visitors can get up close views of Roseate Spoonbills and Yellow-crowned Night Herons, along with Snowy Egrets and Double-crested Cormorants as well as a variety of duck species.

(Article and photos by MN Lee Phillion and Allison Volk)

Nature Explore Classroom Towne Park, St Charles County Park

MN Connie Campbell

This Nature Explore Classroom is the only certified Nature Explore Classroom in St. Charles County. The classroom was the capstone project for Confluence Chapter in 2010 and 2011. The classroom is open to the public from dawn to dusk every day and is very well used. I rarely am there without children being present. The classroom is maintained by the St. Charles County Parks System and by the Confluence Chapter.

The park system advertises the programs at the schools, and then field trips are arranged with groups of students and volunteers at the park. The usual program is a "Nature Walk." The MMNs arrive early

and observe what nature has in store for them that day. It might be turtles on a log, dragonflies hatching, bullfrogs calling, snakes swimming, turtles crossing the road, milkweed pods bursting, raptors cruising, etc. You get the picture. If nature is a little shy that day, the volunteers have bags of items that they have picked up on their



hikes, walks, and outings. They have snake skins, bones, hatched eggs, old nests, nuts, seeds, etc. for their show and tell with the children.

The children usually rotate through different stations—walks in the prairie, nature walks around the pond, pond life (where the children observe what is in the pond), fishing programs, mammal furs, etc.

Notice that we don't use the

classroom areas. These areas were built for the child to use his/her imagination, for spontaneous play, not for staged lessons. So there is always a free play in the classroom built into the schedule.

Now for the exciting part!

During the year of 2017, volunteers from the Confluence MMN Chapter guided 844 students and 172 adults through learning exchanges with nature!

Many thanks go to Leslie Limberg, Alberta McGilligan, Glenn Bish, Tom Holt, Allison Volk, Alison Robbins, Beth Zona, Linda Leong, and Connie Campbell for sharing their expertise and their love of nature with these people. Hopefully, the enthusiasm and passion these special volunteers have for nature will rub off on the participants of the sessions.





Master Naturalists in Action



By MN Leslie Limberg

A beautifully perfect day for all. We were at Weldon Springs Interpretive Center (WSIC) for the Monarch Madness

Event and a Butterfly Walk with Yvonne Homeyer .

Yvonne is a past president of the North American Butterfly Association. She thanked our chapter for the work we did at the Jim Zeibol butterfly garden at the Busch Conservation Area. Below is a list of insects we spotted.

There were lots of visitors to the Missourians for Monarchs tent.

Kevin McCarthy, our previous advisor—now the Interpretive Center Manager at WSIC really produced a great event.

All master naturalists and master gardeners had lots of fun with kids and families.

Insects ID during the hike included a Soldier Beetle, the Halloween Pennant Dragonfly, the American Painted Lady



Soldier Beetle



Monarch



Halloween Pennant dragonfly



Gray Hairstreak



American Painted Lady

Butterfly, the Gray Hairstreak, Monarchs, Cloudless Sulphurs, Silver Spotted Skippers, and Orange Sulphurs. (Photos by Allison Volk)

Bluebird Monitoring
Report for 2016 and 2017
Confluence Chapter, MMN
Spring Bend and Quail Ridge
County Parks
MN Connie Campbell

Spring Bend is a proposed county park that borders the 364 bridge over the Missouri River and the Katy Trail. It consists of rolling hills of unfarmed fields and limited woods.

We have fifteen bluebird nest boxes scattered along a trail through the fields. The nest boxes are accessed by foot, and the monitors require a good dose of tick repellent and long pants.

The nesting season lasts from early March through early August. During the 2016 season, three Carolina Wrens, five Tree Swallows, six Chickadees and twenty Eastern Bluebirds



Sweet Little Blue Birds

fledged from the boxes which we monitor at least once a week. In 2017, thirty-two Eastern Bluebirds and eleven chickadees fledged from the boxes.

As we monitor, we look for evidence of predators and insects. Wasps have been a problem at Spring Bend. Ants have been an issue at Quail Ridge. We also want to stop any House Sparrows from using the boxes. We look for repairs that should be made to the boxes. We have noticed at Spring Bend that five boxes have not produced birds in the past three years. These boxes will be relocated during the winter months.

The monitors at Spring Bend include Sue Stevens in 2016, and Allison Volk, Jerry Lindhorst, Gail Gagnon, Don Moyer, and Connie Campbell in 2017.



Blue Bird in Box

Quail Ridge is located in western St. Charles County near the conjunction of I-64 and I-70. The monitors at Quail Ridge may use a car to travel the bluebird nest box trail composed of sixteen boxes. However, the monitors have an added responsibility that Spring Bend monitors do not have. They need to protect the birds and boxes from the people using the park.

In 2016, eighty-seven Eastern Bluebirds and nine Tree Swallows fledged from the boxes. In 2017, ninety-one Bluebirds and five Tree Swallows were produced in the boxes. Every box at Quail Ridge is an active box, with none left empty the whole season.

Donna Johnson is the lead monitor and is accompanied by Joe Veras and Leslie Limberg. The Quail Ridge Trail could use additional monitors to lighten the weekly load of these dedicated volunteers.





Bat box at Sodalís Nature Preserve.

Photo by Courtney Celley, USFWS.

From Abandoned Mine to Bat Haven: Missouri's Sodalís Nature Preserve

In 2012, before endangered Indiana bats were discovered at an abandoned limestone mine in Hannibal, it was thought that the species wintered in Missouri only south of the Missouri River. Scientists believed the Missouri population of Indiana bats was about 13,000. But with the discovery came the realization that the maze of tunnels beneath the hilly landscape along the Mississippi River harbored upwards of 168,000 *Myotis sodalis*, making Hannibal home to the world's largest hibernation site for the rare bat.

Partners jumped into action to protect the 185-acre site. Hibernating bats are extremely vulnerable to disturbance during hibernation, and the abandoned

mine was a magnet for unauthorized adventure seekers who drove vehicles through passages, lit fires and even took occasional shots at bats clustered on the ceilings.

The City of Hannibal, Missouri Department of Conservation, Iowa Natural Heritage Foundation, The Conservation Fund and the U.S. Fish and Wildlife Service teamed up to acquire the property for the city as a park—protecting the bats and providing a new outdoor recreation site for Hannibal residents.

It's been a year since Sodalís Nature Preserve was dedicated as a city park and a haven for bats. Managed by the City of Hannibal, the park protects hibernating bats in the former mine with bat-friendly gates at 33 mine entrances. The specially designed gates allow bats to enter and leave but prevent would-be adventurers from entering and disturbing the bats. Outside the mine, the park provides walking, hiking and biking for visitors among the hills around the hibernation site.

Recently, Hannibal has expanded the park, adding a small adjacent parcel of land that will help control ATV use in the area. An extension of the popular Bear Creek Trail will provide a paved path on level terrain for walkers who aren't able to tackle the hills around the park. Both improvements showcase of the City of Hannibal's commitment to managing the site for recreation, bat conservation and public safety.

Meanwhile, inside the mine, scientists counted nearly 200,000 Indiana bats in early 2017 as part of the biennial count of Indiana bats throughout their range, which extends from the northeastern United States to Western Missouri and Eastern Oklahoma. That's an increase from the 2015 count, likely due to the protection afforded by bat gates along with a longer survey effort. It is estimated that Sodalís Nature Preserve supports about a third of all Indiana bats, along with numbers of endangered gray bats, threatened northern long-eared bats, and other species.

Learn more about Sodalís Nature Preserve. <http://www.hannibalparks.org/parks/sodalís-nature-preserve/> From the U.S. Fish and Wildlife Service. www.fws.gov.



A Rusty Crayfish.
Photo courtesy of Ashour Rehana,
Creative Commons

Invasive Rusty Crayfish

If you're being used as bait in recreational fishing, you're already on the losing end of the situation. Unless the person who owns the bait bucket is a knucklehead. Then you're a piece of bait in luck!

There's the chance that when your angler is done fishing for the day he or she might just tip the bait bucket into the water, in which case, you can begin to plot your revenge. And oh, what sweet revenge it will be.

In your new home, where you were unceremoniously dumped after escaping a near-death experience,

you will make it your mission to survive. More than that, you will do your best to reproduce and dominate your new stretch of water. As the years go by, anglers, and perhaps even the original clown who released you from the bait bucket, will find that you have made yourself a general nuisance in the area. If things go according to plan, you'll outcompete local animals and devastate the underwater environment. Let mayhem reign!

Ok, so the intentional revenge plotting on the part of your fishing bait might be farfetched, but the rest of the scenario is all true.

Poor bait bucket etiquette is one of the major ways that we get aquatic invaders where we really don't want them. The **rusty crayfish** is one baitfish revenge story the Midwest continues to battle.

What would a revenge story be without redemption? No, there's

no helping the antics of the escaped bait. It's the anglers who can change the ending to this story. There are a number of ways you can properly dispose of your bait when you're done fishing for the day. Each state has its own preferred disposal method, so know your state's rules before you hit the water.

Here are some options to get you started:

- ❖ Waste not! Take the bait home for another fishing outing.
- ❖ Sharing is caring. Offer your extra bait to other anglers.
- ❖ The final chapter. Bag your bait in a sealed container and put it in the garbage.

Squash your bait's revenge plans before they get out of the bucket. Proper bait disposal is one of the easiest and best ways you can protect your favorite fishing spot.

www.fws.gov.





Putting a Price Tag on the Flood-Reducing Value of Wetlands

by Brandon Keim, Sept. 13, 2017

With every big coastal storm, attention turns to the role of wetlands in reducing their destructiveness. Quantifying that service, however, is a difficult thing to do. Now a team of ecologists, engineers and risk modelers have provided two such price tags: \$625 million in damage prevented by wetlands during Hurricane Sandy, and, in a New Jersey county broadly emblematic of the Atlantic coast, a 16 percent reduction in flood losses every single year.

Arriving in the aftermath of hurricanes Irma and Harvey, the figures, published in the journal *Scientific Reports*, underscore just how under-appreciated wetlands remain despite scientific recognition of their ability to absorb water and blunt storms. "We would like to see the scale of the benefits of these natural defenses reflected in the investments we make in conserving them," says Siddharth Narayan, a coastal engineer at the University of California Santa Cruz and the study's lead author.

Narayan's team first analyzed flood heights along Hurricane Sandy's coastal path in 2012, comparing their extent in areas where wetlands remain and areas where they've been lost to development. Cross-referencing those patterns

with high-resolution data on property insurance claims led to an estimate of \$625 million in wetlands-reduced property damage. That's about one percent of Sandy's toll, though the number varied widely by location. In Maryland, Delaware, New Jersey and Virginia, the states with the greatest wetland cover, property losses were reduced by between 20 and 30 percent.

The researchers then looked at annual flood patterns, not just epic, historical events like Sandy, but regular stormy weather in New Jersey's Barnegat Bay. There they found that properties behind salt marshes experience 16 percent less flood damage than properties unbuffered by marshes. Narayan is careful about extrapolating these findings to the entire Atlantic coast. Every location is unique. Wetland dynamics are complicated, but the bottom line is clear: wetlands are valuable, and potentially very valuable during storms.

Unfortunately, some 25 percent of Atlantic coast wetlands have already been lost to development, and the rate of loss has accelerated during the last two decades. It's a doubly destructive trend. "We are developing in an area prone to flooding," says Narayan, "and we are building over these natural defenses." He hopes the findings will inspire new wetlands conservation and restoration projects. Only three percent of coastal infrastructure spending now goes to natural features,

notes Narayan, which is "well below the sort of percentages we show for the benefits of these wetlands."

Narayan also notes the contribution of insurance experts, not just the usual wetlands-loving conservationists, to the research. "This is the first study to use the insurance industry's own models to put dollar values on wetland benefits," he says. "Hopefully we are showing that the issue matters and it is not just conservationists who think so."

Narayan et al. "The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA." *Scientific Reports*, 2017.

<http://www.anthropocenemagazine.org/2017/09/wetlands-reduce-flood-damage/>

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New Documentary on the Father of Soil Conservation

NRCS (USDA National Resources Conservation Service) has released a new documentary on soil conservation pioneer Hugh Hammond Bennett and the history of NRCS. It is a documentary on Hugh Hammond Bennett, the history of the agency, and the birth of the private lands conservation movement in the U.S.

It looks at the origins of soil conservation in the U.S., from the Dust Bowl and the Great Depression to the establishment of a permanent agency to help the nation recover.

It is an inspiring reminder of why private lands conservation is so important, now and into the future.

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?cid=NRCSEPRD1356274>





FROM THE WILD AND NATURAL SIDE



A bear cub curls itself around a branch in a pine tree.

Photo by Gary Kunkel
(www.sharetheexperience.com).



Shrews have poor vision, so they find food using echolocation, just like bats and whales! Short-tailed shrews use the venom in their saliva to help catch prey - mostly worms, spiders and insects.

Photo: Northern short-tailed shrew courtesy of Gilles Gonthier/Creative Commons.
<https://flic.kr/p/aSxEQp>



October's falling temperatures trigger the annual migration of millions of monarch butterflies across the continent. Every fall, these lovely butterflies fly thousands of miles from as far north as Canada to overwinter in California and Mexico. When swarms of monarchs pause en route to rest and feed on nectar-bearing plants, admirers will see them blanket trees and shrubs in orange and black.

Photo of a monarch butterfly chandelier in California by Joanna Gilkeson, U.S. Fish and Wildlife Service.



As nights grow colder, many animals are preparing for winter. Outside of breeding season, red fox don't use dens. Even in the winter, fox prefer to sleep out in the open!

Photo: Sleepy red fox photo courtesy of Jen Goellnitz/Creative Commons.
<https://flic.kr/p/YAd1BL>



Innies or Outies? Humans aren't the only ones with belly buttons. With a few exceptions, nearly all mammals have navels because of mom's umbilical cord, and bats are no different. Now the real question is: Innies or outies?



Eastern American Toad
By MN Allison Volk



Fishing spiders can dive more than seven inches under water to hunt for prey. They're patient too, waiting for hours on the edge of ponds for insects, tadpoles and even small fish to swim by.

Photo: Six-spotted fishing spider courtesy of Judy Gallagher/Creative Commons. <https://flic.kr/p/b13WFn>





It used to be much harder to send a selfie. In the 1860s, horse riders carried the mail from Missouri to California—covering 1,800 miles in ten days. Today, visitors can explore sections of this famous mail route along the **Pony Express National Historic Trail** and learn about the challenges faced by the young men who kept the coasts connected.

It might have been dangerous work, but you couldn't beat

the views.

Photo from a section of the trail in Utah by Bob Wick, Bureau of Land Management (@mypubliclands).



From the St. Charles County Parks and Recreation Department Parks Receives Prestigious Award

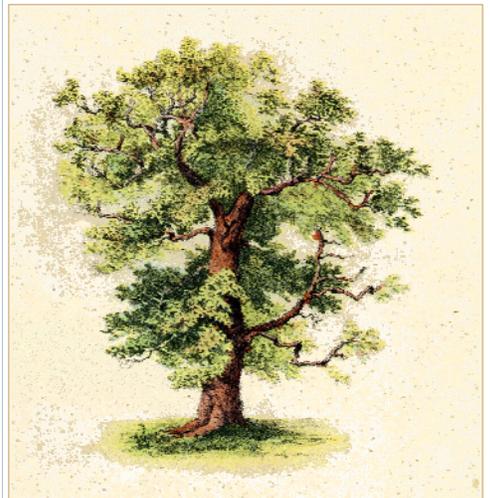
The St. Charles County Parks and Recreation Department recently was awarded the 2017 Dick Dawson Prairie Pioneer of the Year Award by the Missouri Prairie Foundation.

This prestigious award recognizes the Parks Department for making outstanding contributions as a leader in prairie conservation by advocating for the acquisition and conservation of original prairie, prairie plantings in public spaces; encouraging/assisting implementation of prairie plantings/reconstructions in pri-

vately owned landscapes; advocating or promoting prairie plantings/protection; and promoting understanding of prairie value through research and publications.

The Parks Department specifically was recognized for being dedicated to recreation, while leaving at least 50 percent of any acquired land in natural undeveloped green space in each park as prairie planting establishments. Additionally, park staff was recognized for educating citizens about prairies through field trips, guided public hikes, and partnerships with the Missouri Master Naturalist, Confluence Chapter.

Congratulations to all involved with prairie conservation.



MIGHTY OAK

© Kathy J Parenteau
Published: September 2010

Stand tall, oh mighty oak,
For all the world to see.
Your strength and undying beauty
Forever amazes me.

Though storm clouds hover above you,
Your branches span the sky
In search of the radiant sunlight
You count on to survive.

When the winds are high and restless
And you lose a limb or two,
It only makes you stronger,
We could learn so much from you.

Though generations have come and gone
And brought about such change,
Quietly you've watched them all,
Yet still remained the same.

I only pray God gives to me
The strength he's given you
To face each day with hope,
Whether skies are black or blue.

Life on earth is truly a gift.
Every moment we must treasure.
It's the simple things
we take for granted
That become our ultimate pleasures.

Source:
<https://www.familyfriendpoems.com/poem/mighty-oak>

Submitted by Alberta McGilligan





City of O'Fallon 2017 Volunteers Banquet

The city of O'Fallon honored its volunteers during a banquet on 6 October 2017. The theme of the event was "Celebrating the City of O'Fallon Gems."

Several volunteers were honored for their services to the City.

Our Master Naturalists Project was recognized and the group was called "The **Green Gems.**"

Who are these Gems?

Elaine Browning, Frank Dvorak,

Ann Finklang, Jane Porter, Joe Veras, Tara Wallace. and Carmen Santos

I think the name "Green Gems" fits our team quite nicely and we will include the Quail Ridge Team in the Green Gems designation as most of the Green Gems also work in our Quail Ridge Project (Ann, Elaine, Joe, Frank, Jane, Carmen).

We are adding: Scott Barnes, Leslie Limberg, and Beth Zona

We hope that Linda Leong and Paul Crombie join our Team next year.

We invite all of you to join us and become a Green Gem!



Go, Green Gems!

"On every stem, on every leaf, ...and at the root of everything that grew, was a professional specialist in the shape of grub, caterpillar, aphid, or other expert, whose business it was to devour that particular part."



Oliver Wendell Holmes
(1809–1894)



Will Birds Use Nest Boxes to Roost for Warmth During the Winter?

Some birds use nest boxes as roost sites after the breeding season is over. Nest boxes offer shelter from rain, snow, wind, and cold—although a couple of aspects are not ideal for overnight roosting. They can be too small for groups of roosting birds, and their smooth sides and open interiors don't offer much in the way of perches.

So your nest boxes might see double duty as roost sites during winter. But if you'd like to go one step further, you could provide a specially designed roost box. Any backyard favorites that typically nest in boxes—bluebirds, chickadees, titmice, nuthatches, and small woodpeckers—may seek refuge in it. Sometimes more than a dozen birds will pile into a single box to conserve heat.

Roosting boxes differ from nest boxes in several ways. A good roost box is designed to prevent the birds' body heat from escaping, so, unlike a nest box, it has fewer ventilation holes. Also, its entrance hole is near the bottom of the box so the rising warmth doesn't escape.

Inside a roost box there may be several perches made from small wooden dowels, staggered at different levels. The inside front and rear walls may be roughened, scored, or covered with hardware cloth so that woodpeckers can cling to them. A hinged top allows easy access so you can clean the box.

Some people modify their empty nest boxes for winter to make them better for roosting. Techniques include turning the front panel around so that the entrance hole is at the bottom, adding twigs for perches, and plugging some of the ventilation holes.

You can find more about roost boxes, including a sample construction plan, at All About Birds: (<https://www.allaboutbirds.org/attract-birds-with-roost-boxes/>).

A roost box page from the Washington Department of Fish and Wildlife offers full instructions is at this link: (<http://wdfw.wa.gov/living/projects/roost.html>)



Eastern Screech-Owl roosting in a nest box. Photo by Dah Professor via Birdshare.





Thank You!



-  Bob Lee ...another Monarch habitat
-  Phil Rahn for his commitment to Pollinator Habitat
-  Carmen & Leslie for donating ten Glade Coneflowers to the Quail Ridge Habitat
-  Tom Nagle for hunting down a new Swamp Milkweed grant for 3 gardens
-  Chapter members who step up to leadership positions, most recently: Deb Moulton, Ken Benson, Mark Williams, Rob Merriman, and Jane Porter
-  Martha Hessler for her awesome secretary skills for the last 2 years
-  Tom Nagle for his Vice Presidential service for MANY years



Our Leadership



- President—Alberta McGilligan
- Vice President—Tom Nagle
- Secretary—Martha Hessler
- Treasurer—Alison Robbins
- Advanced Training—Deborah Moulton
- Volunteer Coordinator—Glenn Bish
- Membership Services—Allison Volk
- Communications—Leslie Limberg
- Web Site—Rick Gray
- Photography—Don Moyer
- Newsletter—Carmen Santos
- Peg Meyer and Elaine Browning

Advisors

- University of Missouri Extension, Rich Hoormann, hoormannr@missouri.edu
- MDC, Colleen Scott, Colleen.Scott@mdc.mo.gov

Project Leaders:

- Daniel Boone Hays—Bob Coffing
- Matson Hill Park—Bob Coffing
- Cuivre River and Don Robinson State Park—Bob Coffing
- 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
- Cuivre River Flower Phenology—Pat Burrell-Standley
- Schulze Woodland Restoration—Ken Benson

Where is Connie?



Back of the Weldon Springs Site looking for Monarch's.
Photo by Allison Volk

No Safer Place ...



The smell of healthy soil has a sweet and earthy aroma. This is the scent of geosmin, a product of soil microbes called actinomycetes.



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/>

