

The Missouri
Master
Naturalist
Program is



Mississippi Hills Newsletter

April, May & June 2022
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Missouri
Master Naturalist™



Ben Sapp 10th Annual SHED HUNT for YOUTH

Saturday, February 12, 2022

By Beth Whelan



It was a crisp eleven degree day with blue skies and bright sunshine when beautiful memories were made for all the families who took part in the 10th Annual Ben Sapp Memorial Shed Hunt for Youth.

There were approximately 100 children of all ages who started arriving at 8 a.m. with their parents despite the cold temperatures. They were dressed in many layers and so excited to search for their treasure, a deer antler shed provided by the MDC, scattered throughout the forest at the Mark Twain Boudreaux Memorial Visitor Center. Volunteers from the Mississippi Hills Master Naturalists provided many services throughout the day. Several crock pots of soup, including vegetable beef, chili, and chicken noodle soup, barbecued hot dogs, chips and a bottle of water were available for the adventurers.

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

Its purpose is to develop a corps of well-informed volunteers to provide education, outreach and service dedicated to the beneficial management of natural resources and natural areas within their communities for the state of Missouri.

The Mississippi Hills Master Naturalist Chapter is located in Hannibal, Missouri, and serves the surrounding counties. We are involved in citizen science, community projects, nature interpretation, and community nature education.

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And on Facebook [@MississippiHills](https://www.facebook.com/MississippiHills)



A fire pit provided warmth to the hunters after their big hunt, along with a sample of popcorn that had been popped over the open fire. An eagle's nest was on display for the youth to be able to see just how big a nest could be and how it is built. Over 200 penny medallions were created; marking the special event by inserting a penny into the machine and pressing an imprint into the coin.

Other groups that provided points of interest were the Park Rangers from Mark Twain State Park in Florida MO. They set up a tent that featured many hides and furs from animals, and various sizes of antlers that offered a nice collection of information. Many kids enjoyed being able to handle the hides and furs, and often compared their treasured antlers to the ones that were on display in the tent.

Once inside the Mark Twain Boudreaux Memorial Visitor Center, many other volunteers provided more informational activities for the youth, such as gun safety, archery safety examples, animal furs and hides, Native American artifacts, trapping, and many other interesting exhibits.

A multitude of other organizations provided volunteer hours and services. They were Mark Twain State Park, Monroe City High School National Honor Society, Missouri Department of Conservation and Monroe City White Tails Unlimited. The MDC offered a goodie bag filled with tokens of various types, along with information about Mark Twain Lake and the services they provide. Despite the cold temperatures, it was a fun filled day, and many fond memories were created from this special event. Please make plans to attend or volunteer next year.



Our Partnership with the FOREST Council

by Bob Kendrick

The Friends of Recreation & Environmental Stewardship (FOREST) Council is a 501(c)(3) organization composed of 24 member organizations banded together for a common cause around the Mark Twain Lake Area. The latest entry is the Groovy Gardeners that put in the flowers at the Clarence Cannon Dam overlook. Members include the Sailboat Association, the Trail Horse Association, Whitetails, Turkey Federation, Quails Unlimited, the two marinas on the lake, and others.

The Mississippi Hills Chapter of Missouri Master Naturalist is also a member of this 'partner organization'. Over the few short years our banding together has been very fruitful, accomplishing tasks and getting results. The Environmental Trail at Frank Russell Recreation Area is just one such project of many.

When I first became a member of the Master Naturalist organization, I was a little overwhelmed by the formidable problems presented to us; invasive species, poor habitat, white nose in bats, misinformation, climate considerations, destruction, problems, problems and problems. As just one person looking at this, it can seem just a little daunting. Who am I in the face of this?

Possibly the best asset that I discovered within our organization was friends. A conglomeration of like-minded people that could prop me up when needed as well as challenge me. No longer just I, but us, working together and even having fun and enjoying doing it. Joining this group has helped me to become a wealthier person.

The same goes for our group interacting and working with other groups. Working together we can make a difference. *We are.*

Clarksville Eagle Days

By Theresa Casey

The Clarksville location on the Mississippi River offers the best opportunity in Missouri to view our national bird...One hundred plus eagles were observed at this location on Saturday morning.

On January 29 and 30, twelve members Mississippi Hills Master Naturalists provided staffing and educational information for the annual Clarksville Eagle Days in Clarksville, Missouri. The Clarksville location on the Mississippi River offers the best opportunity in Missouri to view our national bird due to its proximity to Lock and Dam #24 which provides an unobstructed view and open water for eagles to fish and feed even in the frigid winter temperatures. One hundred plus eagles were observed at this location on Saturday morning.

Members of MHMN at Clarksville's historic Apple Shed introduced the hourly live eagle demonstrations by Dickerson Park Zoo in Springfield, provided an educational display on Bald Eagles and assisted over 300 children in making eagle related crafts. Down at Riverview Park, several members braved the cold and aided the public with the viewing scopes to watch the live action of the eagles and the nests located across the river. The event was well attended this year following the lower numbers of the last two years due to Covid 19. Many thanks to those members who assisted in this fun, educational event: Carolyn, Jan, Lisa, Gale, Mark, George, Kristy, Quintin, Dennis, Barry, and Theresa.



OUR PRAIRIES

Seven Prairies Per Year For Seven Years

PRESCRIBED BURN WORKSHOP by Sylvia Spencer

A successful prescribed burn following all of Jamie's instructions will encourage new growth of native species and help eliminate invasive species to establish these prairies to prosper for years to come.

Wow! Who knew that having a successful prescribed burn required so much preparation! There is the proper paperwork to complete, multiple weather factors to consider, and what equipment is needed to have ready to use. You may have thought, "Oh, these weeds!" I'm going to burn this area and get rid of X, Y, Z. If done improperly, you could be encouraging the new growth of your unwanted weeds. I encourage everyone who thinks they may want to have a burn sometime, just loves being physical in the outdoors, or enjoys learning; to take this informative class.

On Saturday, January 29th, approximately 40 people gathered at Mark Twain High School for the in-person part of the prescribed burn workshop, which was led by MDC personnel, Jamie Ebbesmeyer. This was a great group - with people from multiple backgrounds including the general public, Brent Goulson's Ag students and Master Naturalists from the Mississippi Hills Chapter. We had a variety of presentations from Mr. Ebbesmeyer, including handouts, power points and my favorite, the burn equipment trailer. Going over correct procedures, all the aspects of the preparation, planning and safety procedures involves much more than I thought.

Prior to this workshop, the participants were required to do an extensive on-line portion of learning. This was a great process to introduce the burn language and gave us a lot of general knowledge prior to the in-person class. I believe that providing a printed version of the on-line portion ahead of time would be of tremendous benefit. This could be used for note taking and kept for all important reference usage later. With so much information being given at once having that reference paperwork/notes would be a great asset.

Master Naturalists have made a commitment to provide restoration of prairies to improve natural resources such as soil health. This provides native food and habitat for many small animals and declining bird populations and offers overall improvement of our local ecosystems. A successful prescribed burn following all of Jamie's instructions will encourage new growth of native species and help eliminate invasive species to help establish these prairies to prosper for years to come.

I can't wait to get out there with experienced people and participate with my new knowledge on prescribed burns. Be safe! Happy learning, get outside and enjoy this natural world!



Mark Twain FFA members help Mack Ellis prepare the back burn on Jan Golian's prairie.



Ann Humphreys and Phil Whelan proudly display another prairie sign in progress.

By Bella Erakko

A LOVE AFFAIR WITH TREES

I remember the day my sister and I climbed a “forbidden” tree—a towering blue spruce. Perched like tee-shirted birds, we heard our parents’ car pull up. We froze. If we were discovered, the consequences would (we suspected) be dire. But they never looked up. We were saved. How we loved that tree—its reachable limbs, its higher-than-rooftop views.

Today, many kids have *never* climbed a tree. Some don’t even have a tree in their yard or have a tree-lined street to shade them on a blistering hot Hannibal day. Increasingly, this situation is being traced to a condition known as *tree inequity* because some communities lack the discretionary income to buy, plant, and maintain a tree. So children don’t see, let alone swing on the low-lying limbs of an oak, maple, mulberry, or ginkgo.

One might say, “So what? It’s just a tree. They’re all over the place.” Not quite—and not always.

One reason Hannibal is a designated Tree City dates back to well over a century. Julius Sterling Morton moved from abundantly tree’d Michigan to the treeless prairie of Nebraska. Where, he wondered, was the cooling shade on a hot Midwest day?

His answer? In 1872, he advertised the first National Arbor Day in Nebraska, and over one million rootlets hit the plains dirt. His vision inched its way acre by acre across the states, sapling by sapling, passing through Missouri and Hannibal, and eventually birthing a true National Arbor Day.

Fast forward into a modern world filled with tree research. Today’s findings indicate that trees reduce cooling costs by 30%, cut crime in half, reduce domestic violence by 35%, increase property values, shorten hospital stays (if the patient can see a tree), help kids deal better with attention deficit disorder, lower blood pressure, remove one billion pounds of carbon dioxide, intercept disastrous storm runoffs, reduce road rage, protect skin—and perhaps best of all, kids can climb a tree.

**This year,
National Arbor Day celebrates
150 years;
the Missouri Arbor Day honors 136 years;
and
Hannibal’s Tree Board recognizes 24 years.**



A 120 year old Northern Catalpa tree in the Robinson Cemetery.

Usually this event focuses on planting a native tree on public property—a school, or public space. But realizing that every Hannibalian deserves tree proximity, the Tree Board contacted the non-profit Forest ReLeaf of Missouri organization, which is donating twelve native trees: 4 White Oak, 4 Hop Hornbeam, and 4 Serviceberry (all native to our area). The goal? To start planting trees in neighborhoods lacking these deciduous giants. The public is invited to help plant these saplings in April. In conjunction with Hannibal Housing Authority, the chosen date/time and site is still to be determined.

One day in the far future, they may become a historic landmark. Consider the Burr Oak sitting right outside the visitor’s entrance to Mark Twain Caves, recognized by the U.S. as a “Liberty Tree” dating back to 1731. Or the tree we plant today may one day be recognized by the State as a “Champion.”

In fact, the Hannibal area already has two. Missouri trees “compete” within their species by height, breadth, and circumference. A few hundred feet from the Liberty Tree stands a Champion—300+ year-old American Sycamore tree—its 146’ white-limbed spread seeming impossibly long.

Anyone may harbor a winner on their property. Kristy Trevathan, chairwoman of Hannibal’s Tree Board, eyed a pecan tree one day near Steyermark Woods Conservation Area. It looked champion-ish to her. Sure enough, it is.

A local favorite comes with a heart-warming story. Lita McElroy Washington planted a Northern Catalpa sapling in the African American Robinson Cemetery 120 years ago. She didn’t want her buried parents lying out there in the hot Missouri sun. The tree took

its shading job seriously, becoming a champion. But even champions shading the dead, die. Hollowed out and rotted, it toppled over. But honoring Lita’s wishes, one limb remains ... the one shading her parents.

So, the trees planted this April will shade generations of people in Hannibal. And with luck, and a hundred years or so, it may become a Missouri champion.

~ ~ ~

**National Arbor Day occurs on
Friday, April 29**

**Further details on where and when the
neighborhood trees will be planted will
be announced soon**

**The Public will be WELCOME &
Encouraged to Come and Participate**



Little Bluestem

2022 Perennial Plant of the Year

By Anne Coleman



Little Bluestem (*Schizachyrium scoparium*) has been chosen by the Perennial Plant Association (PPA) as the 2022 Perennial Plant of the Year. It is wonderful to learn that a native grass in Missouri has been recognized with this title. PPA is a professional association composed of growers, garden retailers, landscape designers, and horticultural educators.

As its name suggests, this grass has silvery-blue stems (particularly at the base) and leaves. Little Bluestem is a warm-season, clumping grass and once established is drought-resistant, and like many other prairie grasses, has an extensive, deep root system, allowing it to do well in poor, infertile soil which is useful for erosion control. It also provides food and wildlife habitat for songbirds, upland gamebirds, and small mammals.

Little Bluestem can grow up to 4 foot tall and a foot in diameter. Its color deepens to rusty mahogany in fall and the clumps remain through much of the winter making it an attractive winter accent.

BLUEBIRDS OF HAPPINESS

By Carolyn Trower



Now is a great time to prepare for the Eastern Bluebird, Missouri's state bird and a naturalist's favorite. With the temperatures warming and plenty of sunshine, they soon will be scouting for nesting areas along the edges of meadows.

Bluebirds are common in the eastern parts of North and Central America. A small bird, about 7 inches in length, the male bluebird is easily identified by its bright blue head and wing feathers. Although the female is much duller in color, both have the characteristic rust-colored throats and white stomachs.

Nesting sites used to favor old wooden fence posts, holes in dead trees, or hedgerows. With larger fields and fewer hedgerows, the bluebird has become scarcer in the eastern portion of the United States.

Today many gardeners and naturalists put up bluebird houses along the edges of their gardens and small pastures. The male scouts for a nesting site in early spring. After attracting a female to the nest site, she begins to build a nest. She usually lays 3-5 pale blue eggs and after hatching the babies are fed insects by both parents. Baby bluebirds become fledglings and are ready to fly about 18 days after hatching.

An interesting fact about the bluebird is that they will not abandon their young after people come in contact with them. This makes it possible for people to check on their bluebird nests and keep an eye on them.

Other birds, House Wrens, English Sparrows, and Starlings will compete for the nesting box. The male bluebird will also defend his territory against intruders and predators such as raccoons, domestic cats, and snakes. The bluebird makes a small cup-like nest of grass and weeds, and a pair can have 2 or 3 nests a year.

Most of their diet consists of insects, specifically beetles, crickets, grasshoppers, and caterpillars. In cooler weather the bluebird supplements its diet with fruits and berries. Bluebirds have incredible eyesight and can spot an insect in the grass at 60 feet. They usually eat their catch on the ground, often while the insect is in the larval stage. This makes them known as "the farmer's friend."

Naturalists can help maintain bluebirds as part of the natural cycle of the backyard ecosystem. There are many websites that provide information on building or purchasing bluebird houses. A typical bluebird house is designed to attract bluebirds specifically. The house should be 5-6 feet off the ground and have a ½ inch hole that is just right for the bluebird.

There is usually a ½ inch gap for ventilation at the top which is often provided by a sloping roof. A drain hole is put in the base of the birdhouse. The front of the birdhouse should open on hinges for easy cleaning.

Additional information on the bluebird and its nesting box can be found on the Missouri Department of Conservation website.

SOIL HEALTH WORKSHOP

By Vanessa Laatsch

This is a review of the Soil Health Seminar that was held in Monroe City Friday, January 28, 2022.

The Seminar started at 8:30 a.m. allowing participants an opportunity to explore vendors for material that might be pertinent to farm business. While most of those present were either farmers or members of Illinois and Missouri Departments of Agriculture, who were obtaining CEU's required for their employment, there were six Mississippi Hills Master Naturalists in attendance: Kent Cheek, Bob Kendrick, Alan Miller, Sylvia Spencer, Al Davis, and Vanessa Laatsch.



The subjects discussed were “Soil Stewardship”, “Carbonomics”, “Cash Rents Agreements” the legal aspect when leasing your land, “Understanding Cover Crop Mixes and species”, and a panel of farmers discussed how they used cover crops and what their results were.

After lunch, smaller sessions were held so attendees could choose the subjects they were interested in. These subjects included, “Integrating Grazing with Cover Crops”, “Interseeding cover crops into standing cash crops”, “Previous Grazing and Cover Crop Trials” and “Practical Stewardship Practices.”

As you can tell by the title of the classes, the subjects seem focused on farming, but the underlying information was much more than farmer oriented. We saw video footage of the dust bowl, and farmers who were determined to plow every available inch of land. As residents of a farming community, many of us over the age of 30 are very familiar with the ‘respect’ that good farmers earned by keeping their fields plowed and weed free. Current farming procedure involves “No Till” practice, and in fact, Farm Services gives No-Till farmers more benefits than tilling farmers. Also, at this time, Cover Crop Farmers are Cost-Shared the first year they plant cover crops in an effort to incentivize this practice.

So, what does all this have to do with you, Master Naturalist? It’s become common knowledge that forests rely on the fungi in their root masses to make trees and forests healthier. It appears our tilled land has damaged a similar fungal layer with all the plowing and root disturbance. Of course, we understand that tilling allows top soil to blow away or wash away, but there’s more. Each year, farmers apply approximately 350 pounds of anhydrous ammonia per acre per year. Or, if the crop rotates with soybeans, a nitrogen harvesting legume, 350 pounds every other year. The soybean has an arbuscular mycorrhiza fungus which enters the legume root and creates a chemical bond wherein it draws the Nitrogen (always available in our soils and atmosphere) and regenerates it into a compound the plant can use. Humans have found a way to create this process also... it was developed trying to create the Hydrogen Bomb. Now, manufacturing plants can separate nitrogen into the necessary units to make anhydrous ammonia – our favorite fertilizer.

Soil Health: Continued

By using a variety of cover crops, including different legumes, at different times of the year, we not only allow more water to seep into the soil, saving the water for the arid times of the year, we also allow natural fungi growth in the soil that creates (well, not create... manufactures... the raw material is already there) fertilizer. This not only produces healthier plants and increased production, but it also reduces the need for fertilizer application, which reduces fuel usages and soil compaction.

I want to make a side comment that this “healthier plant” has access to biology that hasn’t been present in our soil for years, so the “healthier plant” is able to provide trace minerals like manganese, copper, boron, and zinc. This is all due to the fungi activity in the soil. We’ve been hearing that “tired soil” no longer produces healthy plants, and human health is suffering because of it. Now we know how to produce these healthier plants.

Another pretty important message also relates to our forests. Remember the lecture where we learned that if one tree was being attacked by an insect, not just that tree, but other trees in the same area started to produce a compound to repel that insect? It appears that field crops and cover crops in healthy soils are able to do the same thing. This in turn reduces the necessity for so much insecticide to be used in harvestable crops.

Unfortunately cover crops are not an exact science. Experimentation is necessary and cover crop choices may be determined by soil type, weather, the cash crop grown in the same field, and the farmer’s ability to handle the cover crop effectively. Some cover crops must be mowed or sown in a fairly exact way, so a person who farms very large acreages might choose a different cover than someone who is able to assure they attend to a certain acreage at a more exact time. In other words, it’s still in an experimentation mode in some locations. Kansas, where much of the acreage has similar soils and weather, is able to share data, and is well on its way to being a mainly cover crop zone. It’s much more difficult in Missouri where our soil types changes from one zip code to the next, and there’s a dramatic difference in rainfall for different corners of the state. Missouri farmers may exchange success stories, but it’s very possible they may not be able to use the same cover crops as a farm that lays only 200 miles away. With more successes and more farmers willing to experiment with this (and I think Missouri Farm Services should be more agreeable with farmers getting cover crops underway – so there can be more success stories to appeal to neighboring farms), cover crops are well on their way to creating both healthier soils and healthier people.

Two excellent guest speakers were invited from out of state, and they shared exciting success stories. While this was a refreshing seminar, many farmers and Agribusiness workers left the meeting with only enough information to know what can be done (in Missouri), but not quite enough information to be able to do it. I’m guessing that in the next 10 years, the farmers will have taken this information and developed standard procedures that will be successful for essentially all farmers in our community.

The Mississippi Hills Master Naturalist Chapter will hold a **New Master Naturalist Training Orientation**

May 2 from 5:30 p.m. – 8:30 p.m. at the
Hannibal-LaGrange University Burt Administration Building.

Registration is required before May 2 by calling 573-248-2530

Classes begin June 6 –August 29 5:30-9:00 p.m.

Includes three Saturday field sessions

Participants at least 18 years old must register for the June 6 – Aug. 29 training by May 7 and pay \$110.

Register for the full training course by visiting

<https://extension.missouri.edu/events/missouri-master-naturalist-mississippi-hills-chapter-1648049889>.

Find the Missouri Master Naturalists Training full media release in the [MDC Online Newsroom](#)



WORDS OF WISDOM

From our MHMN President, George Wisdom

Our chapter has had a great start this year and has participated in some great projects already (Eagle days, Ben Sapp Memorial Shed Hunt for Youth, Hannibal Teen Fair, Christmas Bird count, Great Backyard Bird Count and more). Even though our winter of snow and cold has seemed long, spring is finally arriving. The cold temperatures are giving way to days that are warmer with longer sunlight. I am looking forward to being outside, hearing the birds sing and the turkeys gobbling in the distance, the tug of a crappie on my line, and of course finding that elusive morel mushroom.

I am also looking forward to working with all of you on the challenges facing us this year. We have some really fun opportunities coming up that you can get involved in. Some of them are the Steyermark Spring wildflower walk/hike, native planting at Bella's hill, tree planting at Ranacker CA and helping with the development of the bike/hiking trail at the Mark Twain Lake Frank Russell RA.

As winter gives way to spring, please give some thought on being safe in the great outdoors. It is always a good idea to have a safety plan before you venture outside. No one plans on having an accident, so it is a good idea to carry your cell phone and water. Let someone know where you will be and when you plan on returning. Be mindful of the hazards along the hiking trail. Poison ivy, snakes, uneven and wet slippery ground are but a few hazards we face. If you are fishing or boating be sure to wear a life jacket, sunscreen, and a hat. It is always a really big surprise if you happen to fall out of a boat. Accidents happen without warning so being prepared is the best medicine for having a fun and enjoyable outing. The boy scout motto "Be Prepared" is good advice for us all.

Let's play it safe in the great outdoors.

George W. Wisdom, President

BY THE NUMBERS

(rounded to nearest whole hour as of March 31, 2022)

2022

SERVICE PROJECTS

Volunteer Service Projects Total Hours = 815

ADVANCED TRAINING

Advanced Training Total Hours = 328

Recognition for achieving Initial Certifications!

- * Al Davis
- * Sylvia Spencer



Congratulations on 2022 Recertifications!

- * Bob Kendrick
- * Vanessa Laatsch
- * Anne Coleman



Special Congratulations to—

- ◇ Theresa Casey
- ◇ Kristy Trevathan

For achieving their *Bronze Milestone* pins for 250 volunteer hours

HELPING THE WILD TURKEY

by Daniel Mallory

Starting with a brief overview of the history and current status of the Wild Turkey. This information was presented by Reina Tyl on 6/29/21, it is available on YouTube titled "Wild Webcast: Wild Turkeys in MO (2021.06.29)". Historically, turkeys were abundant throughout the state but were nearly extirpated following settlement and unregulated harvest and habitat loss. Initial efforts to manage the population were unsuccessful, with the release of pen-raised turkeys. However, starting in the mid 1950's, capturing and translocating proved successful and by the 1970's turkeys had been reestablished to every county in the state. Populations peaked in the early 2000's and have been on a decline since. Two pieces of data that are indicative of a decline in the population are harvest data and poult-to-hen ratio (PHR). Harvest data is collected by successful hunters notching their permits and completing the telecheck process. Poult-to-hen ratio is collected by MDC staff and citizen volunteers who record observations during June, July, and August. The peak in modern turkey harvest occurred in the early 2000's (~60,000), but by the late 2000's, harvest declined by 25% and has been on a steady decline, with the lowest harvest occurring in 2021 (~35,000). The same trend is seen when comparing the poult-to-hen ratio. In the early 2000's PHR was over two and the last survey in 2020 was less than one.

The equation to determine the population size is (production + survival – mortality & harvest = population). Based on previous turkey research (1980's and 2014-2019) the largest factor impacting this population is production. Annual hen survival was similar between the two projects, fall harvest rates of hens declined; however, nesting rate, nest and hen success, and poult survival were lower. Nesting rate was reduced from 97% to 78% and poult survival was reduced from 46% to 23%. There are many factors that have attributed to this decline: increase in nest predators, loss of habitat, lower insect abundance, and changing weather patterns. MDC is currently conducting a research project in Northern Missouri to analyze how these factors are impacting nest success and poult survival. More information to come as this project develops.

One variable that has been talked about to help with turkey numbers across the country is removal of nest predators. Removal of nest predators from a local environment could have potential short-term effect on nesting success if done at appropriate timing prior to nesting; however, removal of nest predators rarely has measurable impact on long term success as these animals move back into the habitat. A potentially substantial opportunity to have long-term effect is habitat improvements, providing ideal nesting habitat and brooding habitat, areas where nest predators have a more difficult time locating nests and finding poults. This can be done with utilizing prescribed fire (dormant or growing season), managing timber to allow undergrowth to provide habitat, and planting warm season grasses and forbs to promote insects that are essential to poult nutrition. It is becoming more apparent that the layout of these habitat types is also important to help protect young poults and hens on nests. For example, with a narrow strip of warm season grasses and forbs, predators can travel on the downwind side and locate nests easier than in an irregular shaped, wider area.

In Missouri over 93% of land is privately owned, so it will ultimately be up to landowners to rise to the occasion to manage the turkey population. MDC has private land conservationists that can assist with goals and provide information on practices. I challenge everyone that reads this to do one thing to help turkeys. If you are unable to do this on your own property, discuss these ideas with neighbors or friends.





MEET KRISTY TREVATHAN

By Bella Erakko

It all began with a honeybee, or perhaps the shock of seeing her father climb a tree to get honey from a beehive nest. Kristy Trevathan, probably only two years old, vividly remembers. “It was a cold winter day. I was outside. My aunt and uncle had a wood burning stove. I just remember the specialness of doing something I had never done before.”

She grew up amidst gardens—flowers and vegetables. “My grandmother probably had 50 to 100 peonies. On Memorial Day, she cut them and made flower bouquets that people would buy to decorate graves. My mom brought daisies and baby’s breath. Being with all these flowers in the basement ... I can still remember the fragrance.”

Of course, like every kid born before cell phones and tablets, she always played outdoors. She spent countless hours in her grandmother’s “secret garden” filled with flowers and pathways—loving the non-native peonies, irises, and day lilies indiscriminately. In those days, “you sat in the yard and visited.” She often perched herself on the big rock under the pear tree.

She met her future husband, Jeff, before they started college. Because he majored in wildlife management, Kristy often tagged along for outdoor classwork such as wildflower collecting. She kept her love of nature alive by working in the Missouri University’s greenhouse while earning a degree in education.

Folding vegetable and flower gardening, and Tree Board membership into her active real estate life, all seemed well until she took a class ...

“The Master Naturalists program really changed me. It was my aha, my born-again moment: biodiversity, web of life, sustainability for insects and birds—it starts with native plants.”

She realized she had found her tribe. Today, she exclaims, “Every bit of spare time is devoted to our chapter, or my education spent reading and taking on-line classes.”

Doug Tallamy, recognized author and naturalist, has totally transformed her thinking. “He says everyone can try

to make their own yard a national park. Put in as many things as you can and you don’t have to rake or mow. Let nature take care of itself. We can do it here. We can be an example!” She adds, “One nest of chickadee fledglings eats 6,000 to 9,000 insects. They can’t eat seeds yet.” All of life, she realizes, is inter-dependent.

From the ramparts, one can almost see
Kristy leading the brigade:
**“FIGHT the bush honeysuckle.
LOVE the prairie development.
PLANT more trees.
BE a Master Naturalist.”**

But there’s still a soft spot for her peonies and irises and day lilies—the flowers that ignited the passion in her for nature. She offers up a bit of Tallamy wisdom: “Doug says if 70 percent is native, you can still have plants you love and grew up with.” She smiles. “I still love them.”

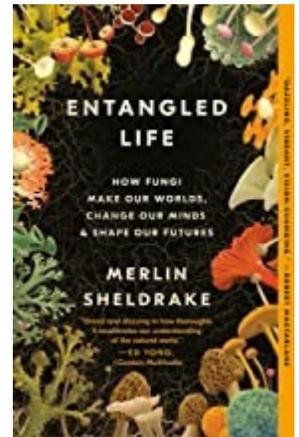




Reader's Review

By Bella Erakko

“Entangled Life,” by Merlin Sheldrake



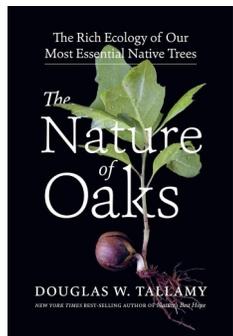
This book starts off with a bang. Consider the following quotes from the *first few* pages:

- “Fungi are eating rock, making soil, digesting pollutants, nourishing and killing plants, surviving in space, inducing visions, producing food, making medicines, manipulating animal behavior, and influencing the composition of the Earth’s atmosphere.
- Over 90 percent of their species remains undocumented
- Honey fungi are among the largest organisms in the world ...the current record holder in Oregon weighs hundreds of tons, spills across 10 square kilometers, and is somewhere between 2,000 and 8,000 years old

And my favorite:

- Some species discharge spores explosively, which accelerate 10,000 times faster than a space shuttle directly after launch.”

Sheldrake makes good on all of these titillating leads. I love his truffle story, and who can’t get off on psychedelics! I’ll admit, I haven’t finished this book, but couldn’t wait to review it. Sheldrake, a biologist and writer, got his Ph.D. in tropical ecology from the University of Cambridge for his work on underground fungal networks in Panama. And with six pages of accolades and praise, this book hits all 10’s on information, readability, and just plain fun.



“The Nature of Oaks” By Douglas W. Tallamy

Reader's Review

By Bob Kendrick

One of my favorite booklets from the Master Naturalist training class is *Fifty Common Trees of Missouri*. I have yet to master it, but I know that of the oak/hickory woods of Missouri, my favorite is the oaks. I love their structure and what they do.

Sometimes things come to me highly recommended, maybe even hyped up. Over the years I hope that I have not become cynical but rather guarded in my expectations. *The Nature of Oaks* was treated similarly by me. I did not even buy the book, but rather borrowed it from a relative. Now, I am returning it with a hearty thank you, and purchasing one for reference and one more to loan out.

I knew the oak has a rich ecology. I never knew how much so. The book is presented in 12 sections, one for each month of the year. I say one book for reference because my next 12 months are going to be spent with that book one month at a time.

Mr. Tallamy could have written on any number of trees and just blown me away; I’m thankful he wrote on my oaks.



Spotlight on Species

Common Morel (*Morchella esculenta*)

By Anne Coleman



Description

The **morel mushroom** is a species of fungus in the family Morchellaceae of the Ascomycota. There are at least three species of morels in Missouri—black, yellow, and half-free. The morel has a conical, blond to grey to brown cap which is very distinct. Fairly uniform, the cap appears ridged and pitted inwards, and is said to resemble a sponge or honeycomb. The stem is white to pale yellow, and straight or with a club-shaped or bulbous base. Caps and stems are hollow and attached to the stem at the lower edge with the exception of the half-free morel whose cap hangs free from the stalk. Morels vary in size, but typically they are about 1–3 inches broad by 2–6 inches tall.

The spores range from white to cream to slightly yellow in deposit, although a spore print may be difficult to obtain given the shape of the fruit body. Spores are produced and released from pits in the spongelike cap. When large amounts of spores are released, the morel may appear to be "smoking".

Distribution

In North America, it is widely distributed, but especially common in eastern North America and the Midwest. They are found statewide in Missouri.

Status

Morels are considered choice edible mushrooms. As with all wild mushrooms, be sure of your identifications, and always cook them.

Habitat

This popular spring fungus grows from the second half of March until the beginning of May depending upon weather conditions. Morels can be found in a variety of habitats—under hardwoods and conifers, in old orchards, moist woodlands, river bottoms and disturbed grounds. Fruit bodies are sometimes solitary, but more often in groups. Trees associated with morels are pine, elm, tulip, sassafras, beech, ash, sycamore, and hickory. Often large crops can be found around the bases of dying elm trees.

Human Connections

Morels are among the most highly prized of all edible mushrooms, however some people cannot tolerate them. Morels must be cooked before eating to remove a gastrointestinal irritant, hydrazine. Because of individual sensitivity, it is advised to eat a small bite of cooked mushroom and wait 24 hours before consuming more. If you are not positive of your identification—do NOT eat it!

One study determined the main nutritional components to be as follows: (on a dry weight basis) protein 32.7%, fat 2.0%, fiber 17.6%, ash 9.7%, and carbohydrates 38.0%.

For many, morel hunting is a treasured ritual that brings people into the woods for the first time in the spring. While some guard their special spots, for others the hunt is a friends and family tradition that is enjoyed year after year.

Sources: Missouri Department of Conservation and Wikipedia

Missouri Master Naturalists at Work

Mark Twain Lake Fish Habitat Project

Master Naturalists assisted in the three stages of this project—Material Preparation, Assembly and Placement. On March 26th, 28 volunteers (MMN and others) gathered for the assembly stage on this brisk day in March and built 50+ fish habitats.



Hunnewell Conservation Area Burn

Phil, Beth, Donna, Doris, Lynn, Sylvia, Bob, Ken and Alan



Pictures by Beth Whelan



MDC Sort & Repair Fishing Poles

Dennis, Ann,
Phil & George

Pictures by George Wisdom



UPCOMING EVENTS

Spring Wildflower Hike

April 16, 2022 at Steyermark Woods Conservation Area



Please join the Missouri Department of Conservation and the Mississippi Hills Master Naturalists for a guided spring wildflower hike at Steyermark Woods Conservation Area in Hannibal on April 16, 2022.

There will be two, approximately 1-hour hikes. Space is limited, and you need to register in advance:

10 a.m. hike: mdc-event-web.s3licensing.com/Event/EventDetails/183154;

1 p.m. hike: mdc-event-web.s3licensing.com/Event/EventDetails/183155.

For more information, call the MDC office in Hannibal at (573) 248-2530, or email MDC Recreational Use Specialist A.J. Campbell at Anthony.Campbell@mdc.mo.gov.



Directions: From Hwy 168 in Hannibal, turn right on Co Rd 410. Travel east for 1 mile. Steyermark Woods CA is on the right.

Volunteer Opportunities with MDC

- ⇒ **YMCA summer camp – July 12. 1:00 - 2:00pm @ Riverview Park –kindergarten through 5th grade. Two sessions (K-2 and 3-5).**
- ⇒ **Madison Public Library – summer Reading program. Theme is *Oceans of Possibilities*.**
- ⇒ **Meadow Campground – looking for a Saturday program.**

Please contact Kathi Moore by Wednesday, April 13 (or sooner) if you are interested in helping.

22 APRIL **EARTH DAY**

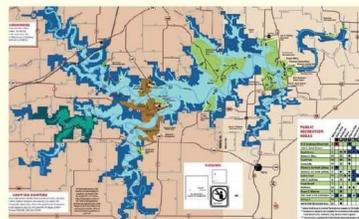


2022 Mark Twain Lake TRASH CLEANUP

The U.S. Army Corps of Engineers is seeking volunteers to help assist with trash pickup at various locations around the lake for 2022 Earth Day. We can't accomplish this task alone and would love anyone and everyone to join.

Efforts will be focused on shoreline clean-up, Hunter/Fisherman parking lots, and recreational areas during the week of Earth Day April 18-22. On Friday, April 22 Corps rangers will gather the collected trash at each location and dispose of it properly.

Trash bags will be provided. Anyone interested in adopting a location during the week should contact Aaron Eckelkamp at aaron.g.eckelkamp@usace.army.mil or call the project office at (573)-735-4097.



US Army Corps of Engineers®



Celebrate Earth Day!

SPRING CLEANUP

SPONSORED BY HANNIBAL PARKS & RECREATION, HANNIBAL BOARD OF PUBLIC WORKS, HANNIBAL AREA CHAMBER OF COMMERCE

PITCH IN TO MAKE HANNIBAL A CLEANER PLACE!

Meet at YMen's Pavilion, 105 Hill St.
April 23, 2022
8-11 a.m.



OUR ENVIRONMENTAL HEROES

John Muir

By Carolyn Trower

“In every walk with nature one receives far more than he seeks.” John Muir

I first read about John Muir when I found his biography in the cloakroom library of my fourth-grade classroom. The biographer’s words let me see Muir as he trekked through the forested wilderness of California. Towering redwoods reached into the sky, their magnificent stature igniting Muir’s quest to save the forests for posterity.

Born in Scotland in 1838, Muir immigrated to Wisconsin with his family in 1849. Decades of wanderlust led him to some of the world’s most beautiful natural areas, however, it was California’s Sierra Nevada and Yosemite that captured his heart. Walking through waist-high wildflowers bordering the area’s high country, Muir wrote, “Then it seemed to me the Sierra should be no called the Nevada, or Snowy Range, but the Range of Unspoiled Light...the most divinely beautiful of all the mountain chains I have ever seen.”

I often pictured Muir gazing up at the trees or marveling at the meadows surrounding the mountains when I walked through our woodlands. No redwoods here in Missouri, or any mountain of any height in Ralls County, but Muir’s love of na-

ture and his fight to preserve natural areas for all Americans to enjoy resonated in the oaks and walnut trees around me.

Over the years Muir wrote countless articles for magazines. In 1874, one series, “Studies in the Sierra,” launched his successful career as a writer. He later published more than 300 articles and 10 books recounting his travels and sharing his naturalist philosophy. Muir’s unbridled enthusiasm for nature inspired people from all walks of life to get out and relish their natural environment.

Muir’s musings gave his writing a spiritual quality that particularly awakened those in the best position to preserve the wilderness. Muir found the American natural landscapes the perfect place to study plants and animals in an environment he believed “came straight from the hand of God, uncorrupted by civilization and domestication.” His nature writings became a synthesis of natural theology where God was always active in the natural order of the world. Muir saw his duty likened to that of John the Baptist – to immerse in “mountain baptism” everyone he could.

**“The best time to plant a tree is twenty years ago.
The second best time is now.”**

– John Muir





Volunteer Opportunity Calendar for April, May and June, 2022

Event Date	Event Time	Event Title
4/9/2022	07:00 pm - 09:00 pm	Parks / Conservation Areas :: Hannibal Parks :: Hannibal Parks & Rec Interpretive Programs :: Night Hike
4/16/2022	09:30 am - 02:30 pm	Parks / Conservation Areas :: MDC :: Steyermark Woods Conservation Area :: Spring Wildflower Hike
4/23/2022	08:00 am - 11:00 am	Natural Resource Stewardship :: Hannibal Spring Clean-up :: Earth Day
4/23/2022	07:00 pm - 09:00 pm	Parks / Conservation Areas :: Hannibal Parks :: Hannibal Parks & Rec Interpretive Programs :: Night Hike
4/26/2022	07:00 pm - 08:00 pm	Program Support :: Chapter Meeting :: (04) April
5/10/2022	06:00 pm - 07:00 pm	Program Support :: Executive Board :: Board Meeting
5/24/2022	07:00 pm - 08:00 pm	Program Support :: Chapter Meeting :: (05) May
5/27/2022	07:30 pm - 09:30 pm	Parks / Conservation Areas :: Hannibal Parks :: Hannibal Parks & Rec Interpretive Programs :: Night Hike
6/28/2022	07:00 pm - 08:00 pm	Program Support :: Chapter Meeting :: (06) June

Monthly Meetings

Monthly Chapter Meetings are held on the 4th Tuesday of every month

Bi-monthly Board Meetings are held on the 2nd Tuesday of every other month

Natural Areas Resources

By Anne Coleman

Mike Leahy, MDC Natural Community Ecologist, was the guest speaker at our March General meeting. If you attended, I'm sure you found Mike's presentation on Missouri's Natural areas as informative and fascinating as I did. Mike's knowledge of Missouri's biologic and ecologic history was extensive, and his presentation was delivered with a sense of humor that kept us wanting to learn more.

Mike also serves as a Missouri Prairie Foundation Technical Advisor and was recently the winner of the Conservation Federation of Missouri (CFM) 2022 Professional Conservationist of the Year. In his work, he plays a key role in the designation and protection Missouri's Natural Areas, and this work has led to the preservation of several of Missouri's distinct natural communities and geologic features.

Fortunately, Mike's years spent as MDCs regional natural history biologist, Heritage community ecologist and natural areas coordinator has resulted in several publications and recorded programs that we can continue to learn about and better appreciate all the natural gems that Mike spoke about at our meeting.

Here are a few of the offerings...Enjoy!

* Note these do not count as AT.

◇ **[Natural Gems along the Big Muddy: Missouri's Natural Areas along the River's Valley](#)**

Presentation by Natural Areas Coordinator Mike Leahy, MDC This presentation focuses on designated Natural Areas connected to the Missouri River. Hosted by Missouri River Relief on Zoom and live-streamed on YouTube. Streaming sponsored by Rivermiles.

[Watch this Presentation on YouTube](#)

◇ Mike Leahy's book **[Discover Missouri Natural Areas](#)** is another great resource. Recently updated, this book helps nature lovers experience 50 great examples of the natural heritage of our state. The publication can be purchased from MDC's Nature Shop--

<https://www.mdcnatureshop.com/MDCWebHome/Merchandise/MerchandiseSale.aspx>

◇ For additional information about **Missouri's Natural Areas**, check out this section of the MDC website--

<https://mdc.mo.gov/discover-nature/places/natural-areas>

◇ **["The Mighty Bur Oak: Sentinel Tree of the Prairie Peninsula"](#)** by Mike Leahy

<http://agebb.missouri.edu/agforest/archives/v25n3/gh1.php>



Watch for new training that is added on the website.

If you find additional training not on the calendar, please send to George and Anne so that it can be added.

If you aren't sure whether the new training qualifies please ask!

THANKS!!

Important

MMN Guidelines for virtual/online training DOES NOT allow for watching recorded training and including it in your AT hours.

Training sessions must include the ability to ask questions and receive responses to your questions. If you are unsure whether training will count, please ask.

Thank you!

Advanced Training Calendar for April, May and June, 2022

Event Date	Event Time	Event Title
4/9/2022	11:00 am - 12 noon	MDC-Native Plants: Virtual: Scott Woodbury Presentation
4/9/2022	01:00 pm - 02:00 pm	MDC-Wildflowers: Virtual: Scott Woodbury Presentation
4/12/2022	07:00 pm - 08:00 pm	MDC-Birds: BirdSafeSTL and Lights Out Heartland-Virtual
4/13/2022	04:00 pm - 05:00 pm	MPF Grow Native! Webinar: Intro to Beetles with Betsy Betros
4/15/2022	12 noon - 01:30 pm	OSU: Bumblebee Short Course for Community Scientists--Threats and Opportunities for Conservation
4/16/2022	10:00 am - 11:00 am	MDC-Wildflowers: Spring Hike at Steyermark Wood--Morning Hike
4/16/2022	01:00 pm - 02:00 pm	MDC-Wildflowers: Spring Hike at Steyermark Wood-Afternoon Hike
4/18/2022	04:00 pm - 04:30 pm	MDC-Discover Nature: VIRTUAL: Spring Wildflowers
4/19/2022	06:00 pm - 07:30 pm	MDC-Discover Nature: Blueprint for Butterflies for Sch. & Yard (virtual)
4/19/2022	06:00 pm - 07:00 pm	MDC-Wildlife: MDC Science Virtual Program
4/20/2022	10:00 am - 10:45 am	MDC-Discover Nature: Naturalist Notes Virtual Series: Amphibians
4/20/2022	12 noon - 01:00 pm	MDC-Insects: Catering to Caterpillars (Virtual)
4/21/2022	04:00 pm - 05:00 pm	MDC-Discover Nature: The River in Time (VIRTUAL)
4/26/2022	06:00 pm - 07:00 pm	Chapter Meeting--Bill Rowe

Most training requires advanced registration. If you want to sign up for a training session, please use the appropriate link below.

FOR MDC: <https://mdc.mo.gov/events>

FOR MPF: <https://moprairie.org/events/>

For other advanced training, follow the instructions in the email sent by George or Kristy. If you aren't sure, please ask! Someone will be happy to help you get signed up.



We're searching for articles for our next newsletter.

What would you like to read about or to learn more about?

Have you read a good book lately?

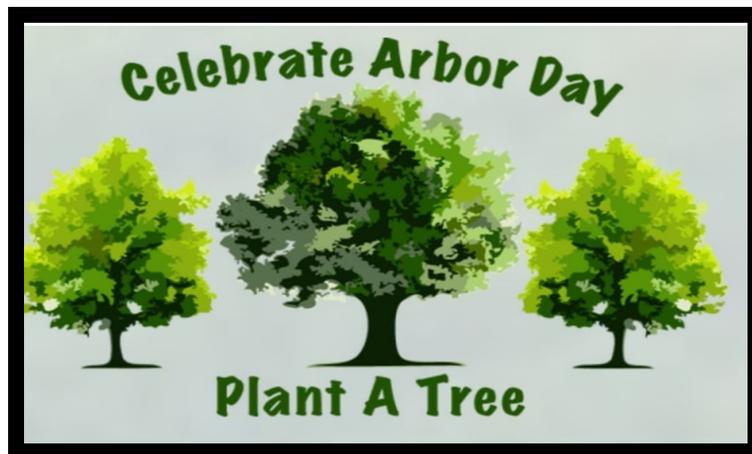
Would you like to share an article?

Contact Janet Golian for more information, to share your ideas or to provide feedback for our newsletter.

The deadline for contributing to the next newsletter is June 30, 2022.

Advanced Training Calendar for April, May and June 2022 Continued

Event Date	Event Time	Event Title
4/22/2022	12 noon - 01:30 pm	OSU: Bumblebee Short Course for Community Scientists--You Can Make a Difference
4/27/2022	05:00 pm - 07:00 pm	MDC--Birds: Beginners Birding (In person)
4/27/2022	02:00 pm - 03:00 pm	MDC--Outdoor Cooking: Dutch Oven Desserts (VIRTUAL)
4/27/2022	02:00 pm - 02:30 pm	MDC--Spiders: Creature Feature: Missouri's Tarantula (Virtual)
4/30/2022	09:00 am - 02:00 pm	MDC--StreamTeam Volunteer Water Quality Monitoring (VWQM): Intro & Level 1 VWQM, Part 2 (Field certification)
5/11/2022	12 noon - 01:00 pm	MDC--Native Plants: Foraging for Chanterelle Mushrooms (Virtual)
5/14/2022	10:00 am - 11:30 am	MDC--Discover Nature: VIRTUAL: Butterfly Survey Training
5/19/2022	10:00 am - 10:45 am	MDC--Aquatics: Homeschool: Wetland Investigators (Virtual)
5/24/2022	06:00 pm - 07:00 pm	Chapter Meeting--Amy Meier
6/28/2022	06:00 pm - 07:00 pm	Chapter Meeting----TBD



Native Keystone Trees

- Oaks (*Quercus*)
- Willows (*Salix*)
- Black Cherries (*Prunus*)
- Birches (*Betula*)
- Pines (*Pinus*)
- Poplars (*Populus*)

Now is a great time to enter your hours!

Please visit—<https://www.hills.missourimasternaturalist.org/>

Enter your hours for Advanced Training and Volunteer Service or send your Hours to Anne Coleman. Please let her know if you need assistance.

Tracking hours helps you towards Certification and credits our Chapter for your hard work and conservation efforts.

THANK YOU!

