



Loess Hills Chapter Missouri Master Naturalist™



This issue is interactive! Wherever you see this symbol, click it for additional media.

Chapter's Tour of Missouri Springs Memorable for All



| Big Spring



see page 8

It's the Season for Seed Collection Volunteerism & Education



Left: Keith Bennett, seed harvest & restoration technician at Dunn Ranch Prairie, helps transfer seed harvested at a collection Friday, August 26. Keith uses his seed collection events to educate volunteers on forbs and fauna at the prairie and to have a fun. Right: MMN Loess Hills volunteers at the collection event Friday, August 26 spread collected Illinois bundleflower seed/trash on a screen to dry while Bennett observes. After the seed is dried, it's processed in a hammer mill. In the background is an antique seed collector that is also used to produce seed mixes from the prairie.



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Rare Blanding's Turtle Sighting Sets Science in Motion

Text and images by Bill Blackledge

This past spring while driving out to meet Darrin Welchert, Wildlife Biologist for Loess Bluffs National Wildlife Refuge, and assist him in one of the annual snake surveys, I was fortunate to find two Blanding's Turtles crossing the auto-tour loop that circles the refuge.

The first one I found was an immature Blanding's Turtle, and I was not confident in my identification. Darrin had shown me a Blanding's Turtle back in 2013 when I assisted him on another survey, but it had been an adult and this one was so much smaller.

I went through my mental checklist, and it just didn't match any of the other turtle species on the refuge. Knowing how rare they are in our state and that Darrin was continuing a long-term data collection effort of this species, I noted the location and then captured the turtle for Darrin.

I had only driven another couple of hundred



Figure 1: Adult male Blanding's Turtle found crossing the Loess Bluffs NWR auto tour loop.



Figure 2 (above): Drill marks on the outer edge of carapace indicate that this adult male turtle was previously captured, and data collected. Records maintained at the refuge show that this turtle was last captured in 2003.



Figure 3 (right): A quick measurement was taken in the field.



Figure 4: Dr. Mills assisted in collecting various measurements and the weight of each turtle.

Figure 5 (right): One of the Turtle Inventory Sheets used to log data on each turtle.

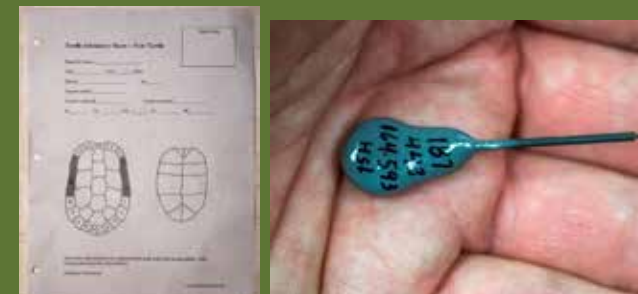


Figure 6 (above): One of the radio tracking devices that is used to monitor the turtle's movements once released.



Figure 7 (left): Darrin Welchert, USFWS Wildlife Biologist, attaching a radio tracking device to the immature Blanding's Turtle.

Figure 8 (right): Using J-B WaterWeld puddy provides a semi-permanent bond that does not affect the turtle's health or mobility.

yards when I encountered another Blanding's Turtle. This time it was an unmistakable large adult. Again, I noted the location and collected it for Darrin. Five minutes later I linked up with him and his team of volunteers preparing to head out on the snake survey.

Once Darrin saw what I had found, he was ecstatic. Fewer than 20 Blanding's Turtles have been found on the refuge since records began in the 1980's and here were two found in the same day! Even more exciting was that the immature Blanding's Turtle was now the first ever documented on the refuge.

Several days later Darrin worked with Dr. Mark Mills, Chair of the Biology Department at Missouri Western State University, to collect data and radio tag each turtle. Both turtles were then released at the locations where I had originally collected them.

Darrin is now monitoring the movements of both turtles with the help of college interns. This data, along with previously collected data, will hopefully assist in a better understanding of this Missouri endangered species.





Figure 9: The adult male Blanding's Turtle outfitted with its new tracking device.



Figure 12: The adult male wasted no time in heading for the water. Notice his vulnerability to vehicle traffic.

Figure 10: The immature Blanding's Turtle with tracking device.



Figure 14: Blanding's Turtle and the amazing wetlands of Loess Bluffs National Wildlife Refuge.



Figure 13: Radio tracking Blanding's Turtles on Loess Bluff's NWR.



Figure 11: The adult male just prior to release.



Member News

Master Naturalist 2022: Loess Hills Chapter Adds 14 Members



In May, 14 new members officially joined the chapter after completing training. Back row (L-R): Mike Euler, Vinnie Waller, Dave Gamet, Steve Potter and Wendell Bronson. Front row (L-R): Linda Laderoute, Michael Thomas, Lisa Euler, Claud Overstreet, Jane Waller, Amanda Waller, Kathleen Holman, Annie Hartley and MDC advisor TJ Peacher. Not pictured: Linda Gocken

Service Awards AUGUST 2022

MILESTONES ACHIEVED:

SILVER (2,500 HOURS)

Janet Mason

PEWTER (500 HOURS)

Suzanne Rush

Bob Spurgat

BRONZE (250 HOURS)

Don St. Cyr

Larry Bunse

Kathi Bunse

2022 RECERTIFICATIONS:

Bruce Windsor

Gerry Crawford

Janet Mason

David Laderoute

Suzanne Rush

Don St. Cyr

Darrel Magee

Kim LaFollette

Bob Spurgat

INITIAL CERTIFICATIONS:

Dave Garnet

Member News

Exploring the Wonders of the Ozarks

We ventured down to see the beauty of

the Ozarks. On the way we stopped at the amazing Amish Bakery and Bulk Food Store. We love the meat and cheese counter there. Our first stop was the Lake of the Ozarks. The next day we headed down to West Plains. On the way we stopped at the Laura Ingalls Wilder Historic Home and Museum. The home is on the Rock Ridge Farm in Mansfield. It is the location where she wrote all her Little House on the Prairie books. Seeing the actual desk she sat at to write her books was inspirational. The museum was wonderful.

We arrived at West Plains and drove around the town and looked at their numerous murals. For the size of the town, it had a lot going on. We stumbled on to a great Farmers Market, a great antique store, and a quilt shop. It's also home to the MDC Ozark Regional Office and Recreation Area. As we headed home, we felt there was so much more to do and see. Another trip??

-Rick and Chris Fulker, 17 August, 2022



Alley Spring



Greer Spring



Mammoth Spring

HIGHLIGHTS OF OUR TRIP:

1. Alley Spring and Mill, the 7th largest spring in Missouri. This spring was vital to the life of the people as it was where grain was ground to provide daily bread.

2. Big Spring, America's largest spring and largest in Missouri. It has an average flow of 286 million gallons of water daily.

It was a beautiful turquoise blue color.

3. Greer Spring. It flows from two outlets at the bottom of a steep ravine. The trail descends about 250 feet so it ascended 250 feet. A nice walk in Bear Country!

4. Grand Gulf State Park

is a cave system with a collapsed roof. It is called Missouri's Grand Canyon. The walking trails gave a great view. It is designated a National Natural Landmark.

5. Peck Ranch was rugged & had forests and hollows. It is home to the elk. It also has the areas highest point, Stegall Mountain at 1,348 ft above sea level.

6. Mammoth Spring also a National Natural Landmark is Arkansas' largest spring. It has a nice ten-acre lake you can walk around on an easy trail.

7. Bennett Springs was great. The trout were in abundance & there were lots of fishermen. We had a nice Sunday lunch at the Lodge.

Two Wrong Turns Make the LHMMN Springs Tour Just Right

Embarking on an all-day tour of the Ozarks springs in southern Missouri on a one-hundred degree day in July might not have been the most prudent decision for the 13 of us who made it, but it turned out to be a memorable experience no doubt.

The group turned in reasonably early on a hot, languid Friday night, after a tasty dinner of local fare near a quaint motel in Mountain View, for an early start the next day. Most of the group met up for a continental breakfast around 8 a.m. to get a healthy start to our spring tour extravaganza. With a belly full of waffles and peanut butter, I hopped in the truck with my husband Dallas to go meet the group at a local gas station to fuel up for the auto tour.

After a 30-minute car ride, we arrived at Greer Spring, the first spring of the day and the second largest in Missouri, discharging 210 million gallons daily. With Dennis Rush staying back to bird watch near the beginning of the trail, the rest of us began trekking down the trail, certain it was just a short walk to the spring outlet.



▶ | Greer Spring

The humidity sank in heavy around us, but we were chipper and eager to see our first spring. A good half-mile or so later, we saw the remaining mill structure of this spring, a sure sign that the fork in the trail we took right earlier required us to take a left turn to descend down to the chert and spring outlet.

Rather than having everyone make it back to where we made the wrong turn at the fork, Dallas and I decided to go get the truck for the group. It was a short jog up the

highway, back to the starting point, and back to where Dennis was sitting directing new hiking traffic the right way (wink wink!). After driving the short distance to the rest of the hikers, everyone loaded up in the truck, and we were on our way, the silly misstep serendipitously creating a rather memorable moment.

Now evermore determined to see our first spring, we again started off down the path, taking the left fork which was actually the right path, and we were off. After reaching the spring outlet, as water both angrily and beautifully erupted along a clear mountain stream with a sheer dolomite bluff as the backdrop, we all took in the sights, letting the water in the air and stream cool and rejuvenate us.

Our fork folly long forgotten, we made it back up the trail through the shortleaf pine and oak woods, in time for a cooling wash cloth, thanks to Suzanne, hydration and a short rest before proceeding onto the next spring.

We just had about a 13-mile drive, but that was before we got lost down a long, bumpy gravel ground in the middle of the Ozarks, which led to a rock creekbed that intersected with the road.

"Sorry Dennis, my Subaru can't cross creeks," Ruth expressed as our tour once again came to halt, and we contemplated our next step.

Just then, as if on cue, a truck rolls up, and we're able to get a local's perspective. With a little backstory about the area from him, we learned that the National Park Service took down the bigger signs directing people to Turner's Mill Access and replaced them with these small, inconspicuous markers nearly invisible to the naked eye! No wonder we had our selves turned around and lost; we'd missed the signs and ended up on the wrong

"You know you've had a good trip if you've had to make at least one u-turn. In our case, two."

-Dennis Rush



▶ | Turner Mill

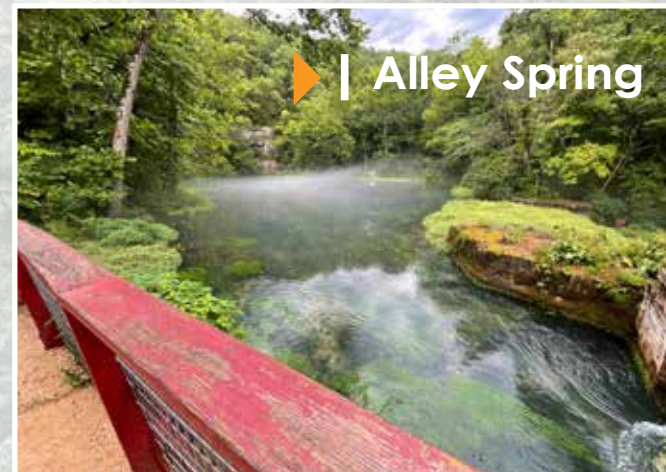
road. Luckily, this gracious local offered to lead the way so that we could get back on track. Imagine that out in the middle of nowhere. The truth is, each wrong turned out to be alright on this trip.

Once we got to Turner Spring Mill, it was already midday and the hottest part to be certain, but fortunately we had the opportunity to be cooled and awed by the force of this phenomenal spring, spewing its power to the tune of about 1.5-million gallons of water daily. You had to traverse a tall, rocky bluff to meet it where it flowed from its source, which in its heyday powered a gristmill, sawmill and electric light for the town of Surprise. Now all that remains is the 25-foot mill wheel (fs.usda.gov).

Once every-



▶ | Big Spring



▶ | Alley Spring

one took time to revel in the spring's beauty, we set off for Big Spring, one of Missouri's first state parks and the last spring of the day. Thankfully the most accessible of the day's springs, it remains tied for the title of America's biggest spring with springs in Florida and Idaho. With an impressive average daily flow of 286 million gallons of water, the spring carries and dissolves 70 tons of limestone through underground passages from almost 50 miles away, giving the spring its tropical blue hue (<https://www.nps.gov/ozar/planyourvisit/big-spring.htm>).

The energy coming from Big Spring's source was invigorating, rushing out with an intensity that seemed to revitalize throughout your body by just being in close proximity to it. Newly re-energized but ready to call it a day, the group's tour ended back at Mountain View where a pizza dinner capped a most successful day.

Not everybody made the last stop of the spring tour on Sunday morning, but for those who met up for one last spring, Alley Spring didn't disappoint. As we rolled up to it, steam hovered over a brilliantly calm azure pool, meanwhile water near the spring's source spilled and crashed over the stone, steel and wooden remnants of the 128-year-old mill, that in its heyday harnessed the infinite energy of the everpresent 81 million gallons of flow daily and used it to help produce food for settlers around this part of Shannon County. The deep crimson, two-story structure, wonderfully preserved by the National Park Service, stands in perfect contrast to the tropicalesque blue water surrounding it. This serene, postcard-worthy scene, included a walk around the pool and a gaze into the crystal clear water, punctuated by long-stemmed aquatic vegetation, that danced in motion with the water.

With our spring tour officially over, I left with the satisfaction of a great trip filled with fellowship, a dash of folly and the lingering serenity of these magnificent Missouri springs.

1. Greer Spring, 11 a.m. ▶



Greer Spring, the first stop on our springs tour, required a nice hike through shortleaf pine forest.



Unfortunately, we took a wrong turn on the hike and to save time, we loaded up all the hikers in our truck to the starting point, to try again...

We're not lost. We're just exploring.
-Suzanne Rush



I took several group photos, including this one at Greer Spring, thanks to a self-timed camera. (NP: Ruth/Walt Hibarger)



Gerry Crawford, Dan McCann, Janet Mason, Hayley Howard, M. Crawford, Barb Cates, Tyson Shipley, Shelley Shipley, Walt & Ruth Hibarger, Suzanne and Dennis Rush



The interpretive site & remains of 1850's era Turner's Mill, also dubbed Turnaround Mill by some LBMMNs after finally finding it.



Thankfully, a local farmer, pointing us the right way, was able to get us back on track after a short detour on the way to Turner Mill.

2. Turner Mill, 3 p.m. ▶



Big Spring, 4 p.m. ▶



Alley Spring, 9:30 a.m. ▶



Alley Spring



Not all of us made it to Alley Spring on Sunday, but it make for a good finale to the trip.

Seed Collection at Dunn Ranch Prairie



Above: Sue Knight hand collects Illinois bundleflower seed, seen in the foreground, at Dunn Ranch Prairie. Keith Bennett showed us how to easily strip the seed from the stem, since the "trash" can also go through the hammer mill.



Above: Keith shows LHMMN Dave Gamet how the hammer mill is used at Dunn Ranch Prairie to process seed collected in the field.

Right: Keith had everyone try prairie ants... to prove to us they're sweet taste.



Grow Native! Master Class
 The Seed Cycle:
 Native Seed Collection, Stratification, and Propagation
 October 26 at 4 p.m.

Need to know how to propagate native seeds you've collected? Register for [this GrowNative! master class](#) to get up to speed on the process.

The Seed Collector
 An Interview with a seed harvest and restoration technician Keith Bennett who is helping restore Missouri's native tallgrass prairie.
 By Jennifer A. Schultz, Producer's Notes, August 16, 2022

To read more about Keith and his work, see the [Fall 2022 Issue of the Nature Conservancy magazine](#).