



Training for Stream Team

By Dan McCann

Dan McCann once again volunteered to teach the 2014 class the basics of stream team. For fourth year in a row, they

chose the Platte River located at Rochester Falls, about 12 miles north-east of St. Joseph on highway

169. Those who participated were able to construct a guided stream survey of the Platte River and the river's surrounding area, perform a simple chemical test, do a macroinvertebrate survey, and then determine of the total river discharge

in cubic feet per second. These are the four basic tests a Missouri Stream team conducts on a river or stream.



Photo by Shannon Holcomb

Dan McCann teaches the 2014 class about stream team.

The Loess Hill Master Naturalists met at the MDC north-west regional head-quarter

on the Missouri Western State University on May 3rd at 9:00 am. A total of eight met and car-pooled to Rochester Falls. We could not have picked a better day. The weather was near perfect. We finished all of our



**Message
From the
President**

It was a great day to be at the River. Missouri River Relief held the recent Missouri River Clean-up on May 17, 2014. We started on a brisk Saturday morning at the parking lot by Remington Nature Center at 9:00 a.m. and proceeded through the maze of information. First we found the regis-

Continued on p. 2

In this Issue

Tree Planting	2
Conference	3
Graduation	4
Wings Over Weston	5
36 Hiway	6
Shawnee Prairie	7
River Clean-up	8
Pinic	9
Mt. Mora	9

Continued on p. 10

Continued from p. 1

tration desk and signed in and received several gift options.

The first information kiosk was a necessity. It guided us through the rest of the morning. Next we got to the Missouri American Water H2O kiosk.

What a great idea give out water on a hot day on the river!

The most important kiosk was the last one before we were fitted for the day. Yes, Margret we were fitted.... The safety tent showed proper and improper techniques, epic fails, etc. Work smarter, not harder.

We went the place to get fitted for our lifejackets. Then we had a few moments to think of a team name and get acquainted if our boat had new people for us to meet. Some people needed team pictures before we left. Then off to the boat ramp we

went.

Slowly all of the orange-clad ants on the beach were lifted off into double-wide boat; river-cruisers designed for the Conservation Department and the Missouri River. How cool!

After about two hours the river-cruisers returned and the orange ants and beaches were swarming again. Now began the stories. One of the stories was about Bill Blackledge bonding with baby goose. There were also stories of mud, slipping, tires hauled in, car parts, tree stumps and plastic sheeting.

Did I mention Bill Blackledge bonding event with a goose? Yes, it seems as Bills boat uncovered a baby goose under some plastic. After the music dies and they quit staring at each other, Bill returns to do what Bill does best. However,

the goose was not having any part of this ignore you stuff. It followed Bill around until they got on the boat and headed for the dock. The goose followed them down the river around a few bends, even though, kind of like a miracle, because in front less than 100 yards were a couple of other adult and some baby geese. But the little goose continued to follow Bill.

When everyone returned, we were sent to the boat for a lunch courtesy of the St. Joseph Casino. Recognition was given to sponsors and kids. Awards were handed out for the usual categories--Best car part, best toy, best etc.

All things considered, the Loess Hills, group will always enjoy a spring Saturday on the Missouri River. I bet Bill will remember this one for a while.

Tree Planting in Platte County



On April 5th, ten volunteers from Loess Hills Chapter of Missouri Master Naturalists volunteered to help plant trees for Platte County Land Trust, one of our new partnerships. Loess Hills Chapter was joined by several schoolbus loads of children. All together, they planted more than 80 trees at Platte Ridge Park. Bonnie Golderberg worked with the Platte County Land Trust to make it happen. This tree planting was organized for the celebration of the 175th anniversary of the founding of Platte County.

Photo by Shannon Holcomb

Loess Hills Members Attend Missouri Master Naturlaists Conference

by Ann Thorne

Missouri Master Naturalists held a conference April 31

oldest book was displayed was *Naturalis Historia*, printed in



Ten members of the Loess Hills Chapter attended the Missouri Master Naturalists session in Kansas City, Mo. L-R: Bonnie Goldberg, Lynn Tushaus, Terry Gray, Corinna Gray, Dan McCann, Ann Thorne, Pam Fry, Jena Graham, Laura Kahl and Charles Bramlage

– June 1 for advanced training. It was held in Kansas City, Mo., at Unity Village. “I was really impressed by the place where it was held,” said Laura Kahl. “It was very nice, had everything we could possibly want, and the speakers were all excellent.”

Pre-conference sessions were offered on Friday afternoon. Corrina and Terry Gray went to the session EarthWorks. “It was thoroughly cool,” said Corrina. “It was in a cave with five native habitats. In each habitat, you were supposed to do different jobs. It was really fun,” said Corrina. Lynn Tushaus and Ann Thorne attended a session to the Linda Hall Library, lead by the rare book curator, the early naturalist books were displayed. The

1492. Tushaus was fascinated by the book *Insects of India*, published in 1800. “The pictures were hand-colored and beautiful,” said Tushaus. It also included a tour of the trees outside the Linda Hall Library. Dan McCann went to the Nelson Art Gallery where he had a personal tour by one of the docents. “It was wonderful,” said McCann. “You could really focus on what was displayed.” He especially liked the primitive weapons, including a throwing dart used thousands of years ago. “It was really interesting to learn about it,” said McCann.

There were many sessions offered on Saturday, and Loess Hills members chose a variety of sessions. One session attended by many Loess Hills

members was Ecology of Bird Migration, taught by Ethan Duke and Dana Ripper, Directors of the Missouri Bird Observatory. The session began indoors with an overview, then went outdoors for observation. “They were enthusiastic and knew incredible an amount about birds,” said Laura Kahl. “For instance, birds get their yellow color from the food they eat.” Corrina and Terry Gray also went to the session, and during the walk the leaders of the session spotted a bird’s nest with babies in it. Later in the day the Grays went back to shoot more pictures of the baby birds and their parents feeding



Photo by Ann Thorne

Laura Kahl listens to Dana Ripper as she talks about the birds that live in this area.

them.

During the first session, Lynn Tushaus went to the Orienteering session. The session began in the classroom, going

Continued on p. 8

Graduates a New Class

by Janet Mason and Ann Thorne

The Loess Hills Graduation Class of 2014 took place at Missouri Conservation Center on the Missouri Western State University campus, even though

Missouri Master Naturalist. She emphasized how volunteers contribute to make outdoor Missouri a welcoming place for both people and a variety species of plants and animals.



by Mary Jo Ostenberg

From left to right: Susie Willenbrink, Melinda Cordell, Lisa Alkier, Corinna Gray, Pam Fry. Back row: Terry Gray, Dena Barber, Mary Helen Stuber, Jena Graham.

it was previously scheduled to be in the Remington Center.

Mary Jo Ostenberg opened the meeting with a description of the nuts and bolts of being a Missouri Master Naturalist. She talked about certification requirements, chapter administration, how to get projects approved and advanced training. She also talked about upcoming activities and how the chapter is structured. Janet Mason gave an outline of last year's chapter volunteer activities, how to record volunteer hours, and pins that were awarded to the volunteers that have earned them.

Later, Syd Hime spoke on how to be an effective volunteer as a

This was followed by a video by Terry and Corinna Gray on the training they had as Missouri Master Naturalists.

Then the graduates received their certificates. Fourteen people graduated from the spring class: Brittany Bremer, Corinna Gray, Dena Barber, Ed Andres, Elaine Wass de Czege, Jena Graham, Lisa Alkier, Mary Helen Stuber, Melinda Cordell, Pam Fry, Ronald Lee Wilburn, Jr., Susie Willenbrink, Terry Gray, and Tyler Hughes.

After the new graduates received their certificates, everyone enjoyed potluck and a graduation cake to celebrate the new volunteers.

Officers of Loess Hills Chapter 2014

President

Shannon Holcomb

Vice President

MaryJo Ostenberg

Secretary

Karen Hayes

Treasurer

Tom Aldrich

Newsletter Design

Ann Thorne

Logo (on front)

Laurel Defreece

Loess Hills Chapter Participates in Wings Over Weston

by Ann Thorne

Wings Over Weston was held May 10th, and both the



Don Daffron helps a little girl make a birdhouse.

by Bob Spurgat

a journal. She talked with the parents and kids. “It was really fun,” said Tushaus. “The kids and adults were very appreciative.”

Mary Helen Stuber, along with two students, helped children make hummingbird feeders. “We were very busy,” said Stuber. “There were lots of children who wanted to make the feeders. I was lucky to have two other people with me.”

Loess Hills and Osage Trails Master Naturalists provided volunteers. Overall, there were 64 volunteers to help ensure that everything worked, as well as 13 employees of the Missouri Department of Conservation and Missouri State Parks. Although Loess Hills members were there on Saturday, on Friday there were 181 fourth graders from surrounding areas who came to visit the area.

Each person from the Loess Hills chapter worked on different projects throughout the area. Charles Bramlage, along with Don Vaughn, Don Daffron, and Bob Spurgat, Dena Berber and others, helped with building birdhouses. “It was fun,” said Bramlage. “Most of the kids were under six, and really smiled when their birdhouses were finished.”

Lynn Tushaus helped with nature journaling. She helped the children cut out pages, glue them together, and make

Two Loess Hills members, Bill



by Ann Thorne

Lynn Tuashaus helps children make a journal.

Blacklege and Martha Moody Blackledge helped in a booth called “Skulls, Bills, Wings, and Talons.” The booth was designed by Linda Williams, of Osage Trails Master Naturalists. The booth includes natural

exhibits, pictures, and various matching games that are used to teach school-aged children about the great variety of birds and how each species is uniquely suited for its environment.



by Ann Thorne

Bill Blacklege helps children answer questions about the exhibit, “Skulls, Wings, Bills and Talon.”

Wings Over Weston is a partnership between Burroughs Audubon and Missouri State Park. The committee that sponsors it includes representatives from Burroughs Audubon (Christine Kline and Mary Nemecek), Missouri State Parks (Lee Wilbeck and Matt Carletti), and Missouri Master Naturalists (Bonnie Goldberg and Linda Williams), and a student and member of Midland Empire Audubon (Jake Phillips). The partnership works all year to raise funds for Wings Over Weston.

Planting Trees on Highway 36

by Janet Mason and Ann Thorne

Loess Hills Master Naturalists planted trees along Highway 36 after watching the manda-

teams headed to their own site with 20 trees to plant.

Charles Bramlage and Janet

ers and found the spot to dig. They got spades closer to the site and commenced to scrape and dig the three-foot high

grasses from the areas where the sprouts would grow. Bramlage used the MDC long-handled dibble to create spaces for the sprouts while Mason tackled a healthy outcropping of Eurasian musk thistle, *Carduus nutans*, on the embankment near the planting site. Both people adapted new techniques for operating planting tools in very steep terrain.

They met the rest of the group at the Cameron junction of I-35 and 36 Highway, sorted tools and rides home, and called it a day.



by Shannon Holcomb

Some of the crew from tree planting met in Cameron after all the trees were planted.

L to Right: Charles Bramlage, Don Daffron, Bob Spurgat, Karen Hayes, Tom Aldrich, Laura Kahl, Don McCann and Janet Mason.

tory MoDOT safety film at MDC NW Regional Office. Ten Loess Hills members participated in the planting. The Department of Transportation was excited about the tree planting, and had a video crew that covered part of it. It was aired on their website.

Each crew selected the trees appropriate for their site. There were seven sites that had already been chosen at the board meeting. Lynn Tushaus and Tom Aldrich mixed up rooting compound, a slush-like mixture that everyone dipped the roots of the tree into before setting it in the ground. Then each of the

Mason selected Gray Dogwood *Cornus* ssp. and left to find their spot, eastbound on Highway 36. After climbing the steep embankment, Bramlage, experienced master naturalist that he is, identified healthy stands of poison ivy. They searched eastward through 0.1 mile of brush in undulating terrain for the pink construction flag mark-



by Ann Thorne

Tom Aldrich and Lynn Tushaus mix the rooting dip for the trees while a conservation agent looks on.

Members Hike at Shawnee Prairie

by Mary Jo Ostenberg

Early Saturday morning, June 14th, four members of our Missouri Master Naturalist, Loess Hills Chapter journeyed to Harrison County in northwest Missouri to join Native Plant Society members for a tour of Pawnee Prairie. Pawnee is one of the last large prairie remnants of northern Missouri. This Missouri Department of Conservation natural area contains over 300 acres of unplowed, rolling dry-mesic upland prairie in the Grand River Hills region and adjoins The Nature Conservancy Dunn Ranch.

Members Bonnie Goldberg, Karen Hayes, Laura Kahl and I were treated to a hike led by our MNC natural history biologist, Steve Buback. We enjoyed wonderful rolling vistas and an astounding array of native forbes and grasses including compass plant, *Silphium laciniatum*, wild white indigo, *Baptisia alba*, thimbleweed, *Anemone virginiane*, lead plant, *Amorpha canescens*, various milkweeds, rattlesnake master, *Eryngium yuccifolium*, culver's root, *Veronicastrum virginicum*, purple coneflower and a large population of bunchflower, *Melanthium virginicum*. This plant species has a conservation value of 9 (10 is the highest) indicating a healthy, diverse habitat for wildlife. We

were very excited to add several new plants to the list of 268 identified species such as wood betony, *Pedicularis canadensis*,



by Karen Hayes

As a member of the Prairie Foundation looks at a bloom, Mary Jo Ostenberg, Paul McKinny (Prairie Foundation) and Laura Kahl look on.

spiderwort, *Tradescantia ohioensis*, two mosses and one hornwort.

In addition to forbes and grasses this prairie hosts a healthy number of birds and insects. A bobolink followed us singing out his R2D2 like bird song. We found a beautiful 13 to 17 year periodic cicadae that is just now emerging in Northwest Missouri. And the ground is covered with large ant hills populated by largely two species of ants including the 'slave' ant that raids the hills of its competitor, carries the prisoners back to their own hill and forces those ants to work for their new community. If you open the hill you will find two entirely different species working side by side.

Perhaps most exciting I was fortunate to meet one of perhaps only two individuals in Missouri that can be considered a true expert in the Cyperaceae family (sedges). Paul McKensie is with Missouri Department of Conservation, U.S. Fish and Wildlife Services. Paul was credited with his contributions to the recently updated Steyermark's Flora of Missouri, revised edition Volume I by George Yatskievych. We talked at length about our Squaw Creek sedge project and his field studies. Paul discovered sedge, *Carex sartwellii* at Squaw Creek Natural Wildlife area, the first identification of this species in Missouri. This species has since been found in only one additional county in Missouri.

But the best news to report is that Paul has agreed to conduct a workshop in spring, 2015 on the genus *Carex* of the Cyperaceae (sedge) family! We're working with Corey Kudra to convince Paul to hold the workshop at Squaw Creek. We'll also be reaching out to Missouri Western State University through Dr. Rushin, Dr. Ashley and Dr. Chevalier to develop a continuing education college credit course dedicated to the Cyperaceae Family. Squaw Creek is the largest wetland refuge in the state. Pershing State Park is also working hard to restore several thousand acres to wetland. Two-thirds



by Karen Hayes

Beautiful periodic cicada found by Loess Hills group.

Continued on p. 9

Missouri River Clean-up

by Charles Bramlage and Janet Mason

Missouri River Relief called for volunteers to assist clean up along the banks of the Missouri River near the French Bottoms Boat Landing in St. Joseph, between Frontier Casino and Remington Nature Center.



by Shannon Holcomb

One of the boats on the Missouri River going out to pick up garbage, including members from Loess Hills Chapter

Around 70

volunteers showed up to help clean up the trash around the river. We picked up our T-shirts and water bottles and headed out on the boats to scour the riverbanks. Both Missouri River Relief and the Missouri Department of Con-

servation supplied the boats. At least eight members of our Loess Hills group assisted: Bill and Martha Blackledge, Derrick Boos, Charles Bramlage, Emma Gossett, Shannon Holcomb, Janet Mason, and John Wood.

Charles Bramlage and Janet Mason, along with

other volunteers, embarked in a motorized johnboat upstream about 15 minutes from the river access, about five miles upstream. Mason shoveled sand from a 500-gallon plastic agricultural water tank while Bramlage scrambled on layers

of driftwood, looking for man-made debris to collect. This and the other trash collected at this site was left by the riverside to be picked up later by the River Relief crew.

Our group then stopped at another site that had been scouted out earlier to pick up more trash. Our boat captain also took a side trip up Dillon Creek to hunt for more trash. We didn't find any significant trash, but did scare up a great blue heron. Other birds seen were soaring vultures and numerous swallows that escorted us back to the boat ramp at French Bottoms.

They docked, disembarked, and dined at the St. Joe Frontier Casino. A small free lunch and entertainment of a trash contest finished up our day down by the river.

Continued from page 3

over detailed topographic maps and learning what to look for. Then they went outdoors and put their skills to use following a trail. Tushaus's group got turned around, though, and ended up back where they had started.

In the afternoon, Charles Bramlage attended Climate Change taught by Pat Guinan, Director of Missouri Climate Change Center and Anthony R. Luop, Atmospheric Science Professor at the University of Missouri. "They were very knowledgeable, and talked about the different between climate and weather," said Bramlage. "It was very informative."

Page 8

On Sunday morning Ann Thorne attended Damselflies and Dragonflies, taught by Betsy Betros, Environmental Scientist and author. "She was amazing," said Thorne. "She knew everything about damselflies and dragonflies. It was a great class," The class began



A newly hatched dragonfly sparkles in the sun.

indoors, then went outdoors to catch and identify the dragonflies and damselflies.

Other sessions Loess Hills members attended included Conservation Legislation, Rat-

lesnakes, and Birding by Ear, Oaks and Ash, Point and Shoot photography, Giving the Gift of Interpretation, Got Kids and Woods? Stay Calm and Carry on, and Basic Shotgun. Pam Fry particularly enjoyed the session about kids and woods. "It included field trip ideas with arts and crafts to inspire kids to get outdoors and enjoy the world around them," said Fry.

"It was a really good convention," said Dan McCann. Pam Fry agreed. "I attended sessions that I felt would help me really information and convictions about nature to children. All three of the sessions I attended were successful in doing just that!"

Continued from p. 7

of sedges grow in a wetland habitat. We have a previously



by Karen Hayes

Corbin, Karen Hayes's grandson and a budding naturalist, was fascinated by the grasses and flowers at Pawnee Prairie.

untapped and unrecognized treasure here in northwest Missouri. Our simple 2014 class capstone project may well result in recognition and results we could have never imagined while we were out there wading through the canary grass!

Stay tuned.

And take a hike!

Karen Hayes' comment on the day says it all. "Nothing makes me happier than learning something new each day. So obviously the wealth of information offered on our tour was wonderful. My favorite plant id of the day was realizing the large asparagus looking plant was really an immature wild indigo...and realizing that I could recognize a mature wild indigo!

Plants for Mt. Mora

by Ann Thorne

Mount Mora, the oldest cemetery in St. Joseph, benefitted last month from Wings Over Weston. When there were

Mount Mora. Bonnie Goldberg was in charge of getting the native plants in the ground.



by Ann Thorne

Putting in plants at Mt. Mora, left to right, Mary Jo Ostenberg, Joyce Slope (volunteer for Mt. Mora) and Bonnie Goldberg.

plants left from the native plant sale. Christine Kline decided to give the plants to Loess Hills Master Naturalists to plant at

A group of Master Naturalists plus a volunteer from Mt. Mora cemetery got together on May 28th to plant. After watering the plants and separating out the ones that were appropriate for the climate, they planted the plants over the next several days. Then they mulched them and watered them a second time. The volunteers were Bonnie Goldberg, Mary

Jo Ostenberg, Ann Thorne, and Bill Blacklage from Loess Hills Chapter and Joyce Slope, a volunteer for Mt. Mora.

Summer Picnic

by Ann Thorne

Loess Hills Chapter of Missouri Master Naturalists had a picnic July 1 at Bluffwoods Conservation Area. Over 25 members, family and friends attended the picnic. It was a pot-luck get-

together. "The food was wonderful," said Lynn Tushaus.



Some people walked the trails at Bluffwoods, others watched birds, some just chatted with each other.

by Lynn Tushaus

Continued from p. 1

testing, and

were on our way home around 12:15 pm.

Our first of four activities was completing a “visual stream survey data sheet.” These surveys are very arbitrary in nature, so we divided into two groups, and each group worked independently of the other. Each group surveyed the 10 separated variables--some of the 10 were flood-plain use, riparian cover, stream bank conditions, and signs of human use, water color, and water odor. Generally speaking, the two groups had about the same descriptions for the ten areas on the survey. The water color and the water odor reminded some of us of us as wine classifications.

The second activity involved collecting macroinvertebrates by using a kick net. This biological monitoring classifies macroinvertebrates found in a one square meter area at the bottom of the river under the rocks in a riffle pool into one of the three categories: organisms classified as sensitive to pollution, somewhat tolerant to pollution, and tolerant to pollution. After collecting the macroinvertebrates and listing each into one of the three classifications, we then assigned a point value to each species and determined a total point value for the testing area. This test is only a field test (not highly accurate), but is a relatively good

indication of the overall health of the river. Our result of our test was less than favorable. It decided only a fair to poor rating could be given to the river.



by Shannon Holcomb

The Platte River where the 2014 class learned stream team methods.

Our third test was a chemical test. There are about ten different chemical tests we could perform, and at this time we chose to test the dissolved oxygen content of the water, and the percent saturation of the oxygen. All the chemical tests performed by a stream team are easy to use and follow what is commonly referred to as “cook-book chemistry”. Some of the chemical tests include testing for nitrates and nitrites, phosphates, ammonia, and hardness. You don’t have to be a chemist.

The fourth and final stream monitoring activity was the stream discharge measurement. This requires measuring the foot distance across the river (109 feet) and measuring the depth of water each foot across the river. We then measured the velocity of the river flow by releasing a floating object into the water and measur-

ing the time it took to flow ten feet. By calculating the average depth (feet), the cross sectional area (feet²), the average surface velocity (feet per second) we are

able to determine the stream discharge at that particular spot on the river. At the chosen point about 75 meter below the falls, we determined the river discharge had an estimated 170 cubic feet per second. I often wonder what the river discharge was like 200 years ago, 100 years ago or 50 years ago. How will the future change the

flow of the Platte River?

All four of the activities were intended to introduce individuals who might be interested in adopting a stream of their own in the future. The data collected by individuals or “teams” can have an immediate use, or used as a data base over a long period of time. The data could show a shift in the stream’s use.

Missouri’s Stream Team program began in 1988, and today there are over 4500 Stream Teams across the state. Missouri is home to over 110,000 miles of streams, and these streams provide an important habitat for thousands of species of organisms, and recreation for the people who use the streams.

For more information please go to www.mostreamteams.org.