

# Litzsinger Road Ecology Center

## COMMUNITY NEWSLETTER

www.litzsinger.org

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*LREC volunteers monitor a recent prescribed burn in the Mulch Pile Woods. See an additional photo and a link to a time-lapsed video of the burn on page 3. Photo by Danelle Haake.*

## Do We Need More Than Science?

*by Bob Coulter*

It's no great secret that schools are being pushed to have strong science and technology programs. Just in the past couple of weeks issues like climate change, sustainable energy, and the role of vaccinations in public health have been before us. Clearly, being scientifically literate is essential for modern citizenship. But is it enough? Poet Wendell Berry challenges us to do more than just pursue science for its own sake. Instead, he argues, we need to prioritize citizenship, community membership, and land stewardship. When we do this well, science and technology can be used to serve everyone's interest.

How can we do this, even with young kids? The work we do together linking your kids to the schoolyard and their back yard offers kids great

first steps, putting them on a trajectory of care. Over time, you are helping them to build knowledge and capacity toward ends greater than themselves. This work—framed as 'civic ecology' practices—makes learning across the curriculum real and memorable, and it sets them on a meaningful life trajectory. It's good work to be doing, for all of us. ♪



# VOLUNTEER EDUCATOR RECRUITMENT—SPREAD THE WORD!

by Eddie Jones

## APPLICATION PROCESS:

- [Apply online](http://www.litzsinger.org/about-us/volunteers/), then call Martha at 314-540-4068 to set up an initial visit. (Find more information at <http://www.litzsinger.org/about-us/volunteers/>.)
- Applications are accepted year-round.

## ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Share time and talents to lead groups of school children in ecological investigations and explorations of the natural world.
- Facilitate outdoor learning activities designed by teachers (with help from LREC staff), that support the curricular goals of participating teachers.
- Available for service once a week for 2–3 hours at a time.
- Smile.

## QUALIFICATIONS/EXPERIENCE:

- Enjoy working with children in an outdoor setting, in all kinds of weather, throughout the year.
- Love being outside.
- Weekly availability.
- Jump at the opportunity to change a lesson plan on the spur of the moment.

## EDUCATION:

- Life experience.

## PHYSICAL DEMANDS:

- Ability to keep track of four or five children.
- Tolerance of orange clothing.



Volunteer Educator Janice Weil leads students on an exploration of the creek bed.  
Photo by Leslie Memula.

## WORK ENVIRONMENT:

- Training consists of weekly opportunities to work with other Volunteer Educators and paid staff as you learn to lead student groups and become familiar with the natural habitats at LREC.
- Paid staff will provide lesson plans, coordinate student activities, and maintain a safe and friendly work environment.
- Check the weather forecast. You'll be outside.

## COMPENSATION

- An increased understanding and appreciation of natural habitats.
- Capture the contagious enthusiasm of children in an outdoor setting.
- Orange clothing.
- Be entertained by the occasional and harmless eccentricities of the paid staff. ✎



## HORTICULTURE & RESTORATION OFFERINGS FOR SCHOOL GROUPS

by Deanna English

We have plants sprouting in our wonderfully warm, simulated spring greenhouse and these babies are growing fast enough to need transplanting. It's a wonderful social and productive time with colleagues, students, or volunteers: grab a tray of crowded seedlings, gently tease the little plants apart, and place each in its own separate pot. It's one of my favorite things to do on a cold winter day. Students always seem to enjoy this activity and it gives them time to come inside and warm up a little before heading out for another LREC adventure. The transplanting is fun to combine with Mary's wonderful root and plant structure demonstration listed at right. So if you're planning a spring visit, and this activity fits well with your goals, please let us know and you can help us get this job done!

If you are planning a visit in March, you may want to consider some of these other activities. If any fit with your curriculum and LREC visit plans please call or email your school partnership coordinator and make arrangements to join us as we prepare for spring.

### MARCH RESTORATION OPPORTUNITIES:

**Stream cleanup**—Cleanups available when the stream is at a safe level.

**Stream monitoring**—Stream monitoring kits are available and include dissolved oxygen, conductivity, pH, temperature (air and water), nitrates, turbidity, and chloride.

**Macro invertebrate monitoring**—This is an opportunity to count the numbers and types of macro invertebrates found in the Deer Creek to help determine stream health.

**Invasive plant removal**—We welcome opportunities to educate as students help us remove invasive plant species from the site.

**Roots and plant structure demonstration**—This activity introduces students to the purpose and function of roots and plant structures.

**Greenhouse transplanting**—We can always use the help to transplant some of those little seedlings. 🌱

## Burn

by Danelle Haake

Many thanks to the volunteers who helped with the burn of the South Prairie and Mulch Pile Woods on Friday, February 13, 2015. This was our first burn in that part of the woods, and we are eager to see what changes in the area this spring.

To see time-lapse video of the prairie burn, visit: <http://youtu.be/eO5CumeR.M>. 🌱



LREC staff and volunteers manage the burn in the woods. Photo by Danelle Haake.



# LREC Research: Phenology Project

by Danelle Haake

Back in the November newsletter, I mentioned the phenology project that we began last spring. As a reminder, phenology is the “scientific study of cyclical biological events, such as flowering, breeding, and migration, in relation to climatic conditions.” (American Heritage Science Dictionary, 2002). In our case, the biological cycle we are following is the timing and duration of flowering.

In 2014, we came up with 13 paths, or transects, to walk each week. These paths took us throughout the site, including the savannah, rain garden, prairies, woods, and

several edge habitats. The transects ranged in length from 60 to 220 meters. Every week from March to November we walked these paths, identifying and recording all of the blooming plants we could find along the way. This was very time-consuming, but it was also very educational for those who participated; none of the staff are trained botanists, so we learned to identify several species we had been seeing but didn’t recognize. We also saw several species that we had not seen before and that were not on our LREC plant list.

During our phenology walks, we identified 282 species of flowering

plants. Of these, only 41 are non-native.

Some species were found blooming in several transects for many weeks: wild white indigo (*Baptisia alba*), wood mint (*Blephilia hirsuta*), rose turtlehead (*Chelone obliqua*), tall coreopsis (*Coreopsis tripteris*), rose mallow (*Hibiscus lasiocarpus*), blue lobelia (*Lobelia siphilitica*), perennial phlox (*Phlox paniculata*), Maryland senna (*Senna marylandica*), royal catchfly (*Silene regia*) and several of the asters (*Symphyotrichum* spp.).

Other species were found only one time in one or two places: marsh marigold (*Caltha palustris*), dog-tooth violet (*Erythronium albidum*), woolen breeches (*Hydrophyllum appendiculatum*), winged monkey flower (*Mimulus alatus*), Miami mist (*Phacelia purshii*), wild petunia (*Ruellia strepens*), and indian pink (*Spigelia marilandica*).

I am only beginning to go through the data we collected to see what nuggets of knowledge we can add to our treasure chests. The first thing I’ve done is compare



Royal catchfly (*Silene regia*). Photo by Danelle Haake.

See **Research**, page 5



From **Research**, page 4

the species found in the North Woods, the North Prairie, and the transitional habitat, or edge, between the two. It is interesting to observe the number of specialist species that are only in one of the habitats and generalist species that live in two or all three. In fact, we found the largest number of species are prairie specialists (52 species) and woodland specialists (42 species), but the third largest group is the generalist species that are found in all three habitats (28 species). (See Figure 1.)



Tall coreopsis (*Coreopsis tripteris*).  
Photo by Danelle Haake.



Top: Maryland senna (*Senna marylandica*).  
Bottom: woodmint (*Blephilia hirsuta*).  
Photos by Danelle Haake.

Location(s) (North Prairie, North Edge, and North Woods)	Number of Native Species	Number of Non-Native Species
Prairie, Edge, and Woods	24	4
Prairie and Edge	19	5
Edge and Woods	8	2
Prairie and Woods	4	0
Prairie only	47	5
Edge only	6	3
Woods only	35	7
<b>TOTAL</b>	<b>143</b>	<b>26</b>

Figure 1. The number of species observed in flower in 2014 in the North Prairie, North Edge, and North Woods. While many species specialize in either prairie or woodland, there are also many that occur in all three habitats.

In the next week or two, we will begin our phenology walks for 2015. Rather than walking 13 transects, we are reducing the number to seven (with another three that we will revisit as time allows). If anyone is willing to commit to coming out each week, we would be glad to have a volunteer or two join us for this project. Contact me at [danelle.haake@mobot.org](mailto:danelle.haake@mobot.org) if you are interested. I promise that you will learn a lot! 🌱

# Glass House Quiz: A Winter Mystery

by *Danelle Haake and Deanna English*

Welcome to a different sort of quiz this month inspired by our first snow adventure of 2015. We decided to do a little storytelling and invite you into our mystery adventure. We hope you enjoy.

## OUR SNOWY DAY ADVENTURE

It finally snowed, and we were both excited the morning of Tuesday, February 17 to get out and enjoy a walk in the snow around LREC. To start, we bypassed the South Prairie, which had been burned the Friday prior; we would get there eventually, but wanted to be among the vegetation to start the day. The snow crunched under our feet and the sun broke through the clearing clouds, allowing us to bask in the imagined warmth of the below-freezing day. At least it wasn't windy...

We were the first humans to venture into the prairie since the snow, but we certainly weren't the first creatures. Deer tracks crisscrossed the landscape, mostly in the mowed areas, but often disappearing down paths that most visitors to LREC only glance at before continuing on to more 'accessible' areas. We began walking through the North Prairie, following our maintained—though not manicured—trails when suddenly we had a mystery.

We both stopped short and stared at a new set of tracks. They appeared to be from a canine or feline visitor. We have seen coyote, fox, dogs, and domesticated cats on the property in the past year, so all of those came immediately to mind. The tracks followed a line, very straight and purposeful, beckoning us to follow. With the excitement of children we eagerly began to follow the tracks to see where they went. We chattered away about what it could be, searching our minds for what we knew about tracks; wouldn't it be great to find out where one of our resident fauna spends its time?

**1. Images 1a and 1b at right are photos of the prints we saw. The size is comparable to those of a pet cat. What do you think we were following?**

- a) a domestic cat
- b) a small domestic dog
- c) a coyote
- d) a fox



Top photo by Deanna English.  
Bottom photo by Danelle Haake.

See **Quiz**, page 7



From **Quiz**, page 6

We hadn't gone far when we noticed a deviation in the animal's path. We saw a small pile of what we thought was scat; not unheard-of here, but we don't normally have the tracks to follow as the animal goes about its business. We walked on and noticed another little side trip and another small brownish pile, this time with a little blood. Uh oh, that can't be a good sign for the health of our new friend!

When we found a third deviation and a third pile, we decided it was time to look closer and find out what was really going on. What do you think we found? Here's some photos so you can see what we were observing.

**2. What do you think we found? Check out photos 2a and 2b at right to see what we were observing?**

- a) scat
- b) vomit
- c) animal entrails
- d) hairball

We found about eight different piles like those pictured as we followed the tracks through the North Prairie.

We also started to notice several places with tracks like this.

**3. Which animal do you think made the tracks in photo 3a at right?**

- a) a bird
- b) a rodent
- c) a snake
- d) a baby bunny

At this point we thought we had solved our mystery and continued to follow the tracks around the property making more observations of this animal and other wonderful winter signs. Our story continues in the answer section. Once you've drawn your conclusions, look at the answers on the next page and see whether or not you agree with us!



Photos by Danelle Haake.

See **Quiz**, page 8



From **Quiz**, page 7

Answers:

We can't be 100% sure that we are correct, but the following is *our* solution to the mysteries we encountered on our walk.

First, we looked closely at the tracks to identify our visitor. One important difference between canine and feline tracks is the claws. Cats retract their claws, so you generally don't see imprints from them in the tracks. We could clearly see claw marks in many of the tracks, so a stray cat was not our visitor. We decided that the tracks were too small to be coyote, so that left a fox or a small dog.

One thing we noticed right away is that the prints indicated that this animal was being very deliberate in its journey. The prints were in a very straight line and seemed to be pretty evenly paced. Domestic dogs don't tend to travel like this and are usually rather distracted exploring all around them and bouncing and playing about in the snow. We decided that we were following our resident fox, so our answer to question 1 is **d) a fox**.

Now for the mystery piles. Upon further examination, we realized that the piles were not scat from the fox (though scat is involved). They were the discarded entrails of the fox's prey, so the answer to question



2 is **c) animal entrails**. So what do you think was the fox's prey?

Many of the deviations/piles that we noticed occurred in places where you could just barely see a path of disturbance in the snow crossing our trail, or occasionally something more obvious like the picture in the quiz. We are fairly certain that these disturbances were caused by small rodents travelling under and across the snow, and that these critters became the fox's dinner. Also later this same day Leslie got a picture of a pile that actually had a rodent foot still there. So the answer to question 3 is **b) a rodent**.

We continued following the fox tracks through the woods and on into the trails of the Pasture



Rodent foot and entrails.  
Photo by Leslie Memula.

Prairie. There was no sign that it caught anything in the Pasture Prairie, though we could see that he or she made a couple of attempts. So why was there such a great buffet in the North Prairie? We suspect that many small mammals from the burned

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South Prairie have moved into the North Prairie for cover. The ones unlucky enough to be caught by the fox had not found suitable hiding places before being detected.

We hope you enjoyed our mystery tour through Litzsinger's winter wonderland. During the next snow we hope you are inspired to get out and find some tracks to follow yourself. We'd love to hear about your mysteries. 🐾

Resource:

Canine vs. Feline Tracks: <http://www.bear-tracker.com/caninevsfeline.html>.



The North Prairie (left) offers many more hiding places for small animals than the recently burned South Prairie (right). Photos by Danelle Haake.

## MARCH

by Martha M. Schermann

Moving

Around

Remembering

Childhood

Hideouts

## LREC Announcements

March 19

### Volunteer Enrichment: Birds

1 to 3pm, meet at the Cabin.

Colleen Crank will discuss some of her onsite research from her last eight years, including her nest box and mist netting studies. Afterwards some of our expert birding volunteers will lead bird walks around the site. If you'd like, come early with your lunch at 12:30pm. RSVP to Martha at 314-540-4068 or [martha@lrec.net](mailto:martha@lrec.net).

## Local Events

March 19-20

### Missouri Outdoor Summit

Runge Conservation Nature Center in Jefferson City. Attend keynotes, sessions, and discussions about how to increase opportunities to connect people to the outdoors. \$85. Details and registration at <http://confedmo.org/missouri-outdoor-summit/>.

March 21

### Confluence Trash Bash

Check in 8-8:30 at various locations. Help out during this multi-watershed clean-up in the North St. Louis area, focused around the Confluence of the Missouri and Mississippi Rivers. Advanced registration required. Learn more at <http://www.riverrelief.org/>.

Various dates in March and April

### FrogWatch USA Volunteer Training

6:30 to 8:30pm at Shaw Nature Reserve and Broemmelsiek Park. Learn how to gather information for this citizen science monitoring program. Free. Learn more and register at <http://www.stlzoo.org/education/frogwatchusa/>.