

Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

January 2013

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Signs of animals abound at LREC during the winter. Below impressions of a raptor and a mouse in the snow tell a story. See page 7 for an animal track resource. Photo by Anne Wamser.

Starting a Hobbit for the New Year?

by Bob Coulter

As I write this, the movie adaptation of *The Hobbit* is ruling the box office. What few people know is that it was originally crafted by J.R.R. Tolkien as a story for his kids. Even fewer know that its origin was a stray line Tolkien doodled when he was completely bored with grading papers. (Of course none of us have ever been in that position!). Anyway, from a single line—"In a hole in the ground there lived a hobbit"—Tolkien crafted a best-seller and the subsequent *Lord of the Rings* trilogy as a sequel.

What's your Hobbit? What idea do you have noodling around in your head as a great way to engage your kids? How can we help you to flesh out your ideas? In this issue of the newsletter we highlight this summer's workshops, which are a great way to carve out a few days to develop project ideas in

the company of your colleagues. Also, we're always available just to chat and think through possibilities with you. All you need to do is take the first step. As proto-hobbit Bilbo Baggins remarked, "There's no knowing where you might be swept off to." ✨





Is It Summer Yet?

by Eddie Jones

Don't get me wrong. Cold, overcast days will never keep me inside. Amazing natural events occur even on the coldest, darkest days. And I'm usually most aware of my cold feet when I'm sitting indoors (like now). I'm actually looking forward to the summer of 2013 because it will give us an opportunity to work with many of you as participants in one of two redesigned multi-day workshops or a new workshop we are introducing this summer. (Workshop details are on page 3.)

The redesigns are part of our latest attempts to more effectively assist as you engage your students in Place-Based Education (PBE). We went back to our own PBE model: integrating curriculum, schoolyard habitats, and community connections. And we discovered that we were underutilizing a valuable community partner who has published a series of instructional units that use schoolyards to support curriculum!

In our October 2011 newsletter we introduced the availability and effectiveness of the Missouri Department of Conservation's *Discover Nature Schools* (DNS) program. With the support of their Education Consultant, David

Bruns, we will now incorporate the DNS instructional units into our 3-day introductory workshop *Effective Outdoor Learning*. Training will include the opportunity to apply for funds to implement the units. This addition will provide participating teachers with ready-to-use schoolyard learning activities and a very helpful community partner. While this workshop is designed for teachers who are new to LREC, it will also be of benefit to our returning teacher partners, who are encouraged to attend.

We have also discovered (via that tenacious instructor "Experience") that it is more sensible and sustainable for the habit of outdoor learning to *precede* habitat enhancement projects. Therefore *Sustainable Schoolyards* will now be open only to teachers with at least one year of experience working with LREC. This workshop will focus primarily on enhancing wildlife habitat in the schoolyard as a means of supporting the curriculum. The *Earth Partnership for Schools* K-12 Curriculum Guide will continue to be the primary resource for this workshop.

Finally, we are offering a new workshop for those of you who are responsible for teaching weather

Sustainable Schoolyards workshop participants:

Have you attended a Sustainable Schoolyards summer workshop at LREC in the past? If so, you are invited to attend a meeting with other teachers on Wednesday, January 30 from 9 am to 3 pm here at LREC. The meeting will give you the opportunity to share progress and challenges in implementing schoolyard nature study and habitat development into your curriculum. We will also take a fresh look at the *Earth Partnership for Schools* lessons.

Lunch will be provided. If a note to your administrator will help you secure release time for the day, please let us know. Past winter meetings have been very productive. And if you think that you haven't made much progress in curriculum implementation or habitat development...all the more reason to attend! Register with Eddie at eddie@lrec.net.

and climate or plant and animal adaptations and who want to do it with a strong connection to our local community. Be sure to check out *What's It Like Where You Live?*

Each of these workshops is intended as one component of a partnership with LREC: a partnership that extends through the year—even during the cold, overcast, and fascinating days of January. Is it summer yet? No. So go outside! ♪

See workshop details on page 3.

2013 SUMMER WORKSHOPS

Effective Outdoor Learning

*Session I: June 19–21, 2013; 9 am–4 pm or
Session II: July 15–17, 2013; 9 am–4 pm
at Litzsinger Road Ecology Center*

Discover the learning opportunities in your schoolyard and community as you begin a yearlong partnership with Litzsinger Road Ecology Center. During this 3-day introduction to place-based education, you will become acquainted with outdoor learning and the unique opportunities it presents for your students to achieve curricular goals in science and across the curriculum. You will be introduced to *Discover Nature Schools*, an outdoor curriculum published by the Missouri Department of Conservation and become eligible to receive funding for outdoor learning equipment. LREC will provide instructional and technical support through the next school year.

Fee: None for class or follow-up student field experiences.

Call 314-409-4947 for more information.

Sustainable Schoolyards

*June 10–14, 2013; 9 am–4 pm
at Litzsinger Road Ecology Center*

Building on the principles of outdoor, place-based education, workshop participants will be introduced to teaching methods for investigating the history and ecology of your school and for enhancing the schoolyard as a habitat, all with your students and in support of your curriculum. LREC will provide instructional and technical support through the next school year. This workshop is open to teachers who have had a prior partnership with Litzsinger Road Ecology Center. Applications will be accepted from teams of two or more teachers.

Fee: None. Graduate credit is available.

Call 314-409-4947 for more information.

What's It Like Where You Live?

*July 22–26, 2013; 9 am–4 pm
at Litzsinger Road Ecology Center*

Learn how to engage your students in active investigations of local ecosystems and then compare what it's like in St. Louis with other areas. How are we different from a desert community like Phoenix? Why are there different plants and animals in a rainforest? By combining a study of weather and climate patterns with plant and animal adaptations, your students can build the framework for understanding places near and far. Direct links to Common Core math and Next Generation science standards help you to meet your curriculum requirements. Ongoing support through the school year—including priority access to no-cost field study at LREC—is a benefit of your participation. Useful for all, but probably the best match is for grades 3–8.

Fee: None. Graduate credit is available.

Call 314-368-7489 for more information.

In the Calendar This Month...

As a thank you to the volunteers for all of their efforts in 2012, each received a 2013 Litzsinger Road Ecology Center calendar that includes some of our favorite images of the plants, animals, and people that may be found at LREC. When we have put together calendars in the past, we frequently were asked to identify this plant or that insect. So this year, we will provide these IDs each month in the newsletter. Since not all of our readers will have a calendar, we will post the full-size photos on our blog (<http://www.litzsinger.org/weblog/>) for your reference.

Volunteers: If you have not yet received your calendar, please contact Martha.

January

1. North prairie under snow
2. North prairie and north woods after the burn
3. Shortleaf pine (*Pinus echinata*)
4. Students exploring with a Volunteer Educator



Glass House Quiz: Urban Canines

by Deanna English and Danelle Haake

One afternoon in December, Danelle was walking into the Cabin with a volunteer when the neighbor's chickens started making some noise. Glancing over, she saw some motion and quickly realized that there was a coyote walking toward the hen house. As the coyote approached to within 20 feet of them, the chickens really started squawking. After turning for a moment to look at the people watching from the deck, the coyote turned down the truck path and trotted quickly away.

While sightings like this are infrequent, there certainly are wild canines living in urban areas, including St. Louis. More often, we are reminded of their presence by the scat that is found on top of downed trees in the woodlands at LREC. Let's find out what there is to know about these large mammals in this month's quiz:



Coyote (*Canis latrans*).

1. **Besides domesticated dogs, which canines might you find in the St. Louis area?**

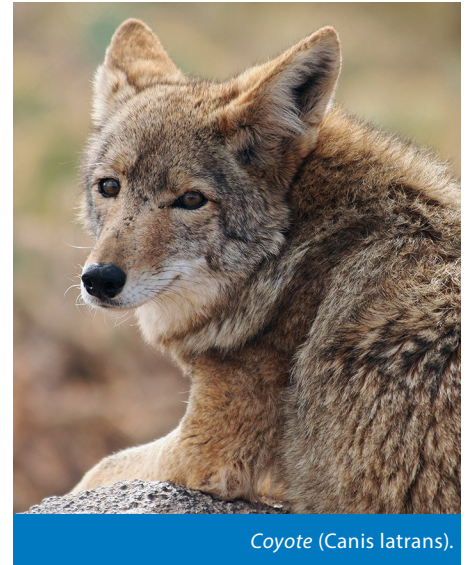
- a) Fox and coyotes
- b) Fox, coyotes, and wolves
- c) Coyotes only
- d) Fox only

2. **When you are looking at canine tracks, what is one mostly reliable way to exclude the domestic dog as a possibility?**

- a) Wild canines place their feet directly in front of one another which creates a nearly straight line of footprints. Dogs do not do this.
- b) Dogs will weave back and forth across the landscape as they run. Wild canines are more deliberate in their travels so their line of tracks move in more of a straight line.
- c) Wild canines have only three toes and dogs have four.
- d) It's nearly impossible to tell a dog track from other canines. Only experts can determine whether the tracks are a domestic dog or a wild canine.

3. **Coyotes are wild animals that may on occasion become a nuisance, preying on small pets and getting into trash. What are some strategies you can use to keep coyotes from becoming a nuisance?**

- a) Harass or chase coyotes you see in the area to make them feel unwelcome.
- b) Fence your yard.
- c) Do not let cats and small dogs out at night unless they are accompanied by an adult.
- d) All of the above.



Coyote (*Canis latrans*).

See **Quiz**, page 5

From **Quiz**, page 4

4. How might the absence of wolves affect coyote and fox populations?

- a) More fox and less coyotes.
- b) More fox and coyotes.
- c) More coyote and less fox.
- d) About the same population as when there are wolves.



Gray wolf (*Canis lupus*). Photo: USFWS.

5. How is a wolf-and-fox-dominated predator community possibly related to Lyme disease?

- a) Wolves and foxes are important hosts for ticks so there is an increase in Lyme disease where you find these two predators.
- b) The preferred prey for wolf and fox are primary hosts for ticks, so theoretically there should be a decrease in Lyme disease where you find these two predators.
- c) Wolves reduce the population of coyotes which hunt the preferred prey for ticks so the tick population increases.
- d) None of the above. There is no correlation between tick borne disease and canine populations.

See **Quiz**, page 6



Red fox (*Vulpes vulpes*).

New Volunteer Educators

We are happy to welcome 11 new Volunteer Educators to our LREC family! Jane Costello, Carole Fehr, Scott George, Fran Hagan, Debbie Koch, Alex McNett, Cliff Parmer, Lee Phillion, Cynthia Rill, Laverne Sebben, and Nancy Zvolanek successfully completed the required Volunteer Educator training this past fall here at Litzsinger Road Ecology Center.

They bring a variety of expertise to their work with children. We have some Master Gardeners, Master Naturalists, retired teachers, a retired librarian, and a geologist in the group. This is an incredibly enthusiastic group of nature lovers and outdoor education advocates. Many of these new VEs have already been signing up to lead the school groups and we look forward to working with them even more in the future! 🌿



Deanna English ignites plant matter in the South Prairie to start the prescribed burn on December 14, 2012. Photo by Eddie Jones.

From **Quiz**, page 5

Answers:

1. **a) Fox and coyotes.** In the St. Louis area you will find both fox and coyotes.
2. **b) Dogs will weave back and forth across the landscape as they run. Wild canine are more deliberate in their travels so their line of tracks move in more of a straight line.** Answer “a” is true of foxes because of their very narrow chest.
3. **d) All of the above.** These are some things that you can do to discourage coyotes. Others include keeping outside areas well lit, obeying leash laws, and avoiding leaving out items that might attract coyotes such as garbage and pet food.
4. **c) More coyote and less fox.** Because of dietary overlap, wolves compete more directly with coyotes so without wolves there will be more coyotes. However this increased number of coyotes drives down the fox population as the two species compete for small mammals.
5. **b) The preferred prey for wolf and fox are primary hosts for ticks, so theoretically there should be a decrease in Lyme disease where you find these two predators.** According to the Levi and Wilmers article listed in our sources, the pre-

ferred prey for wolves (deer) and fox (small mammals) are frequent hosts of ticks. Wolves and fox preying on these tick-bearing animals should reduce the population of ticks and therefore decrease the incidence of Lyme disease.

Sources:

“Introduction to Coyotes.” Missouri Department of Conservation. <http://mdc.mo.gov/node/4617>.

Levi, T. and Wilmers, C. 2012. “Wolves-coyotes-foxes: a cascade among carnivores.” *Ecology* 93: 921–929. ♪

Horticulture & Restoration Offerings for School Groups

by Deanna English

It's January, and we are already thinking about spring at the horticulture and restoration end of LREC. The seeds that we collected and prepared earlier in the season are now ready to be planted in the greenhouse. Working in a greenhouse in January is delightful, and we look forward to the planting and the pleasure of observing the new seedlings as they emerge. School groups are encouraged to help during their visit.

We are also making seed mixes to be spread in areas of the newly burned prairie. On snowy days this is super fun for both kids and adults. Who doesn't enjoy playing in the snow? We're keeping our fingers crossed for a snowy January.

Check out the following January activities. If they fit into your curriculum, then call or email your school partnership coordinator and make arrangements to join us for these activities:

Stream cleanup—Available when the stream is at a safe level.

Stream monitoring—Use a kit to test dissolved oxygen, conductivity, pH, temperature (air and water), nitrates, turbidity, and chloride.

Invasive plant removal—Learn about invasive species and help us remove invasive plants from the site.

Roots and plant structure demonstration—Students are introduced to the purpose and function of roots and plant structures.

Seed sowing in the greenhouse—Students can learn about seed sowing and sow some of their own plants in the greenhouse.

Seed sowing outside—Help us spread seed and “stomp” it into the ground. ♪

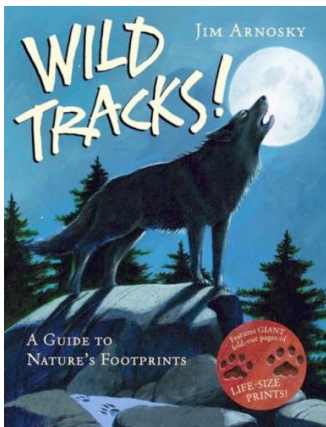


Restoration Assistant Anne Wamser with students in the greenhouse.

LREC READING CORNER

by Deanna English

Wondering what to do with your students outside on these cold winter days? One idea is to introduce them to animal tracks. I personally find that it's great fun going out the day after a nice snow or rain to look for evidence of schoolyard or backyard visitors. Learning to identify tracks is fun but also educational and can lead to discussions and projects about food webs, winter survival, and patterns found in nature. Whole stories can be uncovered once children (and adults) begin to read the landscape around them.



Wild Tracks!: A Guide to Nature's Footprints by Jim Arnosky

Wild Tracks! is a wonderful book that gives just enough information to intrigue the reader without overwhelming her with information. The illustrations are beautiful and include drawings of life size tracks as well as many illustrations of animals. I enjoyed comparing the different tracks along with the tidbits of interesting information sprinkled throughout the book: Did you know that fox tracks are the easiest canid tracks to identify because their chest is so narrow that they place their feet directly in front of each other?

If you get a chance, I'd recommend picking up this book and sharing the world of tracks with your students. I predict you'll make some wonderful discoveries right in your schoolyard! 🐾

Rebate to RainScape?

Landowners in the Deer Creek watershed are eligible for rebates for RainScaping (landscaping for stormwater management) their yards. Options include rain gardens, rain barrels, soil amendments, and more. Optional training workshops are offered on February 9 and February 12.

Details and application available at <http://deercreekalliance.org/rainscaperebates.aspx>. Applications due March 1, 2013. Questions? Email RainScaping@mobot.org or call 314-577-0202.

Also: Check out the Garden's new online *RainScaping Guide* at <http://www.mobot.org/rainscaping> to learn more about RainScaping! 🐾

LREC Announcements

January 30

Monthly Water Quality Sampling
1 to 4 pm, meet at the Glass House. Questions? Contact Danelle Haake at danelle@litzsinger.org or 314-961-4410.

January 31

Volunteer Enrichment: Rain Gardens

1 to 2:30 pm, meet at the barn. If you'd like to bring a sack lunch, join us early at 12:30 pm; the program will begin at 1 pm. RSVP to Martha at martha@litzsinger.org or 314-540-4068.

Local Events

January–March, various dates

Eagle Events & Programs

Programs throughout the St. Louis area include guided hikes, presentations, "meet and greets" with bald eagles, and more. Details at <http://www.greatriverroad.com/eagles/eagleevents.htm>.

January 19

Introduction to Beekeeping Workshop

10 am to 4 pm at Purina Farms in Gray Summit, Missouri. Focus is on beekeeping as a side business. \$20 (box lunch included). Call 314-604-3403 or email duschackm@lincolnu.edu with questions or to register (registration due by January 11).

February 2

Maple Sugar Festival

10 am to 3 pm at Rockwoods Reservation in Wildwood, Missouri. See trees tapped and collect and boil the sap. Call 636-458-2236 for more information.