

# Litzsinger Road Ecology Center

## COMMUNITY NEWSLETTER

www.litzsinger.org

May 2011

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*Sixth grade students from Wyvetter Young  
Middle School apply their knowledge of  
habitats to make their schoolyard attractive  
to native animals. Read more on page 2.  
Photo by Tami Yonke.*



## Perfinkers in the Wild

*by Bob Coulter*

Last week I stumbled across an interesting concept that might help you as you prepare your curriculum for next year: students as “perfinkers,” able to simultaneously perceive, feel, and think. Obviously, much of current educational practice focuses on students as thinkers, able to assimilate a great deal of information. Ecological understanding requires this and more. Do your students have the ability to perceive, looking deeply at something long enough to really take it in and make sense of subtle details? Do they notice their feelings as they work, forging a bond with nature and feeling motivated to improve a local habitat?

Focused study in an outdoor space near your school can help nurture the perfinkers in your midst. Regular observations help to notice who is a “regular” in the space and who is visiting, and to see how the site changes over time. Stewardship projects that improve the habitat add to this, fostering a deep connection with a space that—at least for a time—is theirs.

We look forward to working with you as you craft your plans using this outdoor space in the coming school year. Please keep us involved so we can build the strongest partnership for your kids. 🌱

# Expanding Partnerships

by Deanna Lawlor

One thing we work very hard to do here at LREC is to integrate all the different projects in which the staff members are involved. The education staff strives to partner with our restoration ecologists, and in turn, the ecologists work to keep the education department informed of their projects. Working together enriches our positions as well as enhances the opportunities here for teachers and students.

There are also grant-funded projects that expand our outreach beyond the boundaries of LREC. Community Science Investigators (CSI) is one of those projects. CSI is a National Science Foundation grant funded project focused on after-school programs at local middle schools. CSI introduces

students and teachers to two technologies, Geographic Information Systems (GIS) and an augmented reality game program (MITAR) developed by MIT. The students then use these technologies at school to help develop science-focused service learning projects in their school's community.

One of our CSI schools took advantage of the opportunity to integrate their after-school program into their school-day curriculum and visits to LREC.

Teacher Tami Yonke, has been coming to LREC for several years bringing sixth and seventh grade students from Wyvetter Young Middle School in East St. Louis. She uses her time at LREC each

## Wyvetter Young Middle School

District: East St Louis

Location:  
3939 Caseyville Ave  
East St. Louis, IL 62204

Grade Levels: 6–8

Number of Students: about 300

LREC partners with the 6th grade classes and the Community Science Investigators (CSI) after-school program.

year to enhance her science curriculum at school.

Ms. Yonke and fellow Wyvetter Young teacher Kevin Murphy also run the CSI program at the school. Using the skills gained in CSI, Ms. Yonke developed her own LREC curriculum, integrating their environmental studies with a game using MITAR.

First, while at school, the students played a version of the MITAR game to become familiar with the technology and to learn more about habitats in their own schoolyard. When they visited LREC, they expanded on this experience by playing a similar MITAR game—



Sixth grade students at Wyvetter Young Middle School research habitats. Photo by Tami Yonke.

See **Wyvetter Young**, page 3



From **Wyvetter Younge**, page 2

this time learning the habitat requirements of four local animal species. After the visit, the students took the information they had learned back to school and shared their findings with other students.

The Wyvetter Younge CSI after-school group is now taking this experience even further by applying their newfound knowledge to design a natural habitat in their schoolyard to attract birds and other native species.

It has been exciting to watch the teachers and students at Wyvetter Younge Middle School take advantage of so many of the resources we offer. This sort of partnership is what LREC strives to create, and is rewarding for all of us to experience. ✍



Wyvetter Younge students explore habitats at LREC. Photo by Tami Yonke.

# Glass House Quiz: Baby Animals

by *Danelle Haake and Deanna Lawlor*

Spring is here and one of the fun parts of spring is...babies! We have all seen lots of baby plants popping up around LREC for the past month or so. Now it is time for the baby animals to have a day in the spotlight.

There are a number of young animals that we might see in the next few months as they grow. But where are they now as babies? Match the animals with their 'childhood' homes at LREC:

*[Hint: Do the ones you think you know first, then use the process of elimination for the others.]*

1. Muskrat
2. Turkey
3. Northern crayfish
4. Painted turtle
5. Eurasian tree sparrow
6. Belted Kingfisher
7. Dragonfly
8. Coyote
9. Deer
10. Bullfrog
11. Praying mantis
12. Red-shouldered hawk
13. Pileated woodpecker

- a. in the sediments of Deer Creek or the pond
- b. in the banks of Deer Creek with an underwater entrance
- c. in the prairies or in old fields
- d. on the ground in the prairies
- e. in a den dug on steep slopes; sometimes using manmade structures such as storm drains, under sheds, or manmade holes
- f. in egg clusters protected by a hardened, foam-like mass
- g. in the LREC nest boxes
- h. hanging out in their nests in sand or gravel banks or in mown fields until they are old enough to journey to the creek
- i. in cavities in dead trees
- j. high in trees in open woodland or large trees along prairie edges
- k. tunnels in the stream bank
- l. in the ephemeral pond
- m. clinging to the mother for about 2 weeks as she swims in Deer Creek

See **Quiz**, page 6

# Thank You, Volunteer Educators!

by Eddie Jones

Volunteer Educators have done it, again! Their sense of LREC as one of their own “nature places” combined with the intent to pass that sense along to young people has resulted in another year of enjoyable, if sometimes unpredictable, student learning experiences at the ecology center. While we are not provided with test scores that correlate directly to student outdoor learning, we do get occasional notes and drawings from students regarding a recent visit. These notes are insightful and candid. Excerpts follow:

*Thank you for teaching me and sharing what you know about bullfrogs. Bullfrogs are very adapted to water which I think is good. Your time you spent with us was worth spending.*

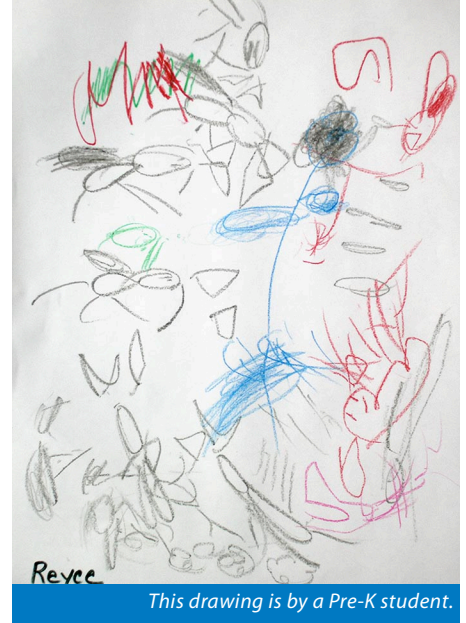
—Sixth grader

*Thank you for giving me the opportunity to learn more about habitats and, hopefully, I get to do it again in the eighth grade. But I really thank you for telling me how to capture a crayfish.*

—Sixth grader

*Thank you for showing my group around the ecology center. My favorite part was making the rafts. I didn't like looking at the field guides, but the rest was fun.*

—Sixth grader



This drawing is by a Pre-K student.

*Thank you for being my guide on the field trip. I really enjoyed learning about the cup plant. My favorite thing was looking at the deer tracks. It was a mystery to find out if the deer tracks were fresh or old.*

—Fifth grader

*Thank you so much for showing us the woodland, creek and prairies. I really liked learning about snags. The bluebells were my favorite. It was cool how Mountain Mint really smelled like mint. I had a blast.*

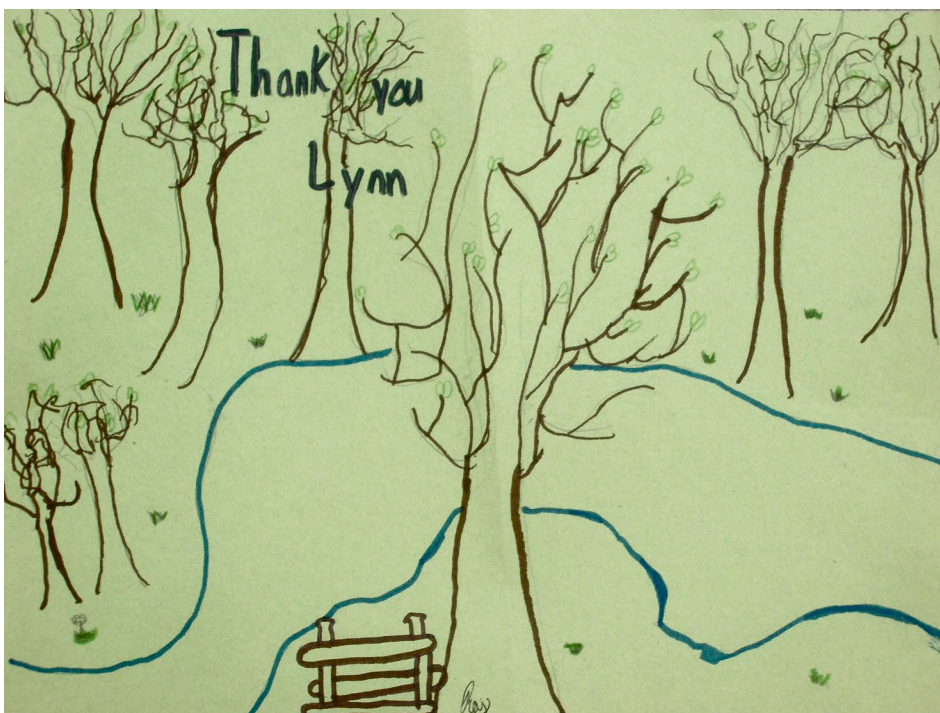
—Fifth grader

*Thank you for your time and patience and working with us. I really had fun but it was just too cold to be walking around for three hours. But besides that, it was great.*

—Sixth grader

*Thank you for putting up with me and my friends. We hope that you had a nice day.*

—Fourth grader



A fifth grader sent this drawing of LREC.

See **Volunteer Educators**, page 8



# Volunteer Excellence

by Danelle Haake

We at LREC are fortunate to have many dedicated volunteers. In the past, several individuals have received awards from the Garden for their years of service or their exceptional commitment to our efforts here at LREC.

This is the inaugural year of a new Garden award for volunteers, the *Group Excellence Award*. This award is for “the group that has demonstrated effective teamwork through the completion of a special project or a superior, sustained effort which has contributed significantly to the mission of the department and/or the Garden.”

The winner of this Garden-wide award for 2011 is the LREC Friday Horticulture Volunteers! While all of our volunteers contribute substantially to the mission of LREC, this group stood out above the rest. For your reliability and your enthusiasm, we honor you Richard, Ray, Pauline, Larry, Chuck, Charlie, Henry, Carol, Marc, and Stephanie.

In the two years that I have had the great fortune to work with this team, they have created habitats for bees and birds, built bridges and overlooks, planted over 500 trees and shrubs, removed several dozen bags of litter from Deer Creek, and cleared nearly an acre of bush honeysuckle in the woodlands between the driveway and the creek. They have performed a multitude of facility repairs and improvements ranging from re-hanging damaged doors and installing misting systems and shelving in the greenhouses to repairing metal fencing and replacing damaged mailboxes. And this list only scratches the surface!

In everything they do, the Friday Crew works together. In the process they share a wealth of knowledge and experience with each other and with the staff and students.

Friday volunteers, you make us look good! It is an honor and a privilege to work beside each of you! We cannot thank you enough... 🌿



From top to bottom: Richard and Larry build a compost bin; Ray and Chuck prepare to work together on a project; Richard, Stephanie, and Charlie learn about the project for the day with Mary; Pauline, Henry, Carol, and Marc warm up with coffee and tea before heading out to work in the snow. Photos by Danelle Haake.



## TEACHERS...

### Planning for Next Year

Now is the time to submit your proposal for working with us next year. Applications can be downloaded from <http://www.litzsinger.org/2011-partner-application.doc>.

Scheduling for the 2011–2012 school year will begin the week of August 1.

### Summer Opportunities

LREC is offering teacher professional development workshops this summer, including ones on sustainable schoolyards and place-based learning. Check out our offerings and find links to other opportunities offered by Missouri Botanical Garden and other local institutions on our website: <http://www.litzsinger.org/profdev.html>.

From **Quiz**, page 3

Answers:

1. b) Muskrat babies live in the banks of Deer Creek. Here at LREC we have observed muskrats building their homes in the stream bank with an underwater entrance. However, muskrats will also build their home with vegetation in shallow water. Usually the female has 2–3 litters each year, with 4–7 young in each litter. (<http://mdc.mo.gov/discover-nature/field-guide/muskrat>)
2. d) Turkeys lay their eggs on the ground in the prairies. Most turkey nests are located near a permanent source of water. Turkey hens can be very skittish when nesting and have been known to abandon their nest if disturbed even once. At LREC we make sure we stay on the trails around the prairie during the spring. (<http://mdc.mo.gov/landwater-care/animal-management/bird-management/wild-turkey-habitat-and-management>)
3. m) Northern crayfish babies cling to their mother for about two weeks as she swims in streams. Common in pools of rocky streams in the Prairie Region, the Northern crayfish is the only species of crayfish known to live in Deer Creek.
4. h) Painted turtle babies hang out in their nests in sand or gravel banks or in mown fields until they are old enough to journey to the creek. Painted turtles dig nests that are about four inches deep and two inches wide. Once their 2–20 eggs are laid, the females cover the nests so well that they are nearly impossible to find.
5. g) Eurasian tree sparrows at LREC have all but taken over the nest boxes. In the U.S., this species of sparrow is only common in the St. Louis area, where it was introduced in 1870. Other small populations may be found in Illinois and Iowa along the Mississippi River. (<http://www.litzsinger.org/research/crank2009.pdf>)
6. k) Belted kingfishers tunnel into the stream bank. The male and female both use their beaks to excavate a 3–7 ft. long tunnel where they lay their eggs in total darkness.

See **Quiz**, page 7



From **Quiz**, page 6

7. a) Dragonflies live as larva in the sediments of Deer Creek or of the ephemeral pond. On average, dragonfly larva live underwater for about ten months before emerging into adulthood, but some can spend up to six years as larvae. Few species of dragonflies live longer than two months as adults.
8. e) Coyote babies live in a den dug on steep slopes. Sometimes they use manmade structures such as storm drains, under sheds, or manmade holes. Most often, coyotes will use an abandoned burrow made by another animal. They were called “little prairie wolves” by members of the Lewis and Clark Expedition. (<http://nwco.net/PDF/coyote.pdf>)
9. c) Deer are found in the prairies or in old fields. Born in late May or early June, the doe most often has twins. Each doe has an established fawning territory that they return to each year. One doe living around LREC regularly has triplets. (<http://mdc.mo.gov/discover-nature/field-guide/white-tailed-deer>; <http://mdc.mo.gov/hunting-trapping/deer/life-history>)
10. l) Bullfrogs live as tadpoles in the ephemeral pond. Bullfrogs lay up to 80,000 eggs, most of which are eaten by predators, particularly leeches. The surviving eggs will hatch in about two weeks. Bullfrogs may remain as tadpoles for as little as four months or as long as two years, potentially reaching five inches long.
11. f) Praying mantis eggs spend the winter in clusters protected by a hardened, foam-like mass. As the eggs hatch into the nymph stage in late spring, the siblings will eat each other unless they are first dispersed by wind. This cannibalistic predacious behavior sometimes continues into adulthood as the female mantis eats her mate.
12. j) Red-shouldered hawks nest high in trees in open woodland or large trees along prairie edges. Red-shouldered hawks may use the same nest for many years and nest in mid March, the earliest of all Missouri hawks. According to MDC, they usually line the nest with fresh leaves or pine needles. The fresh greens repel parasites and help hide the nestlings. ([http://www.allaboutbirds.org/guide/red-shouldered\\_hawk/lifehistory](http://www.allaboutbirds.org/guide/red-shouldered_hawk/lifehistory))
13. i) Pileated woodpeckers nest in cavities in dead trees. The male bird bores the nesting hole and the pair raises the young. Woody Woodpecker was modeled after the Pileated Woodpecker. (<http://mdc.mo.gov/discover-nature/field-guide/pileated-woodpecker>)



Top: praying mantis egg case.  
Bottom: Red-shouldered hawk nesting in tree.  
Photos by Danelle Haake.

#### References:

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- Voshell, J. Reese Jr.. 2002. *A Guide to Common Freshwater Invertebrates of North America*. McDonald & Woodward Publishing Co. 🐌

From **Volunteer Educators**, page 4



Volunteer Educators at work.  
Photos by Eddie Jones.

**PLEASE NOTE:**  
The *Litzsinger Road Ecology Center Community Newsletter* is going on summer hiatus. Look for our next issue in September 2011.

## LREC Announcements

*Tuesdays beginning May 10*

### LREC Tree Inventory

To celebrate the Year of Forests, we are doing an inventory of the trees at LREC. We are planning to work on this project each week on Tuesday afternoons from 1–4 pm, beginning May 10. If anyone would like to participate in this summer-long project, contact Danelle (314-961-4410 or [danelle@litzsinger.org](mailto:danelle@litzsinger.org)). No experience necessary!

*May 26, June 30, July 28, August 25*

### Monthly Water Quality Sampling

Meet at 9 am at Glass House. Contact Danelle Haake (314-961-4410 or [danelle@litzsinger.org](mailto:danelle@litzsinger.org)) with questions.

*June 2*

### Volunteer Thank-you Potluck

Noon to 3 pm at the Windegger Shelter at Tilles Park. RSVP to Martha at 314-540-4068 and tell her what you'll bring.

*Throughout Summer*

### Volunteer Educators Needed

There are several opportunities for volunteer educators to work with students during the summer months. Check the LREC program calendar <http://www.litzsinger.org/calendar/> for specific dates. Contact Martha at [martha@litzsinger.org](mailto:martha@litzsinger.org) or 314-540-4068 to schedule.

*September 12*

### Volunteer Educator Training

Beginning Monday, September 12 and continuing for eight consecutive Mondays. Spread the word. Contact Martha at [martha@litzsinger.org](mailto:martha@litzsinger.org) or 314-540-4068 for more information.

## Local Events

*May 7*

### Spring Wildflower Sale

9 am to 4 pm at Shaw Nature Reserve. Admission is \$3 or free to Garden Members or SNR Passholders. Pre-sale for MBG members on Friday, May 6 from 4 to 7:30 pm. Learn more at <http://www.shawnature.org/nativeland/plantsale.aspx>.

*May 15*

### Rain Garden Block Party

Noon to 3 pm at Oakbrook Park in University City. Celebrate the first spring for a group of seven rain gardens. Enjoy free food, plant giveaways, music, and more. Details at <http://www.riverdesperes.org>.

*June 4 & 5*

### Golden Prairie BioBlitz, Potluck Dinner, & Campout

Help inventory species on this 320-acre prairie near Golden City in Barton County. The BioBlitz begins at 2 pm on June 4 and lasts through the next morning. Visit <http://www.moprairie.org> for details. RSVP to [info@moprairie.com](mailto:info@moprairie.com) or call 1-888-843-6739.

*Accepting entries through July 15*

### "Take a Shot!" Youth Nature Photography Contest

This photo contest is for ages 14 and under. Photos must be taken at Shaw Nature Reserve between April 15 and July 15, 2011. Complete details and entry forms at <http://www.shawnature.org/photocontest.aspx>.

*Through October 31*

### Plastic Pot Recycling

9 am to 5 pm daily. Recycle your plastic garden pots, polystyrene cell packs and trays at the Garden and other locations. Details at <http://www.mobot.org/plasticpotrecycling/>.