

# Litzsinger Road Ecology Center

## COMMUNITY NEWSLETTER

www.litzsinger.org

May 2015

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*Students from Mary Ellen Leary's fourth grade class at Clark Elementary transplant seedlings on the LREC deck with help from staff member Mary Voges and volunteer Gary Giessow. Read Mary Ellen's description of her students' studies on page 2. Photo by Leslie Memula.*

## Holding on to Mystery

*by Bob Coulter*

I recently returned from my annual “think trip” to the American Educational Research Association conference. One of the more intriguing ideas I got to ponder emerged from a presentation focusing on maintaining the mystery in environmental education. Left to their own devices, curriculum mandates and testing requirements will reduce everything to a set of facts to be known and procedures to be mastered. It’s incumbent upon us to push back—to help the kids hold on to their sense of mystery by finding something that is just fascinating, or by reveling in seeing how things change over time.

It’s not enough just to go outside to check off a curriculum box. We need to make our environmental experiences evocative, drawing us in at the same time that we are brought forward into new understandings and new commitments. This simultaneous pulling inward and pushing forward is at the core of students’ growing environmental (and personal) identities.

These last few weeks of the school year present a great opportunity to search for the mysterious, and reflect on how we can build it into our plans for next year more fully. We look forward to talking with you about this as we plan together for next year. 🌿





Clark Elementary fourth graders teach kindergarteners about the school's woodland garden. Photo by Mary Ellen Leary.

## Sustainable Planting

by Mary Ellen Leary, Fourth Grade Teacher at Clark Elementary School, with input and ideas from her students

*The fourth graders at Clark Elementary Webster Groves School District are expanding their sustainable woodland garden on the school grounds.*

While taking part in the ECO-ACT program (Missouri Botanical Garden) we learned about ecosystems. Our goal for our garden is that by planting native plants of Missouri, we will preserve a healthy balance in our garden's ecosystem.

We recently visited Litzsinger Road Ecology Center to learn more about sustainable woodland plants. While on our visit we observed evidence of sustainability in Litzsinger's woodland ecosystem. One observation made was that the woodland plants

were easy to find because of their new growth and blooms. We also noticed that invasive plants were easily spreading all over the woodland garden floor since they had no natural enemies to stop their growth. Our concern was that the invasive species were taking nutrients and resources out of the soil and away from the native plants. We observed the woodland plants that were thriving—such as trillium, horsemint,

and columbine—were growing in areas away from the invasive plants.

In addition to exploring the woodland garden we also replanted seedling plants (called transplanting) to bring back to school to plant in our school garden in May. We are happy to report that the plants—columbine, seed box, greyhead coneflower, water parsnip, and creek oats—are all thriving and growing rapidly in our classroom greenhouses.

As a part of our community partnership we are teaching the three kindergarten classes at Clark about sustainable woodland gardening. We have already taught the kindergartners about our woodland garden. Our next lessons will focus on, “Why is our garden sustainable?” and “What plants are native to Missouri woodland gardens?” We look forward to planting our new plants with the kindergarten classes at the end of the school year and celebrating sustainability! 🌱



A student draws the creatures found in Clark Elementary's woodland garden. Photo by Mary Ellen Leary.



## THINKING AHEAD TO NEXT YEAR: PLACE-BASED EDUCATION AT YOUR PLACE

We're pleased to see that Litzsinger Road Ecology Center continues to be a valuable resource for teachers like you who are interested in making the most of their environmental investigations. As you may know, we are limited in the number of calendar slots we can offer to schools. Looking ahead to next year, we will be working toward these priorities:

- Scheduling LREC site visits for classes that have a plan to link their work here with a definable project taking place on their school grounds or in the local community.
- Working with school partners to identify sites in the neighborhood that provide fertile grounds for ongoing observations and monitoring of nature.

We will be scheduling meetings with all of our teacher partners in May and June to reflect on the current year and make plans for the upcoming one. In preparation for your meeting, please complete a final Seasonal Partnership Update [available on our website](#), and be thinking about the best way to partner with LREC next year. Also, we invite you to participate in the summer learning opportunities listed at right! ✂

### SUMMER OPPORTUNITIES FOR TEACHERS AT LREC

We're offering more opportunities for you to learn at LREC this summer! Contact Martha Schermann ([martha@lrec.net](mailto:martha@lrec.net) or 314-540-4068) to register for any of these offerings:

*May 29, 1-3pm*

**Volunteer and Teacher Enrichment: Water Quality and Macroinvertebrate Sampling.** Learn how chemical, physical and biological tests are used to evaluate water quality in Deer Creek.

*June 11-12, 9am-3pm (also offered July 7-8)*

**Schoolyard Assessment.** Learn how to "read" your school grounds and identify great project spaces for your kids to investigate throughout the school year.

*June 24, 1-3pm*

**Volunteer and Teacher Enrichment: Native Plant Families.** Learn how plants are classified and which families are represented at LREC.

*July 7-8, 9am-3pm (also offered June 11-12)*

**Schoolyard Assessment.** Learn how to "read" your school grounds and identify great project spaces for your kids to investigate throughout the school year.

*July 14, 1-3pm*

**Volunteer and Teacher Enrichment: Plants, Pollinators, and Other Partnerships.** Learn about the relationship between pollinators and the plants that they pollinate. Other plant-animal relationships will be examined, too.

*July 27-31, 9am-4pm*

**Sustainable Schoolyards workshop.** Learn how to develop natural habitats on your school grounds while meeting curriculum standards.

### THE 2014-15 SCHOOL YEAR AT A GLANCE:

100 teachers + 2000 students + 50 Volunteer Educators =

One year of place-based education at 40 schools in the St. Louis region

About half of these schools have established or are developing schoolyard natural areas that support their curriculum, provide habitat for living things, and enhance their community.

## HORTICULTURE & RESTORATION OFFERINGS FOR SCHOOL GROUPS

by Deanna English

Spring is my favorite season, and this spring has been glorious. The woods are exploding in bloom and the prairie is greening up. It's always so much fun to watch the burned prairie turn from scorched black to bright kelly green.

We have also been working hard to clear wintercreeper (*Euonymus fortunei*) from around the cabin area. Many people including staff, volunteers, students, and teachers have all pitched in to pull up euonymus, mulch, and plant native plant species. We have all been delighted to watch the natives that were struggling under the carpet of wintercreeper explode and begin to cover the exposed soil. We have also enjoyed the project because it's so close to the action that school groups can spontaneously jump in and help if they are interested.

If you are visiting the site in May, please take time to check out the restoration work around the cabin, and if you're inspired help a little or find something on the list below that better fits into your lesson plan. We always enjoy working with your students.

Hope to see you soon.



Prairie trillium (*Trillium recurvatum*) and blue-eyed Mary (*Collinsia verna*). Photo by Susan Baron.

### MAY RESTORATION OPPORTUNITIES:

**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.

**Plant seedlings**—Depending on how we warm up this month we will be planting seedlings in the woodland and prairie

**Tree monitoring**—High School and Middle School students can work on developing tree identification skills and learn techniques used to inventory a large area of trees.

**Plant monitoring**—Students can learn how the plant monitoring grid is setup at LREC and practice their own monitoring skills. ✂

## MAY

by Martha M. Schermann

MAY your Summer  
be full of  
Wildflowers,  
Butterflies, and  
Buzzing Bees



# Glass House Quiz: Opossums

by Danelle Haake and Deanna English

Recently Danelle has been using our new wildlife cameras to capture a lot of our nightlife. One of our frequent visitors is the Virginia opossum (*Didelphis virginiana*). As we looked at the images, we had plenty of questions about this creature that most of us have bumped into at night in our own yards. Deanna even found some little ones in her house.

Many people don't care for the opossum, but we happen to think this nighttime creature is interesting, and even a little cute. We thought we'd learn a little more about opossums and pass what we learned on to you. For example, when first seen by the commander of the *Nina* in 1492, the opossum was considered a novelty. One was captured and brought back to Spain where it was dubbed "Pinzón's monster." One of our favorite facts about opossums is that they are resistant to the venom from the bites of native venomous snakes. Maybe you'll feel differently about this nighttime neighbor after you've learned a bit more.

*"The Pinzón's monster is the Wonder of all the Land-Animals."*

—Explorer John Lawson (1701)

**1. Fossil remains indicate that opossums have been around how long?**

- a) 5 million years
- b) 10 million years
- c) 50 million years
- d) 70 million years

**2. Opossums are the only mammal in North America that carry their young in a pouch, much like a kangaroo. What are mammals that carry their young this way called?**

- a) pouchials
- b) marsupials
- c) frontpackers
- d) papoosials

**3. When looking at opossum tracks there is something that distinguishes them from other mammal tracks. What is that characteristic?**

- a) opposable "thumbs" on the hind feet
- b) opposable "thumbs" on the front feet
- c) webbed hind feet
- d) both a and b

**4. Opossums are most active at night. What is this called?**

- a) diurnal
- b) crepuscular
- c) nocturnal
- d) paternal



**5. Opossums have been tested for their intelligence. In one test at the University of Georgia, they were tested on their ability to remember where food was hidden in a complicated maze. How do you think they scored?**

- a) as smart as a rabbit or a turtle
- b) as smart as a cat
- c) as smart as a dog
- d) smarter than all of the above

**6. Opossums have more of these than any other North American mammal?**

- a) young
- b) teeth
- c) claws
- d) rods and cones in the eyes

See **Quiz**, page 6

From **Quiz**, page 5

Answers:

1. **d) 70 million years.** The opossum lived during the age of dinosaurs and is one of the oldest surviving mammals.
2. **b) marsupials.**
3. **a) opposable “thumbs” on the hind feet.** These “thumbs” on the hind feet are actually called “hallux.”
4. **c) nocturnal.** Nocturnal creatures are most active at night, diurnal ones are most active during daytime, and crepuscular ones are most active at dawn or dusk.
5. **d) smarter than all of the above.** Apparently the only animal in that test that beat the opossum was the human (thank goodness!). Opossums were also very good at distinguishing between toxic and edible mushrooms.
6. **b) teeth.** Opossums have 50 teeth. In comparison, humans have 32. ✂



*The Virginia opossum (Didelphis virginiana) is a marsupial, carrying its young in its pouch. When the young outgrow the pouch they often hitch a ride on their mother's back. Photo by [Specialjake](#).*



*This opossum bares some of its 50 teeth. Photo by [PiccoloNamek](#).*

Sources:

Whitaker, John. *National Audubon Society: Field Guide to North American Mammals*. New York: Alfred A. Knopf, Inc., 1996. Print.

Mother Nature Network

<http://www.mnn.com/earth-matters/animals/stories/10-things-you-didnt-know-about-opossums>

National Opossum Society

<http://www.opossum.org>

National Wildlife Federation

<http://www.nwf.org/news-and-magazines/national-wildlife/animals/archives/2003/american-heritage-opossum.aspx>

Litzinger Road Ecology Center

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## LOCAL UPCOMING EVENTS

May 9

### Shaw Wildflower Market

9am to 4pm, at Shaw Nature Reserve in Gray Summit. Browse hundreds of varieties of annual and perennial wildflowers, ferns, trees, and shrubs to use in home landscaping and to attract wildlife, along with both showy and hardy plants for sun or shade. Beer, wine, cheese, meats, and more will also be available for purchase. (Note: some vendors don't accept credit cards so be prepared with cash or checks.) Included in Shaw Nature Reserve admission. Learn more at <http://www.shawnature.org>.

June 20

### Green Homes Festival

9am to 4pm, at the Butterfly House and Faust Park in Chesterfield. Explore the links between sustainability, energy efficiency, and conservation at home to a healthy planet. Enjoy exhibits, hands-on activities, and presentations along with local foods, live music, and sustainable and handmade shopping. Free. Learn more at <http://www.mobot.org/greenhomesfest>.

July 11

### Bug Hunt

10am to 3pm, at the Butterfly House in Chesterfield. For families with children ages 2 and up. Explore insects in their own habitat! Children will enjoy games and crafts; adults can learn about butterfly gardening and constructing bee houses. Outdoor bug hunts will be led by staff entomologists. Included in Butterfly House admission. To learn more, go to <http://www.butterflyhouse.org> and go to the events calendar.



Top: A Shaw Wildflower Market shopper displays her purchase. Bottom: a budding entomologist hunts insects at the Bug Hunt. Photos by Missouri Botanical Garden staff.

## LREC Announcements

May 12

### Water Quality Monitoring (Chemistry)

1pm, meet at the Glass House. If you have questions or to RSVP contact Danelle Haake at [danelle@litzinger.org](mailto:danelle@litzinger.org) or 314-961-4410.

May 29

### Volunteer and Teacher Enrichment: Water Quality and Macroinvertebrate Sampling

1 to 3pm, meet at the Cabin. Learn how chemical, physical and biological tests are used to evaluate water quality in Deer Creek. 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).

June 24

### Volunteer and Teacher Enrichment: Native Plant Families

1-3pm. Learn how plants are classified and which families are represented at LREC. RSVP to Martha at 314-540-4068 or [martha@lrec.net](mailto:martha@lrec.net).

July 14

### Volunteer and Teacher Enrichment: Plants, Pollinators, and other Partnerships

1-3pm. Learn about the relationship between pollinators and the plants that they pollinate. Other plant-animal relationships will be examined, too. RSVP to Martha at 314-540-4068 or [martha@lrec.net](mailto:martha@lrec.net).

August 7

### Volunteer Thank-you Pot Luck

11am to 2pm, at the Windegger Shelter at Tillis Park. We will provide the meat and the drinks. Family members are welcome. RSVP to Martha at [martha@lrec.net](mailto:martha@lrec.net) or 314-540-4068 and tell her what you will bring and how many are coming.

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IS GOING ON SUMMER HIATUS.

LOOK FOR OUR NEXT ISSUE IN SEPTEMBER 2015.