

# Litzsinger Road Ecology Center

## Community Newsletter

9711 Litzsinger Road • Ladue, MO 63124 • Phone (314)442-6717 • [www.litzsinger.org](http://www.litzsinger.org)

### Teachers: Help Wanted

By Bob Coulter

**W**e recently began what we hope will be a series of volunteer enrichment opportunities that focus on teaching and learning issues. These will complement our ongoing series of programs to enrich volunteers' understanding of the natural history of the site and the surrounding community. The larger goal, of course, is to continue building our capacity to engage students with nature. Many volunteers come to us with a strong teaching background and are looking to build their understanding of ecology, while others are retired scientists or engineers looking for ways to help students learn about and appreciate nature.

Teachers: Here's where we need your help. While we have a sense of your needs from our planning discussions with you, what else do you want us to know about the challenges you face in making your LREC experiences meaningful? What are the best things happening, or what can we be doing better? The feedback you provided to our evaluators in the surveys and interviews last spring suggest that you're generally quite positive about your students' experiences on site, but we know we can always do more.

Related to this, please let us know how we can support your professional growth, either through short, targeted workshops or summer institutes. Volunteer enrichment and teacher professional development can complement each other to make our field lab program even stronger. Please take a minute to drop me a note at [bob.coulter@mobot.org](mailto:bob.coulter@mobot.org) or give me a call at (314)442-6737 to let me know what your needs and interests are. Thanks. ☺

#### **Volunteer Enrichment: Inquiry at School and in the Field**

*Friday, November 9 from 1–3 pm in the barn; RSVP to Martha at (314)442-6717*

We promote inquiry-based learning at LREC. What does that really mean, and how does it align with how schools promote inquiry in their science curriculum? Bob Coulter will bring his multiple personalities to work that day, including the one that was an elementary school teacher for 12 years, to lead hands-on activities and discussion.

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#### **Upcoming LREC Events:**

##### **LREC Stream Team**

November 1, 9–11am. Monitor water chemistry. Call Jennifer at (314)961-4410 if you plan to attend.

##### **New Education Volunteer Training**

Continues Mondays through November 12, 9am–3pm. Meet at the barn. Veteran volunteers welcome—RSVP to Martha at (314) 442-6717.

##### **Volunteer Enrichment: Walkabout**

November 8, 2:30–4pm. Meet at the cabin after afternoon school group.

##### **Volunteer Enrichment: Inquiry at School and in the Field**

November 9, 1–3pm in the barn. RSVP to Martha at (314)442-6717. See box at left for more details.

##### **Slide Presentation:**

##### **How Leaves Change Color**

November 14, 2:45–3:30pm in the barn. Presented by Chuck Yates.

#### **Upcoming Opportunities:**

##### **Wild Ones Native Plant Organization Seed Exchange & Pot Luck**

November 7, 6pm. At new carriage house at Shaw Nature Reserve. Bring seeds or plants to swap. For more information call (636)451-3512 ext. 6078.

##### **Missouri Ozark Forest Ecosystem Project (MOFEP): Forests Forever?**

November 8, 5:30–9pm. Forum held at the Living World, Saint Louis Zoo. Admission free but please register: <http://icte.umsl.edu/events.html>.

# Place-based Education in Action: Spoede Students and Community Members Take to the School Grounds

By Heather Wells-Sweeney

On a given day at Spoede Elementary School you'll probably hear sounds of joyful delight coming from the schoolyard. If you look to the playground, you may not notice any kids there. In searching to find the students using the grounds on this day, you'll have to visit several other areas on the grounds.

In the vegetable garden you'll find second graders harvesting okra, peas, pear tomatoes, and lettuce for the salad bar.

In the beds in the front of the school you'll find third graders planting tulips for their Journey North investigations ([www.learner.org/jnorth/](http://www.learner.org/jnorth/)).

If you keep looking you'll find the other grades, like the kindergarteners in the bird garden measuring different varieties of sunflowers.

If you follow the kids back to their classrooms, you'll see that what they do in the schoolyard really is part of school. For example, the fifth grade students are learning

about health and applying fractions as they make muffins (see page 3 for recipe) from the carrots that were harvested from the garden. The first graders are applying their garden observations as they arrange diagrams of plants in different phases of their life cycles. The work they did in the garden prepared them for their first of three visits to LREC for our *Prairie Seeds and Woodland Wonders* Field Lab. (The volunteers raved about how well prepared the students were.)

See **Spoede**, page 3



## School Facts:

Location: 425 North Spoede, Saint Louis, Missouri

Grade Levels: K-5

Participating Classrooms: 100%

Web: [www.ladue.k12.mo.us/spoede/](http://www.ladue.k12.mo.us/spoede/)

Second graders using the vegetable garden at Spoede.  
Photos by Ms. Cadieux.



Girl Scouts from Troop 1450 planting in the Spoeede Outdoor Classroom to earn their Bronze Award. Photo by Heather Wells-Sweeney.

If you come back to the Spoeede schoolyard on a Saturday, you'll find some different groups of kids, including the the adult variety, too. Last Saturday the woods were buzzing with Girl Scouts working on their Bronze Award. On October 28 and November 3, folks from the community will join Spoeede parent and LREC volunteer Sharon Buchanan to plant 400 plants donated by LREC.

The people—the kids and the community members—who come to the Spoeede schoolyard are strengthening their ties to their local place. The students are learning about our local flora and fauna by engaging with what's right outside the classroom windows. What's happening at Spoeede is a model of place-based education. LREC is committed to place-based education as we work with schools to strengthen ties to the local communities. 🐾

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***Help plant LREC plants at Spoeede!***

*Join us for Spoeede Community Day at Spoeede Elementary School, 425 North Spoeede Road, on Saturday, November 3, from 9 am to 2 pm.*

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### Carrot 'N' Spice Bran Muffins

Prep: 15 minutes/Bake: 15 minutes

#### Ingredients:

- 2 cups whole bran
- 1 ¼ cups milk
- ⅓ cup cooking oil
- 2 beaten eggs
- 1 ½ cups finely shredded carrot
- ½ cup coconut
- ½ cup raisins
- 1 ¼ cup all-purpose flour
- ½ cup packed brown sugar
- ¼ cup granulated sugar
- 2 teaspoons baking powder
- 1 teaspoon baking soda
- 1 ½ teaspoons ground cinnamon
- ½ teaspoon salt

#### Directions:

In a large mixing bowl, combine cereal, milk, oil, and eggs. Let stand 10 minutes. Stir in carrot, coconut, and raisins. In another bowl, combine flour, brown sugar, granulated sugar, baking powder, baking soda, cinnamon, and salt. Add cereal mixture to flour mixture. Stir just until combined. Grease muffin cups or line with paper baking cups; fill each <sup>2</sup>/<sub>3</sub> full. Bake in a 375° F oven for 15–20 minutes or until toothpick inserted near center comes out clean. Serve warm. Makes 18 muffins.

#### Make Ahead Tip:

Cool muffins completely. Wrap in foil and place in freezer plastic bag or store in airtight freezer container. Freeze up to one month. To reheat, wrap muffins in foil; bake in 300° F oven for 15 minutes or until warm.



Please note: November 5 through March 28 is the controlled burn window for LREC. Let Malinda know if you want to volunteer for the burn—(314)961-4410.



# Riparian Restoration Activities

by Jennifer Brown



▲ Before: Invasive plants bush honeysuckle and wintercreeper overgrown along streambank in north woods. (September 2004)



▲ During: Streambank in north woods cleared of bush honeysuckle and wintercreeper. Biodegradable erosion matting was installed to help secure native seed mix. Native bare root whips were later planted into the matting material. (March 2006)



▲ After: Streambank in north woods showing the successful establishment and growth of native plants. (October 2007)

Photos by Jennifer Brown

The restoration work at LREC remains ongoing in the riparian areas along Deer Creek. These areas of the property along the streambanks are the newest addition to our restoration efforts at LREC, and the restoration staff has been pleased with some of the progress made thus far.

For the past few years we have been working to remove invasive plants from along the streambanks and replacing them with suitable native plants that offer more in the way of bank stabilization and wildlife habitat. The list of invasive plants that we have to fight is long, but the two main culprits that can be detected all year-round are bush honeysuckle (*Lonicera mackii*), which occupies the mid-canopy, and wintercreeper (*Euonymus hederaceus*), which covers the ground layer of the woodland/riparian community. In addition to these persistent pests, we also battle with an annual vine, Japanese hops (*Humulus japonicus*), in the summertime.

All of these invasive plants have shallow root systems that do little to stabilize the banks or allow water to soak into the ground to recharge the stream. Also, they dramatically decrease the biodiversity of our riparian and woodland communities by out competing native plants, preventing them from establishing and growing.

As one of our goals at LREC is to increase the biodiversity of the existing natural areas onsite, we have been working fiercely with the help of seasonal interns, volunteers, and students to curb these invasive plant populations. In many cases, our efforts have been dramatic. We recognize that it is a continuous battle against degraded hydrologic forces and weed seed sources from upstream of LREC. Despite this we have had many successes getting various herbaceous and woody native plants established along targeted reaches of Deer Creek (See comparison photos at left).

See **Riparian Restoration**, page 5



Volunteer Educator Trainees helped plant over 160 native plants along a section of streambank formerly overgrown with Japanese hops. Photo by Heater Wells-Sweeney.

The majority of the riparian restoration activities have taken place along the most upstream locations of the property. Early this spring horticulture volunteers helped us to plant over 300 bare root woody shrubs and trees. Once the weather turns cool enough for these plants to go dormant this fall, we plan to plant an additional seventy woody plants which have spent the summer in our nursery.

Some of the woody native plants that we have had the greatest success with include: ninebark (*Physocarpus opulifolius*), witch hazel (*Hamamelis vernalis*), indigo bush (*Amorpha fruticosa*), dogwoods (*Cornus* sp.), and spicebush (*Lindera benzoin*). The survival rates for other woody species such as willows (*Salix* sp.), persimmon (*Diospyros virginiana*), and buttonbush

(*Cephalanthus occidentalis*) have not been as high.

In addition to planting woody plants in place of bush honeysuckle, we have also been sowing seed and relying heavily on students and volunteers to help us plant

hundreds of herbaceous plants in place of the wintercreeper.

One plant we are particularly impressed with is the giant native cane (*Arundinaria gigantea*) that we dug and transplanted from the Shaw Nature Reserve's nursery this spring (see photo at right). The excitement of watching these areas grow has been enhanced as we start to witness some of the other forms of life utilizing these areas as habitat (see photo at right).

We enjoy celebrating these small restoration successes as they occur over time and we will continue to look forward to watching these areas transform with your helping hands! 🐌

### New Intern!

Donna Beezley started with us on October 22 as the invasive species intern. She will be primarily working on mapping, monitoring, and controlling invasive plant species on site, but will also help with seed collecting and cleaning, burn preparation, planting, stream monitoring, and whatever else we think up for her to do! Y'all probably already know Donna as a Friday horticulture volunteer. She decided that she wanted to work with us more often to see if this is something she might like as a career. We are excited to have her on staff until early January.



▲ Giant native cane dug from Shaw Nature Reserve's nursery and transplanted along Deer Creek in the spring of 2007. Photo by Jennifer Brown, Oct. 2007.



▲ Missouri woodland swallowtail caterpillar feeding on its host plant, hornwort, which was planted by students as part of our riparian restoration efforts. Photo by Sean Fears, Aug. 2007.

## Prairie Invertebrates

by Malinda Slagle

James Trager from the Shaw Nature Reserve and I attended the Prairie Invertebrate Conference in Decorah, Iowa on October 20. After a long drive, we made it to an area of Iowa that looks like the Ozarks. Decorah is in north-eastern Iowa and is in the Driftless area of Iowa, which was not covered by the most recent glaciers and is dominated by karst topography. Karst topography is characterized by caves, disappearing streams, sinkholes, springs, and blind valleys, and is commonly associated with limestone and dolomite bedrock. Since the Ozarks also weren't glaciated and have karst topography, northeastern Iowa looks almost just like home.

Most speakers at the conference had a deep interest in using insect communities to indicate habitat quality or restoration progress. I listened with great interest because this is one of the main reasons I monitor pollinator populations at LREC. People were studying beetles, moths, leafhoppers, bees, and butterflies. Some interesting characteristics they were looking for to assess quality or conservation value of these insects included: voltinism (number of times a species lays a clutch of eggs in a year), origin (native or non-native), overwintering habitat (migrating or staying in the prairie, woods, etc.), wing length (to show how

mobile it was), habitat fidelity (do you always find it in prairie, woodland, stream, etc and nowhere else), and host plant affinity (does it only eat a small number of different plant species). For instance, a conservative insect might lay one clutch of eggs a year (univoltine), be native, overwinter in prairie grass, have short wings, only live in the prairie, and only eat prairie dropseed. A very common insect would lay multiple clutches of eggs a year (multi-voltine), be non-native, migrate south or to a different habitat, have big wings, live in multiple habitats, and eat a wide variety of plants.

I also was presenting results at the conference. I spoke about the pollinator populations that I have been monitoring here at LREC. I was also able to include Rick Clinebell's research in my talk because Beth Newton from Fontbonne University recently compiled his data from LREC into a spreadsheet. Rick and I found 101 species of bees and 26 species of butterflies at LREC, including many species that are habitat specialists or plant specialists.

One of the bees, *Andrena polemonii*, a native woodland dweller and Jacob's ladder specialist, is a state record. No one has recorded this species in Missouri before. It's pretty exciting that I found it here!



*Andrena polemonii*  
Photo by Malinda Slagle.

The number of bees found here is similar to large preserves such as the Tyson Research Center and Englemann Woods. The number of butterflies is low in comparison to the Tyson Research Center or Shaw Nature Reserve or even North American Butterfly Association member Kraig Paradise's backyard count. More monitoring is necessary to determine if our numbers of species of butterflies are actually low or if I just have been missing some of the species.

If you are interested in helping with butterfly and bee monitoring projects, including insect collection, pinning and spreading, labeling, data entry, and/or identification, please let me know. I have been lucky to receive help from a Ladue Middle School class over the summer and from a volunteer, former ERC participant Allison James, this fall. Working with insects is fun and interesting, and I am willing to teach anybody who would like to learn. To find out how you can help, contact me at (314)961-4410 or [malinda.slagle@mobot.org](mailto:malinda.slagle@mobot.org). ☞