



Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

September 2014

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Students from Southview School crossing the prairie. Learn about a special project Southview students have undertaken on page 2. Photo by Eddie Jones.

Guiding Thoughts for the New Year

by Bob Coulter

I confess...I'm a skeptic about the value of specific, measurable goals, especially in work like ours that is filled with uncertainty and punctuated by kids' lurches forward sprinkled among relatively quiet periods. Still, I like a few well-framed guidelines to provide focus and direction. To that end, I came across a short book called *Treading Softly: Paths to an Ecological Order* while I was at a workshop at MIT this summer. In it, author Thomas Princen argues that humans are at their best when:

1. They are faced with a genuine challenge
2. They are creative and productive
3. They find meaning in their own problem solving and in acts larger than themselves
4. They help themselves and help others
5. They self-organize and self-govern
6. They feel that they are getting a fair shot at the benefits of their work

Our primary role is to help you build values like these into your professional practice. While our shared work has an ecological focus, these principles transcend that boundary. We hope you find ways to make them come alive throughout your kids' experiences—and your own—this year. As always, let us know what we can do to help. 🌿





Student Project Highlights: Southview School

by Deanna English

We are always looking for ways to engage students in the restoration and care of the Litzsinger Road Ecology Center site. These opportunities not only improve LREC but also allow us to demonstrate the satisfaction that comes from restoring or caring for a natural space. I'd like to take some time each month to introduce you to some of the great student supported projects that are happening here at LREC. This month the focus is on our partnership with **Southview School**.

For the last few years, students from Southview have planted and managed our demonstration raised bed between the barn and cabin.

This raised bed was the result of a 2011 summer intern project by Rachel Fox.

Rachel worked on the problem that many schools face: not having a green space in which to plant, and therefore needing to plant in containers. Since native plants have deep root systems, Rachel researched and designed the deep planter we have here.

Southview students have since been the primary group that have planted and managed the planter each year. Make sure to check out their great work next time you visit. We have all enjoyed watching the plants grow and bloom each season. 🌱



VOLUNTEER EDUCATOR TRAINING STARTS SOON!

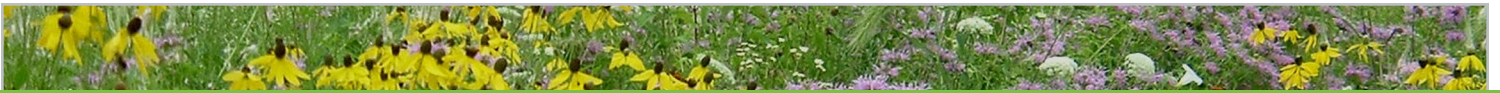
Do you know someone who would make a good Volunteer Educator? Let them know about us!

Volunteer Educator training for new recruits begins on Monday, September 8, 2014 from 9 a.m. to 3 p.m. Monday training sessions continue for eight consecutive weeks. During training, volunteers will become familiar with the site, learn inquiry-based, outdoor teaching strategies, and gain an understanding of basic ecology. Trainees will also have many opportunities to observe school groups and practice teaching.

Those interested in becoming Volunteer Educators and attending the training should contact Eddie Jones at 314-409-4947 or email eddie@lrec.net. 🌱



Demonstration raised bed. Photo by Eddie Jones.



Glass House Quiz: All Things Yellow

by Deanna English and Danelle Haake

During the late summer and early fall, you can't help but notice the bounty of yellow flowers in the prairies. Even those with some experience identifying plants often resort to noting the species as NYC (Darned Yellow Composites). With this in mind, we thought it might be nice to see how well you know the NYCs here. And just for fun, we threw in a few other yellow questions, too.

1. Our prairie and edge habitats are dominated by NYC blooms. Match the picture and description with the name of each plant of some of the most common yellow displays at LREC.

- Sweet coneflower (*Rudbeckia subtomentosa*)
- Sneezeweed (*Helenium autumnale*)
- Brown-eyed Susan (*Rudbeckia triloba*)
- Flat top goldenrod (*Euthamia graminifolia*)
- Cup plant (*Silphium perfoliatum*)
- Goldenglow (*Rudbeckia laciniata*)
- Tall goldenrod (*Solidago altissima*)
- Wingstem (*Verbesina alternifolia*)



e) I grow up to 8 feet tall and have a square stem.



f) I have long, narrow, grass-like leaves.



g) I have candy cane striped stems.



a) Like my name says, I can be tall (up to 7 feet).



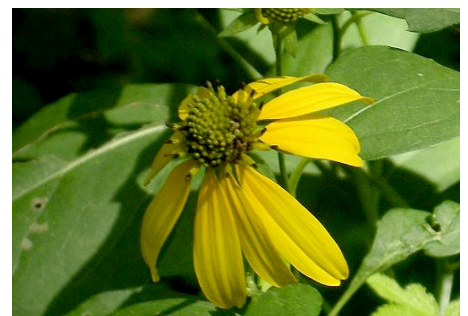
c) I hang out along woodland edges and have a lovely winged stem.



b) I am very leafy with narrow wings of leafy tissue along my stem.



d) My stem is many-branched to hold my multiple small flowers.



h) I'm quite a cut-up; well, at least my leaves are...

See **Quiz**, page 4



From **Quiz**, page 3

Not only are there blooms, but there are other yellow things around too. Here's a variety of other noticeable yellows around LREC now.

2. We are always looking for this caterpillar on our milkweeds. Which is it?

- a) yellow swallowtail larva
- b) monarch larva
- c) yellow skipper larva
- d) luna moth larva



3. We see a lot of this bird around the prairie. Which is it?

- a) yellow grosbeak
- b) common yellowthroat
- c) goldfinch
- d) crazy escaped canary from a neighbor's house



4. This prairie grass with yellow pollen is one of the species for which the 'tallgrass prairie' is termed. Which is it?

- a) big bluestem
- b) indiagrass
- c) switchgrass
- d) yellow grass



5. We find a lot of these yellow things on the milkweed. What are they?

- a) aphids
- b) fungi
- c) lady bug larva
- d) caterpillar poop



See **Quiz**, page 5



Welcome, Phoebe!

In May, LREC School Partnership Coordinator Leslie Memula and husband Raj traveled to China to meet their new daughter Phoebe Ruo Yu Memula. Phoebe (almost five) joins big brother Nemero (almost six). 🌱

SEPTEMBER

by Martha M. Schermann

Summer's
Expectations
Provoke
Thoughts
Evoke
Memories
Beyond
Effortless
Recollections





From **Quiz**, page 4

Answers:

1. a) Tall goldenrod
b) Sneezeweed
c) Wingstem
d) Brown-eyed Susan
e) Cup plant
f) Flat top goldenrod
g) Sweet coneflower
h) Goldenglow
2. b) Monarch larva. Look for me on the milkweed plants in the prairies!
3. c) Goldfinch. You can find goldfinch in flocks in the prairies feasting on all the seeds. Listen for their distinct call and bouncy flight: http://www.allaboutbirds.org/guide/american_goldfinch/sounds.
4. b) Indiangrass. Indiangrass and other tallgrass prairie grasses are called ‘warm season’ grasses because they don’t get growing until the summer.
5. a) Aphids. Okay, they are not exactly yellow, but close. This is the orange milkweed aphid which really likes our swamp milkweed. (Photo: Kansas Department of Agriculture Archive, Bugwood.org)

All photos by Danelle Haake unless otherwise noted. 🌿

Horticulture & Restoration Offerings for School Groups

by Deanna English

This year we are attempting to be more deliberate about specific school group opportunities at LREC. We have had the restoration offerings calendar for several years with seasonal activities available. You can see the September opportunities listed below. **In addition** to these, we would like to offer some opportunities specific to this year. We hope that you will take advantage of any of these during your visits.

2014–2015 SCHOOL SPECIFIC RESTORATION PROJECTS

Cabin Restoration Project—We will be working with school groups to restore the area around the cabin by removing invasive plant species and replanting and seeding with native species. Please think about spending part of your visit doing one of the following activities.

- Remove invasive species such as winter creeper (*Euonymus fortunei*) and bush honeysuckle (*Lonicera maackii*)
- Plant native plant species
- Identify and flag existing native plant species
- Remove select aggressive and/or undesirable native species

Demonstration Garden—This will be the start of planting in our third year demonstration garden area. This project has been completely managed by school groups to simulate what may happen as you start and manage a garden at your school. We need groups to do one or more of the following.

- Weed existing beds
- Plant fall plants in year two and year three beds

ONGOING SEPTEMBER 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.

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.

Tree monitoring (HS/MS)—High school and middle school students develop tree identification skills and learn techniques used to inventory a large area of trees.

Plant monitoring—Students learn how the plant monitoring grid is set up and practice their own monitoring skills.

Collect seed—Learn to identify one or two plants and go out and help us collect some seed.

Clean seed—Learn about different seed sizes and dispersement strategies. Clean and prepare for planting in the greenhouse or for sowing outside. 🌿

LREC Research: Chelsea Pretz

by Danelle Haake

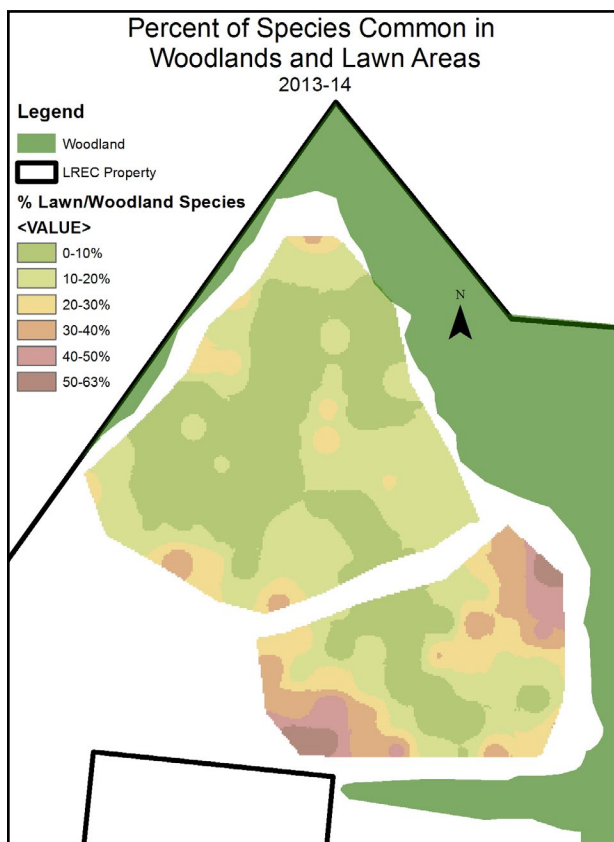
This summer, Litzsinger Road Ecology Center hosted two summer interns and a garden research intern. Chelsea Pretz, Sarah Black, and Brittany Bratt spent their summer here learning to identify native plants, transplanting seedlings that will eventually be planted in area schoolyards, and conducting independent research. All three of them did excellent work and, over the next few months, I would like to share a bit with you about their efforts.

Chelsea Pretz is a student at Harris-Stowe State University. She joined us at Litzsinger Road Ecology Center via the Research Experiences for Undergraduates (REU) program through the Missouri Botanical Garden. The REU program is a longstanding program funded by the National

Science Foundation which pairs students with mentors to introduce them to real-world scientific research. I've been proud to serve as a mentor for the past two years, being a 'graduate' of the program myself.

Habitat edges have been studied for many years, but most often

in the context of their effects on predator/prey interactions or habitat availability/desirability. Chelsea's project, entitled "Preliminary Investigation of Edge Effects on Prairie Plant Species," looked at how differences in microclimate along prairie edges might influence the types of plants found in these edges. She used data-logging thermal sensors and hand-held equipment to try to identify areas in the North Prairie and South Prairie



Chelsea Pretz holding a home-made mounting device for temperature sensors. Photo by Danelle Haake.

with different microclimates, for example different temperatures or humidity levels.

She helped collect plant density data in the South Prairie and used the data collected last year from the North Prairie in order to look for relationships between individual plant species and their location within the prairies. She also looked at groups of species (woody plants, mints, etc.) for relationships to the edges (see GIS map at left).

Chelsea learned many things this summer. She did an excellent job of taking a general research idea and running with it. Her project changed direction a couple of times to account for unexpected challenges, but she always worked hard with a great attitude. She

See **Chelsea**, page 7

Litzsinger Road Ecology Center

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Meet Amanda Topping

by Mary Voges



Please welcome our new part-time Restoration Ecology Coordinator, Amanda Topping.

Amanda (Mandy) is a native of St. Louis: she grew up in South County and attended Lindbergh High School.

She continued on to Hendrix College in Conway, Arkansas where she received a bachelor's degree in biology, then attended the University of Georgia in Athens, Georgia, obtaining her graduate certificate in conservation ecology/sustainable development and her master's degree in landscape architecture.

Amanda has worked at the St. Louis Science Center off and on for eight years and has accumulated many titles, from Modern Life Science Project Coordinator and Gallery Leader, to Educator in Life Sciences and Researcher. She continues to work at SLSC, providing exhibit interpretation and coordinating and supporting the volunteer teams.

Among many other experiences, Amanda comes to us with a background in native plant communities and landscaping, sustainable development, green roofs and rehabilitation of native regions.

Amanda says this job is a part-time version of her dream job, restoration being an important part of her life. All of us welcome Amanda to our staff and hope she finds her dream job here at LREC! 🌿

From **Chelsea**, page 6

developed an appreciation for the importance of understanding statistics and she completed the project in the short 8 weeks available to her. Congratulations, Chelsea, on completing this project and we look forward to hearing about your future accomplishments!

Note: You can find a copy of Chelsea's presentation on our website at <http://www.litzsinger.org/research/pretz.pdf>. 🌿

LREC Announcements

September 19

Water Quality Monitoring

9am to noon, meet at the Glass House. Questions? Contact Danelle Haake at danelle@litzsinger.org or 314-961-4410.

September 29 or October 6

Volunteer Enrichment: School Programs Update & Sample Lesson

Meet in the barn. Session offered two times (9:30–11:30am or 12:30–2:30pm) on each date. Sign up for one session. Learn updated info on our school programs and sample a lesson. RSVP to Martha at 314-540-4068 or martha@lrec.net.

Local Events

September 16

Watersh(E)dification: Making the Invisible Visible

9am to noon at MO History Museum. Visit the Watershed Cairns exhibit with co-creator, Libby Reuter. \$14. Register: http://academyofsciencestl.org/events/on_science.php.

September 20

Prairie Day

10am to 4pm at Shaw Nature Reserve. Discover prairie heritage through activities, demos, exhibits, and guided hikes. Admission is \$6 (\$3/members, \$2/children). More at <http://www.shawnature.org/>.

Various Dates

St. Louis Community College Continuing Education

One-session classes; locations/fees vary. Upcoming: *Intro to Ecosystems of the World* (9/18), *Owls of Missouri* (9/23), *Forest Ecology of Missouri* (9/25), and *Nature and Young Children* (10/4). See <http://www.stlcc.edu/Continuing-Education/classes/>.