

Litzsinger Road Ecology Center

Community Newsletter

9711 Litzsinger Road • Ladue, MO 63124 • Phone (314)442-6717 • www.litzsinger.org

Don't Spill That Paint!

By Bob Coulter

While volunteering for Habitat for Humanity last weekend, a couple of fellow volunteers reinforced for me the importance of our work promoting environmental awareness. The house we were working on had a hose to the street available but otherwise no completed plumbing. As we were finishing up the day's tasks and beginning cleanup, a well-meaning individual said she would just rinse out her paint tray and brushes at the curb. Seeing my recoil, she paused long enough for me to explain how the paint would quickly wash to a storm sewer and into the nearest stream. Plan B was to wash it into the still unfinished front yard. Enviro-lesson part II covered groundwater contamination. Fortunately, as chair of my church's Green Sanctuary committee, I get to play the part of the environmental guidance counselor occasionally.

Considered in a larger context, these exchanges are an all-to-common event. As you all know, we don't live apart from nature, but even well-meaning people sometimes need help in making environmentally sound decisions. Our day-to-day work helping students tune in to their place in nature will—we hope—have an impact on their future decision making. Specifically relating to protecting water quality, we are pleased to host a new teacher workshop June 14 that will help students be more aware of their place in their watershed. They will be more careful with their paint brushes! Kudos to Jennifer Brown for her efforts in developing this exciting curriculum.

In a larger scale, getting kids out of the classroom, taking action to improve their community, and leaving the world a bit better off are all important goals we share with you. As you pursue new learning opportunities this summer or take a well-deserved rest, please know that you have our appreciation and admiration for a job well done this year. We'll see you in the fall, if not before.

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Upcoming LREC Events:

LREC Ecology School Field Trip
June 8, 8am–3pm. Visit Shaw Nature Reserve. See page 2.
Clean Water Education Teacher Workshop
June 14, 9am–4:30pm. At LREC. See page 2.

Upcoming Opportunities:

Plastic Pot Recycling
Drop off clean plastic garden pots and trays weekends through June 24. For times and locations call (314) 577-9440 or go to www.mobot.org.
Native Plant School
June 14, 1–4pm: Rain Gardening and Storm Water Runoff. Whitmire Wildflower Garden at Shaw Nature Reserve. Sessions includes hands-on tours and demonstrations. Reserve your place by calling (636)451-3512.
Classes at SNR
June 15, 8:30–11pm: Nighttime Insects. June 16, 9am–12 pm: Wildflowers. Call (636)451-3512.
Grow Wild Garden Tour
June 24, 9am–3pm. Visit a series of homes with native plant gardens in the St. Louis area. Sponsored by Wild Ones, The Green Center, and Shaw Nature Reserve. More info at www.shawnature.org/events/GrowWild.aspx or call (314)725-8314.

Upcoming Watershed Education Workshop for Teachers

By Jennifer Brown

In your teaching, do you ever cover any topics relating to water? Would you like to include more hands-on and place-based lessons that relate everyday human activities to water resources? Well, the Litzsinger Road Ecology Center, in partnership with the Metropolitan Sewer District, is hosting several Clean Water Education workshops for teachers focused around watershed and stormwater issues.

Come learn how the EnviroScape® model can be utilized as an effective tool to teach about complex problems and simple solutions concerning the quality of water in our region and downstream! The EnviroScape® is a three-dimensional model of a watershed that demonstrates how things we do on the land can affect the health of our waterways. In addition to providing teachers with training and education materials, EnviroScape® models will also be made available for teachers to use both during and after the length of the project period.

Partial funding for these workshops is being provided by an EPA 319 grant administered by the Missouri Department of Natural Resources. See details about the first workshop listed below.

Clean Water Education Workshop for Teachers Grades 4-8

Date: Thursday, June 14, 2007

Time: 9:00am – 4:30pm

Location: Litzsinger Road Ecology Center

Cost: Free, lunch provided

To register, please send name, address, phone number, e-mail, school name, and school district to:

Dona Anderson
Division of Environmental Compliance, MSD
10 East Grand
St. Louis, MO 63147
(314)436-8708
danders@stlmsd.com

Seating is limited—registration closes June 8.

Ecology School Field Trip!

By Malinda Slagle

Join us on an Ecology School Field Trip to Shaw Nature Reserve (SNR) on Friday, June 8. All are invited, even if you didn't attend Ecology School!

Meet at the Glass House at 8am to car pool out to Gray Summit or meet at SNR in the visitor's parking lot at 8:45am if you live closer to there. We plan to be back at LREC by 3pm.

We will provide lunch. Bring water and a sun hat. Wear sturdy shoes and long pants. RSVP to Malinda by calling (314)961-4410 or emailing malinda.slagle@mobot.org.



Ohio Spiderwort (*Tradescantia ohioensis*)
Photo by Sean Fears

Field Research Programs at LREC

By Malinda Slagle

One of the focuses of the Litzsinger Road Ecology Center is providing field research experiences for students of all ages. Field research is important for many reasons for both students and the site. For the site, field research is beneficial because the staff learns more about organisms on site. This knowledge helps us to better manage the organisms living here to increase their health and diversity. For instance, the research on the prairie plant community at LREC (monitored at the large metal rebar poles in the prairie and woodland) has taught us that while the prairie has many species of plants, comparable to a prairie remnant, their distribution is not even. So we are trying to distribute certain plant species by collecting their seed and spreading it in new areas.

For students, field research provides more in-depth knowledge of a particular organism, community, or ecosystem and enhances scientific inquiry skills necessary for the research. For instance, high school students in the MO-STEP program last summer were wondering what was unique about the St. Louis

area that has sustained Eurasian Tree Sparrows (or ETSES). These ETSES are non-native birds that only live in the St. Louis area and haven't invaded surrounding areas. This question led to monitoring the nest boxes used by the ETSES at LREC and mistnetting for them. Students learned in great depth about invasive species, why they are invasive, and what conditions might be controlling the invasion of a particular species. Students learned the techniques needed to closely study these birds, specifically how to study nests in boxes and how to remove the delicate limbs of a bird from a mistnet (a light weight see-through net set up across flyways to entangle birds in flight). This study is an ongoing project with the MO-STEP program. Colleen Crank is an LREC volunteer that has been assisting with this project and also monitors the nestboxes at LREC regularly for other birds.

Most of our long-term researchers at LREC are graduate students. Beto Dutra, a graduate student at UMSL, is studying the pollination and fruit dispersal of bush honeysuckle, an invasive plant species. In 2006 he studied the insects that pollinated bush



Eurasian Tree Sparrows
Photo by Sean Fears

honeysuckle and whether a bush honeysuckle flower could self-pollinate. In 2007 he is studying whether bush honeysuckle's presence negatively affects the pollination of Virginia waterleaf, a native plant that flowers at the same time as bush honeysuckle. He put netting over flagged flowers of the Virginia waterleaf in the woodland to keep out pollinators and is hand-pollinating the plants with pollen from other Virginia waterleaf plants and pollen from bush honeysuckle. He is looking at the number of seeds set by the plants to understand whether bush honeysuckle pollen is having a negative effect on this plant's pollination.

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Keefe Reuther, a graduate student at SLU, is studying the population dynamics of Japanese pavement ants. This invasive ant species is living in the parking lot at the Glass House and currently has not invaded other areas on site. He is interested in their aggression patterns, how they interact with other ant species, how other ant species act when this species isn't present, and how things change when these native ants come in contact with Japanese pavement ants. He studies this by using pecan Sandies® (cookies) as bait for the ants to fight over and pitfall traps (tubes in the ground marked by flags) to collect ants to understand their diversity.

John Flunker, a graduate student at UMSL, is studying the relationship between ants and wild senna at LREC. He is looking at the chemical composition of the leaves, the nectar that comes from the extrafloral nectaries located at the stem and leaf intersections, and is looking for insects that eat senna and how they interact with the ants. He studied this in 2006 by excluding ants from certain plants, studying their activity and that of herbivores on other plants, and taking samples of the nectar and leaves back to the lab for analysis.

Jeff Norris, a graduate student at UMSL, has a butterfly garden at LREC in the tree nursery area that he has duplicated at many other sites throughout the area. He will compare the butterflies in these gardens to see how they differ based on the surrounding plant communities. For instance, some of his gardens are in urban schoolyards and are surrounded by lawn grass and asphalt. Here at LREC, the garden is near woodland and prairie where he might expect to see more species of butterflies than in the schoolyards.

Valerie Newton, a former assistant of Rick Clinebell's, a long-time researcher at LREC, is planning to study the movement of bees at LREC this summer between patches of rattlesnake master in the prairie using fluorescent marking powder. She hopes to gain the necessary experience doing research so she can attend graduate school in environmental studies.

Our internship program has also been a training ground for new researchers. Our current interns, Sarah van Middlesworth and Lane Richter, are conducting on-site research projects. Sarah's project will be mapping and monitoring populations of our five most invasive plant

species at LREC. Lane is still deciding what he will study.

Staff also conduct research projects to contribute to our understanding of the site. Jennifer Brown monitors Deer Creek monthly for chemical properties and twice a year for benthic macroinvertebrates (insects and other small critters that live underwater). She also is monitoring the structure of the stream channel by mapping and photographing the creek. She often has interns, students, and volunteers who help her with stream research. In addition to the plant survey, I am conducting a pollinator survey of the site. Since 2004, I have been taking monthly samples of bees and butterflies by netting insects from flowers in the prairie and woodland to better understand our pollinator community.

Our research program is valuable for educating staff, volunteers, and students about field investigations. If you see someone netting insects or flagging plants, don't hesitate to stop him or her and inquire what they're studying. Unless their investigation is time-sensitive, researchers will be glad to talk to you. You'll open a whole new avenue of learning for yourself or the group of students you're with!