

# Litzsinger Road Ecology Center

## Community Newsletter

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

### Hedgehogs at Litzsinger?

By Bob Coulter

One of the more interesting books I read this summer was Jim Collins' *Good to Great*, a study of how good companies made the organizational transitions that enabled them to move from being merely good to being great. (Even better, he had the wisdom to write a supplement applying the concepts to non-profit organizations, instead of assuming we should operate like a business.) One of the key concepts in the book was that successful organizations had a hedgehog-like sense of how to stay focused on the immediate surroundings: the areas in which the hedgehog can control and prosper in. The contrast Collins was drawing was with the browsing habits of a fox, meandering widely in search of opportunities.

This led me to think about how we—whether we be teachers, volunteers, or Center staff—can be good hedgehogs, focusing our efforts on where we can have the greatest impact. To start that as a community discussion, I'll propose that there are at least four areas in which LREC has very strong capacities now, along with room to grow in the future. Together, these can be the means by which we can continue to grow in our ability to learn from each other and support students, whether they be pre-schoolers or graduate students.

*Place-based education* provides an overarching focus, as our programs all emphasize a sense of place, whether it is helping young students to feel comfortable and curious when they are outdoors, or helping older students pursue in-depth investigations. Increasingly, we are supporting projects that involve people applying what they learn at LREC to make a difference in their local communities.

*Work grounded in authentic field experience* provides direct support for our place-based efforts. Students don't just collect seeds here—they are participating in real restoration projects. Watershed projects contribute to the real work being done by local watershed groups. These provide a basis in reality that counters the all too artificial premise of the pre-packaged curricula found in many schools.

*School partnerships* enable teachers and students to develop and

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#### Upcoming LREC Events:

##### Volunteer Lunch and Walk

September 5, pizza at noon; walk at 12:30 pm. At Glass House. For more information or to RSVP call Martha at (314) 442-6717.

##### New Education Volunteer Training

Begins September 11, 9am–3pm. Meet at the barn. Veteran volunteers welcome.

#### Upcoming Opportunities:

##### Prairie Day at Shaw Nature Reserve

September 9, 10am–4pm. A fun family event that portrays prairie heritage through activities and demonstrations, guided hikes, and pioneer games on the 250-acre tallgrass prairie. (636) 451-3512; [www.shawnature.org](http://www.shawnature.org).

##### Earthways Energy and Recycling Festival

September 16 and 17, 10am–4pm. EarthWays Home and grounds are filled with demonstrations, exhibits, information, activities, presentations, and displays to help all ages learn to reduce waste, save money and live more sustainably at home. 3617 Grandel Square. Call (314) 577-0220.

## Diminutive Data Detectives Make Down to Earth Discoveries

By Eddie Jones

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### Question:

When it comes to field investigation, what advantage do first graders have over LREC volunteers and staff?

### Answer:

Theirs eyes, ears, noses, and hands are closer to the ground.

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This has been a delightful observation as we have had the privilege of working with the Kindergartners and first graders of the Maplewood-Richmond Heights Early Childhood Center (ECC). There is nary a bug, bite-mark, or scat that escapes their notice. A half-hour of exploration with these highly observant students may move you a whole 20 feet along a woodland or prairie trail! Give them a hand lens and they really slow down!

The ECC has been a significant part of the school programs at Litzsinger Road Ecology Center since the fall of 2004. Each of the last two school years, 10 classes from the ECC, comprising all of the K-1 students in the school district, have participated in seasonal explorations of the LREC natural areas. Coordinated by Julie Dennison, the student inquiry teacher, ECC students have explored LREC as much as six times in a two-year period. While all of the K-1 students visited during the school year,

### School Facts:

Location: 2801 Oakland Avenue, Maplewood, MO

Grade Levels: Pre-K, K, 1

Number of Students: 160 (down by 1/3 from 4 years ago)

Number of Classrooms: 10 (down 2 from last year)

Students Receiving Free/Reduced Lunch: 44%

about 30 were also participants in a 5-day program this summer: Early Nature Explorers. During a week in June, students investigated plants, animals, habitats, rocks, and plant-animal "connections." As a result of these long-term relationships, students have developed a comfortable familiarity with the LREC natural areas (and its orange-attired humans), resulting in more focused observations during their field explorations along with a healthy respect for the local environment and its inhabitants.

Another ECC teacher, Cindy Boutté, spent 5 days this summer at LREC with four other teachers writing a field study plan that she will implement with her students during the coming school year. In addition, Cindy has made arrangement with the ECC pre-K teachers to get those younger students to LREC this year. Along with the K-1 classes, they are already on the 2006-07 program calendar.

Our work with the ECC teachers and their students has helped us to strengthen and validate the

Center's commitment to partnering with area schools. All of us at LREC are hoping to continue our relationship with this wonderful community-oriented school despite a district-wide declining enrollment. As the ECC students develop a greater awareness of their sense of place in the natural world, especially their immediate surroundings, they are on their way to becoming informed and effective learners and citizens in their present and future communities.



## Prairie CPR

By Heather Wells-Sweeney

High school students from throughout the metro area convened at LREC this summer for an intensive four-week service-learning program. With a little different twist than past years, this year's Ecological Restoration Corps (ERC) narrowed the focus to concentrate on two subject areas—watersheds and prairies (and their interconnectedness).

Two weeks into their four-week program, ERC took what they had been learning about restoration at LREC out into the environs of St. Louis. ERC traveled to Calvary Cemetery in North St. Louis to help restore St. Louis' last remaining parcel of remnant tall grass prairie.

At LREC, the ERC participants helped our prairie restoration efforts by collecting and pressing herbarium specimens, removing Japanese hops and curly dock, and collecting sedge seeds. (Some of the sedge seeds will be used at Calvary Cemetery.) The students also removed woody plants such as dewberry, grapevine, and tree saplings. These activities taught students important skills such as tool safety, plant identification, safely working in extreme heat, and teamwork.

At Calvary Cemetery, our main project was to remove trees from the prairie that have grown up in the absence of fire and to

place the cuttings into a compact burn pile. The prairie has not been burned regularly in decades, with 1997 being the most recent prescribed burn.

Hopefully, permission will be granted to burn the prairie at Calvary Cemetery in the next year. Without fire, the prairie has become quite degraded, and may disappear altogether without resuscitation. A partnership has formed recently to offer such CPR. The partnership is comprised of The Archdiocese of St. Louis, Missouri Botanical Garden, Missouri Department of Conservation, The Nature Conservancy, and The Green Center. The Nature Conservancy hopes that the restoration at Calvary Cemetery can become a national model for urban restoration projects and partnerships.

We look forward to ERC continuing work at Calvary Cemetery. The work that ERC did this summer is just the beginning of a very long-term restoration plan. The Memo of Understanding between the partners guarantees that the land has been set aside for the next 50 years (and the time may be



extended indefinitely). The Archdiocese has granted permission to restore the patches of the 5 acres of remnants, plus the larger area that these remnants are spread throughout, totaling about 20 acres. One of the restoration priorities is to remove the many trees that remain—perhaps LREC staff and volunteers can return to assist. Native plants and Seeds will be added continuously—perhaps students who complete the Prairie Seeds and Woodland Wonders Field Lab will help propagate seeds at LREC destined for Calvary Cemetery. Perhaps teachers who come to LREC will take their students to Calvary Cemetery for comparative studies or for service-learning opportunities. Stay tuned to find out how LREC continues our connections with this community-based restoration project.



# Flipping Historic Hydrology on Its Head & Back Again

By Jennifer Brown

Recently some of the LREC staff attended a Grow Native symposium entitled “Greening St. Louis: Sustainable Landscape Development.” The symposium entailed a tour of the landscaped areas at the new Alberici headquarters, now acclaimed as the “greenest building in the world,” and various presentations from professionals leading the way in the field of green conservation and sustainable design.

The thing that surprised me the most about this symposium was that I went there expecting to hear a lot about native plants, which definitely occupied a big part of the central stage, but to my delight, the central theme of the symposium was on water and its relationship with the land! In fact, the case was made that, “water is the most important element driving sustainable landscape design and ecological restoration work.” And you know what? They are right!

Water is perhaps the most misunderstood and mismanaged resource on Earth. Our culture as a whole largely treats the water that falls from the sky as a waste product that we need to get rid of. We are conditioned to conveying rain off of the land and away from our properties as quickly and efficiently as possible. This mindset however,

has resulted in turning water into a powerfully destructive force that has increased the severity of flooding and erosion and has contributed to the degradation of our nation’s land and waterways. The challenge that this symposium brought to the forefront is how to rethink the way in which we treat water, particularly storm water, so as to create a paradigm shift to honor water as the precious, life-giving resource that it is and to work to keep it on our land and properties for as long as we can!

This new way of thinking has inspired green conservation design techniques such as green roofs, rain gardens, rain barrels, native landscaping, and bio-swales that aim to slow and store rain water in ways that more closely mimic natural hydrologic conditions. The way this is done in many cases is through the utilization of deep-rooted, native plants that allow water to soak into the ground.

Instead of just running off, the water that soaks into the ground is filtered, cleansed, and stored before slowly making its way back to the earth’s surface as the groundwater recharge that supplies streams and springs with their base flows.

LREC is already doing a great deal to model these practices through the use of landscaping with native plants, the restored prairie tracts, and the newly installed rain garden, but I look forward to exploring more ways in which we can incorporate these types of practices into LREC’s restoration, education, and outreach endeavors.

The keynote speaker for the symposium, James Patchett, was particularly well spoken and inspirational to me. Patchett is the founder and president of the Conservation Design Forum, an

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For those of you who want to find out more about these green conservation design techniques, there is a fantastic homeowners handbook called “Six Simple Things You Can Do To Help Save the Mississippi River” that describes each of these techniques and is downloadable from the web at [www.riveraction.org](http://www.riveraction.org). LREC can also supply you with a copy of this handbook if you are interested.



**Hedgehogs**, from page 1

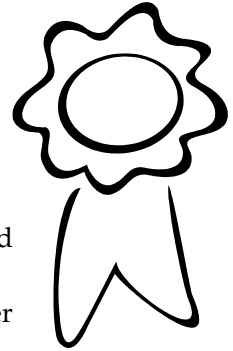
maintain long-term relationships with staff and volunteers at the Center. Over time, we try to help our teacher partners grow professionally as we learn from them, and have students' experiences build from one year to the next. One of the strongest findings from the program evaluation we are having done is that most teachers value their partnership with LREC and would like to see it expand. (Teachers, many thanks for your participation in the surveys and interviews!)

*Data tools* are used here for mapping, graphing, and communicating field research data on topics such as prairie plant biodiversity. Our work with students and teachers using these tools in certain programs has been recognized and replicated nationally, but it hasn't penetrated our field labs as much as it might. This will be an area to consider carefully in the coming year, enhancing our field investigations with better data tools where it is appropriate.

Together, these four areas give us guiding lights as we focus our efforts on the areas in which we can make the greatest contribution to building environmental stewardship in the area. Please join in this discussion as we continue to build the Center's future. Drop me a note at [bob.coulter@mobot.org](mailto:bob.coulter@mobot.org), or give me a call at (314) 442-6737 and let me know what you're thinking.

## **LREC Receives International Award**

Last month, LREC received a prestigious international award recognizing the work Bob Coulter and Jennifer Krause have done over the past few years promoting technology-enhanced environmental education. At the annual Environment Systems Research Institute conference held in San Diego, LREC was awarded a "Special Achievement in Geography" award from ESRI. We were one of 187 selected from over 3,000 nominees, and the only one working with teachers and students to be recognized.



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organization recognized as a leader in the promotion of sustainable land planning and design that operates out of the Chicago area. His central message was one that is largely emphasized in the content of our stream field lab. Patchett argues that, "the first step by which a culture can learn to live sustainably is to understand the human relationship to the interaction of water with the geology, soils, topography, flora and fauna unique to a place." It was exciting to be able to draw parallels between sustainability and the "placed-based" approach we are taking with our student programs. I find it rewarding to think that by grounding our youth in the ecology of place we are better preparing them for understanding complex ecological problems and thus, enabling them to create solutions and make better informed choices towards a sustainable future.

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of *The North American Prairie* and originator of the root studies of prairie plants leading to the diagram we have posted in the barn. The plants at Nine Mile Prairie were perhaps 2 feet tall, how surprising that their roots go 10-15 feet deep!

Mary and I had a good time at the prairie conference, learned a lot, and made some great contacts with prairie enthusiasts from all over the country.

# North American Prairie Conference

by Malinda Slagle

Mary and I recently attended the North American Prairie Conference in Kearney, Nebraska. While Kearney itself was about as exciting as it sounds, the 5 remnant prairies we visited in Nebraska and the prairie enthusiasts we met there were jewels. People came from Germany, Louisiana, Canada and points in between to share their knowledge and research on prairie restoration, education, ecology, and management. Many of the participants were professionals, but many others were landowners restoring prairie in their “back 40.”

The theme of the conference was invasive species in prairies. An invasive species is a non-native plant or animal that is aggressively invading natural habitats. Invasive species cost \$138 billion a year in management and research. Invasive species are the number two threat to global biodiversity after habitat destruction. Introducing new species is not the problem: only about 1 in 100 plant species people introduce becomes invasive. The problem is our attitude, that we can move whatever species wherever we want, and it won't cause problems. Invasive species managers at the conference spoke about best management strategies for invasive species such as *sericea lespedeza* and garlic mustard. Other

researchers spoke about the effects of invasive species on native vegetation and pollinator communities.

Not all the seminars dealt with invasive species, however. Many speakers discussed monitoring projects they conducted to evaluate restoration success or population status of a group. I was particularly interested in these talks because I gave a talk on the vegetation monitoring we have been conducting at the prairie restorations at LREC. Between 2001–2005, we found 216 plant species in the prairies, 179 of which were native species. Of the 37 non-native species, 4 are aggressively invasive into natural habitats according to the Missouri Exotic Pest Plant Council: tall fescue, winter-creeper, crown vetch, and white sweet clover. Of the native species, eight were species indicative of a high quality, undisturbed, intact prairie or wetland habitat: Virginia bunchflower, bottle gentian, green false foxglove, royal catchfly, Sullivant's milkweed, rattlesnake master, queen of the prairie, and rose turtlehead. In comparison to unplowed prairie remnants in Missouri, we had fewer native plant species, but about the same number of non-native plant species overall.

Perhaps the most exciting and interesting part of the prairie conference were the field trips.

We visited Juhl Prairie, Thompson Meadow, and Dannebrog Cemetery. Thompson Meadow was fascinating because, as a wet prairie in the Loup River valley, it contained many species similar to those at LREC; however, instead of their being 8-10 feet tall, they were 3 feet tall. It was like LREC in miniature. Central Nebraska receives about a third of the rainfall of the St. Louis area so the plants there don't have as many resources as ours. Dannebrog Cemetery was full of beautiful wide-reaching 150 year-old burr oaks. At Dannebrog was a small woodland area set aside with species similar to ones at LREC's North Woods, and a sand prairie full of unfamiliar species. The soil and hydrology make a huge difference in determining the vegetation. We visited Spring Creek Audubon Preserve on our own. Spring Creek was a lovely prairie on a hill surrounding a wetland. While there, we saw two prairie-dependent species: the upland sandpiper and the regal fritillary. It was a truly inspiring afternoon. Speaking of inspiring, we briefly visited Nine Mile Prairie to commune with the spirit of John Weaver who conducted his landmark prairie research there. Weaver was a famous prairie ecologist, author

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