

Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

September 2016

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Students investigating their schoolyard at Central Christian School. Learn more about how students at the school use their schoolyard on page 2. Photo by Eddie Jones.

Building Citizens

by Bob Coulter

Over the course of the summer as I was finishing up my new book, I had the opportunity to re-engage with the writings of Vito Perrone, visionary progressive educator. The idea I ended up using most—and challenge you to do likewise—is to be sure we are educating “toward large purposes.” As you begin the year, it’s easy to let the unrelenting pace of curriculum coverage and nit-picky tests set the agenda. To counter this, I encourage you to be sure that larger purposes are driving your curriculum, with skills in a supporting role. How are the kids engaging with—and building—a community, in the classroom, the school, and beyond? How are they building a life, even at an early age? Here, David Perkins’ idea of “lifeworthy learning” comes into play—learning that is both engaging to students today and which has longer-term value in providing ideas and insights that can be used in other contexts. Maintaining this dual focus isn’t easy. The staff and volunteers applaud your efforts, and stand ready to help you. Let us know how we can make this a great year for you and your kids. ✍





Stories from the Schoolyard: Central Christian School

by Leslie Memula

Throughout this school year we will be using our newsletter as a space for you to share what's happening in your outdoor spaces. This new monthly feature, Stories from the Schoolyard, will serve as a glimpse into the effective outdoor learning going on in the St. Louis area.

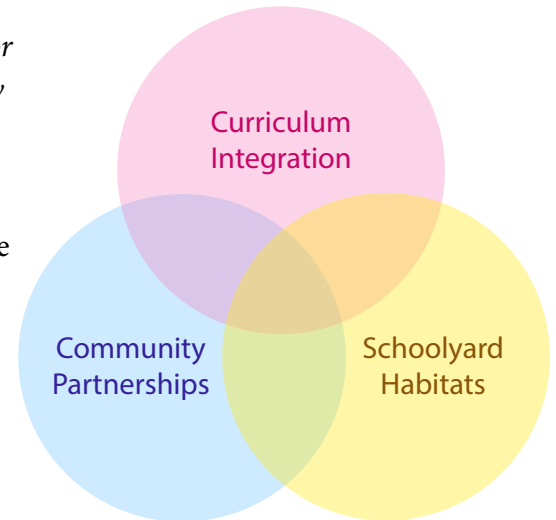
Even though school has only been in session a few short weeks, there are already wonderful things happening in local schoolyards. Deb Barham, fifth- and sixth-grade science teacher at Central Christian School in Clayton, reflects at the beginning of the school year:

When the Summit garden was started at Central Christian School three years ago, the ultimate goal was to put in place a green space for all of the Central students to enjoy and explore God's creation, not just the fifth and sixth graders who occupy the Summit.

Over the past few years, Central's fifth-grade students have completed an Outdoor Explorations unit as their first unit in fifth grade. Through this unit, students researched and chose plants to grow and maintain in the garden. As sixth graders, they continued to make observations and maintain the green space. The Summit garden is now into its fourth year. Students' native plant choices are thriving, so the fifth graders are turning their attention to creating garden resources for younger students. As their culminating activity this year in Outdoor Explorations, fifth graders will be creating a fall native plants field guide for the younger students at Central to utilize as they investigate and observe the Summit garden. Now this space will be available for observation, study, and enjoyment by all Central students!

We now want to focus on making all parts of the garden easily accessible for observation. Through phase two we will build paths through our native plants so that all of our green space can be investigated. It has been an exciting journey watching this green space transform, flourish, and thrive these past three years at the minds and hands of Central students!

We look forward to showcasing other outstanding examples of effective outdoor learning with you each month! 🌿



Central Christian School students in their schoolyard. Photo by Eddie Jones.



TEACHER ENRICHMENTS ARE RETURNING FOR THE 2016-17 SCHOOL YEAR!

Please join us as we visit and investigate local schoolyards! We will meet from 4–5:30 p.m. at the host school.

Tuesday, September 13, 2016

Exploring Pollinators
at The Soulard School
1110 Victor Street
St. Louis, MO 63104

Wednesday, October 12, 2016

Learning with Seeds
at Keysor Elementary
725 N. Geyer Road
Kirkwood, MO 63122

Thursday, November 17, 2016

Understanding Watersheds
at The Freedom School
1483 82nd Boulevard
University City, MO 63132

RSVP to your LREC staff contact so we know how many people to expect!

SAVE THE DATE

Mark your calendars for the following events:

Wednesday, January 25, 2017
9 a.m.–3 p.m.

LREC Winter Conference at Missouri Botanical Garden

Spring 2017 Teacher Enrichments:

Wednesday, February 22, 2017

Tuesday, March 21, 2017

Monday, April 17, 2017

Summer-y

by Leslie Memula

It was a great summer here at LREC—probably the busiest that I remember! We welcomed 34 educators from 18 schools in the kickoff of our year-long partnership programs—*Effective Outdoor Learning*, *Sustainable Schoolyards*, and *Place-based Learning*. Spending time with dedicated teachers is always a highlight of the summer months. In addition to teachers, the site was bustling with kid activity. Students from seven different summer programs (including three teen programs) spent time with us. A special thank you to our dedicated Volunteer Educators for braving the heat in order to work with these kids and also to the amazing Horticulture Volunteers for keeping the site in tip top shape! Enjoy these photos from this summer. 🌿

Clockwise from top: summer teens, photo by Eddie Jones; summer kids, photo by Eddie Jones; summer teachers, photo by Leslie Memula:





A Word From the LREC Volunteer Educators

Greetings to all from the Volunteer Educators of Litzsinger Road Ecology Center. This past May, some of us got together to discuss the joys and challenges of our service. We wanted to share a summary of our thoughts with you:

1. We love sharing nature with children!
2. We communicate well with LREC staff regarding teacher lesson plans.
3. We value the monthly volunteer enrichment sessions.
4. We feel better prepared, and more effective, if we:
 - have some understanding of the teacher's behavioral expectations.
 - are equipped with teaching tools and strategies appropriate for the day's lesson and age group.
 - know that the teacher has effectively prepared the students for their visit (lesson, behavior, clothes, shoes, name tags...).
5. We recommended that:
 - LREC staff check in periodically with student groups during their visit. Their presence and input are valued.
 - Volunteer Educator trainees be assigned a Volunteer Educator mentor who they can shadow and with whom they can discuss their experiences.
 - parents should not be grouped with their own children.
6. We are eager to meet and mentor Volunteer Educator trainees throughout the year.
7. We are looking forward to another great school year of engaging children with nature! 🌿



Photo by Leslie Memula.



Photo by Leslie Memula.



From Cemetery Prairies to National Tallgrass Prairies:

2016 NORTH AMERICAN PRAIRIE CONFERENCE

by Mary Voges

On Sunday, July 17, five very enthusiastic and curious LREC staffers left St. Louis for the North American Prairie Conference in Normal, Illinois. It was hosted by Illinois State University, where Deanna, Mary, Jamela, and interns Josh and Amy ‘dormed’ it out for four days.

Of the 86,898,620 original acres of historic prairie in the upper Midwest (Illinois, Indiana, Iowa, Minnesota, Missouri, and Wisconsin), only 176,580 (0.2%) of high quality remnant prairie remain. Although the conference discussed many aspects of tallgrass prairie history and restoration consistent to all the states mentioned, the focus of the conference was particular aspects of Illinois prairies and remnants.

Many interesting seminars and discussions were offered, including: managing prairies to enhance insects and soil invertebrates, the status of prairie birds, and life history characteristics of prairie forbs.

One of the most interesting presentations (to me) was, *The Use*

of Prairie Pioneer Cemeteries as an Aid to Educate the Public about the Value of Tallgrass Prairie by Glenn Pollack.

Prior to our desire for clean-cut plots and plastic flowers, families picked out the prettiest areas for their relatives to rest. These gardens became larger as the families grew and passed, sometimes increasing to acres of plots, crosses and other means of honor. They were not cut down or mowed, but left to thrive as pioneer prairies, withstanding wildfires and the onslaught of agricultural machinery. What a gift they turned out to be! Large or small, these remnants of prairie plants and fauna have become an educational and historical tool.

One last fact: good people were buried in some family cemeteries facing East, while evil people were buried facing West.

On Tuesday of the conference, we

chose different field trips to attend. Choices were short, half-day excursions to such sites as Sugar Grove Nature Center at Funk’s Grove—the largest remaining intact prairie grove in the state of Illinois—and Weston Cemetery Prairie and Franklin Farm.

All-day field trips included Nachusa Grasslands, where bison were recently re-introduced and the site of ongoing habitat restoration, and TNC Kankakee Sands.

Some thoughts and quotes from the conference:

- “People of the Prairie have to become people of the Fire.”
- Plant all the species you want on year one that you want in year 100.
- Plant a large weight of seeds.
- Plant invasions change soil communities. ♪



© K. R. Robertson
Illinois Natural
History Survey

Shooting star at Tomlinson Pioneer Cemetery Prairie in Champaign County, Illinois. Photo by K. R. Robertson, Illinois Natural History Service.

Summer Intern: Amy Turlington

by Susan Baron

Each summer, we are fortunate to have two interns join us in restoration work at Litzsinger Road Ecology Center. This past summer, Amy Turlington and Joshua Lovera spent hours and hours pulling invasive plants, transplanting seedlings, weed whacking, collecting and cleaning seeds, and doing whatever else needed doing.

In addition to all this work, they contributed to our ongoing research in the areas of phenology, plant monitoring, and creek monitoring. Between these activities, they each completed their own research. (You'll be able to read more about Josh's research in next month's newsletter.)

Amy researched a fascinating mutualism between senna plants (*Senna herbecarpa* and *Senna marilandica*) and ants.

Senna plants (among other plants) have extra-floral nectaries. These are small structures that produce nectar, but aren't flowers. On senna plants, the extra-floral nectaries are located on the stem near where the leaves attach. Ants are attracted to the sweet nectar in the nectaries and may also benefit from access to easy prey—they eat the herbivorous insects

that visit the senna plants. In return, the ants provide the senna plant with protection from other insects that might harm it. Because both the senna and the ants benefit from the arrangement, the relationship is called a mutualism.

Amy studied whether ants would continue to visit senna plants if the extra-floral nectaries on the plants were blocked off. She hypothesized that fewer ants would visit the plants with blocked extra-floral nectaries, but that some ants would still visit those plants for other benefits (such as easy prey).

To investigate, Amy covered the extra-floral nectaries of some senna plants at LREC with nail polish. She compared the number of ants visiting these plants with a control group of plants that still had their extra-floral nectaries intact. Amy found that senna plants with blocked nectaries had significantly fewer ants visiting them than the control plants.

Despite the data seeming to support her hypothesis, Amy identified several design flaws that



Amy presenting her findings. Photo by Fred Clarke.

make her study less conclusive. It is possible that the nail polish used to block the extra-floral nectaries repelled ants through its smell or unnatural appearance (sparkly purple). Variable field conditions (weather, location, etc.) and human error may also have affected the data. Most mysterious was the complete disappearance of five of the plants in the study (aliens or ghosts?—you decide!).

Amy's research paper can be downloaded at www.litzsinger.org/research/turlington.pdf.

Thanks to Amy for all her hard work this summer and we wish her all the best as she continues her studies at Southern Illinois University at Carbondale! 🌱

Glass House Quiz: Fall Visitors

by Deanna English and Mary Voges

The days are getting shorter. The air is feeling cooler. The leaves are beginning to change, and we are finding ourselves starting to look and listen as we prepare to welcome some of our non-human kin as they pass through our area.

Most of our readers are familiar with the monarch migration this time of year, but we are also welcoming some of the hundreds of millions of birds that migrate through Missouri on their way to warmer places to stay for the winter months.

Birds have their own sort of GPS and mapping system to help find their way. They use the sun, stars, and the earth's magnetic field along with visual landmarks as they travel to their winter homes. We feel very honored that many of these migrants spend some time at Litzinger Road Ecology Center.

There are 412 bird species that spend at least part of the year in Missouri. LREC has recorded approximately 75 of these species on site. Included in this list are many fall migrants. Colleen Crank has been collecting bird data at LREC for eight years. Based on that data, a few migrants we may see and hear at LREC in the fall are pictured starting at the column to the right.

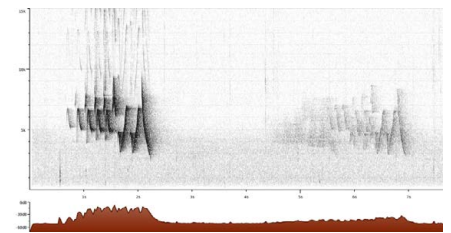
Calls of each of the birds are available on our website at <http://www.litzinger.org/fall-visitors/> (or follow the links).

Can you match the pictures and call to the name of the bird? Give it a try and then enjoy hearing and seeing these birds for a few months as they travel through our area.

Bird species:

- Mourning warbler
- Lincoln's sparrow
- Chestnut-sided warbler
- Nashville warbler
- Least flycatcher
- Magnolia warbler
- Tennessee warbler

Bird 1



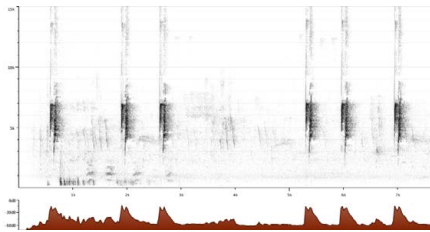
[Link to audio](#)

See **Quiz**, page 8



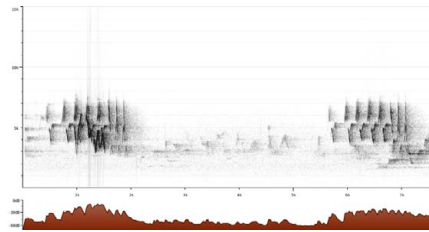
From **Quiz**, page 7

Bird 2



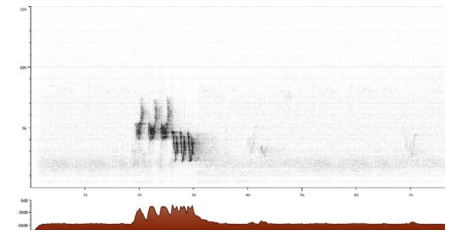
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Bird 3



[Link to audio](#)

Bird 4



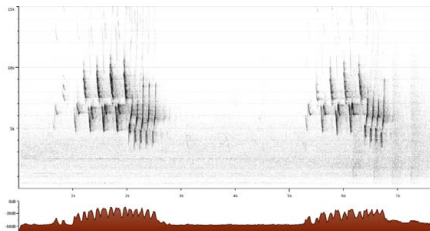
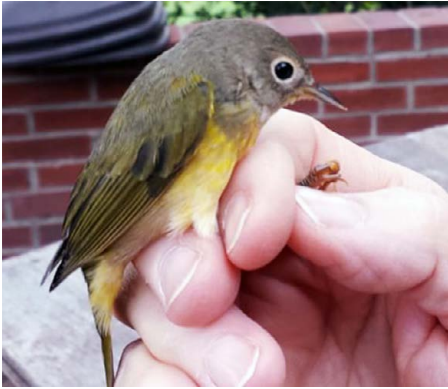
[Link to audio](#)

See **Quiz**, page 9



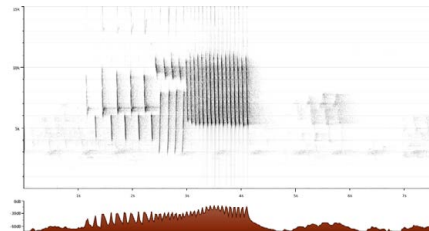
From **Quiz**, page 8

Bird 5



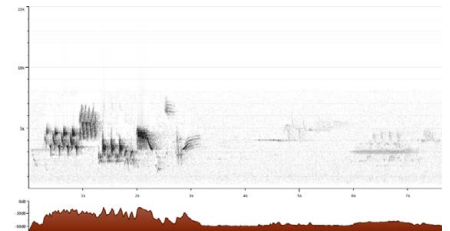
[Link to audio](#)

Bird 6



[Link to audio](#)

Bird 7



[Link to audio](#)

See **Quiz**, page 10

Teachers and Volunteers:

Have you joined one of our Facebook groups yet? Join to learn about local events and site news, and share posts with your colleagues.

[Join LREC Volunteers](#)

[Join LREC Teachers](#)





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Answers:

Bird 1:

Chestnut-sided warbler

(*Setophaga pensylvanica*)

Learn more at [https://www.allaboutbirds.org/guide/Chestnut-sided Warbler/id](https://www.allaboutbirds.org/guide/Chestnut-sided_Warbler/id).

Recorded sightings of this bird at LREC are August, September, October, March, and April.

Credits: Top: juvenile, photo by Danelle Haake. Middle: breeding male, photo by [Matt Tillett](#), [USFWS](#). Bottom: recording/sonogram by [Jonathon Jongsma](#).

Bird 2:

Least flycatcher

(*Empidonax minimus*)

Learn more at [https://www.allaboutbirds.org/guide/Least Flycatcher/id](https://www.allaboutbirds.org/guide/Least_Flycatcher/id).

Recorded sightings of this bird at LREC are September, October, March, and April.

Credits: Top: photo by [Mdf](#). Middle: photo by [Fyn Kynd Photography](#). Bottom: recording/sonogram by [Ryan P. O'Donnell](#).

Bird 3:

Magnolia warbler

(*Setophaga magnolia*)

Learn more at [https://www.allaboutbirds.org/guide/Magnolia Warbler/id](https://www.allaboutbirds.org/guide/Magnolia_Warbler/id).

Recorded sightings of this bird at LREC are August, September, March, and April.

Credits: Top: female/juvenile, photo by Colleen Crank. Middle: male, photo by [Bill Majoros](#). Bottom: recording/sonogram by [Richard E. Webster](#).

Bird 4:

Mourning warbler

(*Geothlypis philadelphia*)

Learn more at [https://www.allaboutbirds.org/guide/Mourning Warbler/id](https://www.allaboutbirds.org/guide/Mourning_Warbler/id).

Recorded sightings of this bird at LREC are September, October, March, and April.

Credits: Top: female/juvenile, photo by Danelle Haake. Middle: breeding male, photo by [Tom Benson](#). Bottom: recording/sonogram by [Martin St-Michel](#).

Bird 5:

Nashville warbler

(*Leiothlypis ruficapilla*)

Learn more at [https://www.allaboutbirds.org/guide/Nashville Warbler/id](https://www.allaboutbirds.org/guide/Nashville_Warbler/id).

Recorded sightings of this bird at LREC are September, October, April, and May.

Credits: Top: female, photo by Colleen Crank. Middle: male, photo by [Mick Thompson](#). Bottom: recording/sonogram by [Jonathon Jongsma](#).

Bird 6:

Tennessee warbler

(*Leiothlypis peregrina*)

Learn more at [https://www.allaboutbirds.org/guide/Tennessee Warbler/id](https://www.allaboutbirds.org/guide/Tennessee_Warbler/id).

Recorded sightings of this bird at LREC are September, October, April, and May.

Credits: Top: photo by Colleen Crank. Middle: photo by [Jeff Bryant](#). Bottom: recording/sonogram by [Andrew Spencer](#).

See **Quiz**, page 11

From **Quiz**, page 10

Bird 7:

Lincoln's sparrow

(*Melospiza lincolnii*)

Learn more at https://www.allaboutbirds.org/guide/Lincolns_Sparrow/id.

Recorded sightings of this bird at LREC are September, October, March, and April.

Credits: Top: photo by Danelle Haake. Middle: photo by [Kelly Colgan Azar](#). Bottom: recording/sonogram by [Davyd Betchkal](#). 🐦

SEPTEMBER

by *Martha M. Schermann*

Seeing
Every
Preschooler
Take
Each
Moment
By
Enabling
Resources

GOODBYE, HELLO

Goodbye, Danelle

Danelle Haake (Coordinator of Restoration Ecology) left LREC in July, to more fully focus on her PhD studies at Saint Louis University. She will be missed greatly by the LREC team and the broader Garden team, but we know she will stay connected given her academic pursuits and personal interests. We wish her the best of luck!

Hello, Stacey

Stacey Carman joined the LREC staff in June 2016. She will be working with fourth and fifth grade teachers and students in the Ritenour School District to implement scientific modeling activities linked to Garden research interests. Prior to joining LREC, Stacey spent the past 26 years teaching and consulting in the education field.

Stacey holds a BS in Education from the University of Missouri-Columbia and a Masters of Education from Maryville University. Additionally, she holds a photography certificate from the Rocky Mountain School of Photography. Outside of work, Stacey enjoys spending time with family, fly-fishing, photography, and managing a food pantry. 🐦



LREC Announcements

September 13

Teacher Enrichment: Exploring Pollinators

4–5:30pm, at The Soulard School. Learn more on [page 3](#).

September 15

Volunteer Enrichment: Ongoing Research at LREC: Plant Monitoring, Erosion, and Phenology

1–3pm, meet at the barn. Bring your brown bag lunch at 12:30pm or meet us for the program at 1pm. RSVP to Martha at 314-540-4068 or martha@lrec.net.

Local Events

September 12 & 14

Monarch Tagging

9am–noon, at Weldon Springs Interpretive Site. More at <https://mdc.mo.gov/events/view/1045936>.

September 17

Prairie Day

10am to 4pm, at Shaw Nature Reserve. Discover prairie heritage! Learn more at <http://www.shawnature.org/>.

September 19

Early Childhood STEAM Conference

8am–4pm, at SIUE. \$50 registration fee. Learn more at <https://www.siu.edu/educationaloutreach/early-childhood-center.shtml>.

September 23 & 24

Academy of Science–St. Louis BioBlitz

At Forest Park. Join scientists and naturalists to inventory species. Open to school groups, families, individuals. Learn more at <https://www.academyofsciencestl.org/events/>.