

Litzsinger Road Ecology Center

Volunteer Newsletter

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Building Hope

By Bob Coulter

In one of those “strange connections” moments, some reading I was doing for a class I’m taking on early American religious history actually had some value for clarifying what we’re doing here at Litzsinger. Back in 1770’s, the Rev. John Murray, a Universalist minister (one of the forerunner groups of today’s Unitarian Universalists), seems to have annoyed a bunch of dour Calvinists by believing that in his sermons he should “Give them not Hell, but hope!” As you might imagine, the Puritanical era then didn’t fully embrace Murray’s ideals, which led someone to throw a rock through a church window, narrowly missing his head while he was preaching. Not missing a beat, he bent down from the pulpit, picked the rock up and remarked “The argument is solid and weighty, but it is neither rational nor convincing.”

More than 200 years later, we’re faced with an opportunity every day to give teachers and students hope in the form of meaningful experiences with nature: hope that there is more to learning than prepping for tests, hope that we can make a difference in our world through restoration and conservation. As volunteers, every time you invest your time in leading a group or restoring native plants, you’re coming down firmly on the side of hope for the future. The arguments for educational “reform” that take the meaning out of learning and for “progress” that threatens our environmental future may have solid and weighty support, but in the end, they aren’t rational, and our collective work toward a better future will in the end be more convincing.

Please join us for the community meeting later this month to continue our dialogue on building Litzsinger into the best resource it can be.

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Upcoming LREC Events:

Community Meeting and Lunch

March 28, 12–1:30p.m. At Glass House. Lunch provided. Come with ideas of what is going well, and what we should be building toward. RSVP to Martha at (314) 442-6717.

Volunteer Enrichment: Using the Greenhouse

March 28, 2–3p.m. Meet at Barn. RSVP to Martha at (314) 442-6717.

LREC Stream Team: Macroinvertebrate Monitoring

April 6, 9a.m.–12p.m. For more information or to RSVP call Jennifer Brown at (314) 961-4410.

Upcoming Opportunities:

Earth Day

April 23, 10:30a.m.–6p.m. At the Muny Grounds at Forest Park. This year’s festival features exhibits, food, shopping, music and more. Call (314) 962-5838 or go to www.stlouisearthday.org for more information.



Greenhouse Activities

By Mary Voges

Our greenhouse is providing many wonderful opportunities for students and staff alike. Recent classes from Buder, Clark Elementary, Flynn Park, McGrath and New City Schools investigated seed propagation within the “spring like” atmosphere of the our newest classroom.

Many of the students had previously collected and cleaned seed at LREC; so introducing them to the next

step in the circle of propagation was to explain how staff stratified seed (prepared seed to go dormant or mimic winter by storing in a moist, cool environment). This year, the seeds were stored in white sand and the students were asked, “Why white sand?” Answers varied from “So you can see the seed” to “Because it looks like snow”.

Continuing around the propagation circle, the students were then in charge of seeding

prepared flats by spreading the “gooey, sandy, doughy” seed mix, covering with vermiculite, watering and labeling each flat. Each group took ownership of a different plant by reading the characteristics, relating height of plants to height of friends and teachers, and practicing genus, species and common names, as well as the requirements of all plants in order to grow.

The students’ next visit will combine outdoor investigation with transplanting their seedlings into larger containers. Discussions will include root and leaf growth and why the same seedling may have two completely different leaf structures. Later on during the school year, the students will be planting the same seedlings they so carefully sowed months before. The circle continues.

Spring Ephemerals

By Malinda Slagle

In early spring before the trees have their leaves, beautiful wildflowers carpet woodland floors. This early emergence is an adaptation to shading present in the summer.

Additionally, wildflowers emerging in the spring are able to take advantage of high moisture and nutrient levels before the trees are actively absorbing them. True spring ephemerals complete the majority of their yearly life cycle before trees leaf out. Their leaves expand, they flower, fruit and senesce. True spring ephemerals to watch for at LREC include: spring beauty (*Claytonia virginica*), false rue-anemone (*Isopyrum biternatum*), trout lily (*Erythronium albidum*), and toothwort (*Dentaria laciniata*). Many other shade-tolerant wildflowers emerge and bloom in spring but retain their leaves for part or all of the summer and usually fruit in summer. Ones to watch for blooming at LREC in April include: celandine poppy (*Stylophorum diphyllum*), columbine (*Aquilegia canadensis*), golden ragwort (*Packera obovatus*) wild geranium (*Geranium maculatum*), wild ginger (*Asarum canadense*), bloodroot (*Sanguinaria canadensis*), Virginia bluebells (*Mertensia virginica*), Jacob's ladder (*Polemonium reptans*), and wild sweet william (*Phlox divaricata*).

Unique adaptations help these ephemerals to thrive in this time period. The earliest emerging spring ephemerals are extremely short. Their stature helps to buffer the fragile leaves from cold nighttime temperatures by keeping them near the soil. The soil is buffered from temperature changes by high moisture content and leaf litter. Long lives and underground storage organs help support such a rapid yearly life cycle by providing a place to store reserves for next year's quick flush of growth.

Many of the spring ephemerals also develop intricate interactions with animals that help to disperse their seed and pollinate their flowers. Wild sweet william is butterfly-pollinated and is an obligate outcrosser, meaning that a single plant cannot pollinate itself. The blue flowers with spots or nectar guides on the petals and sweet scent of wild sweet williams guides butterflies to their slim flower tubes. Specialized small andrenid bees pollinate many of the spring wildflowers include golden ragwort, Jacob's ladder, and celandine poppy. The red flowers of columbine are a clue that hummingbirds returning from their yearly trip to Central America pollinate it. Insects cannot see red, but birds can see red. Hummingbirds are highly attracted to it, which is why

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Trout lily



Columbine



Wild geranium

Photos by Keir Morse

hummingbird feeders are red and many hummingbird-pollinated plants have red flowers. To facilitate seed dispersal, bloodroot and wild ginger have eliasomes, or fatty food bodies, on their seeds to attract harvester ants. The ants collect the seed, take it back to their nests, eat the eliasomes, and discard the seed.

LREC has many species of woodland wildflowers, but due to the invasion of wintercreeper (*Euonymus fortunei*) they are very few in number and may not be in the easiest place to find them. Other woodlands around St. Louis area where wildflowers can be found include: Shaw Nature Reserve in Gray Summit, Babler State Park in Wildwood, Castlewood State Park in Ballwin, Powder Valley Conservation Area in Kirkwood, and Hawn State Park in Ste. Genevieve. To learn more about spring wildflowers check out the Spring Wildflower Walks on Tuesdays April 4–May 9 or the Saturday Wildflower Walks on April 22 and May 20 at the Shaw Nature Reserve. Call (636) 451-3512 if you are interested in the walks.

References

- Michigan Natural Features Inventory. 2004. Mesic Southern Forest. http://web4.msue.msu.edu/mnfil/abstracts/ecology/Mesic_southern_forest.pdf*
- Nelson, P.W. 2005. The Terrestrial Natural Communities of Missouri. Missouri Natural Areas Committee.*

Gopher it, Jennifer!

It is with regret at having a valued friend and colleague move on, but with best wishes for success in her new home, that we watch Jennifer Krause move on to the Gopher State. (That's Minnesota, for those of you who were eliminated in the first round of the geography bee.)

We are forever in her debt for all she has done to make the web site, newsletter, and field lab materials look so professional. Fortunately, she will continue to serve as our graphics and publications guru from afar. Telecommuting is a wonderful thing for work, but we will all miss her being among us in person.



Spring Riparian Restoration at LREC

By Jennifer Brown

Streambank and riparian revegetation efforts are underway along Deer Creek at LREC. In early March LREC horticulture volunteers helped to remove six truck loads (and counting!) of invasive bush honeysuckle from a section of streambank in the northern woods on the property. Staff then worked to prepare the area for reseeding. A native seed mix was put together from seed collected last year along with an annual nurse crop of oats. To keep this seed from washing away and to help hold the soil in place, staff installed biodegradable erosion matting to blanket the area.

Native bareroot whips and willow cuttings are also going to be planted all along this reach of the creek in place of

the bush honeysuckle. A few of the woody species included will be Ward and sandbar willows (*Salix caroliniana*, *Salix interior*), ninebark (*Physocarpus opulifolius*), witch hazel (*Hamamelis vernalis*), buttonbush (*Cephalanthus occidentalis*), spicebush (*Lindera benzoin*), river birch (*Betula nigra*), and persimmon (*Diospyros virginiana*). All of these native species of shrubs and trees have extensive, deep root systems that will better serve to anchor the soil and improve infiltration compared to the invasive shrub, which has taken over so much of our St. Louis woods.

At the location where the erosion matting has been installed there is a small erosion gully that has formed over the years, which is

beginning to “headcut” or rather, move up slope and steadily worsen. If this continues unchecked, the headcut will eventually move upwards into the firebreak and north prairie. To slow and hopefully prevent this from happening a series of small check dams are going to be constructed in the drainage channel of this gully. A check dam is a small barrier constructed of rock that serves to reduce the effective slope of the channel, thereby reducing the speed of flowing water and allowing sediment to settle out behind the dam. These types of structures are easy to construct and are typically used to reduce erosion in small channels of this sort.

Keep an eye out for these restoration efforts taking place in this area. I look forward to working with you and watching these projects grow!



← Newly installed biodegradable erosion matting along Deer Creek. A native seed mix and an annual cover crop was sown underneath the blanket. Native bareroot whips will also be planted in this area and other sections along Deer Creek in during the month of March.

Pileated Woodpeckers

By Martha M. Schermann

The scientific name means *Dryocopus* {tree cleaver} *pileatus* [crested].

It is fairly easy to recognize a Pileated Woodpecker by its large size and red crest on its head. The body is predominantly black, with thick black and white stripes reaching from the bill to the wing and chest area. The red 'moustache' along the cheek distinguishes males from females. It has strong neck muscles and a reinforced skull that safeguards the brain from the shock of pounding on hard surfaces. Bristle-like feathers protect the nostrils from sawdust.



Pileated Woodpeckers usually mate for life. In the spring, they lay an average of 4 eggs, with both partners sharing nesting duties—from building to incubating to feeding. They also do their best to protect the eggs and young from predators such as tree-climbing snakes and have been known to carry the eggs to another nest if the current one becomes unsuitable. At the time of hatching, the young are naked and helpless. Fledgling usually occurs after 24–30 days, differing with

different latitudes and locations. The surviving young leave the parents in the fall of the same year.

Dead or dying trees, stumps and logs are essential for nesting, roosting and feeding. They focus primarily on Carpenter Ants but will also eat other insects such as wood boring beetle larvae, as well as wild fruits and nuts. They obtain their food by scaling bark off trees and creating excavations in trees to expose galleries. The Pileated has been seen drinking water from streams and ponds and has also been seen visiting suet and bird feeders.

To identify cavity trees or to discover signs of the presence of Pileated Woodpeckers, look for large wood chips at, or near, the base of a tree. There are three different types of cavity:

- **Nesting cavities** are typically made in dead wood, 15–70 feet off the ground with a large round or vertically elliptical hole. New holes are made each

year, probably to avoid parasites. Holes appear dark, indicating the hollowness inside.

- **Roosting cavities** provide temporary shelter from the elements or protection from predators. Keep your eye out for a tree with several oblong-shaped holes that give the bird many exits in escaping predators.
- **Feeding cavities** are more irregular in shape and rougher around the edges. They tend to appear lighter in color inside as they don't often lead to hollow chambers. Remember to look for them on fallen logs as well as up in the trees.

References

Wild About Gardening.

www.wildaboutgardening.org

Sea World/Busch Garden Animal Information Database.

www.seaworld.org/animal-info/

Pileated Woodpecker Central.

www.pileatedwoodpeckercentral.com