

Litzsinger Road Ecology Center

Community Newsletter

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


Crossing Borders

By Bob Coulter

Old winter nights make a great time to catch up on some reading. One book I just finished, *Artscience: Creativity in the Post-Google Generation*, discusses some interesting ideas that led me to reflect on our work engaging kids with the environment and the local community. The basic premise of the book is that by looking for productive “border crossings” among normal separate fields we can understand things in new ways. For example, X-ray technology is giving art historians insight into early “drafts” of paintings that were then painted over to make today’s masterpieces.

This is much richer and more complex than simply creating an interdisciplinary curriculum, as productive as that can be. Instead, *Artscience* challenges us to use one discipline to have a richer experience with another. Just as the art example shows how scientific advances give us a better appreciation of the painter’s craft, I think we can find many examples of how border crossings can enrich our own learning as well as the lives of our students.

Two examples come to mind here. First, how can a strong understanding and application of math make for better science? We can certainly learn math skills by doing a lot of measurements, but how do these measurements of things like soil temperature or water quality actually improve our understanding of ecology? Can we actually make better science through the use of math? Likewise, can our students use their understanding of ecology to promote change in your school community?

Interesting things to think about and discuss as your field labs and school-based projects develop... 

Inside this issue:

Natural Lawn Care	2
A Brief Geologic History of St. Louis	4
Ecological Restoration Corps.....	4

Upcoming LREC Events:

Bush Honeysuckle Roundup

March 7, 9am–3pm. Meet at glass house at 9am for coffee and snacks. Pizza for lunch will be provided.

LREC Stream Team:

Water Chemistry

March 27, 9am–noon. Meet at barn. Hearty snack afterward will be provided. Please contact Malinda Slagle at (314)961-4410 if you plan to participate.

Upcoming Opportunities:

Native Plant School

Native Plant Propagation from Seed: March 13, 1–4pm. Native Landscape Planning, Planting, and Maintenance: March 27, 1–4pm. Whitmire Wildflower Garden at Shaw Nature Reserve. \$12 (\$8 for Garden Members). Reserve your place by calling (636)451-3512.

Spring Peeper Musical at SNR

Evenings, late February thru mid March (It’s up to the frogs and toads!). For more info call (636)451-3512.

State Stream Team—Intro Level Macroinvertebrate Sampling Training

April 11, 8:30am–5pm at Busch Wildlife Area. Workshop is FREE. Registration deadline March 26. To register, call (573)526-3406 or go to www.mostreamteam.org/wqintro.asp.

Natural Lawn Care

By Malinda Slagle

It's time for Spring! Look out for the spring beauties, false rue anemone and rue anemone blooming in the woods this month. Many birds will begin nesting and mammals such as bats and otters are coming out of hibernation.

People are coming out of hibernation this time of year too, and are ready to spend some time getting their yard ready for spring. Of course, the best type of yard for soil, water, and wildlife is one full of trees, shrubs, wildflowers, and native grasses. Native plants will attract interesting birds, butterflies, beetles, and other wildlife. My



Painted Lady and Showy Goldenrod.
Photo by Colleen Crank.

tiny prairie garden in my front yard attracted goldfinches throughout the summer and fall, tiger swallowtails, monarchs, fiery skippers, Peck's skippers, and bumble bees. Native plants also require no fertilizer and have deep root systems that help water absorb well into the soil. We can help you to choose excellent native plants for your yard that both look attractive and attract wildlife. Later on in spring, after we planted the plants needed at LREC and school partners' gardens, we would even be glad to donate some of the plants we grew in the greenhouse for your yard.

Besides gardens, the large part of many Missourians' yards is turf grass. Just so y'all know, I am opposed to turf grass in general because it is a monoculture that provides no habitat for animals and doesn't even look interesting (in my humble opinion). However, even I have some turf grass for my dog to play in and to use as a pathway around my native plant gardens. If you have a sunny well-drained yard, you are in luck. You could kill your existing turf grass this spring and plant native turf grass: buffalo grass. Buffalo grass (*Buchloe dactyloides*) requires no fertilizer and no water (after the first year). It forms a dense turf that grows no more than 4–6" tall and never has

to be mowed. If you enjoy a more manicured look, mowing once or twice a year is plenty. It is the lowest maintenance, most wildlife and water quality friendly type of turf grass. If you're interested in what buffalo grass looks like, take a look at the savannah area to the left of the drive by 9733 Litzinger.

For those with shady moist lawns who have turf grass you'd like to care for responsibly, you might consider using a more natural approach to your lawn this year. Rule number one for natural lawn care is taking care of your soil. Measuring your lawn and testing the soil are good first steps to taking care of the soil. To measure your yard, break it up into smaller simple geometric shapes and measure those. Measuring your yard is important because it allows you to apply the correct amount of fertilizer to your lawn. One of the **biggest sources of chemical pollution** in urban watersheds is from **individuals fertilizing their lawns at too high a rate**. The extra nitrogen in the streams can cause algal blooms and kill fish. Once you measure your lawn, make sure to calibrate your fertilizer spreader and **read your fertilizer label** so that you apply at the correct rate for your lawn's area.

See **Lawn**, page 3

Lawn, from page 2

You can get your soil tested for free by the University of Missouri Extension Service. This can be useful in your garden as well as for your lawn. You should test your soil before establishing a new lawn, every three years on established lawns, or whenever you need to correct specific nutrient problems. Use a small shovel or soil probe to take 12 samples throughout your lawn of 4 inch depth of soil. Put the soil in a plastic bucket and mix it all up. Send about 2 cups of the mixture in a brown paper lunch bag to:

Soil and Plant Testing Laboratory
23 Mumford Hall
University of Missouri,
Columbia, MO 65211.

You will also need to fill out a horticulture soil sample information form available on the web in MU publication G 6954, *Soil Testing for Lawns*. (<http://extension.missouri.edu/explore/agguides/hort/>)

Some good organic fertilizers include corn gluten (nitrogen and suppresses annual weeds), bat guano (nitrogen and phosphorous), blood meal (nitrogen), earthworks (nitrogen, phosphorous, potassium, and calcium), nature safe (nitrogen, phosphorous, potassium, calcium, and sulfur), and focus (nitrogen, potassium, iron, kelp, humic and fulvic acid). There are many more available. Corn gluten can be an especially good option for early

in the spring to prevent germination of annual weeds. Don't apply fertilizer just before or just after seeding, it may inhibit germination.

Proper mowing is one of the most important parts of managing a lawn. For zoysia, grass should be mowed at about 2 inches. For cool season grasses, grass should be mowed at about 3 inches. The higher your mowing height, the more vigorous the roots will be and the better the grass will compete against weeds. Don't cut more than one third of the leaf growth in any mowing. Clippings should be mulched right onto your lawn to help return more of the nutrients to your lawn.

The most natural lawn care calls for you to let your grass go dormant in the summer. However, if you can't stand a less green lawn in the summer, water early in the morning to prevent evaporation and disease. Water only the amount your soil type can absorb, avoid puddling and run off. If you have a sprinkler system, make sure to shut it off during and after rains. Your lawn needs only 1 inch total of water per week to stay green, including rainwater. Watering less frequently helps maintain healthy root systems.

Hopefully these tips will help you to start your yard maintenance right this year. Think of new areas

of turf grass to put into native plantings, make a rain garden off of your gutter, turn that sunny area into buffalo grass, and manage the rest of your lawn the natural way to help improve water and soil quality. ☞

References:

Fresenburg, B. , T. Teuton, D. Day, and J. Zimmerschied. Natural lawn care. G 6749. MU Extension, University of Missouri-Columbia.

Announcing...



Caleb Joshua Brown

Born February 14, 2008
9:21 p.m.

7 lbs. 2 oz.; 20½ inches

Proud parents are
Jennifer (LREC Naturalist)
and Adrian Brown

A Brief Geologic History of St. Louis

By Sean Fears

One of the first comments you'll hear from kids searching for fossils along Deer Creek is, "Why are all the fossils marine?" That's quite a long story... In fact, most of the story written in bedrock in the St. Louis area originated 299–360 million years ago in the Carboniferous Period. At that time, Missouri lay very close to the equator and a shallow sea covered much of North America. The climate was *far* warmer (by about eight degrees Celsius across the globe), and the combination of that warmth and higher sea levels fueled the growth of swamps that eventually became massive deposits of coal in the continental interior. Water and land traded spaces many times during the period, yielding a layering of sedimentary rock with extensive discontinuities and great variability from region to region within what is now the state of Missouri. The tropical to subtropical climate and shallow sea were ideal conditions for the formation of coral reefs, and the

fossils in our region make that abundantly clear.

The Carboniferous in North America is split into two periods based on whether rock dates from the later, coal-rich time of the Carboniferous (referred to as the Pennsylvanian, due to massive coal deposits in that region of the country) or the earlier, limestone-rich epoch known as the Mississippian. As the name of the latter suggests, rocks from this period are extremely common within Mississippian coral reefs looked somewhat different than their modern equivalents; crinoids all but dominated the scene. Horn corals, bryozoans (lacy colonies of small animals with limestone skeletons that arranged themselves in vertical sheets), and brachiopods were also common members of the reef community. The prolific nature of crinoids during this period is definitely reflected in the fossil record, so much so that Missouri chose one as the state fossil.



Above top: Bryozoans and corals.
Above bottom: Brachiopods.
Photos by Sean Fears.

Teachers interested in geology and fossil field investigations, please contact me when making plans for the 2008–09 school year. Volunteers, stay posted for a volunteer enrichment to be announced! ☞

The **Ecological Restoration Corps** program is a high school youth experience consisting of engaging activities and experiential learning in two parts: an intensive two-week summer program focused on building basic ecological knowledge and restoration skills through activities such as seed collection and cleaning, invasive species management, and water monitoring; and bi-monthly classroom sessions as well as weekend work days during the school year that build on and improve those skills while simultaneously establishing, enhancing, and maintaining native spaces at LREC and other locations in the community. Please note that, unlike in previous years, the program is open to prior ERC participants. If you know of someone who would be interested in the program, contact me at sean@litzsinger.org or (314)442-6812; additionally, applications can be found on the Web at www.litzsinger.org/erc.html.