

Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

February 2011

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White oak leaf emerging from bud.
Learn more about buds on page 3.
Photo by Deanna Lawlor.



Summer Learning

by Bob Coulter

There's nothing like a cold and snowy day to make you think of summer. As your thoughts wend that way, be thinking of which professional development opportunities you'll be taking advantage of when school lets out. With so many institutions in the Zoo-Museum District and other offerings from universities, there's a lot to choose from. I encourage you to consider two no-cost workshops we will be offering at LREC:

Sustainable Schoolyards (June 13–17, 2011):

Turn a portion of your schoolyard into an outdoor classroom by engaging your students in the planning, development, and management of a native plant habitat. Several St. Louis area schools have successfully implemented the curriculum, based on the *Earth Partnership for Schools* program developed at the University of Wisconsin, Madison Arboretum. Workshop participants will receive implementation assistance during the school year. The workshop is open to teams of at least two teachers from a school.

Promise of Place (June 20–24, 2011):

Help your students meet curriculum goals while they build a connection to the community. Place-based education uses your neighborhood as the starting point for a wide range of investigations, and equips them to branch out to the larger world from a familiar starting point. Building on their local interest, students apply their knowledge as they work to improve their community through service learning projects such as planting native species or documenting changes in local history. Over the course of the week, you'll learn the basics of place-based education and service learning, and have ample time to create a project that meets your curriculum requirements in new and engaging ways.

Applications are available at www.litzsinger.org/profdev.html. I hope to see you at one or both workshops!

Check out additional professional development opportunities from Missouri Botanical Garden, Shaw Nature Reserve, and EarthWays Center at www.mobot.org/education/workshops.asp. 🌿



Gardening in February?

by *Eddie Jones*

Those plants are dead,” is an oft heard statement from students visiting LREC this time of year. But, we know that they are not dead; they are simply in energy-conservation mode during less than ideal growing conditions—like prolonged cold or drought.

As students and teachers of plant life cycles, there are unique opportunities presenting themselves at this time of year. As you venture outdoors, take the time to examine plants in their winter garb, pay attention to buds, bark, twigs, leaf scars, thorns and evidence of interactions with other living things: galls, gnawed twigs/buds/bark, holes and cocoons.

Check out this blog entry for more information: <http://garden.org/regional/report/arch/inmygarden/3661>.

This is also the time of year to start native plant seeds indoors and nurture the seedlings as they wait for spring to arrive for proper planting.

Now is the time to prepare for springtime planting in the schoolyard. With limited greenhouse capacity, native plants for LREC teachers will be limited to those who submit a reasonable request in the next few weeks. Please check with your staff contact for more information.

Happy gardening! 🌱



Photos by Eddie Jones.

Wonderful Winter Buds

by Deanna Lawlor

One of my favorite ways to watch spring arrive is by observing buds. As the days lengthen, and long before most of us are thinking spring has arrived, buds are preparing to burst forth.

Many people never notice buds until spring is fully upon them, but buds develop on trees and shrubs in the late summer at the base of the leaf stem. The buds are present throughout the winter and they are worth watching long before they burst open. Inside each of the

How to measure buds

1. Select several different tree species to observe. Try to select buds on branches in a sunny location. Select five to ten buds on each tree.
2. Measure the length of each bud in millimeters.
3. Try to measure the same buds at each visit. I like to tie ribbons on the branches I'm observing.
4. Take the average of the lengths from your buds and be astounded at the changes.
5. Measure them every week until the leaves emerge in the spring.
6. Enjoy the wonder of being the first to see the tiny leaves emerge, perfect miniature versions of the adult leaves they will quickly become.

buds is a tiny embryo of the leaf or flower that will emerge in the spring.

During the winter months, these embryos need protection from cold and loss of moisture, and most do this with what botanists call *bud scales*. Bud scales vary from species to species, every type unique. It is interesting to observe the patterns and details of bud scales of different species of trees and shrubs.

For example, the magnolia tree just outside my office has wonderful buds that have a single furry scale that wraps around the bud just like a tiny fur coat.

Then there's the flowering dogwood I walk past each morning with its bulbous four-scaled bud that reminds me throughout winter that soon we will have spring. These four scales will eventually make the showy white bracts that draw such attention to the flower. The true flowers are the greenish-yellow centers.

Buds that contain leaves and flowers differ in shape and size, too. Generally leaf buds are smaller, more slender, and often sit closer to the twig. Flower buds are often larger, usually spherical in shape, and stand away from the twig.



A) Magnolia buds. Notice the larger flower bud and smaller leaf buds. B) Flowering dogwood bud. C) Dogwood flower. D) Paw-paw. Notice the round flower bud and the end leaf bud, which is naked (no scales). Dogwood flower photo courtesy of Floridata.com; all other photos by Deanna Lawlor.

If you start visiting your trees and shrubs now and measuring the buds, you will begin to see them lengthen and swell as they prepare to flower or leaf.

Buds are fascinating and beautiful. Get out your ruler, sketchpad, camera, and hand lens, go outside, and enjoy. 🌿

Glass House Quiz: Look Up, Look Down, Look Around

by *Danelle Haake and Deanna Lawlor*

During a recent online training for wildland firefighters, one of the important safety messages of the program was about being aware of your surroundings. Keep an eye to the sky as weather conditions might change or a burning branch might fall from above. Make note of the terrain so you do not stumble in hidden holes or trip over exposed roots. It is important to know where heavy equipment and the other members of your team are. They summarized these and other concerns with their mantra: **Look up, look down, look around.**

Later in the week, as we were walking through the woodlands, we found that the simplest way to explore our surroundings at LREC was to follow the mantra of the wildland firefighters.

We all usually do a pretty good job of looking around, but not so much up and down, so that is where we focused.

What notable features do you see in the photos? There are probably more than one, and possibly some that we didn't notice.

See **Quiz**, page 5

Look Up...



From **Quiz**, page 4

Look Down...



Check your answers on page 7 and let us know what you see that we've missed! (Send an email to danelle@litzsinger.org or deanna@litzsinger.org.)

Quiz photos 1–4 by Danelle Haake. Quiz photo 5 by Deanna Lawlor.

See **Quiz**, page 7



Student estimating a tree's height.

The Year of Forests

by Danelle Haake

The International Year of Forests has begun. The United Nations designated the year 2011 as the Year of Forests in order to promote the sustainable management of our forests. As members of the Missouri Botanical Garden team and as promoters of sustainable communities, we at LREC have been looking at ways that we can do our part to share in the year-long celebration of forests.

Though we do not have any true 'forests' here at LREC, we do have a large number of trees in our woodlands and savannah. A survey completed in 1992 found 43 species of trees on-site. The species list from this survey includes several species that I have not noticed on the grounds and there are a few species missing from the list, thanks to the restoration efforts of my ecological predecessors. The report from the 1992 survey is available at www.litzsinger.org/research/ochs.pdf.

Beginning this spring, we will be doing a tree inventory on-site. Several details are still being worked out, but we know that this inventory will include identifying the species of each tree, measuring the trees' diameters, and making notations on the health and condition of the trees. With this information in hand, we will be better able to manage our woodland. We will be able to answer questions like:

- Are there species that we have lost from the property?
- Are some species more or less abundant than we would prefer?
- Are there invasive species that we should address?
- Do we have pest or disease problems in the woodland?
- Are there areas of the property where we should add or remove trees?

This should be a fun and interesting project. We would love to include any volunteers or student groups who are interested in participating. No experience is needed and all necessary tools and ID books will be provided. Please contact Danelle (danelle@litzsinger.org; 314-961-4410) for further details.

For more information on the International Year of Forests, visit: www.un.org/forests. ✎



The Missouri Botanical Garden is celebrating the International Year of Forests with a TREEmendous year of activities highlighting the real value of trees and the critical role they play in our lives.

Events and activities include:

Arbor Day Tree Giveaway

April 1, 2011

Great St. Louis Tree Hunt

April 1–September 30, 2011

Interactive Discovery Center

April 1, 2011–January 3, 2012

Forest Festival

April 30–May 1, 2011

Extreme Tree Houses Exhibition

April 30–August 21, 2011

For more information, go to www.mobot.org/treemendous.

From Quiz, page 5

Answers:

Look Up...

1) This crow was particularly noisy as he circled over LREC. But did you see the rachises left on the branches of the tree? (A rachis is the 'stem' of a compound leaf. See our September 2010 quiz (www.litzsinger.org/201010.pdf) to learn about compound leaves). A few still have leaflets attached. And it looks like the branches are opposite—telling us that this is either a box elder, or an ash.

2) We saw two nests on this photo. Also, in the upper right corner, you can see little 'balls' hanging off of a tree. It looks a little like it could be a sweetgum tree with its gumballs, but knowing that this was taken in our wetter woodland, maybe you already know that this is a sycamore. Did you notice that the sky is completely cloud covered?

Look Down...

3) There are lots of fallen leaves in this picture, but what is all of that green at the bottom? It may be the middle of winter, but these woodland mint plants refuse to give up their green! You can see the top of one of the stalks with its seed pod, too. Near the top of the picture there is another cluster of mint leaves as well as a bit of grass peeking through.

4) If someone is trying to send us a message, then we don't know their alphabet. This photo, taken along one of our prairie trails, shows how the mice and other small rodents wander when the ground is covered with snow. They do not want to walk above the snow where they might be seen by predators, so they make tunnels under the snow between the grass and the soil.

5) It looks like one little mouse wanted to make a liar out of us! They may prefer to be under the snow, but rodents will also go on top of the snow like this. You can see tiny footprints on either side of a line left by the tail! 🐭

LREC Announcements

February 24

LREC Stream Team

Meet at 9 am at Glass House. Contact Danelle Haake (314-961-4410 or danelle@litzsinger.org) with questions.

February 28

Volunteer Enrichment: What Lives Inside a Rotting Log?

Noon to 3 pm. Meet at barn. Brown bag lunch at noon. At 12:30 we will explore the environs of the rotting log and meet our hidden neighbors. Call Martha at 314-540-4068 to RSVP.

Local Events

February 5

6th Annual Backyard Bird Festival

7:30 am to 3 pm at Missouri Botanical Garden. Enjoy a day filled with guided walks, live exhibits, informative classes, and more. Fees vary. More information and online registration at www.mobot.org.

February 10 or February 11

Native Plant School: Native Plant Propagation from Seed

1 to 4 pm at Shaw Nature Reserve. Reserve. \$12 (\$8 for Garden Members). Visit www.shawnature.org or call 636-451-3512 to find out more or to reserve your place.

February 19

St. Louis Garden Blitz: "The Edible Revolution"

8 am to 3 pm at Missouri Botanical Garden. Enjoy a day of seminars, demonstrations, exhibits, and workshops featuring both nationally and locally-recognized horticulture professionals. \$96 (\$80 for Garden Members). More information and online registration at www.mobot.org.

National Invasive Species Awareness Week

February 28–March 4, 2011

Teachers, please contact us if you would like help planning your own NISAW event or activity.