



# Elk Lick Echo

A Newsletter of Floracliff Nature Sanctuary

Fall 2014

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## Using iNaturalist to Promote and Share Floracliff's Biodiversity

By: Natalie Redish

Those who have had the pleasure of visiting Floracliff are well aware of the sanctuary's beauty and diversity. This summer I was given the opportunity to capture and share some of the magnificence beneath the canopy during an internship with Floracliff. Staying true to the organization's mission to educate the public about the natural history of the Inner Bluegrass region, we utilized photography and the online platform iNaturalist to create a new interactive web presence that highlights and shares the sanctuary's biodiversity.

iNaturalist is a website and application for users to record the occurrence, location, image, and other data for any species observed. The site began as a final project for Master's students at UC Berkeley's School of Information, and through numerous collaborations and much hard work, it has become an integrated up-and-coming social network. iNaturalist has a vision for facilitating a meaningful connection between people and the natural world, to inspire a passion for conservation, and create a record of life for years to come. Not only can users document their own observations, they can seek community assistance for identifying species. The program is also capable of syncing with multiple social networks such as Flickr, Picasa, and Facebook. With a smartphone camera, you can upload photos that also include the metadata necessary to import the date, time and exact location. In addition to promoting interest in the natural world, this collection of data can play an important role in education, conservation, climate change, biogeography and research of all kinds.

As a part of my internship, my role was to develop Floracliff's presence on iNaturalist by recording observations and creating informational guides for the species lists. Each week, I photographed the flora and fauna I observed on my hikes. I recorded plant phenology events throughout the summer including the flowering and fruiting of many species. These photographs were added as observations in the Floracliff Biodiversity Project and used in various species guides on iNaturalist including Wildflowers, Woody Plants, Amphibians and Reptiles, Invasive Exotic Plants, and Ferns and Fern Allies. Floracliff will continue to add observations and images to the project and species guides. Visitors can also be citizen scientists for Floracliff by joining and participating in the Floracliff Biodiversity Project. Next time you come for a hike, be sure to document your discoveries! Links for the Floracliff Biodiversity Project and the species guides can be found here:

[www.inaturalist.org/people/floracliff](http://www.inaturalist.org/people/floracliff).



Left to Right: ironweed, cave salamander, prickly pear and widow's cross, green frog, all photos by Natalie Redish

Help us save on printing and postage costs by receiving your newsletter via email and in color! Send an email to [info@floracliff.org](mailto:info@floracliff.org) and include your name and address so that we can make the changes. Thank you!

## Flora Focus: Great Blue Lobelia (*Lobelia siphilitica*)

By: Josie Miller



Great blue lobelia (*Lobelia siphilitica*) is a late summer to early fall-blooming herbaceous perennial in the Campanulaceae family native to moist sites throughout most of the eastern United States and north into Canada. Visitors to Floracliff may observe the beautiful plant flowering along the rocky banks of Elk Lick Creek. The flowers of great blue lobelia proceed in opening from the bottom of the floral spike (or raceme) over a period of several weeks. Each flower contains a column that consists of the pistil (the female parts) surrounded by fused stamens (the male parts). When the flower bud first opens, it is in the male stage, its anthers loaded with pollen. As the flower matures into the female stage, the pistil extends to receive pollen from incoming pollinators.

Great blue lobelia is visited by a number of native bees including digger bees (*Anthophora* spp.), yellow-faced bees (*Hylaeus* spp.), green sweat bees (*Augochlorini* Tribe), and small carpenter bees (*Ceratina* spp.) ([Pollinators of Native Plants](#), Heather Holm, 2014). Bumble bees (*Bombus* spp.), the primary pollinator of great blue lobelia, tend to work their way up a flower spike, thus limiting the chance of self-pollination by visiting a mature female-stage flower after visiting a male-stage flower on the same stem. They use the broad lower lip of the flower as a landing pad, and as they work their way toward the nectaries deep within the flower, they are dabbed on the top of the head, thorax, and abdomen with pollen that dehisces from the anthers. If the next lobelia they visit has mature female-stage flowers, the pollen on their backs will brush against receptive stigma, and they will have earned their nectar reward.

## Flora Focus: Doll's Eyes (*Actaea pachypoda*)

By: Laura Baird



Doll's eyes can be found throughout the eastern United States. It can be identified by its alternate, bipinnately compound leaves with sharply toothed leaflets. Each leaf is fairly large compared to the size of the overall plant, which reaches one to three feet tall. The flowers are small and white, occurring on dense cylindrical spikes in the late spring. They have a citrusy aroma and offer ample pollen as a reward for their pollinators, which are mostly sweat bees.

In the late summer and early fall, the fruit matures and the plant's common name begins to make sense. The ripe fruits are large, stark white berries. Each berry has a dark, pupil-like scar at its center that marks where the flower bore its stigma. To make the image a little more unsettling, each "eyeball" is held by a swollen red stalk. This trait gives the plant its specific epithet *pachypoda*, which translates to "thick foot". The plant's other common name, baneberry, refers to the plant's toxicity. Although the entire plant is toxic for human consumption, a variety of wildlife browse on the plant's leaves. Many birds, including sapsuckers and wood thrushes, consume the berries. Small mammals like mice also steal berries, stripping off the pulp before consuming the seed.

## Many thanks to those who donated in the last quarter:

### Donors:

**Shooting Star (\$50-99):**  
Dennis and Elizabeth Chambers  
**Spicebush (\$100-299):**  
Ramesh and Suzanne Bhatt  
Clara Wieland

### In-kind Donors

Town Branch Tree Experts  
(wood chips)

### Volunteers

Maya Burke  
Michael Fleck

Hugh Huffman  
Alex Hunter  
Seth Midkiff  
Natalie Redish  
Charles Sither  
Nathan Skinner

# Schedule of Events

All events require advance registration. Cost is \$5 per person or \$12 per family unless otherwise noted. Most hikes last 2-3 hours. Call 859-351-7770 or email [info@floracliff.org](mailto:info@floracliff.org) to register or get more information.

## Programs and Hikes

Unless otherwise noted, all hikes are rated moderate to strenuous in difficulty due to narrow trails, uneven terrain, changes in elevation, and distance.

### **Saturday, October 4th @ 1:30 p.m.: Fall Wildflowers**

This hike to Elk Lick Creek will feature the last blooms of the season such as goldenrods, asters, and lobelia.

### **October 10th & 11th: Geology of Central Kentucky and the Palisades Field Studies Workshop (\$50)**

Led by Dr. Stephen Greb of the University of Kentucky, this workshop will focus on the geology and paleontology of central Kentucky. Morning sessions will cover topics including: geologic principles, geologic mapping, paleontology, and the geologic history of central Kentucky. Field trips will include Floracliff and one other location in the Palisades.

### **Saturday, October 18th @ 1:00 p.m.: Tree and Mushrooms**

This hike will cover the identification and natural history of some of our most common trees and fungi as well as their relationships with each other. Highlights will also include Elk Lick Falls, Elk Lick Creek, and some of the oldest trees in the preserve.

### **Saturday, November 8th @ 10:00 a.m.: Long Hike**

Join us for our annual long hike. This hike will cover about 4 miles and will feature the Kentucky River, Elk Lick Falls, Elk Lick Creek, and the oldest documented tree in Fayette County.



This Ordovician star fish fossil was found at Floracliff. Learn more about this and other fossils in the upcoming geology workshop on October 10th and 11th.

## **Weed Warrior Days - free!**

**Saturday, October 4th, 10 am - 1 pm**  
**Saturday, November 1st, 10 am - 1 pm**  
**Saturday, December 6th, 10 am - 1 pm**

Volunteer activities will involve assisting with the removal of exotic plants from the preserve. This is part of an ongoing effort to protect our native species and we rely on the help of volunteers. Please call ahead to register and receive more information at 859-351-7770. If you are interested in helping out on any other day, give us a call and we can work something out!

**THE MARY E.  
WHARTON NATURE  
SANCTUARY AT  
FLORA CLIFF**

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Lexington, KY 40522

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Web address: [www.floracliff.org](http://www.floracliff.org)

Floracliff is a non-profit organization. We rely on support from community members like you. Please support preservation in your region.

Yes! I would like to contribute a tax-deductible gift to Floracliff.

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Zip \_\_\_\_\_ Email \_\_\_\_\_

Amount enclosed \_\_\_\_\_ Date \_\_\_\_\_

- \$5 - \$49 acorn
- \$50 - \$99 shooting star
- \$100 - \$299 spicebush
- \$300 - \$499 dogwood
- \$500 - \$999 hickory
- \$1000+ old oak tree
- other

Please make checks payable to Floracliff and mail to:  
Floracliff, P. O. Box 21723, Lexington, KY 40522.  
Thank you!



**P.O. Box 21723  
Lexington, KY 40522**

*Address correction requested*