



Elk Lick Echo

A Newsletter of Floracliff Nature Sanctuary

Winter 2011

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The Geology of Floracliff

By: Beverly James, Preserve Manager

Winter is a great time to observe geological features in any area. The lack of thick vegetation makes it possible to see the land in a way you may not be able to see it otherwise. One of Floracliff's main attractions is Elk Lick Falls, a 61-foot waterfall that is also one of the largest known surface deposits of travertine in the eastern United States. Due to the steep terrain and fragile plant communities, we do not have a trail to the base of the waterfall, but during winter one can see a great deal of the formation from the main trail.

The formation of the travertine, or calcareous tufa, is associated with the area's groundwater seeps and springs, which are typical of karst geology. As the water flows through these areas, it accumulates calcium carbonate from the limestone. The water then reaches the surface, heads down a stream and over the waterfall, re-depositing the calcium carbonate as travertine. The deposition is dependent on a delicate balance between temperature, water chemistry, and the carbon dioxide present in the air. The resulting travertine is a white to light yellowish-brown mineral, more porous than the limestone found nearby. There are a number of these "petrified waterfalls" along the tributaries of the Kentucky River, but Elk Lick Falls is likely the best known due to its size.

A lesser known geological feature found at the preserve is the Elk Lick Graben, which is part of the Kentucky River Fault system. A graben is a depressed section of land bordered by two parallel faults. The two faults bordering the Elk Lick Graben split near Elk Lick Creek, creating a visible shift in the layering of the rocks. This same graben is visible in the rock cut along I-75 near exit 99.

Upstream from Elk Lick Falls is Kettle Springs, which likely plays a large role in the deposition of travertine. The name of the spring comes from the fact that a kettle was used to collect water from the spring. A neighbor of Floracliff that has lived in the area for many years can remember hauling the kettle from a Lexington distillery on a horse-drawn sled to its spot at the spring in 1929. He recalls the spring providing the "best tasting water".

On March 12th, geologist Jim Drahovzal will be leading a hike to discuss these features in greater depth as well as other geologic points of interest at Floracliff. Space is limited, so call ahead to register at 859-351-7770 or email floracliff@aol.com.



Elk Lick Falls, a 61-foot waterfall, is also one of the largest known surface deposits in the eastern US.

Help us save on printing and postage costs by receiving your newsletter via email and in color! Send an email to Floracliff@aol.com and include your name and address so that we can make the changes. Thank you!

Our Wish List

Please contact Beverly James at 859-351-7770 or floracliff@aol.com if you wish to donate any of the following items. All donations are tax deductible.

- Handheld GPS
- Projector
- Tools (hand tools or power tools)
- Regional field guides
- Gift certificate to hardware or office supply store
- Work gloves
- Spray bottles
- Birding binoculars

Flora Focus: American Beech (*Fagus grandiflora*)

By: Laura Baird



American beech leaves persist through winter.

The American beech is a deciduous tree native to eastern North America, easily recognized by its smooth gray bark, shallow root system, and distinctive slender buds. It can spread asexually by producing sprouts or “suckers” from existing roots, creating beech groves.

Its fruit, a nut or “mast”, was a primary food of the passenger pigeon, and the destruction of beech forests may have been a major contributing factor to the bird’s extinction. Beech mast remains an important food source for many woodland creatures today, including deer and turkey. Beech trees, often partially hollow, are additionally important for providing den sites for wildlife such as squirrels and raccoons.

The smooth bark of the American beech scars easily and the beech is a popular target for vandalism, even historically. An American beech tree trunk inscribed “D. Boon kilt a bar 1803” was found and preserved in Louisville, and although it is doubtful that Daniel Boone himself carved the message, the damage was authenticated to be from the mid-19th century.

While the American beech is not an abundant tree at Floracliff, it stands out in the winter due to the tree’s tendency to hang on to its leaves throughout much of the dormant season.

Flora Focus: Squirrel Corn (*Dicentra Canadensis*)

By: Emily Campbell



The heart-shaped flowers of squirrel corn form a raceme.

Squirrel corn, a perennial herb of the poppy family Papaveraceae, flowers between April and June. The fragrant flowers are ¾ to 1 inch long and line up along the top of the stem in a raceme. The flowers are heart shaped and white to light pink in color. Its scientific name, *Dicentra* translates in Greek as “two spurs”. The “spurs” are the two nectar-producing halves of the heart that form the shoulders and four petals. These plants store their energy in small yellow bulblets along the rootstock that resemble kernels of corn, hence the common name.

The leaves and flower stalks grow from the bulblets on the rootstock. The leaves are bluish green with a waxy coating. They are highly divided and there is usually one leaf per flower on the stem. The fruit of these flowers are capsules with 10-20 crested seeds inside.

Squirrel corn is normally found on the eastern United States in wooded areas. It resembles the bleeding heart, a relative, and is cultivated as a garden ornamental. The whole plant reaches an overall size of about 6 to 12 inches tall. It is actually a threatened species in some states due to over logging. squirrel corn is often confused with another close relative, Dutchman’s breeches (*Dicentra cucullaria*), a more common species that is often seen growing alongside it. Floracliff, being a well balanced deciduous forest, offers squirrel corn a high-quality habitat.

Many thanks to those who donated in the last quarter:

Volunteers

Nancy Adams
Sarah Bray
Kate Bussell
Brandon Coons
Emily Dobbs
Erick Espinal
Whitney Gambill
Kristin Grenier
Melanie Gruen
Maggie Heaberlin
Hugh Huffman

Roberta James
Laura Keller
Maddie Keyser
Ryan Lange
Montessori Middle School of KY
Brianna Nunn
Will Overbeck
Joseph Porter
Lissa Probus
Kaisey Propps
Evan Rhea
Bill Rodgers

Charles Sither

Donors

Shooting star:

David and Lisa Ruggles

Spicebush:

Central KY Ornamental and Turf
Association
Vulcan Materials

Hike Leaders

Neil Pederson

Schedule of Events

All events require advance registration. Cost is \$4 per person or \$10 per family unless otherwise noted. Most programs last 2-3 hours. Call 859-351-7770 to register or for more information.

Interpretive Hikes

Saturday, February 5th @ 1:30 p.m.: Winter Tree Identification

Preserve Manager Beverly James will discuss how to identify trees without their leaves by relying on their bark, buds and leaf scars. Hiking level is moderate.

Saturday, March 12th @ 10:00 a.m.: Geology of Floracliff w/ Jim Drahovzal

Geologist Jim Drahovzal will lead this hike to discuss the various geological features of Floracliff, including Elk Lick Falls, Elk Lick Graben, and Kettle Springs. Hiking level is moderate to difficult.

Saturday, March 26th @ 10:00 a.m.: Wildflowers of Early Spring

Join us for the first wildflower hike of the season. We should see many of the early risers, such as trout lilies, hepatica, and spring beauties. Hiking level is moderate.

Wednesday, March 30th @ 10:00 a.m.: Mid-week Wildflower hike

For those with some free time during the week, this will be a great chance to catch the early spring wildflowers. Hiking level is moderate.

Saturday, April 2nd @ 1:00 p.m.: Wildflower hike w/ Martina Hines

Martina Hines, an ecologist with the Kentucky State Nature Preserves Commission, will lead this wildflower hike during the peak blooming period. Hiking level is moderate.

Weed Warrior Days - free!

Saturday, January 8th, 10 am – 1 pm

Saturday, February 5th, 10 am – 1 pm

Saturday, March 5th, 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!

Private Appointments

Private tours can be scheduled for small groups interested in visiting Floracliff. Interested parties can contact Beverly James by calling 859-351-7770 or email floracliff@aol.com to schedule an appointment.

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

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Lexington, KY 40522

Phone: 859-351-7770
Email: floracliff@aol.com
Web address: 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.

Name _____

Address _____

City _____ State _____

Zip _____ Email _____

Amount enclosed _____ Date _____

- \$25 - \$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.



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

Address correction requested