



## Constructing a History of Land Use on the Domain

**H**ow does land use history affect current ecology on the Sewanee Domain? For example, how do past logging, agriculture, or other modifications of the land affect the composition of the current ecosystems?

This computer mapping project was spurred by the need to create a spatial database of historical Domain land use in order to better understand how past land use affects current ecology. It will provide material for future student projects based on a landscape-level understanding of land use history and its connection to forestry, economic, and biologic consequences today.

Collaborating with the forestry and biology departments, the Office of Domain Management, and the Landscape Analysis Lab, Lawson Armstrong, Karena Kwauk, Anne Bradley, Nick Hollingshead and I are creating this database. We are using written historical records to determine the spatial extent of land use activities by translating these documents into digital spatial information and connecting data to digital polygons on a map. Each polygon will be associated with descriptive information about the activity that went on within it and will link to the database.

The purpose of constructing a database of land use history is to help students and faculty doing research on the Domain by providing them with

a landscape level understanding of the land they study today. But going through every document in the Domain Management office and piecing



together events has given me a greater understanding of the Domain and of our changing attitudes toward it. At one time, the Domain was looked at as an economic resource in terms of the ability to sell and buy land. This developed into seeing the forest on the Domain as an economic resource itself. In the last 50 years, emphasis on the Domain as a learning resource has grown. In the 1960s, forestry students participated in forest inventories; in

the 1980s their classes conducted forestry experiments. Now conducting research on the Domain is an inter-departmental effort to learn more about our surrounding landscape.

I majored in geology because it requires active inquiry in the natural world and seemed the most multidisciplinary science, combining elements of chemistry, physics, forestry, biology, hydrology, and geography. While this project was not based on geologic research, I enjoyed the opportunity to work with a diverse group of people, particularly the Landscape Analysis Lab and the Office of Domain Management.

Each day, I heard the Domain Management interns talking about their daily tasks of walking boundary lines or bushwhacking through newly acquired land, and I realized that every deed or map I scanned was a representation of a similar amount of time, energy, and dedication on the part of past Domain managers, professors, and students.

This project will allow students, faculty, and the Sewanee community to use the Domain as a landscape level laboratory for analysis in environmental studies. This project will make available an element to integrate biology, forestry, geology, economics, and history: Our Domain.

—Elspeth Iralu, class of 2009



## Getting Acquainted with Lost Cove

Within minutes of setting foot in Sewanee's newly-acquired Lost Cove this past July, Jon Evans and I had found three species of plants that we had not seen anywhere else on the University Domain. Jon had made several equally fruitful treks into the cove, but this was my first botanizing trip there since its purchase earlier this year. The new plant discoveries will boost our list of plants of the Domain into the vicinity of 900 species.

The addition of the 3000-acre Lost Cove to Sewanee's 10,000-acre Domain presents tremendous educational, recreational, and stewardship opportunities for Sewanee. Not only does it expand the University's land holdings, but it links the Domain to the 8000-acre Franklin-Marion State Forest, preserving a swath of forestland and generous corridor for wildlife.

That is wonderful news for the University community and all the plants and animals with which we share this landscape. But what does it mean to the individual botanist, the herbarium curator who loves nothing more than rambling through the woods in search of new plants?

Until this summer, I could count my trips into Lost Cove on one hand: a hike to the Big Sink while I was in college; three trips with Bran Potter's "Walking the Land" class (one of those actually into nearby Champion Cove); and one spur-of-the-moment foray to see the effect of logging on the hillsides a few years ago.

Other than that, I have had to settle for

enjoying the cove vicariously: hearing my children relate their adventures there as part of St. Andrew's-Sewanee School's "Sense of Place" program, and friends tell of boating around the cove when the karst topography is overwhelmed by big rains. Lost Cove's only outlet for water is a series of sinkholes. Water at the Big Sink can easily reach six feet in depth, and after a lot of rain some have seen it 18 feet deep.

And then there are the tales of the moonshiners. Former Sewanee police chief Jim Parrott was involved in finding and destroying whiskey stills in and around Lost Cove in the 1970s. According to Jim, some men's lives consisted entirely of moonshine and the state penitentiary. One veteran bootlegger became so institutionalized that one fine day he robbed the Sewanee Bank and then walked to Shenanigan's to wait for the police to come pick him up and take him back to jail.

Back to botany. In the Smokies, one hikes uphill to see the great plants; but on the Cumberland Plateau, the diversity of herbaceous plants is down along the sides of the plateau. The soil is more moist, and the limestone bedrock provides more plant nutrients. So down you must go: clambering around boulders and rock outcrops, over fallen trees, through wet and dry streambeds. And when you've had enough botanizing, you must pull yourself up to the top of the plateau. But the rewards are worth it. Anyone who has gone down into Dick Cove or Shakerag Hollow knows what I am talking about.

Sewanee's new Lost Cove property is composed of wooded hillsides stretching from the top of the plateau to (but not including) the meadows in the bottom of the cove. Bedrock changes from sandstone to limestone as one moves down the hill. The crescent-shaped property provides 360 degrees of aspect, from dry south-facing ridges to rich north-facing slopes and everything in-between.

And the forest is bisected by a large TVA powerline right-of-way that is mowed periodically, providing a long, narrow opening in the canopy. All of this adds up to a variety of plant communities.

I was lucky to find a young roving botanist, Virginia McDaniel who works for the National Forest Service in Arkansas, to accompany me into the cove one weekend in mid-September. We followed the TVA powerline part of the way down, collecting specimens from the aster and grass families. At the bottom, we got turned around in a patch of huge bamboo before coming upon the almost-dry Big Sink. Our collecting bags full, we slogged back out via an old road.

By the time this issue of *The Sewanee Plant Press* comes out, I hope to have had a tramp into Lost Cove with Sally McCrady Hubbard, an intrepid spirit like her father, our former vice-chancellor. Another couple of trips like that, and I should become familiar enough with the tract to lead wildflower hikes there next year—without getting lost in the bamboo. Plan to join me and the rest of the Herbarium staff as we get acquainted with Lost Cove, Sewanee's new-found treasure.

—Mary Priestley



# Fall Calendar of Events

## A Guided Walk Through Abbo's Alley

Sat., October 4, 7:45 AM, Mary Priestley

A Family Weekend tradition! Meet at the Quadrangle for this one-hour easy walk in the Abbott Cotten Martin Ravine Garden.

## Dedication of Spencer Hall

Tues., October 7, after the Founders' Day Convocation

The Herbarium has lovely new facilities in Spencer Hall, the new wing of the science building. Come join in the celebration!

## Tour of Spencer Hall, Homecoming Weekend

Fri., October 24, 4 PM

Members of the Staff will be in the Herbarium during the tour for anyone who would like to visit. Various publications and even posters will be given away to lucky visitors. A Wine and Cheese Reception for alumni and faculty hosted by the Vice Chancellor and the Dean of the College will follow at Spencer Hall.

## Botanical Watercolor Workshop

Sat., November 1, 9:30 AM

Back by popular demand, this workshop led by Chattanooga watercolorist Margaret Patten Smith gives people of all ability levels an opportunity to try their hand at capturing some of autumn's beauty in watercolors. Participants are invited to bring in botanical or other natural objects to paint, or choose from a variety provided.

Bring your own painting materials and meet in the new herbarium on the first floor of Spencer Hall. The workshop is free, but space is limited, so reservations are necessary.

## The Cross/Perimeter Trail/ Tennessee Avenue Trail

Sat., November 15, 1:30 PM, Yolande Gottfried

This 1.25-mile loop hike is one of those featured in the summer 2008 issue of the *Sewanee* magazine, in the article "Sewanee's Best Day Hikes," which calls it "an easy and relaxing hike through rolling topography." Most of the leaves and flowers will be gone, but the trees and Liesegang bands and other geological features will still be there. Meet at the War Memorial Cross.

All times are CST or CDT.

Wear appropriate shoes on all of these walks. Risks involved in hiking include physical exertion, rough terrain, forces of nature, and other hazards not present in everyday life. Picking flowers and digging plants are prohibited in all of the above-mentioned natural areas.

For more information on these events or to reserve a spot in the watercolor workshop, call Yolande Gottfried at 931.598.5327 and leave a message.

## THE SEWANEE PLANT PRESS

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*Drawings, by Mary Priestley, are of crabapple, goldenrod, a self-portrait, and a hand lens.*

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## Membership Application/Renewal

The Friends of the Sewanee Herbarium support the work of the Herbarium: education, research, and conservation. A \$10.00 annual contribution would be very much appreciated. The date of your most recent contribution is printed on your address label.

Name and Address (if different from that on the mailing label on the back):

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Please make check payable to The University of the South. Gifts are fully tax deductible. Send to:

Sewanee Herbarium  
c/o Mary Priestley  
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## Buggytop Flora Project

The Sewanee Herbarium is assisting the Tennessee Native Plant Society (TNPS) in conducting a vegetation survey of the Carter State Natural Area (SNA) for the Tennessee Department of Conservation (TDEC) as part of the All Taxa Biodiversity Inventory of Tennessee's State Parks and Natural Areas. The Carter SNA includes Buggytop Cave (also known as Lost Cove Cave) and is part of the South Cumberland State Recreation Area (SCSRA). It was established in 1976 through a donation to TDEC to protect the cave and the area around it, currently a total of 375 acres.

The Carter SNA is of particular interest

to the University since the acquisition last winter of 3,000 acres in Lost Cove and Champion Cove. That acquisition together with the rest of the Domain of The University of the South, the Franklin-Marion State Forest, and the Carter SNA form a major habitat corridor for this part of the South Cumberland Plateau.

As this newsletter goes to press, the most recent foray into the Carter SNA lead by project coordinator for the TNPS, Dennis Horn, will have just taken place on September 13, 2008. The group will hope to have added to the list which already includes over 230 species of vascular plants observed on previous trips to the area. Those trips include a couple made last fall with Dennis Horn by Herbarium director,

Professor Jon Evans; Herbarium curators Mary Priestley and Yolande Gottfried; Todd Crabtree, state natural areas botanist; Kevin Fitch, state natural areas scientist; and Jason Reynolds, SCSRA ranger.

A group of 15 interested people from the general public and TNPS members participated in a spring survey on May 10, 2008, adding many new species to the list. Some of the more uncommon plants on the list, likely to have been in bloom on the most recent trip, include Eggert's sunflower (*Helianthus eggertii* Small), Cumberland rosinweed (*Silphium brachiatum* Gattinger), and eared goldenrod (*Solidago auriculata* Shuttlw. ex S. F. Blake), the last species only found, in Tennessee, in Franklin County.

—Yolande Gottfried

## You might be a botanist if ...

- ... it takes you three hours to walk 50 meters through a wildflower meadow.
- ... you've got a hand lens attached to your keychain.
- ... Barack Obama appears to you in a dream, and he asks you what plant family *Sanicula marilandica* is in.

—Virginia McDaniel

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