

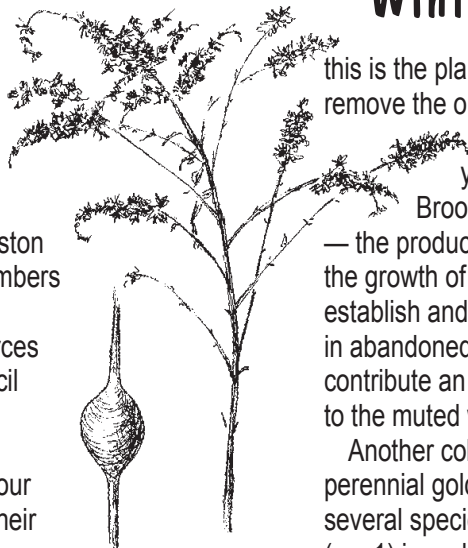


Winter Botanizing

An early January walk through the old fields on the Domain's "Cheston Farm" with members of Sewanee's Natural Resources Advisory Council presented an opportunity to enjoy some of our wildflowers in their winter state.

The late Charles Cheston, former Sewanee Forester and chair of the Forestry Department, sold the farm to the University in 1992. He had cleared fields, created ponds, and raised angus cattle. Once grazing ceased, opportunistic herbaceous plants seeded in, as well as blackberry, pines, and early successional hardwoods. Recently, Domain Manager Nate Wilson has been working to clear part of the former pastureland, and much of it is currently populated by the likes of broomsedge, goldenrod, and rabbit-tobacco.

Broomsedge (*Andropogon virginicus* L.) (pg. 3) is beautiful in the wintertime. This perennial grass — not a sedge at all — dies back every fall, leaving stems and leaves that European colonists are purported to have used to fashion brooms. The scientific name, *Andropogon*, means "beard of a man," and refers to fuzzy growth around fruits and along stems. If you've ever been tempted to try making your own broom,



this is the plant to start with. But be sure to remove the old flowers. You don't want to distribute that fuzziness as you sweep!

Broomsedge employs allelopathy — the production of chemicals that inhibit the growth of competing vegetation — to establish and maintain stands longterm in abandoned fields. These populations contribute an unmistakable rusty red color to the muted winter landscape.

Another colonizer of old fields is the perennial goldenrod, of which we have several species on the Domain. This one (pg. 1) is probably Canada goldenrod (*Solidago canadensis* L.) Susun Weed, on the Wise Woman's e-zine, suggests steeping a handful of crushed dry leaves for 30 minutes in boiling water to make a tea to counter allergies, sore throats, and coughs.

Goldenrod leaves contain about 7% natural rubber, and Thomas Edison developed one that was approximately 12%. The tires of the Model T that Henry Ford gave him were made from goldenrod. But natural rubber has a low molecular weight, and the tires would soften and start to melt in hot weather. Synthetic rubber is what's used in tires today.



Goldenrod forms colonies, clumps of genetically identical plants. Occasionally, an entire colony will sport galls, plant growths in response to egg-laying by certain species of flies or moths. The ball gall illustrated here is caused by a fly whose larva spends the winter inside the gall. Wintertime damage to the galls is often caused by woodpeckers in search of the juicy larvae.

One distinctive member of this old-field community, rabbit-tobacco (*Pseudognaphalium obtusifolium* (L.) Hilliard & B.L. Burt) (pg. 4) is an annual. Its appearance is unique: dusty white flowers and stems with bi-colored leaves, one side of which is white, the other green, later turning dark brown.

Also this plant, a member of the Aster family, figures prominently in some of our childhoods. Kids have smoked the stuff, and the experience has convinced more than a few to stay away from that truly wicked weed — tobacco.

Crush the dried plant in your hand, and it exudes a pleasant scent that some say resembles maple syrup. But burn the crushed bits in a paper bag, stick your nose in the top and take a whiff, and the odor can only be described as acrid. Harmless, but totally unappealing.

Rabbit-tobacco, if gathered before it goes to seed, makes a lovely dried flower. Spray the tight flower heads with hair spray or some other fixative, and the plant will stay beautiful inside all winter, providing a bright spot and a hint of summer on winter days when tramping around outside isn't possible.

Mary Priestley

From the North Carolina Botanical Garden News

Stars and Bars . . . and Botany: E. Kirby Smith

By Carol Ann McCormick, Assistant Curator, UNC Herbarium

This summer Kevin Chuang, the 2011 **Charles T. Mohr Herbarium Intern**, is cataloguing newly accessioned specimens collected by famous southeastern botanists such as Charles W. Short (1794–1863, Kentucky), Charles Mohr (1824–1901, Alabama), and Augustin Gattinger (1825–1903, Tennessee). Paper was a precious commodity in the nineteenth century, so specimens were mounted on thin paper or with multiple species on a single sheet. Kevin is learning to cope with such curatorial conundrums and to decipher nineteenth-century penmanship.

Kevin has also found specimens collected by lesser-known nineteenth-century botanists such as “E. Kirby Smith.” As we catalogue our plant specimens, we also document the people who collected them, so I commenced to search for Mr. or Ms. Smith. I discounted all hits on my first Google® search, “E. Kirby Smith,” as they all dealt with a Civil War general. Adding “botany” to the search string yielded an article by Dr. George Ramseur of the University of the South on the history of botany at Sewanee, which included this information: “Gattinger met and became good friends with retired Confederate General Edmund Kirby Smith, a mathematics and botany professor here at Sewanee. He visited and botanized with Kirby Smith on several of his collecting trips.”¹

Edmund Kirby Smith was born in St. Augustine, FL, in 1824. After graduating from West Point, he served in the Mexican-American War under General Zachary Taylor. After the war, he returned to West Point as a mathematics instructor. The Treaty of Guadalupe-Hidalgo, which had ended the Mexican-American War, established a new border between the two nations, and in 1854, Captain Smith was assigned to the Mexican-American Boundary Survey, which was charged with setting the official boundary. “In recognition of Smith’s interest in plant life, Major W. H. Emory, head of the commission appointed him botanist. The Captain was delighted; this was more to his liking than any peacetime assignment he had ever had.”² Kirby Smith, along with colleagues Bigelow, Thurber, Parry, Schott, and Wright, collected thousands of plants along the survey line.³ These specimens are in the Harvard and Smithsonian Herbaria.

In 1861 Kirby Smith joined the Confederate forces and by 1863 was in Shreveport, LA, in command of the Trans-Mississippi Department (Arkansas, western Louisiana, and Texas). After the

Union seized Vicksburg and the Mississippi River, the Trans-Mississippi Department became so isolated from the rest of the Confederacy that it became known as “Kirby Smithdom.” It’s doubtful that General Kirby Smith had time for botanizing during this busy period.

“Kirby Smithdom” was in fact so isolated that E. Kirby Smith was the last Confederate general to surrender. After taking an oath of amnesty in 1865, he returned to civilian life. In 1875 he became professor of mathematics and acting professor of botany at University of the South in Sewanee. “Kirby Smith himself was a great mathematics teacher but not a great mathematician. He

knew enough to teach undergraduates; he had neither time nor inclination to become a great scholar. During cold winter days he often permitted his two dogs to enter the classroom and occupy choice places around the [stove] while students worked at the blackboard. When some student made an error the professor would whistle for ‘Ned’ or ‘Dick,’ and hand him the eraser. Then with a twinkle in his eyes he would turn to the troubled student. ‘Rub it out,’ he would exclaim. ‘Even Ned knows it’s wrong and wants you to erase it.’”²

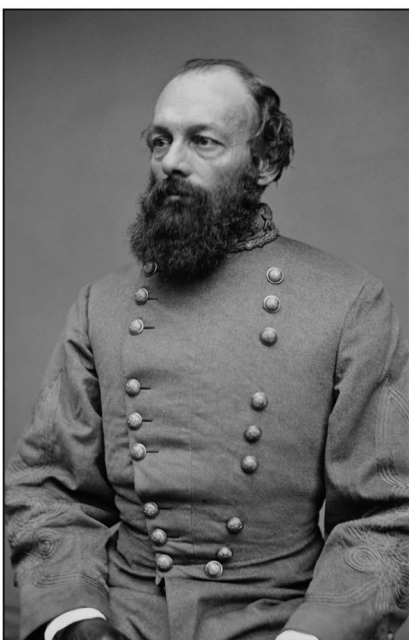
No one knows how many specimens Kirby Smith made while he was in Tennessee: the UNC Herbarium has four, University of the South’s herbarium has one. It’s unclear whether there are any more to be found. Gattinger wrote of Kirby Smith, “He would be a

very able man to collect but his work is in ‘darts and fits.’”¹

Edmund Kirby Smith, last surviving full general on either side of the conflict, died on March 28, 1893 and is buried in the Sewanee cemetery. In 2011, the 150th anniversary of the beginning of the Civil War, we can hope that Smith’s sentiments expressed in a letter to a Sioux City, Iowa, historical society will come to fruition: “sectional differences are fast disappearing and that, under the blessing of God, we will soon be, if we are not so already, one people in truth and deed.”² 🏳️

Sources:

1. Ramseur, George. 2001. Augustin Gattinger at Sewanee. *The Plant Press: Newsletter of the Friends of the Herbarium* 5(1): 1.
2. Parks, Joseph Howard. 1954. *General Edmund Kirby Smith, C.S.A.* Baton Rouge: Louisiana State University Press.
3. Emory, William H. 1859. *Report on the United States and Mexican Boundary Survey made under the direction of the Secretary of the Interior. II.* Washington, D.C.: Cornelius Wendell, Printer.



Winter Calendar of Events

**Mountathon—Sewanee Herbarium,
Spencer Hall — Sat., Feb. 11, 9:30–11:30
a.m., Mary Priestley**

Pressed plants are the “bread and butter” of the herbarium. Valuable for scientific reference, they are often objects of beauty. Come help us mount our backlog of specimens collected by such giants of Southeastern botany as Albert Radford and C. Ritchie Bell. Learn methods that have been passed down through generations and are still used today, and take home a guide to mounting pressed plants. Meet in the herbarium on the first floor of Spencer Hall. The main entrance is across from duPont Library and there is parking behind the library.

**Hunt for the First Hepatica — Shakerag
Hollow — Sat., Feb. 18, 1:30 p.m.,
Yolande Gottfried**

A walk to see what might be out early in Shakerag—maybe some hepatica, pepper-and-salt, or star chickweed. If flowers are scarce on the ground, we’ll look at mosses, liverworts, lichens, clubmosses, and even some ferns, which are not fazed by winter weather. Meet at Green’s View for this moderate-to-strenuous 2-mile walk that may include a steep rocky section of the trail. Come prepared for muddy, wet, icy, and/or rocky conditions.

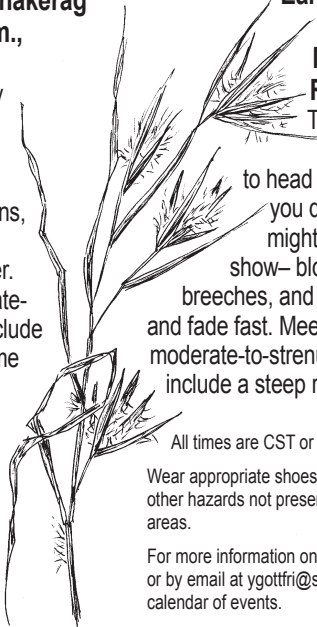
**Wee Beasties of Lost Cove
— Sat., March 3, 10 a.m., Paul
Davison, bryologist**

Don’t miss this micro-safari, co-sponsored with the TN Native Plant

Society. With hand lenses and a few contrivances we aim to discover what few will ever see while in the field. A new device will be the baited slide. Join us as we scout for water bears, rotifers, and even ciliated protozoans that live among the mosses and wet leaves of the forest floor. While focused on the small, we will also take advantage of opportunities to observe leaf litter arthropods and other invertebrates. Plans are to spend the morning in Lost Cove and then move to a lab on campus to use microscopes for further investigation. Meet at the Blue Chair restaurant in downtown Sewanee. Bring a bag lunch for this potentially extended trek into the world of the very small — and don’t forget your hand lens.

**Early Spring Wildflowers —
Shakerag Hollow — Sat.,
March 17, 2 p.m., George
Ramseur**

The first day of spring is almost here and it’s time to head out to Shakerag Hollow. If you don’t get out about now you might miss the beginning of the big show— bloodroot, trout lily, Dutchman’s breeches, and spring beauties bloom early and fade fast. Meet at Green’s View for this moderate-to-strenuous 2-mile walk that may include a steep rocky section of the trail.



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 or other Sewanee Herbarium events, please contact Yolande Gottfried at the Herbarium (931.598.3346) or by email at ygottfri@sewanee.edu. Directions are available on the Herbarium website, lal.sewanee.edu/herbarium/, under the calendar of events.

THE SEWANEE PLANT PRESS

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Stars and Bars ... and Botany is reprinted with permission from the August 2011 issue of the newsletter of the North Carolina Botanical Garden.

Drawings, by Mary Priestley, are of the Cheston Farm, goldenrod, broomsedge, and rabbit-tobacco.

Friends of the Sewanee Herbarium

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.

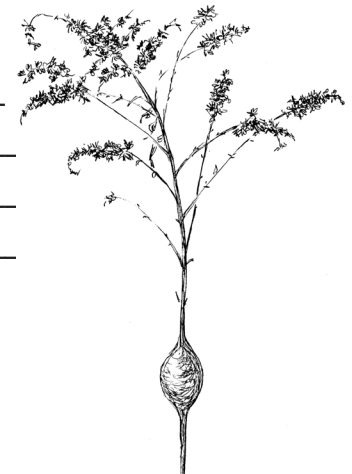
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Flora of the University Domain Update

The Flora of the Domain moved one step closer to completion in 2011 with the careful outside review of our voucher specimens by Dr. Duane Estes from Austin Peay University. Duane spent many hours and several late night, Sundrop-powered sessions carefully going through the Domain collection with us. We have had a wonderful time working with Duane and look forward to our future collaborations.

The official Domain Flora count now stands at 1043 taxa. There were 5 new plant species found on the Domain in 2011. Three were lawn weeds identified on campus (yes these count, if they weren't planted!): *Oxalis corniculata* (creeping sorrel) is a pernicious greenhouse weed that spreads from pot to pot via the use of exploding seed capsules. Some of these seeds made their way out of the Woods

greenhouse and formed a small population around the retaining wall and lawn next to Woods Lab.

Last April, Mary found a Eurasian member of the Forget-me-not family, *Buglossoides arvensis* (corn gromwell), growing in the new lawn adjacent to Spencer Hall. I found a healthy population of *Dichondra carolinensis* growing in the lawn adjacent to duPont Library. This prostrate, creeping herb is a member of the morning glory family. It caught my eye because back in 1992 I used this species in a clonal plant foraging study that I conducted when I was teaching at Rice University. It is an excellent space invader and some folks in California actually plant their entire lawns with *Dichondra*.

Katie Qualls, a senior ecology and biodiversity major, found a single specimen

of *Spiranthes ovalis* (October ladies' tresses) in one of my Domain permanent vegetation plots in Lost Cove that she was censusing for her honors thesis research. This beautiful little white orchid blooms very late in the season and is not commonly found on the Plateau.

The most recent addition to the Flora is *Isoetes valida* (quillwort) which I found growing in the exposed, shallow lakebed within the upper reaches of Lake Jackson. This diminutive clubmoss-relative looks more like a sedge than a lycopod and is distinguished from other members of its genus by the surface texture of its megaspores! It is the closest living relative of the giant lepidodendron trees that once dominated the forests of this region during the Carboniferous Period, 300 million years ago.

Jon Evans

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