

## For They're Some Jolly-Good Fellows: Herbarium Sponsors an Exciting New Student Position

As part of an initiative to raise awareness of Sewanee's fantastic biological diversity, the Sewanee Herbarium will fund a pilot fellowship program in the coming year for junior and senior students who excel in the natural sciences and are excited to share the wonders of the Domain with others. Biodiversity Fellows, as they will be called, will act as student ambassadors for the Domain and the surrounding Cumberland Plateau region, using their knowledge and passion for the area to engage the University and its visitors. They will also be part of a much larger task force working to meet the goals for natural areas stewardship listed in Sewanee's 2013 Sustainability Master Plan.

Each fellow will be expected to participate in the three main aspects of the program: leadership and service, communication, and research. Though each fellow will find unique ways to fill these roles, the fellows will essentially be a team, working closely with each other and the Herbarium to communicate the excitement of the Domain's biodiversity to the greater Sewanee community.

For the leadership and service portion of the program, fellows will assist with existing Herbarium projects and activities and will design new outreach programs for the Herbarium and beyond. Fellows will engage their peers and the community with biodiversity related service projects, such as invasive species removal, and other outings led in conjunction with the Sewanee Natural History Society. Guided nature walks and special hikes will be organized for visitors to the Domain in coordination with the Admissions Office. Prospective students, alumni, parents, and other visitors interested in the natural beauty of the Cumberland Plateau will have the opportunity to participate in informative tours led by the students who know it best. Biodiversity Fellows may be called upon to contribute their knowledge and leadership

abilities to the summer Pre-College Field Studies Program, and may also become directly involved with the management of the Domain by serving on the Domain Stewardship Committee and/or the Sustainability Steering Committee. Inevitably, each fellow will find a unique way to contribute to the program's goals, but you can be sure that however they choose to participate, their presence will be known.



As ambassadors of the Domain's flora and fauna, this group of students will utilize a variety of communication outlets to keep the University and its guests informed about our biodiversity, its management, and its importance. Blog entries for the Herbarium and the Sustainability program along with articles in local newsletters and newspapers will highlight biodiversity-related projects and events in the area as well as the Biodiversity Fellows' research. Fellows will give talks on campus, both to the public and to individual classes, and will assist in arranging and organizing visits and special seminars by other biodiversity-related speakers.

The communication section of the program will also focus on the development of educational materials such as nature guides, pamphlets, and promotional videos that will heighten interest in the Domain's biodiversity.

In addition to their other duties, Biodiversity Fellows will actively conduct research that will contribute to our understanding of the Domain's biodiversity and its conservation. As a team, they will assist with the Herbarium's ongoing research and with biodiversity monitoring on the plateau. As individuals, they will engage in independent research projects concerning some aspect of Domain biodiversity that is of special interest to them. Each project, whether group or individual, will have implications for the Domain's biodiversity management, in which the Fellows will be intimately involved.

The 2013-2014 academic year will be the pilot year for the program, yet there is already a small group of students on campus working to jumpstart projects and activities for the coming year. I am among them, and I am thrilled and honored to have received the title of a Sewanee Biodiversity Fellow. I am currently training under the Herbarium staff and Post-Baccalaureate Fellow Nathan Bourne, becoming familiar with Sewanee's flora and the daily activities of the Herbarium. Though my time as a Biodiversity Fellow will be limited to the program's infancy, I have no doubt it will be one of the most important aspects of my academic career at Sewanee. I look forward to not only my own work with the program, but also to training the fellows that follow me, passing down a title that may soon become esteemed in the Sewanee community. Be on the lookout for me and the other Biodiversity Fellows this fall, and keep an eye out for the many exciting biodiversity events to come!

—Hali Steinmann C'15  
Sewanee Herbarium Biodiversity Fellow

## The Fruits of a Fellowship: A Year in the Herbarium



It once again feels like a Tennessee summer. The humidity and temperature are on the rise; blackberry vines are flecked by flowers on their path of transformation into the fruits that will provide sweet relief on many hot days; and the blueberries are pregnant with fruits that will soon ripen.

While summer brings with it the promise of swims in Lake Dimmick, the unforgettable taste and feel of that first vine-ripened tomato fresh from the garden, and warm clear nights spent on the porch with the company of close friends, it also brings a reminder that my time in the Herbarium as a post-baccalaureate fellow is coming to a close. As I think about the end of the year and the next stage of my life, I have been reflecting on what the past year has been, what was accomplished, and what there is still to look forward to in the next month.

As a post-baccalaureate fellow I have worked for both the Herbarium and the Office of Environmental Stewardship and Sustainability. While this has divided my time and diversified my focus, what I have found most exciting during my time has been exploring the connections between the two. To many the cataloguing of a flora, the mounting of specimens, and the storage of plants in a herbarium may seem antiquated, the stuff of science past far removed from the current world of cutting-edge molecular and technology-driven science, but the role and importance of Herbaria has

become increasingly apparent to me over the course of this past year.

As I have helped to write a Sustainability Master Plan for the University that has focused largely on the preservation and management of Sewanee's natural environment in a sustainable way, I have realized that most of our understanding of the immense wealth of resources on the Domain comes from the work of programs like the Herbarium.

One of the major challenges of the sustainability movement is figuring out how to sustain human and natural communities and the relationships between the two in the context of a changing climate that threatens to disrupt patterns and processes across those communities. As we struggle to address issues brought about by climate change, the first step is to understand the effects that climate change can have. To achieve that understanding it is essential to know what the natural communities we are looking at are composed of and how that composition is distributed. This is a primary role of the Herbarium.

To understand the flora of the Domain, to know what the more than 1100 species that have been found are and roughly where they can be found will allow us to see the effects of a changing world over time. The baseline knowledge that has been established through many years of collection, documentation, and study will provide a benchmark against which the composition of communities can be compared in the future.

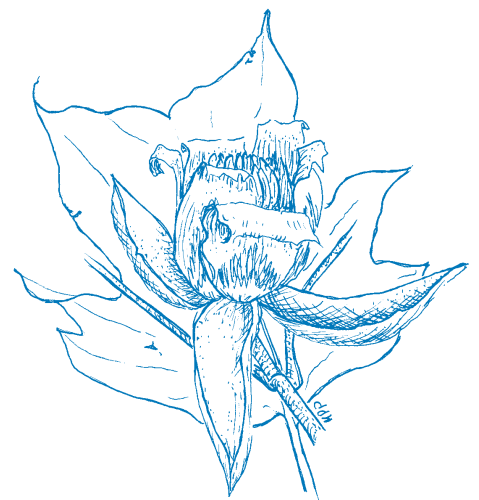
It is for this reason that I have come to value highly all of the work I have done towards the writing and potential publication of a Vascular Flora of the Domain that will be the culmination of my fellowship. This work—even when it involved the occasional tedium of doing a lot of database management—coupled

with encouraging awareness of the Domain Flora through projects like the Herbarium blog and leading hikes will work towards helping sustain the great plant diversity we are lucky enough to be able to enjoy and appreciate in our own backyard.

Over the course of the past year I have become increasingly aware of the threats to that diversity, the implications those threats can have, and how it is possible for us to act to preserve it. It is my hope that the work I have done, helping the Herbarium to document the flora and the Office of Environmental Stewardship and Sustainability to create a plan for how to sustain it will contribute towards sustaining the richness of that flora to be enjoyed by generations of Sewanee students to come.

While there are many elements of my time working in the Herbarium I will miss, I am confident that programs like the new Biodiversity Fellows program will carry the torch forward, continuing to promote the understanding of biodiversity on the Domain and working towards sustaining it.

—Nathan Bourne, C'11  
Herbarium Post-baccalaureate Fellow



# Summer Calendar of Events

## Nature Journaling Opportunity

**9:00–11:00 a.m. Thursdays. Mary Priestley**  
This is not a workshop. Rather, it is an invitation to set aside any or all Thursday mornings for nature journaling. Meet at Stirling's Coffeeshouse on the Sewanee campus. Bring a notebook (preferably small and unlined) and a pen or pencil. Any other art supplies are optional.

## Mountathon—Sewanee Herbarium

**Sat., June 22, 9:30-11:30 a.m., Mary Priestley**  
Come help us mount our backlog of pressed plant 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.

## The Res—SAS

**Wed., June 26, 4 p.m., Nathan Bourne '11 and Hali Steinmann '15**

Nathan, a post-baccalaureate fellow, and Hali, a biodiversity fellow, both working in the herbarium this summer, will lead a walk around this lake on the St. Andrew's-Sewanee School campus through scenic terrain and diverse plant communities. This easy to moderate one-hour walk will begin at the parking lot behind the science buildings of St. Andrew's-Sewanee, just off Fire Tower Road.

## The Res—SAS

**Wed., July 10, 4 p.m., Nathan Bourne '11 and Hali Steinmann '15**

A reprise of the above-described walk.

## LOOKING AHEAD

### Lost Cove

**Sat., Sept. 7, 10 a.m. Jon Evans**

Sewanee professor Jon Evans will lead the Tennessee Native Plant Society on a hike off-trail to explore some of the benches leading down into Lost Cove from Point Disappointment. We'll look for late summer bloomers, including the state-listed *Silphium brachiatum*. The emphasis for this all day excursion will be on exploration of the flora of these interesting habitats just below the escarpment on the Cumberland Plateau. Meet at the Blue Chair Café, Sewanee, for this moderate to difficult hike. Bring lunch and plenty of water. Contact Mary Priestley, 931-598-0157, for more information.

All times are 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](mailto:ygottfri@sewanee.edu). Directions are available on the Herbarium website, [lal.sewanee.edu/herbarium/](http://lal.sewanee.edu/herbarium/), under the calendar of events.

## THE SEWANEE PLANT PRESS

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*Drawings, by Mary Priestley, are of some late spring bloomers on the Domain: Solomon's seal, mountain laurel, yellow-poplar, and puttyroot orchid.*

## 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.

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

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## From the Blog 5/27/2013—A New Orchid Debuts!



**W**e found a new orchid today! Actually, we've known for several years that puttyroot orchid, *Aplectrum hyemale*, grows here on the Domain, because we've seen the single overwintering leaves that lie on the forest floor like scraps of corduroy fabric. The trick, though, is to catch the plant in bloom. In contrast to the 8" grey-green leaves that stand out against the brown leaf litter, the 1" maroon-to-yellow-to-green-to-brown flowers are only too well camouflaged

when they bloom in late spring or early summer. So this was a treat—a first sighting for the Domain.

We have two species of orchids—this one and crane-fly orchid, *Tipularia discolor*—that photosynthesize all winter long and bloom in spring or summer. The latter, although even harder to distinguish when in bloom, is more common on the Domain. As its common name implies, the flowers resemble crane-flies, which in turn resemble giant mosquitoes.

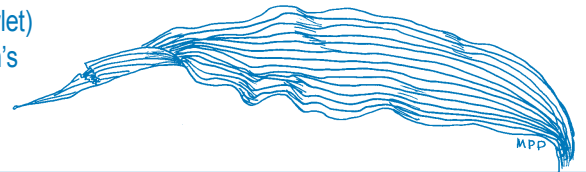
Orchids produce their pollen in packets called pollinia rather than as loose grains and are known for their adaptation to specific pollinators. The crane-fly orchid, for example, is pollinated by noctuid (owlet) moths. Its pollinia adhere to the moth's compound eye, apparently the only part of the insect where anything

will stick! Puttyroot, on the other hand, is self-pollinated, freeing it from dependence on insects. The downside of this strategy, however, is that it cuts down on genetic diversity.

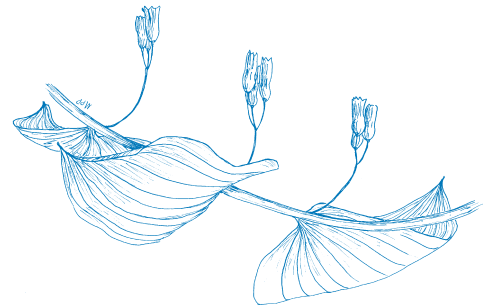
So far we've found the puttyroot orchids in only a couple of places in Shakerag Hollow. But the more we get around the Domain, the more likely we are to find more communities where this lovely little plant has found a home.

Keep up with Herbarium activities at <http://sewaneherbarium.wordpress.com/>

—Mary Priestley



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