



Domain Flora Published!

It's official! After many years of hard work by the staff and students of the Herbarium the Vascular Flora of the University of the South has been accepted for publication in the journal *Castanea* and appeared in the September issue. The University has secured the right for the paper to be freely accessible online.

The Flora documents the presence of 1118 taxa for vascular plants on the Domain. To put this in perspective, that number represents 39 percent of the total vascular plant taxa for the entire state of Tennessee! Sewanee has the highest documented plant species diversity of any college campus in the United States. This flora contains six new state records, 74 new Franklin County records, and two potential new species. Eighteen taxa on the Domain are listed as protected either at the state or federal level, including the federally listed endangered *Clematis morefieldii* and state listed endangered *Diamorpha smallii*, *Silphium brachiatum*, and *Symphyotrichum pretense*. The high plant diversity on the Domain reflects the broad range of habitats that can be found on our 13,000 acres.

The Flora is the first publication to describe the plant communities of the Domain and will now serve as a reference for all future scientific research and management conducted on University land. The Flora would not have been possible without the many years of collecting by our Herbarium curators: Mary Priestley and Yolande Gottfried. Special thanks goes to co-author Callie Oldfield, our Herbarium post-baccalaureate fellow this past year, who put in countless hours formatting the 31-page paper and conducting many

of the floristic analyses. My colleague, Dwayne Estes at Austin Peay University was extremely helpful as another set of eyes to confirm our voucher specimens.

We have already found three new species for the Domain since the Flora was submitted, so stay tuned for an "additions to the Domain flora" paper!

—Jon Evans

Evans, J.P., C.A. Oldfield, M.P. Priestley, Y.M. Gottfried, L.D. Estes, A. Sidik, and G.S. Ramseur. 2016. The vascular flora of the University of the South, Sewanee, Tennessee. *Castanea* (in press).



Celebrating Milestones, Honoring George Ramseur

This fall, the Herbarium's *Sewanee Plant Press*, where we have regularly chronicled the botanical achievements of some of Sewanee's finest students, will celebrate its 20th Anniversary. In addition, long-time contributor, former Professor of Biology and Herbarium Director Emeritus George Ramseur has turned 90. In recognition of these milestone events, a celebration is planned at Homecoming on Friday, November 4, at 4 p.m. in the Herbarium. Please make plans to join us.

Over the last 20 years, the Herbarium has provided ad hoc funding for many Sewanee graduates to return to campus and publish the botanical research they initiated as undergraduates. These Herbarium Graduate Fellows conduct research and assist the Herbarium with curation, outreach and communications. In honor of the 20th anniversary of *Plant Press* and to honor George Ramseur's many contributions to it, we are announcing a campaign to raise at least \$50,000 to create the George Ramseur Endowed Fund for Graduate Fellows.

Please consider making a year-end contribution to this important initiative. We know that Sewanee's 1,120 species of plants make our 13,000-acre campus unparalleled as place for botanical field research. It is important that we now endow a program that will sustain our ability to successfully connect this botanical treasure to future Sewanee students.

Earmark gifts for Sewanee Herbarium Graduate Fellowship Program and send to: Office of University Advancement, The University of the South, 735 University Avenue, Sewanee, TN 37383. You can also make your gift online at give.sewanee.edu Indicate the gift is for the Herbarium Graduate Fellowship Program in "Comments."



Coastal Basswood Research Published

Sprouting behavior allows small populations of woody plants to persist in the same location for hundreds to thousands of years despite isolation and limited sexual recruitment. In a paper published in the September issue of the *American Journal of Botany*, my colleague Dr. Ashley Morris and I examined the demography and genetic structure of coastal basswood (*Tilia americana* var. *caroliniana*) populations on back-barrier islands along the Georgia coast of the United States. Over a 10-year period, we found that the cycling of basal sprouts promoted population maintenance despite the absence of new individuals produced from seeds.

Our assessment of the genetic structure of these populations suggested that the basswood trees on these islands have likely

been isolated for at least 2,400 years due to sea level rise. We concluded that by promoting population persistence through periods of unfavorable environments, sprouting behavior can influence the composition of future plant communities, either by prolonging an eventual species extinction or allowing populations to expand when favorable conditions return.

Dr. Morris, C'97, started this research with me as a Sewanee undergrad when she was a student in the Island Ecology Program. She is currently an associate professor of biology at Middle Tennessee State and the curator of the MTSU Herbarium.

—Jon Evans

Evans, J.P., and A. Morris. 2016. Isolated coastal populations of *Tilia americana* var. *caroliniana* (Malvaceae) exhibit long-term persistence through vegetative growth. *American Journal of Botany* 103:1–7.

Impact of Deer on Domain Forests Published

I recently published a paper with a group of students and colleagues in the journal *Forests* that examined the patterns and drivers of white-tailed deer herbivory across 3,000 acres of the Domain. This work stemmed from the honors research conducted in my lab by Meg Armistead, C'14 (ecology and biodiversity), and represents the first published study of deer browsing on the southern Cumberland Plateau.

White-tailed deer populations have been increasing in the eastern United States, causing changes in plant communities and the structure of forests owing to deer eating the plants (herbivory). As a result, it is important to identify drivers of this herbivory in order to inform management practices.

Using fenced deer exclosures on the Domain, we found that deer are causing a decrease in tree sapling density. The southern Cumberland Plateau has been called one of the more resilient sites in the Southeast in the face of climate change; however, managing forest regeneration may be complicated by the effects of deer on sapling growth and survival. Deer herbivory may preclude the ability for tree species to adapt to microclimatic change.

It has been poorly understood how topographical features affect deer. The results of this study show that on the Cumberland Plateau, topography plays a critical role in limiting the foraging behavior of deer and is a primary predictor of sapling density. Understanding where deer impacts are most concentrated can help managers reduce human-wildlife conflicts, such as vehicle collisions, increasing Lyme disease, and economic losses, while improving forest regeneration and diversity.

—Jon Evans

Evans, J.P., C.A. Oldfield, K.K. Cecala, J.K. Hiers, J.K., C. Van De Ven, and M.M. Armistead. 2016. Pattern and drivers of white-tailed deer (*Odocoileus virginianus*) herbivory on tree saplings across a plateau landscape. *Forests* 7: 101.



WHAT IF TREES COULD WALK?

A SEWANEE TREE BOOK



MARY PATTEN PRIESTLEY

INSPIRED BY

GEORGE S. RAMSEUR, SR.

What if Trees Could Walk?

Think for a minute: what if one of the Virginia pines that dangle from Piney Point could take off? Would they still hang around that iconic overlook? If not, where would they go, and why?

This and other questions were the stuff of Dr. George Ramseur's teaching method—provocative queries posed to get his students thinking. Sewanee botany professor for years, George was plant mentor to decades of college students. I should know—I was one of those students.

This book, due out in time for our Homecoming open house, is inspired by George and his engaging teaching style. *What if Trees Could Walk?* will be available on amazon.com and in the Sewanee bookstore. All book sales will benefit the Sewanee Herbarium, of which George Ramseur was the founder.

—Mary Priestley

Friends of the Sewanee Herbarium

The Friends of the Sewanee Herbarium support the work of the Herbarium: education, research, and conservation. A \$10 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):

Amount enclosed: \$10 Other: \$ _____

Please mail checks (made payable to The University of the South) to:

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Sewanee, TN 37383



Others who might like to receive *The Sewanee Plant Press*: _____



Fall Calendar of Events

Homecoming Open House

Fri., Nov. 4, 4–5 p.m.,

Herbarium/Biology Department

Meet in the Herbarium (Spencer 171).

We have much to celebrate, including the publication of the Domain Flora, 20 years of *The Sewanee Plant Press*, and the debut of *What If Trees Could Walk?*

Botanical Watercolor Workshop

Sat., Nov. 12, 9–11:30 a.m.,

Margaret Smith

This workshop led by Chattanooga watercolorist Margaret Patten Smith gives people of all ability levels an opportunity to try their hand at capturing beauty in watercolors. Participants are invited to bring in their own objects to paint, or choose from a variety provided. Bring your own painting materials and meet in the herbarium on the first floor of Spencer Hall. The workshop is free, but space is limited, so reservations are recommended (see next column).

Nature Journaling

A group meets for nature journaling Thursday mornings 9–11. Come try it out—stick with it if you like. Bring an unlined journal (or a few sheets of unlined paper) and a pen or pencil. No experience needed. As the seasons transition, we gather in different places, so contact marypriestley@bellsouth.net for info on the meeting place.

All times are CST or CDT.

For more information on these events or to reserve a spot in the watercolor workshop, call the Herbarium at 931.598.3346. Directions are available at the Herbarium website, lal.sewanee.edu/herbarium.

THE SEWANEE PLANT PRESS

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Drawings, by Mary Priestley, are of tickseed, beautyberry, coastal basswood, hungry ungulates, and persimmon.

HERBARIUM BLOG

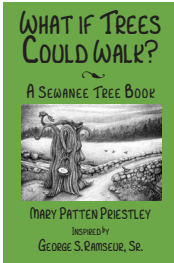
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**Celebrating 20 years of
The Sewanee Plant Press
and our new book!**

In Memory of Ashley

Ashley Block graduated *summa cum laude* from Sewanee in 2013 with an honors degree in ecology and biodiversity. Ashley's honors research with Dr. Evans focused on agricultural legacies and forest succession at the King Farm. She received the Harry C. Yeatman award for her achievements in biology and graduated Phi Beta Kappa. While at Sewanee, Ashley participated in numerous extracurricular activities. Her bright and caring personality and strong work ethic touched the Sewanee community.

After graduating, Ashley worked at Walt Disney World in conservation and management. Later, she became an environmental site assessment scientist with the environmental consulting firm Aerostar SES. In 2015, she began graduate school at the University of

Georgia in the Integrative Conservation and Anthropology (ICON) program. She planned to study land use decisions on genetically modified crops in Brazil.

I had the pleasure of working with Ashley in the Herbarium over the summer. She returned to Sewanee with two goals in mind: to resurvey the King Farm vegetation plots with Dr. Evans in order to publish her honors thesis, and to investigate the possibility of establishing a Tennessee Plant Conservation Alliance. Ashley was extremely dedicated to her research, and her ability to cold-call botanists and conservationists around the state inspired me. Our summer at the Herbarium ended full of elation, as we each presented research at the Botanical Society of America conference in Savannah, Georgia.

Tragically, on Sept. 12, Ashley was struck and killed while biking in Athens, Georgia, by a person driving under the influence of drugs.

Ashley will always hold a special place in our hearts, and we will never forget the impact she made on Sewanee, the University of Georgia, and everyone she met.

—Callie Oldfield, C'15

