

# THE PLANT PRESS



Volume VI, No. 3

Newsletter of the Friends of the Herbarium

Summer 2002

## A Michaux Celebration

*“André Michaux epitomizes our image of the field botanist who enthusiastically explores lands for new plants and thoroughly catalogues his discoveries. His legacy endures to this day.” —Michael Baranski, Catawba College*

This past May, botanists, historians, horticulturists and others gathered in Gastonia, North Carolina, to celebrate the life and work of 18th century French botanist André Michaux. The Michaux International Symposium and Festival, co-sponsored by Belmont Abbey College, the Daniel Stowe Botanical Garden, and Gaston Day School, was an unforgettable event. As part of the celebration, nearby Charlotte’s Mint Museum of Art had an exhibit of the extraordinary work of Pierre-Joseph Redouté, the most celebrated artist in the history of botanical illustration. Redouté illustrated Michaux’s two publications, *The Oaks of North America* and *The Flora of North America*.

Who was André Michaux? And why all the fuss? Born to a farming family near Versailles, France, he began to study botany only after the tragic death in childbirth of his young wife. He distinguished himself so that he was sent to Persia in search of plants that might be adaptable to the climate and soils of France. After that successful trip, King Louis XVI sent him, with his young son in tow, on a similar mission to North America in 1785. The French government was particularly in need of trees for reforestation and use as timbers for ships.

Michaux accomplished the task in no small measure, shipping back to France tens of thousands of North American plants and seeds over the course of

eleven years. From the botanical point of view, a greater accomplishment was his discovery and documentation of plants, particularly from the Southeast, that were previously unknown to the scientific world. Altogether, he named hundreds of North American plants, as a perusal of any botanical guide to this region will show. His discoveries range from trees like southern red oak (*Quercus falcata* Michx.), winged elm (*Ulmus alata* Michx.) and bigleaf magnolia (*Magnolia macrophylla* Michx.) to ferns, including Southern lady fern (*Athyrium felix-femina* ssp. *asplenoides* (Michx.) Hulten) and Christmas fern (*Polystichum acrostichoides* (Michx.) Schott). Popular wildflowers that he named include halberd-leaved violet (*Viola hastata* Michx.), dwarf larkspur (*Delphinium tricornis* Michx.), and large-flowered trillium (*Trillium grandiflorum* (Michx.) Salisb.).

The French Revolution took place while Michaux was in North America, and the erstwhile King’s Botanist eagerly embraced democracy. When as Citizen Michaux he climbed North Carolina’s Grandfather Mountain in 1794, he thought it was the highest mountain on the continent. He recorded that on reaching the summit he jubilantly sang out *The Marseilles* and shouted, “Long live America and the Republic of France! Long live liberty!”

The symposium marked the 200th anniversary of Michaux’s death. Some

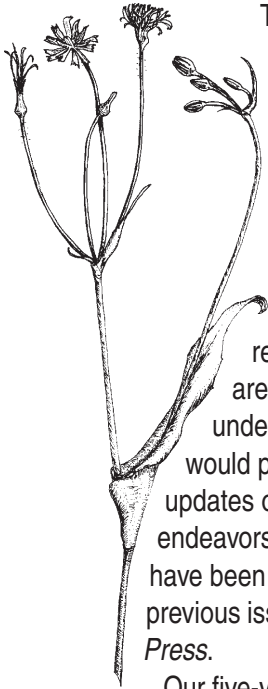
thirty papers were presented, with topics ranging from descriptions of his travels to electrophoretic analysis of bigleaf magnolia; and from the current status of some of the rare plants that he discovered to updates on great 18th-century gardens of France. Participants came away with a deeper understanding of the range of Michaux’s influence and the significance of his accomplishments.

Of particular interest to Sewanee was George Rogers and Vivian Rogers-Price’s paper on Michaux’s influence on botanist Stephen Elliott, the father of one of the founding bishops of The University of the South. Elliott never met Michaux, but he was well acquainted with his work. He made many references to Michaux’s publications in his two-volume work, published in 1824, modestly titled *A Sketch of the Botany of South-Carolina and Georgia*.

In the words of Charlie Williams, chairman of the symposium’s executive committee, “Michaux combined in one person the ruggedness of a frontiersman with the scientific learning and skill of the best minds of the Enlightenment. He lived and worked not only on the frontier of civilization but the frontier of science.” André Michaux is a name worth remembering.

—Mary Priestley

## From the Director



This is an eventful year for the Herbarium and the Landscape Analysis Laboratory at Sewanee. A number of projects have been completed recently and some are still very much underway. I thought I would provide some brief updates on our various endeavors, some of which have been introduced in previous issues of *The Plant Press*.

Our five-year study of forest change in Sinking Pond at the Arnold Air Force Base near Tullahoma, TN, draws to a close this summer. Mary Priestley and Yolande Gottfried have completed the plant inventory for the natural area and discovered a number of new Base records. In 1997, we discovered that for the last three decades new trees had mysteriously stopped growing into the canopy of this unique swamp forest. This past year we mapped nearly five acres of forest down to every seedling and sapling and analyzed tree distributions as a function of flooding depth and light availability within the pond. We determined that the proximate cause of this regeneration failure has been prolonged flooding in recent years.

Scientists at the U.S. Geological Survey in Nashville collaborating with us on this research have recently developed a hydrological model of this karst system that reconstructs the pattern of pond filling and draining over the past century. The model reveals that climatic variation in the latter part of the last century has resulted in increased regional rainfall patterns during the critical months associated with the filling and draining of Sinking Pond. The Pond has indeed

flooded more extensively in recent years as indicated by the vegetation. The secret of Sinking Pond seems to be linked to global climate change.

In March, the Landscape Analysis Lab completed its Small Area Assessment Forestry Demonstration project funded by the EPA and US Fish and Wildlife Service. We found that 15 percent of the intact native forest on Tennessee's southern Cumberland Plateau has disappeared since 1981, a deforestation rate that rivals that of rainforest loss in the Amazon basin. Most (74%) of this loss has been caused by conversion of native forests to plantations consisting of non-native loblolly pine. Recently, many of these plantations have been subjected to massive pine bark beetle losses.

We found that the rate of conversion from native forest to pine plantation doubled during the last three years of the study period (1997-2000) and has been responsible for loss of water quality and diminished bird diversity. This study was one of the first to comprehensively quantify the ecological impacts of pine conversion in the South and has subsequently received considerable media attention, given the heightened concern over the future of southern forests.

The Herbarium and the Landscape Analysis Lab, in conjunction with the Biology Department, have successfully completed the first year of environmental education outreach to local plateau schools through funding from the Howard Hughes Medical Institute. Mary's "The Mountain is our Home" program at Grundy County High School integrates plant taxonomy, local folklore and ecology with the goal of instilling a "sense of place" and pride in the plateau landscape. Our work with schools in Grundy and Franklin Counties has provided a wonderful opportunity for Sewanee students to do service learning projects right here in our own community.

This summer Mary is working with Caitlin Elam '03, our Herbarium summer intern, to finish the Flora of the Domain project. We should have a document describing the flora available in the Fall.

Finally I would like to express my sincere thanks to the Herbarium Curators, Mary and Yolande, for all of the work that they do that makes the Herbarium mission such a success. *The Plant Press* is in its 6th year of publication and has become a Sewanee tradition.

George Ramseur and I are now committed to building an endowment for the Herbarium that will provide support for our staff and allow us to sustain the education, outreach and research mission that makes our program so special. We look forward to your support in helping us to achieve this goal.

—Jon Evans

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The Sewanee Herbarium  
Biology Department  
The University of the South  
735 University Avenue  
Sewanee, TN 37383

#### WEB SITE

[http://www.sewanee.edu/  
biology/herbarium](http://www.sewanee.edu/biology/herbarium)

#### EDITOR

Mary Priestley  
(931) 598-1997  
mpriestl@sewanee.edu

#### CONTRIBUTORS

George Ramseur  
gramseur@sewanee.edu

Jon Evans  
jevans@sewanee.edu

#### COMPOSITOR

Tammy Scissom

*Drawings in this issue are of passion flower, bigleaf magnolia, cynthia, and pitcher-plant.*

**Enclosure:** Sewanee's Big Trees brochure

# Summer Calendar of Events

**Abbo's Alley and Charlotte's Garden**  
**Wed., June 26, 4 p.m.—Mary Priestley**  
Botany, history, and horticulture combine in this leisurely walk through the Abbott Cotten Martin Ravine Garden, culminating with tea in Charlotte Gailor's Garden. Established as a park in the 1880s, the "Alley" did not begin to take shape until Professor Martin brought it under his care in the 1940s. The Herbarium is maintaining two beds of native plants in recently renovated Charlotte's Garden. Meet at the South Carolina Avenue entrance to Abbo's Alley. One mile, easy.

**Lake Cheston Botanical Grab-bag**  
**Wed., July 10, 4 pm.—Yolande Gottfried**  
Meet at the pavilion at Lake Cheston to explore whatever is most interesting on that day (previously scouted by your leader)—lower and higher plants, wetter and drier plants. Hand lenses will be available. Bring a hat, sunscreen, and water if you wish. Walk will last about an hour.



**Creating the Nature Notebook**  
**Sat., July 13, 9 a.m.—Jill Carpenter**  
The nature notebook is a rich blend of observation, discovery, art, personal experience, imagination and inspiration. It's been called a "path to place." Chart your own path to this lovely place,

Sewanee, by creating a nature notebook. Savor the journey while you sharpen your skills; at the same time produce a useful document and lasting keepsake. Call Jill at 598-0795 or 598-9376 to sign up and find out the particulars. Another session will take place the following Saturday to share our progress.

**Sandstone Outcrop Succession**  
**Sat., July 20, 10 a.m.—George Ramseur**  
Explore the flora of the sandstone outcrops and enjoy the wonderful view from Piney Point, one of the best vantage points on the Domain. Expect to see shortleaf and Virginia pines, blackjack oak, blazing star, and other plants adapted to this unusual habitat. Meet at the tennis courts parking lot at St. Andrews-Sewanee School. Two miles, easy.

Contact the Herbarium (931.598.1798) for more information on these outings.

"Wildflowers of Sewanee," a new poster produced by the Herbarium, designed by Rachel Malde with text and drawings by Mary Priestley, is now on sale at the University Book and Supply Store. Proceeds go to support the work of the Herbarium.



## 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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Amount Enclosed:  \$10.00  Other: \$ \_\_\_\_\_

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

Sewanee Herbarium  
c/o Mary Priestley  
735 University Avenue  
Sewanee, TN 37383



Others who might like to receive *The Plant Press*: \_\_\_\_\_

## Where are they now?

*These biographical sketches are about former students. Classmates Erik Johnson and Allan Strand (see Plant Press Vol. IV No.4) both went to the University of Georgia after graduating from Sewanee. Erik married Amy Louttit in 1987 and they now live near Tallahassee with their children Maren and Jonas.*

—George Ramseur

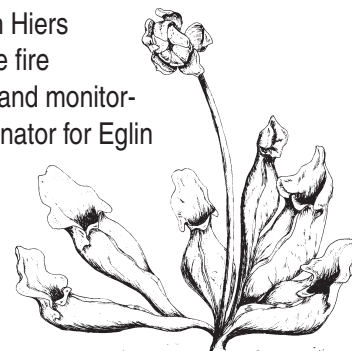
Erik D. Johnson (C'86) majored in Biology, and was mentored by George Ramseur. He says he remembers fondly “the botanical jaunts on The Mountain and in the Smokies with Dr. Ramseur— even the white-knuckled drives down mountain roads with George’s hands on the steering wheel, but his eyes and attention seemingly entirely on plants within the surrounding blur of boulder-strewn rock slides, timber, precipices, and coves”.

After receiving his B.S. from Sewanee, he studied agronomy and ecology at the University of Georgia, receiving an M.S. in 1989. He then completed an internship at the N.C. Botanical Garden where he studied conservation and propagation of rare native plant species. In 1990 Erik accepted a position with the Florida Department of Natural Resources, conducting environmental assessments for lands proposed for acquisition and protection under the state’s landmark 10-year, \$3 billion Preservation 2000 program. In 1994 he shifted his emphasis to conservation lands management, and has

worked with the Florida Park Service as a resource management biologist since then.

His proudest professional achievements include the proposal, assessment, and eventual acquisition of ~20,000 acres on the northern Gulf coast that now form one state forest and three state parks (strongholds for many rare taxa including five pitcher-plant species) and the proposal and assessment of ~18,000 acres for acquisition along the upper Apalachicola River—a North American biodiversity hotspot. Acquisition is ongoing in the latter project, with over 8,000 acres recently protected that connect a 4,000-acre state park and a 6,000-acre preserve owned by The Nature Conservancy. These recent acquisitions support at least 27 endangered or threatened plant species and have resulted in the Florida Park Service now managing most of the habitat for the endangered *Torreya* tree (*Torreya taxifolia*) and about 90% of the habitat for the endangered Apalachicola rosemary (*Conradina glabra*).

He recently completed a comprehensive two-year field evaluation of the status of Florida’s six pitcher-plant species and their fire-maintained seepage habitats in the Florida State Park system (to be published in the *Natural Areas Journal*). His ongoing projects include a similar evaluation of habitat management for the threatened Florida scrub-jay (the state’s only endemic bird species) and documentation and restoration of an old-growth stand of longleaf pine in a Panhandle state park that has undergone several decades of fire exclusion (some trees being ~300 years old). The latter is being done in coordination with Kevin Hiers (C'96), the fire ecologist and monitoring coordinator for Eglin Air Force Base.



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## SEWANEE

*The University of the South*

Herbarium, Biology Department  
735 University Avenue  
Sewanee, TN 37383-1000

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