

THE PLANT PRESS



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Newsletter of the Friends of the Herbarium

Winter, 1999

Deer Browse on the Domain

During the fall months of this year a fellow student, Robert Finch ('99), and I conducted studies concerning the effects of deer browse on plant community dynamics in the plateau forest surrounding Dick Cove on the Domain. This work was part of a class project in Professor Evans's Plant Ecology (Biology 206) course. Our studies were directed toward discovering to what extent deer browse changed distribution and abundance of tree species when compared to parallel areas that have been fenced in for three years and hence protected from this influence.

The Domain represents a safe haven for deer as compared to the surrounding lands where hunting is allowed. The white-tail deer population in and around the Sewanee community has been increasing over the past several years. This uninhibited growth could have serious effects on the distribution and abundance of plants which are preferred by the browsing deer. We hypothesized that the browse activity of deer is changing the structure and composition of the forest understory on the plateau.

We found that deer were browsing preferentially among the species but were not having a significant effect on the dynamics of any one species, because there were no compositional changes evident. The combined effects of deer browse over all of the species, however, did produce a significant decrease in the density of tree seedlings and saplings in the understory.

We believe our findings suggest that the effect of deer browse is currently limited to moderate changes in understory structure, but compositional change could occur with expected continued increases in the deer population. We recommend that students continue to monitor these long-term plots so as to provide data to aid in future management decisions concerning deer on the Domain.

—Joe Mobley '99

Annual Report 1998

The major focus for the Herbarium in 1998 has been the improvement of the databases, both by entering more of the specimens already in the collection and by making the databases relational. Most of this work was accomplished during the summer by a student intern funded through Domain 2020 (as featured in the previous issue of *The Plant Press*) and by the students of the Plant Systematics (Biology 310) course during the spring semester.

Approximately 600 plant specimens were added to the database, of which more than half are from the Domain. This includes over 85 new plant species for the collection, of which about two-thirds had not been previously collected on the Domain.

There are now 2764 records in the Herbarium Collection database and over 800 in the Sightings. The latter represents an increase of about 300, mostly contributed by the students of Plant Systematics from their field trips. These records are now easily linked to the Plant Species Information database, accessing distribution, abundance, and other facts based on major floristic work published for the region. In addition to the emphasis on the databases, the collection continues to grow to the point that it is necessary to consider acquiring two new herbarium cases.

Education and outreach activities have continued with the ongoing publication of *The Plant Press* and the participation of well over a hundred people during the past year in the seasonal hikes, slide shows, and workshops sponsored by the Herbarium. During the second annual Herbarium Homecoming Open House alone, which was possibly even more successful than the first, over 40 people joined the hike into Thumping Dick Cove. With the support of new and continuing subscribers, the Herbarium hopes to be able to present a flora of the Domain before the end of the century and the millenium.

—Yolande Gottfried

The Sewanee Herbarium: Education—Research—Conservation

The Plant Press

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Thanks

We owe a huge debt of gratitude to William Patten, who has served as compositor for *The Plant Press* since its inception. His patience, enthusiasm, and good spirits, coupled with his word processing skills, have been invaluable.

With this issue, I make my first venture into all of the subtleties of physically putting together this newsletter. Thanks so much to Bob Jones for his help in getting me started with all of this and to Elizabeth Gleave, a graphic artist from the British Isles, who offered a number of wonderful suggestions.

—Mary Priestley

More Sewanee Botany

Following the recent series on the history of botany at Sewanee, I thought it might be interesting to follow with something about the students who got their start here. I have taught something over 3000 students in my 35 year career here, and several have followed the botanical path. Many others are in closely related fields. This first article is about Ross Clark who graduated in 1963 and was the first of my students to receive a Ph.D. in botany.

I invite others to send in their stories and/or tell me of students I might have lost track of.

Born in Lexington, VA, Ross Clark attributes his early interest in plants to his grandmother and to "Miss Betty" Taylor, both of whom patiently tolerated him as a young child in their gardens.

After enrolling at Sewanee, he took all the botany he could find. "Those who know George Ramseur well know his style of growing serious botany students was not pushy recruitment, but the ability to perceive a natural interest in one student at a time, and subsequent low-key, persistent encouragement. Whenever possible, he invited me to assist him on field trips and forays, and gave me the opportunity to serve as a botany lab assistant. George's encouragement and Harry Yeatman's influence together persuaded me to apply for graduate work at their graduate alma mater, Chapel Hill."

Ross returned to the Sewanee area to do his master's thesis, under the direction of Dr. Al Radford, on the flora of the Fiery Gizzard Gorges. During his time at Chapel Hill, the herbarium was the focus of high activity. Active plant collecting for the Flora of the Carolinas was winding down, and the manuscript for the Manual was constantly being debated and refined. Radford's next project, a modern flora of the Southeast, never came to fruition, but three state woody floras directly or indirectly resulted — Fred James's work in Virginia, Gary Tucker's in Arkansas, and Ross's *Woody Plants of Alabama*.

A year before finishing his doctorate (1969, in plant systematics with a minor in ecology), Ross took a job at the fledgling University of South Carolina at Spartanburg, where he was honored as the most outstanding teacher on campus. Moves took him to Erskine College, then to the Morton Arboretum, and finally to Eastern Kentucky University where he served as chair for six years. In the summer of 1998, he returned to full-time teaching.

While in South Carolina, he was active in conservation work, conducting several surveys of potential wilderness areas, as well as the first study of rare and endangered vascular plants of Francis Marion National Forest. He and C. Leland Rogers of Furman University formulated the original list of threatened and endangered South Carolina vascular plants. At Morton Arboretum, he founded and administered the Cooperative College Botany Program, affiliating the Arboretum with 16 colleges and universities to offer a variety of advanced botany courses.

His field experience includes all of North America (except the far north), central Europe, and northern China. His publications include several floras, taxonomic papers, a book on tree identification, and a number of articles on woody landscape plants, bonsai culture, and apiculture. In addition to advising and teaching students, he is currently working on the floras of two Kentucky counties and an updated flora of the Red River Gorge.

—George Ramseur

Winter Calendar of Events

Botanical Drawing

Charley Watkins, Jan. 30, 9 A.M.—12 noon

Although Charley is better known for his work behind the camera, he has a degree in art and is adept at drawing. We will provide the subjects and materials. Please phone 598-1324 to let us know if you plan to join us.

Shakerag Hollow, In Search of the First Hepatica

Yolande Gottfried, Feb. 14, 2:00 P.M.

Ready for a wintertime adventure? Join us for a Valentine's Day walk through Shakerag Hollow, a beautiful forest at any time of the year. We will test Mary Priestley's new key (see p. 4). Meet at Green's View. Two miles, moderate. Subject to cancellation in the event of snow, ice, or extreme temps.

High Mountain Plants of Colorado

Jon Evans, Feb. 25, 7:30 P.M.

Blackman Auditorium in Woods Laboratories

Jon will present a slide show of plants from the high elevation regions of the Colorado Rockies. You will recognize many of these diminutive alpine wildflowers as having relatives here in Tennessee.

Domain 2020 Intern Presentations

Date and Time to be Announced

Last summer, several departments of the college had student interns inventorying and mapping the biological and physical features of the Sewanee Domain. Bring your lunch and come hear about their projects.

New Supporting Friends

Anne Andrau
Scott and Phoebe Bates
Greg and Doris Beasly
Rogers and Trink Beasley
E. Napier Burson
Bertha Christberg
Ross Clark
Henrietta Croom
Eleanor Dallas
Jan Drake-Lowther
Blythe Evans
Marlette Evans
Paul Glick
Dennis Horn
Bill and Kay Jones
William and Minam Keener
Katie Larkins
Ron and Marge Pasch
Anne Patten
Milo Pyne
Linda Scheid
Georgie Short
Stephen and Martha Smith
Tim Spira
Mr. and Mrs. F. S. Wartman, Jr.
Connie Way
Parker and Caroline Wheatley

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: _____ Address: _____

City, State, Zip: _____ 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*: _____

Winter Twig Key to Familiar Sewanee Trees

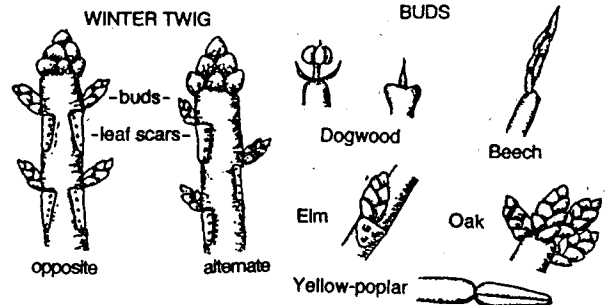
The most common deciduous trees in our plateau forest can be identified in winter by using twig clues. "Keying out" trees is one way to get out and botanize during the winter months. To use this key, start at number 1 and move through, looking for the characteristics of a twig you've selected. Choose "a" or "b" each time.

- 1. Leaf scars a) Opposite.....2; b) Alternate.....4
- 2a) Both round and thin buds *Dogwood* ; b) No3
- 3a) U-shaped to roundish leaf scars*Ash*
- 3b) Pairs of U-shaped leaf scars that touch*Maple*
- 4. Twig color a) Green to red5; b) Gray to brown.....6
- 5a) Green twigs with round buds; spicy smell ..*Sassafras*
- 5b) Yellow-green to red twigs.....*Sourwood*
- 6a) Twigs zigzag7; b) No.....9
- 7a) Bark on young branches mottled*Sycamore*
- 7b) Bark gray or brown, not mottled8
- 8. Buds a) Thin, pointed*Beech* ; b) Off-center*Elm*

- 9a). Buds clustered near tip of twig ...*Oak*; b) No10
- 10a) Buds resemble a duckbill.. *Yellow-poplar* b) No ..11
- 11a)- Twig pith (central tissue) homogenous*Hickory*
- 11b) Twig pith diaphragmed.....*Blackgum*

The bark on the trunk also offers helpful clues, especially when the twigs are too high to reach!
 Smooth: *Beech, Maple, Sycamore*
 Furrowed: *Sassafras, Sourwood*
 "Knitted": *Hickory, Yellow-poplar*
 "Blocky": *Ash, Dogwood, Elm, Blackgum, and, often, Oak*

— Mary Priestley



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