

The Plant Press

Volume II, Number 1

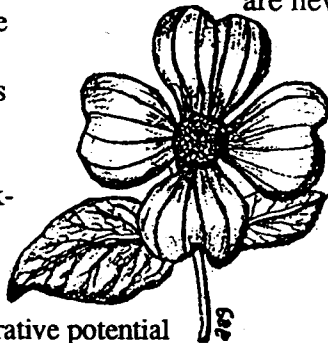
Newsletter of the Friends of the Sewanee Herbarium

Winter, 1998

Dogwood Research on the Domain

Throughout the eastern deciduous forest, flowering dogwood (*Cornus florida* L.) populations continue to decline due to the introduction of the Asian fungus *Discula destructiva* Redlin. that causes dogwood anthracnose blight. In its spread southward from New England, dogwood anthracnose has decimated this once prolific understory species over much of the Appalachians. The fungal blight is primarily limited by evaporative potential of the dogwood canopy, periods of drought, and topography. Kevin Hiers C'96 and I recently conducted a study on the Domain in which we compared the responses of two dogwood populations to the *Discula* blight, one in an old growth, mixed mesophytic forest in Dick Cove and the other in the dry oak-hickory community of the plateau surface adjacent to the cove. These areas receive the same annual rainfall but vary in light conditions and evaporative potential due to forest structure. Both populations have experienced nearly identical rates of infection with significant and pervasive mortality. Dogwood population data collected in 1983 and 1995 indicate a density (stems/hectare) decline of 98% in the cove. A similar pattern has been found for the plateau using a third site. The absence of current reproduction in these sites combined with high mortality of small size classes indicate the inevitable extinction of the species from both types of community on the Domain. The loss of *Cornus florida* as a once common understory species raises long-term concerns about changing forest structure and function in this region, particularly with regard to the role that dogwood plays in calcium cycling and fall forage for neotropical migratory birds. This study will be published in the December '97 issue of the journal *Conservation Biology* and will be featured on its cover. If you would like to receive a reprint, please contact the Herbarium.

—Jonathan Evans, Herbarium Director
Drawing by Alicia Gottfried



Annual Report

During 1997, the Herbarium continued to build up the plant collection and the computer databases and began education and outreach projects. Application was made for inclusion in *Index Herbariorum*, an international listing of herbaria.

Approximately 800 plant specimens were processed and added to the database, including over 200 new collections, of which about three-fourths are from the Domain. About one-third of those are new species additions, not previously collected on the Domain.

The Herbarium maintains three computer databases. There are now over 2100 records in the Herbarium Collection database, over 500 in Sightings, and over 1000 in Plant Species Information. A website has been designed for the Herbarium as part of the Department of Biology page.

The databases should soon be internet accessible.

Students in the Plant Systematics course (Biology 310) last spring used the Herbarium extensively for various class projects, including processing old specimens and collecting and adding new ones.

The Plant Press, the newsletter of the Friends of the Sewanee Herbarium, made its debut in the summer of 1997. Two plant brochures were produced as part of the Department of Biology's *Biodiversity on the Mountain* series.

Looking ahead, around 500 species of vascular plants have been identified as likely to occur on the Domain and as absent from the collection. This list will be the focus of the ongoing effort to complete the Flora of the Domain.

—Yolande Gottfried, Associate Curator
*This article is an abridged account.
Full report available on request.*

The Sewanee Herbarium: Education—Research—Conservation

The Plant Press

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Botany at Sewanee—Part 3

As early as 1910 the college catalogue printed the recommendations of the College Entrance Examination Board for a curriculum in biology (as well as other departments). However, at that time there were very few well-trained biologists available, so there were few institutions with sufficient demand or resources to implement the CEEB recommendations—Sewanee certainly could not. Instead, the biology program grew more in terms of the professors' interests than in suggestions from outside.

Beginning in 1937, the professional level of the biology department made a bold step forward with the appointment of Edward

McCrary (BA College of Charleston, MA Pittsburg, PhD Pennsylvania) as professor of biology. With a strong zoology background, he replaced general biology with general zoology. Botany was set up as a separate department under John Fredrick Moyer, professor of forestry, with courses in general botany and physiology & ecology. The general forestry and forest botany courses were omitted from the forestry offerings. In 1941 Harris Campbell Moore (BA Washington and Lee, MS Virginia) was appointed instructor in forestry and biology, and the botany department rejoined biology with courses in general botany, plant anatomy, and plant physiology & ecology. Moore left in 1945 making McCrary the only biology faculty—with 13 courses listed. John Gibbs Mahan (BA Lynchburg College; MA, PhD Virginia), a zoologist with a strong interest in genetics, arrived in 1946 as assistant professor of biology. Forestry professor Charles

Cheston, who had come to Sewanee in 1943, was also listed with the biology faculty in 1946-47. In 1947 the botany program was strengthened by the arrival of Paul Hamilton Waring Webb (BA South Carolina, MA George Washington and an almost completed doctorate in botany from UNC). He taught general botany, bacteriology, plant anatomy, plant pathology, and systematic botany. McCrary left in 1948 to become head of the Biology Division of the Oak Ridge National Laboratories. He was elected vice-chancellor and returned to Sewanee in 1951.

The biology department began the 1949-50 school year with assistant professor Waring Webb, assistant professor William Clark Gorham (BA Illinois, MA Columbia, PhD Michigan), and instructors Frank Dowell, Ben Watson, Frank Woods, William Harris, and Charlotte Gailor. After an illness of only one week, Waring Webb died on November 22, 1949. His sudden death left the entire community in shock, but it was especially devastating to the biology department. To the trustees in June, 1950, Vice-Chancellor Boylston Green reported, "Because of the lamentable situation in the biology and botany classes, it has been resolved completely to reorganize that department." With the termination of the existing biology faculty, 1950 would mark a new beginning for the department.

To be continued.

—George Ramseur
Herbarium Director *emeritus*



Winter Calendar of Events

Shakerag Hollow, in Search of the First Hepatica

—Yolande Gottfried, Feb. 14, 2:00 PM

Ready for a wintertime adventure? Join us for a walk through Shakerag Hollow, a beautiful forest at any time of the year. Meet at Green's View. Two miles, moderate. Subject to cancellation in the event of snow, ice, or extreme temps.

Winter Tree Identification

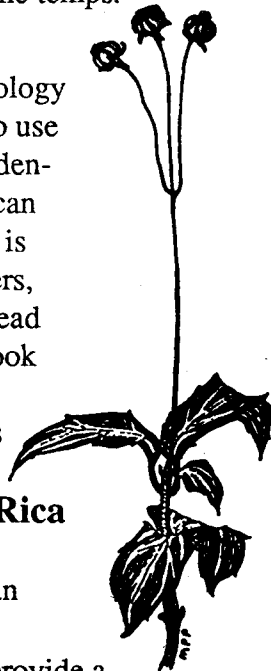
—Karen Kuers, Dept. Forestry & Geology

Have you ever wanted to be able to use buds, bark, and other subtle clues to identify trees in winter? Without leaves, can you tell an oak from a hickory? Now is your opportunity to learn. Karen Kuers, Assistant Professor of Forestry, will lead this outing. Time and place TBA—look for notice in *The Messenger* or write mpriestl@sewanee.edu to receive this information via e-mail.

Interesting Plants of Costa Rica

—Jon Evans, Assistant Professor of Biology, March 5, 7:00 PM, Blackman Auditorium, Woods Laboratories.

Jon Evans' slide presentation will provide a tour of different plant communities in Costa Rica and give natural history descriptions of some of the more interesting/bizarre plant species that inhabit them.



Shakerag in Winter

Shakerag Hollow is a favorite springtime destination for wildflower enthusiasts. In winter, it offers quite a different experience. At this time of year, visitors can see through the woods and down into the cove. The distinctive bark of the trees is much more evident: that of black walnut is reminiscent (to some!) of milk chocolate; buck-eye's bark peels off in small, roundish patches.

And nothing could be much shaggier than shagbark hickory bark!

The forest floor is unexpectedly green in winter. Leaves of waterleaf, sweet cicely, and puttyroot orchid, among others, are out all winter, photosynthesizing on the occasional warm day. Many of the lower plants are evergreen: mosses cover the rocks and tree trunks; walking fern, marginal woodfern, Christmasfern, and ebony spleenwort, as well as the "fern ally," clubmoss, may all be seen.

A wintertime trek through Shakerag helps to dispel cabin fever. It shows, too, that although evidence of growth at this time of year is scarce, nature is not in hiatus. And who knows? You might just find the first Hepatica.

—Mary Priestley, Curator

The drawing is of spotted wintergreen, Chimaphila maculata (L.) Pursh.



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Yes! I would like to be a Friend of the Sewanee Herbarium

The Friends of the Sewanee Herbarium support the work of the Herbarium: education, research, and conservation. A \$10.00 contribution would be very much appreciated.

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*: _____

Autumn Outreach Events —Report

Beautiful weather was the order of the day this fall, and we were able to have three very successful outings. Around 20 people joined Harry and Jean Yeatman for a botanical excursion around Lake Eva. The lake and surrounding forest provide habitat for a great variety of fall-blooming wildflowers, as well as a number of interesting non-flowering plants. We hope that our knowledgeable hosts will invite us back soon.

By happy accident, we scheduled Charley Watkins' nature photography workshop for fall break. As a result, several undergraduates were among the shutterbugs who joined Charley at Lake Cheston for a morning of observing and photographing the plants and scenes around the lake. The results of our labors have been placed on temporary display outside the Herbarium.

The Biology Department launched the *Biodiversity on the Mountain* series over Homecoming Weekend. We were gratified with the turnout for our open house. The Herbarium was actually crowded with people who came to see what we are all about. Thanks to everyone who came. We enjoyed sharing our facility with you. To cap the

occasion, Jon Evans led a hike down through Dick Cove, joined by several alums and others. This old growth forest is a special place, a living laboratory for botanists, ecologists, foresters, and their students—a fascinating place to visit.

Many thanks to all of our leaders and participants! As we move into winter, with its inevitable cold and drizzly days, we hope that the weather will cooperate with our schedule as well as it did this fall.

—Mary Priestley

Biodiversity on the Mountain

The Herbarium is contributing to *Biodiversity on the Mountain*, a series of informative pamphlets produced by the Department of Biology. To date, there are four in the series, covering common birds, ferns, nuts & acorns, and amphibians of the Sewanee area. They are free and available in the Department of Biology and at the Bishop's Common. Two additional pamphlets—a checklist of the woody plants on the Domain and an introduction to the aquatic plants—are nearing completion.

Friends of the Sewanee Herbarium are supporting this effort with your contributions. Please let us know if you would like to receive the pamphlets through the mail.

SEWANEE

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