THE PLANT PRESS

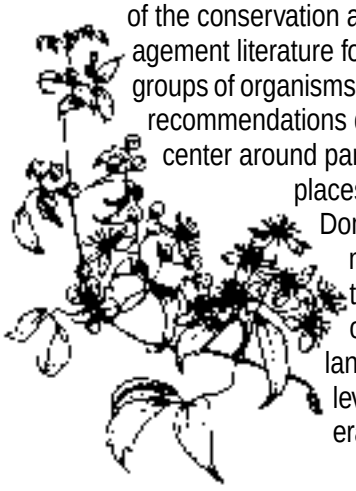
Volume III, No. 4 | Newsletter of the Friends of the Herbarium | Autumn, 1999

Domain 2020

This past spring the University Domain 2020 Committee completed its final report on recommendations for the stewardship of University lands going into the next century. I was joined by Mary Priestley, David Haskell and Karen McGlothlin in preparing the Biology Department's contribution to this document. Below are some of the highlights of our report:

"The Domain provides a unique opportunity for Biology students and faculty to study forest communities and their constituent species in the absence of major human disturbances and the associated effects of habitat fragmentation and degradation. Indeed, the forest area located in Dick Cove represents one of the few remaining old-growth stands of cove hardwoods left in the Southern Appalachians. In a recent study conducted by the Nature Conservancy, the old-growth forest communities of the Cumberland Plateau were classified as one of the nation's most critically endangered areas of biodiversity.

"The following recommendations are based on recent Biology Department inventories and studies of the Domain fauna and flora, and on an extensive study of the conservation and management literature for these groups of organisms. Our recommendations do not center around particular places on the Domain so much as they refer to overall landscape-level considerations. First and foremost, we recommend that the maintenance of healthy, functioning ecosystems be the central goal for future Domain management since our ability to sustain secondary, output-oriented goals over the coming decades (whether they be recreation, outdoor education, wood fiber, housing developments, etc.) depends on our collective ability to achieve this overarching, ecological goal.



"Defining what constitutes healthy, functioning ecosystems on the Domain should be an ongoing task involving a constant dialogue among Sewanee scientists and their colleagues. It should be recognized that we are still learning about the temporal and spatial processes that drive the patterns of species distribution and abundance on the Domain and how different species contribute to ecosystem functioning such as nutrient flow and food web dynamics. In light of this, we should proceed cautiously and conservatively with activities that might impact these systems. The best available science and current research therefore should be used to increase our understanding of ecosystem processes on the Domain.

"We believe it is essential that we consider the landscape context of the Domain in our development of goals and objectives. Much of the future condition of the Domain will be determined by what happens ecologically in the adjacent landscape surrounding the Domain. For example, if our specific management objectives include controlling deer populations, excluding exotics, maintaining mammalian predators, limiting neotropical migrant bird decline, etc., all of these will be directly influenced by activities on lands surrounding us. Conversely, with the rapid land-use conversions occurring across the southern Cumberland Plateau, the Domain is rapidly becoming one of the last large, contiguous tracts of native hardwood habitat in our region and therefore its conservation and scientific value at the landscape-level is increasing dramatically.

"It is very important that we do not confuse commodity-oriented goals with ecosystem maintenance goals particularly in relation to 'forest health' issues. A case in point would be future management of a gypsy moth outbreak. While it might be beneficial to the short-term maximization of wood fiber production to conduct thinning operations and spray pesticides, such activities would have long-term impacts on ecosystem integrity, putting into jeopardy many other desired output values from our forests such as pollinator activity, maintenance of closed canopy habitat, etc.

"Finally, contemporary resource management necessarily requires an interdisciplinary team approach. Such a team at Sewanee should assist the administration in formulating and achieving specific objectives through the ongoing collection and analysis of relevant data. It is very important that this team draw upon the wide diversity of scientific contributions represented in our faculty and students. The knowledge gained from research, inventorying and monitoring should be used in an adaptive management framework which allows for the constant evaluation of management decisions and the development of new management actions over time."

Continued on page 4

THE PLANT PRESS

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

WEB SITE

http://biology.sewanee.edu/herbarium

EDITOR

Mary Priestley
(931) 598-1324
mpriestl@sewanee.edu

CONTRIBUTORS

Jon Evans
(931) 598-1304
jevans@sewanee.edu

George Ramseur
gramseur@sewanee.edu

Yolande Gottfried
rgottfri@sewanee.edu

COMPOSITOR

Tammy Scissom

New Supporting Members

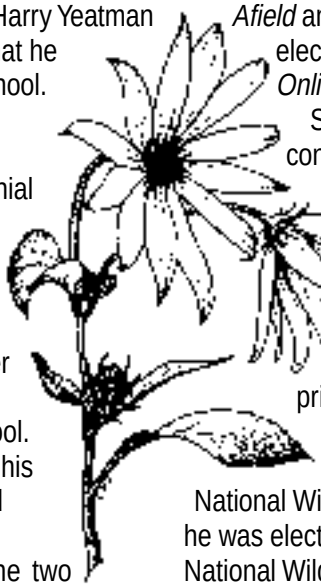
Phyllis Bennett
Philip Biles
Lyn Bradford
Suzanne R. Cahoon
Ernest Cheek
Ed and Meredith Clebsch
John Evans
Teresa Hanlon
Nita Heilman
Shirley Manalay
Martha Mikkelson
Fred and Judy Mitchell
Mary Frances Nault
Shirley Nicholson
Ann Poag
Patrick Rakes
Pauline Rambo
Jeffrey Runge
Dabney Halyburton Sanders
Richard and Theresa Warren

Sewanee Graduates in Botanical Fields

This, the second profile of Sewanee students who have pursued botanical careers, features Spencer Tomb of the class of 1965. One of the important features of the Biology Department in my day was the way in which the faculty worked together to make sure that a biology major was well-rounded in the fundamentals of biology. Spencer, as did Ross Clark before him, credits the important contribution of Harry Yeatman in his final career choice. —George Ramseur

Growing up in the coastal bend region of Texas, Spencer Tomb was the kid in school who almost always had a frog, flying squirrel or horned toad in his pocket. His father encouraged his interest in natural history, and he started fishing at five and hunting doves at eleven.

After graduating from Texas Military Institute in San Antonio, he completed his B.A. in biology at Sewanee. Harry Yeatman first mentioned to Spencer that he should consider graduate school. One day in the Comparative Anatomy lab, Dr. Yeatman watched him go over the cranial nerves of a shark with a fellow student and later that day asked him if he had ever thought about graduate school and teaching. Spencer was quick to answer that he was headed for medical school. While at Sewanee, however, his interest in natural history and teaching grew faster than his interest in medicine, and the two plant courses, taxonomy and ecology, were important in that shift of thinking.



Following a year of cancer research in Houston, he entered graduate school in botany at the University of Texas at Austin, receiving his doctorate in 1970. That was just short of three years after entering graduate school. Not bad for a student who took more than four years to finish a B.A.! His first job was at the University of Illinois at Chicago. Four years later, he joined the faculty at Kansas State University and felt that he had found the perfect place for a duck-hunting botanist to raise a family. He has been known on occasion to adjust his teaching schedule to increase the number of days that he can hunt.

Spencer's research has centered on the Tribe Lactuceae of the Asteraceae and on electron microscopy of pollen. He has published over 30 scientific papers and is well-known for his work on Composites and pollen. His most recent paper, published in *Taxon*, was on the pollen of a new angiosperm family. It is entitled "Pollen morphology and relationships of *Setchellanthus caeruleus* (Setchellanthaceae)." He has also written popular pieces on hunting, botany, dog training, conservation and natural history for *Sports Afield* and *Outdoor Kansas* and the electronic media like *Outdoors Online*, ool.com.

Spencer has been active in conservation organizations. He joined the Board of the Kansas Wildlife Federation in 1984 and has served as president for three terms. He has been KWF's principal volunteer lobbyist since 1988. He is also on the board of the Kansas Chapters of the National Wild Turkey Federation. Recently, he was elected as Region 9 Director of the National Wildlife Federation. He says it is an awesome responsibility to be on the Board of the country's largest broadly-based conservation organization, with a budget of over $100 million and 340 employees. Spencer teaches botany and natural history for the Becoming an Outdoors-Woman (BOW) program and the NWTF's Women in the Outdoors. He also is an instructor in the Kansas Hunter Education Program.

An outdoor writer once said that Ph.D. behind Spencer's name in the fall and winter really meant "prefers hunting ducks." The writer also called him "Dr. Duck," a nickname that has stuck in some circles. Spencer is married with three grown sons, Andy, Mark and Sean, all of whom majored in Political Science at Kansas State. His hobbies include training golden retrievers and making slate wild turkey calls.

Autumn Calendar of Events

Abbo's Alley
Oct. 2 • 8:00 AM • Mary Priestley
All early-birds are invited to this Parents Weekend stroll. It's difficult to say what will be in bloom, but the Alley (Abbott Cotton Martin Ravine Garden) is always a treat. Meet on the Quadrangle. One mile, easy.

Shakerag Hollow
Oct. 2 • 1:30 PM • George Ramseur
The Shakerag Hollow trail descends through a cove hardwood forest, an area known for its high diversity of plant species. Famous for its array of spring wildflowers, Shakerag is well worth a visit in the fall. Meet at Green's View. Two miles, moderate.

Fall Wildflower Walk
Oct. 9 • 10:00 AM • Yolande Gottfried
The array of fall wildflowers at Lake Cheston is surprising. We expect to see cardinal flower, turtlehead, and nodding ladies' tresses orchids, as well as Joe-Pye weed, all sorts of goldenrods, and more. Meet at the Lake Cheston pavilion. One mile, easy.

Homecoming Events — Oct. 23

Bird Watcher's Outing
7:30 AM • David Haskell
We will be searching for birds that winter here, as well as late migrants. Meet at the old dairy (now the sculpture barn) at Lake Cheston. Canceled if raining.

Herbarium Open House
9:30–10:30 AM
There's lots to see and do. Use the computer to look up specimens that interest you, and then find them in the collection. Mount plant specimens. Check out the GIS database. Visit with the staff and learn about our recent projects.

Thumping Dick Cove
10:00 AM • Jon Evans
Tour Sewanee's old-growth forest, one of the University's great assets. Dick Cove serves as a living laboratory for students in the college, and there are several ongoing research projects being conducted in and around the cove. Meet in front of Woods Laboratories. Three miles, moderate.

Research Opportunity in Haiti

The Episcopal Diocese of Haiti is interested in supporting a floristic study in that country. The project could serve as the basis for a master's—or possibly even doctoral—thesis, depending upon how extensive it is. According to the Rev. David McNeeley, M.D., Director of Development for the Diocese of Haiti and Friend of the Sewanee Herbarium, the Bishop there is very interested in supporting this project. They have limited means, but probably local room, board and transportation can be funded through the diocese. In addition, the Bishop will do all that he can to help in supporting a grant application, especially one that would help train Haitians in ecology, conservation, and so forth.

This project is waiting for the right person to get it off the ground—someone who is adventuresome, excited about tropical botany and about doing something concrete to help a struggling third world country. Interested persons should contact David McNeeley at Dfmcneeley@aol.com.

—Mary Priestley

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*: _____

_____

Domain 2020 (continued)

Selected Specific Recommendations:

1. Increase the effectiveness of the NRAC by diversifying its composition

We recommend that the composition of the Natural Resources Advisory Committee be changed so that this committee may better reflect the balance and inclusiveness that has been the strength of the Domain 2020 Committee. The committee does not currently reflect this diversity, hindering effective management.

2. Whenever possible avoid fragmentation of existing forests and concentrate disturbance activities into small areas

Many of the organisms on the Domain have most viable populations in unfragmented landscapes. This is especially so for many of the species on the Domain that are listed as rare, threatened or endangered. Disturbance activities should therefore be concentrated as much as possible, rather than spread out in low intensity over the whole Domain. Due to past land-use practices there is currently a wide variety of different-aged communities represented on the Domain. We recommend that there be no manipulation of forest habitat for this purpose unless there is specific scientific value to be gained.

3. Restoration of land-use impacts from earlier in this century

Where economically feasible and when compatible with research and teaching needs, we would like to see the following management actions considered, particularly for the areas of Domain forest away from the central campus and residential areas:

a. removal and restoration of all unnecessary forest roads
b. removal of dams and restoration of streams where reservoirs are deemed unnecessary
c. elimination of white pine where it is invading natural communities
d. elimination of other exotic plant species
e. removal of unmanaged pine plantations and restoration of native species
f. careful restriction, monitoring and permitting of recreational activities
g. re-introduction of fire through the careful implementation of controlled burning.

—Jon Evans

Coming in our Winter Issue:

"Plants of Pond and Shore," by Yolande Gottfried. In her article, Yolande discusses some of the plants found in and near ponds and lakes on the University Domain.

Printed on Recycled Paper

SEWANEE
The University of the South

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

ADDRESS SERVICE REQUESTED

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
PERMIT NO. 4
SEWANEE, TN