

Fall 2007

"This is not just a hand lens. It's a florascope!"

Florascope

The Newsletter of the A. C. Moore Herbarium



Starting from 400 Specimens; Now Over 100,000 and Growing

This is The Centennial Year of the A. C. Moore Herbarium

The year 2007 marks our 100th year: it's the recognition of a century of botanical studies at USC within the A. C. Moore Herbarium. Dr. Andrew Charles Moore (1866-1928), the first chairman of USC's fledgling Biology department, initiated the Herbarium collection with his own plant specimens. His collection, numbering approximately 400 specimens, are all mounted and currently maintained separately within the modern collection.



A. C. Moore

They were collected mostly in South Carolina, especially from the midlands, the area around Caesar's Head, and from near Murrell's Inlet. Moore, who graduated from South Carolina College in 1887, died in 1928 in his bedroom on the top floor of Lieber College. (In those days the buildings on the Horseshoe still

served as residences for the faculty.)

Moore's collections were rapidly expanded in the 30s and 40s especially through the work of P. J. Philson, who was hired in 1935 as an instructor in Biology.

The Herbarium's modern era began in 1952, with the hiring of Wade T. Batson. Batson's initial botanical collections within the present Savannah River Site, and those by his subsequent undergraduate and graduate students swelled the Herbarium's main collection to well over 40,000 specimens. The Herbarium was named in honor of Moore in 1986, during its curation by Cynthia Aulbach-Smith. The herbarium has been under the direction of John Nelson since 1990.

For people interested in the work of the Herbarium, 2007 is important for a few other reasons, as well. It's the 300th anniversary of the birth of Carl Linnaeus, the father of taxonomy; the 95th birthday of Dr. Batson; and, finally, it marks the accessioning of our 100,000th specimen.

Herbarium NSF Grant Shows Results

A project funded by a recent \$98,000 grant from the National Science Foundation (NSF) has now been completed. This three-year grant has made possible the replacement of old, worn her-

barium cabinets with high-quality, state of the art steel cases. As a result of this improvement, the existing specimens are more safely housed, and additional room is now available for approximately 10,000 additional specimens.

In addition, this grant provided much-needed funding to hire personnel for database operations in the Herbarium. Our project has focused on entering record data from all the specimens of South Carolina *angiosperms* (flowering plants), numbering just under 70,000 sheets.

We're sad to say goodbye...

Three Important Staff Members Move On

Rudolph Brantley and Chanda Cooper have been a very effective data-entry "team". Both had salaries supplied by an NSF collections improvement grant. Their combined efforts have resulted in data capture from 47,000 herbarium specimens. Chanda, who graduated *summa cum laude* in May, is continuing her education in the USC School of the Environment. Rudolph is continuing his career at USC's information technology center. We wish them both good luck!

Ann Darr served as the liaison between the Herbarium and the Heritage Program of the SC Department of Natural Resources (DNR), since 1995. She spent approximately half of her time in the Herbarium as assistant curator, while her salary came entirely



Chanda Cooper

from DNR. She was in charge of identifying and labeling all of the pressed material generated through Heritage operations, all totaled about 14,000 specimens. We hope to continue this extremely useful relationship with DNR in providing space for one of their employees. Ann will be hard to replace!



Rudolph Brantley (above) and Ann Darr (right)



such material may be pressed and made into excellent specimens.

We get requests from all over South Carolina and this year have had several from out of state. We even had one request from a gardener in England!

Our plant identification assistance is intended as a public service through the Department of Biological Sciences. This service is free. If you've taken advantage of it, keep us in mind for future help, as needed. Tell your friends about it, too!

Our Name Is in Print!

The Herbarium's "Mystery Plant" column is now featured in twelve different newspapers around the Southeast. This column, authored by John Nelson, is designed as a reminder to the general public of the Department of Biological Science's public services within the Herbarium. Each column features a short essay on an unusual, rare or otherwise noteworthy plant, along with a photograph. Although no "prize" is offered for correctly identifying the plant, this column has generated plenty of interest in USC's free plant identification service. Nearly 300 consecutive weekly installments of Mystery Plant have been printed, and plans are being made for increasing our coverage, with additional newspapers. (If your local newspaper is not carrying this column, request that they do so.)

Plant Identification Requests Keep Coming In

Plantman was a busy superhero this past year, taking care of 273 formal requests for plant identifications. (Actually he had some help from the curator, and from Jeff Brannon, our collections manager.)

More and more requests are coming as electronic requests, via emails, often with photographs attached as jpg files. Usually, this is quite adequate for identifying unknown plants. Plenty of the identifications are based on material sent to us through the mail, and in many cases,



Plantman drawn by Linda Lee

Two Undergrads Take Inventory

Jeff Brannon and Will Cely are undergraduates currently involved in year-long floristic inventories. Their projects are for academic credit, with John Nelson directing them within BIOL 399, Independent Study. (See photos bottom right page.) Jeff and Will plan to present their findings at next spring's annual meeting of the Association of Southeastern Biologists (ASB), April 16-19, 2008, and they plan to graduate in May 2008.

Herbarium Endowment Report

The W. T. Batson Endowment for the A. C. Moore Herbarium and Garden, managed by the USC Educational Foundation, contains as of June 30, 2007, \$139,258.63, with \$18,818.03 of that in a spendable account. As a funding source for student salaries, the endowment has proven to be an important way of augmenting student incomes, at a time when tuition and book costs are steadily increasing. At this time, Jeff Brannon, a senior biology major, is working in the herbarium, and is being trained as a collections manager, which will be useful as a job skill. In addition to student salaries, the endowment supports our acquisition of expendable supplies, such as mounting paper and glue, as well as special needs. For instance, we have been able to purchase three external hard-drives for our computers, as well as a portable GPS unit for field work.

Tax deductible donations to the endowment can be sent as a check made out to "The USC Educational Foundation," with a note reading "For Batson Herbarium Endowment."

First Annual Herbarium Research Presentation Award

An annual award has been established, through earnings within the Batson Endowment, for a USC plant sciences student presenting at the spring meeting of the Association of Southeastern Biologists (ASB). The award, \$500, is made to the best research presentation, either as a poster or presented (oral) abstract. There is no restriction on the kind of research undertaken, and molecular, physiological, ecological, and taxonomic studies are eligible, and the competition may include undergraduates as well as graduate students. Three judges from outside the Department determine the single winner.

The first year's competition involved four different graduate students in the Department of Biological Sciences. The first annual winner is Kate Goodrich, a PhD candidate, and student of Dr. Rob Raguso. Her research project, coauthored by Raguso and Michelle Zjhra (Georgia Southern University), is entitled "Pollination Studies in *Asimina* (*Annonaceae*)." The abstract appears in *Southeastern Biology* 54(3): 194. Congratulations, Kate!



John Nelson presents the first Batson Endowment award to Kate Goodrich.

We're Still Growing—and It's Getting a Little Cramped!

The Moore Herbarium is continuing to grow in terms of its collections. Our material is carefully mounted and stored, and we take advantage of every opportunity to have our specimens studied and annotated by researchers. We intend to continue growing, despite facing space restrictions. Since September 2006, 1,300 specimens were mounted, stamped and numbered, not including activity with the Ravenel collection. Most of these specimens are from South Carolina, collected by Dr. Bert Pittman and Ann Darr, during their plant inventory work with SC Department of Natural Resources.

We have received specimens, additionally, as a part of our exchange agreements with outside institutions, including shipments from Vanderbilt University, California Department of Food & Agriculture (Sacramento), Delaware State University, Martin-Luther University (Halle, Germany), Jagiellonian University (Krakow), and UNC-Chapel Hill.

Outgoing exchanges shipments have been made this year to Cornell University, the Botanical Research Institute of Texas (Ft. Worth), Clemson University, University of Georgia, University of Kansas, and University of Michigan.

One of the ways in which herbaria interact is by sending gift specimens for identifications from various experts on different plant groups. This year we have sent such gifts to the herbaria at the University of Arizona (for *Eragrostis* determinations), Louisiana State University, University of Mississippi, NC State University, University of Tennessee, University of Texas, Cal-Berkeley, and to the Smithsonian Institution. Most of these specimens are from South Carolina, collected by Dr. Bert Pittman and Ann Darr, during their plant inventory work with the SC DNR.

We have loaned formally 748 specimens so far this year to botanists at Humboldt State University, Delaware State, UT-Chattanooga, Purdue-North central, the New York State Museum (Albany), Oregon State University, Washington State University, the University of Florida, Chinese Academy of Sciences (Peking), Botanical research Institute of Texas, Clemson, and the University of Oklahoma.



Undergraduate students Jeff Brannon and Will Cely in the field. Will is working on a study of plant life in Sesqui-centennial State Park and Jeff is studying Aiken State Park.

Ravenel Collections Now Being Loaned!

Our work with the Henry W. Ravenel Collection of Converse College has entered a new phase, involving the assessment and repair of selected plant groups. Of the 6,512 specimens originally transferred from Converse, about 800 have now been restored. We have focused on the “difficult” groups as initial projects, for instance repairing specimens of the sedges and grasses (families *Cyperaceae* and *Poaceae*), notorious among botanists as the most difficult to curate initially as new specimens, and to repair as old specimens. This activity is bringing results quickly, as loans of material are now being made possible, with shipments of *Carex*, *Cyperus*, *Rhynchospora* planned in the near future to researchers for study. Attention will be turned as soon as possible to restoration of the *Asteraceae* (sunflower family) within this collection.

Before and After for Nineteenth Century Specimens from H. W. Ravenel

Many of Ravenel’s specimens are in serious need of repair; none of them is on acid-free (meaning “archival”) herbarium paper. Our intent is to repair the specimens, scrupulously preserving all the plant parts and recorded data, and placing them on new paper. This pair of images shows the “before” and “after” aspects of a



A Ravenel specimen before repair, above, and after repair at left.

single sheet of a fairly common bulrush, *Scirpus polyphyllus*, a plant which grows in bogs and other wet places. The original sheet actually contains two separate collections collected at different times (September 1871 and July 1872), both from near Rome, Georgia. The original specimen was in fact examined in 1941 by the botanist Hugh O’Neill, who was then at the Smithsonian Institution. O’Neill’s annotation confirms the original identification of the pressed plants on the sheet.

Floroscope

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