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UCSB Receives NSF Grant to Preserve Herbarium, Algae Collections

Tucked away in a room beneath the bleachers at the south end of UC Santa Barbara's Harder Stadium, the 100,000 specimens stored in the herbarium of the Cheadle Center for Biodiversity and Ecological Restoration (CCBER) are about to get a much-needed new home.

Thanks to a \$272,162 grant from the National Science Foundation, as well as the generosity of the family of former UCSB Chancellor Vernon Cheadle, the Cheadle Center will soon have a new compact storage system to replace the herbarium's World War II-era cabinets. In addition to preserving the massive collection of oak, conifer, and other plant specimens, the new storage system will also be used to protect CCBER's algae collection, one of the most significant collections of algal material from the central California coast.

"It's a really important project," said Jennifer Thorsch, the Katherine Esau Director of CCBER. "This is a wonderful step in the right direction for a small university museum. UC Santa Barbara has continued to value our collections, where many institutions have shipped collections off, and students don't get the hands-on museum opportunities. There are so many interesting questions that can be answered by preserved specimens. They aid our ability to conduct genetic research, examine species diversity trends, and study species responses to global warming using data available in the collection records. Collections like these are very important."

The NSF funding, a Biological Research Collection grant, is designed for improving facilities and the security and accessibility of collections. After two applications in previous years came close but were turned down, "the third try was the charm," Thorsch said. "Thank you, President Obama, for the stimulus money. We received full funding. It's one of those good stimulus stories."

The NSF grant was preceded by a \$110,000 gift from Dr. William "Bill" Cheadle, son of the former chancellor, and other members of the Cheadle family. Vernon Cheadle was a botanist, and his impressive collection of light microscope slides of monocotyledons, gathered from around the world, is stored at CCBER, as are about 2,500 of his herbarium sheets, which will be among the specimens placed in the new compact storage facilities. "The Cheadle family has been very generous," Thorsch said. "They have provided additional support for us to work on the curation and processing of the preserved plant materials, microscope slides, and creating a database for all of the metadata."

Dr. Cheadle, who is professor and program director in the Department of Surgery at the University of Louisville, said: "I am very excited about the exceptional peer-reviewed NSF grant that has been awarded to Jennifer Thorsch and Carla D'Antonio (CCBER's faculty director) on behalf of CCBER. This will provide critical funding to properly store and provide access to the herbarium collection. My father collected over 5,000 plants and produced over 60,000 light microscope slides during his long and distinguished career as a botanist. The compact storage system will provide access to interested scientists from all over the world to plant specimens for research, thus perpetuating his great legacy. We plan to continue to support the CCBER and its multiple missions, and again congratulate Jennifer Thorsch and Carla D'Antonio on this special accomplishment."

Over the next couple of months, the cabinets currently used to store specimens in the herbarium will be moved into CCBER's classroom for staging. There, working with undergraduate and graduate students, as well as two consultants, Dieter Wilken from the Santa Barbara Botanic Garden and Mary Carroll, a former UCSB graduate student, Thorsch and D'Antonio will go through all 100,000 plant specimens. The plants will be checked for damage and they will be itemized. "We'll have tables set up: This specimen needs conservation, this one needs to be annotated, this one need nomenclatural changes," Thorsch said. "We'll get it completely organized. Then our next goal will be to obtain funding to upload the data to Specify, a database specially designed for web access and searchability of museum collections."

Meanwhile, the new compact storage cabinets will be installed. As items are cataloged and databased, they will be moved into the new cabinets, which will be on a track system and will feature tight-sealing doors. Thorsch expects the entire process will take up to two years. "We've done the calculations and we're anticipating that we should have about a 25 percent increase in space, based on compactibility," Thorsch said.

In addition to Cheadle's collection, the new herbarium will include the life's work of two esteemed and nationally renowned experts. The extensive oak collection of Cornelius H. Muller, emeritus professor of botany at UCSB who passed away in 1997, will be preserved, as will the pine collection of Robert Haller, a former UCSB faculty member who will participate in the identification and annotation of his collection.

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† Top photo: Jennifer Thorsch holds part of the C.H. Muller oak collection currently stored in the soon-to-be-replaced World War II-era cabinets in the herbarium of the Cheadle Center for Biodiversity and Ecological Restoration.

Photo Credit: George Foulsham, UCSB Public Affairs

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