

A new Virtual Herbarium provides online access to a collection of floral data

A Place for Plants in Cyberspace

An example of a specimen image and data available.



Dr. Joseph Rock

In 1908, Joseph Rock founded a herbarium at the University of Hawai'i, a fledgling land-grant university with a campus in bucolic Mānoa Valley. An autodidact, polyglot and intellectual powerhouse, Rock was an early authority on Pacific Island plants. He traveled the region studying endemic and introduced flora and saving pressings for posterity. Rock was one of the most prolific plant explorers in the post-contact history of Hawai'i. Over the subsequent century the collection grew rapidly. It currently resides on the UH Mānoa campus, as part of the College of Natural Sciences, in an unassuming row of rolling file cabinets on the fourth floor of St. John Plant Science Laboratory.

Those file cabinets are about to be thrown open to the world. As part of a National Science Foundation project, UH is in the early stages of putting a digital copy of the Virtual Herbarium online. The virtual version will come complete with high-resolution images of specimens—and, in some cases, DNA sequence data—for the public and scientific community

to peruse. The project is part of a broader effort to develop a shared network of regional herbaria, including collections at the university's Harold L. Lyon Arboretum, at the University of Guam, and other collaborating institutions. Together, these herbaria contain an almost complete catalog of regional plant information and comprise 120,000 specimen records. "This collection is fundamental to the field of botany. And for the first time the scientific community, teachers and students will have easy and convenient access to the entire collection," says Michael B. Thomas, collection manager of the UH Herbarium.

Previously, researchers could only view the collection either by visiting UH or requesting that specific specimens be loaned to their academic institution in a mechanism akin to the interlibrary loan system. Putting the herbarium online will allow researchers, educators, and students to more easily study and view the collections. The Virtual Herbarium will also save shipping costs and reduce the potential for damage to or loss of

plant specimens.

Even more important, the online herbaria will allow for rapid access to specimen data, easier identification of specimens and provide a unified search capability for those regional collections. The project is off to a fast start, with 70,000 digital records completed since inception in January 2008. Specimen digitization began in April 2008 and will comprise selected teaching specimens that represent important plant families such as those with cultural significance to Pacific Islanders. Ultimately, Thomas hopes UH can be a regional data center and repository for flora from all around the Pacific and incorporate botanical specimen data from other academic institutions in Oceania. Says Thomas, "We hope to extend our specimen cyber-infrastructure to other Pacific Island collections and become a unified, easily accessible repository for this valuable information".

Michael B. Thomas, Ph.D., is the collection manager of the UH Herbarium and co-developer of the University's Virtual Museum. The NSF's Experimental Program to Stimulate Competitive Research (EPSCoR) initiative underwrote the grant for the Virtual Herbarium Project.