

## Annual consortium progress report – 2012-2013 - by region

### **California** (as reported by Staci Markos, UC Berkeley, and Ellen Dean, UC Davis)

Twenty-six California herbaria participate in the Consortium of California Herbaria. As of June, 2013, the CCH portal (<http://ucjeps.berkeley.edu/consortium/>) served 1,770,431 records of which 1,006,052 records were georeferenced. The consortium has also started serving California specimen data from two non-California herbaria (Harvard and the New York Botanical Garden) that have valuable older collections. The CCH will start sharing data with SEINet soon as well. The CCH is just starting year four of a five year NSF databasing and georeferencing grant that covers California plants most affected by climate change. This grant provided money to the California Academy of Sciences to enter their California collections data, a major addition to the CCH data set. It only serves information about plants collected in California.

### **Northwest** (as reported by Ben Legler, University of Washington)

The Consortium of Pacific Northwest Herbaria (<http://www.pnwherbaria.org/index.php>) covers Washington, Oregon, Idaho, Montana, Alaska, British Columbia, and Yukon. Their portal currently serves 2,127,000 specimen records and 595,000 images from 27 herbaria. That represents just over 50% of all specimens in all herbaria in the Northwest Region, and it includes all herbaria in the region with > 30,000 specimens. About 60% of the specimens are georeferenced. The consortium is entering their last year of an NSF databasing grant.

**SEINet: Southwest / Intermountain/ Rocky Mountain/ and northern Central Plains Consortia** (as reported by Edward Gilbert, Arizona State University, and Mary Barkworth, Utah State University, and supplemented by information on the SEINet website). SEINet, the Southwest Environmental Information Network, began as a collaboration between Arizona and New Mexico institutions. Its database and has grown to include institutions from many other states. There are currently two separate portals to the information in the combined data base, <http://swbiodiversity.org/portal/index.php> and <http://intermountainbiota.org>; another is in development for the Great Plains. In addition to herbarium specimen data, SEINet portals provide access to botanical garden specimen data, images of living plants, and plant lists from parks and institutions. The network uses an NSF-funded database system called Symbiota (see <http://Symbiota.org>). It now serves over 2 million vascular plant specimen records from herbaria in Arizona, Colorado, Illinois, Iowa, Kansas, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah, and Wyoming herbaria plus some herbaria from other states, e.g., the New York Botanical Garden Herbarium, Hunt Botanical Garden Herbarium, Pacific Union College. Twostate consortia and three regional consortia contribute data to SEINet. The state consortia are Arizona and New Mexico. The regional consortia are: Intermountain Consortium (Nevada and Utah), Northern Central Plains Consortium (Iowa, Illinois, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota) and the Rocky Mountain Consortium (Colorado and Wyoming). In addition to vascular plant data, Ed Gilbert of SEINet manages nearly 2.5 million bryophyte and lichen specimen records from dozens of herbaria around the country (see below under Taxonomic Networks).

### **Texas and Oklahoma** (as reported by Amanda Neill, BRIT)

TORCH ([www.TORCHherbaria.org](http://www.TORCHherbaria.org)) is the Texas Oklahoma Regional Consortium of Herbaria and includes 38 Texas herbaria and 14 Oklahoma herbaria (spreadsheet of these herbaria is available on the TORCH website). A small annual meeting was held in May 2013 as part of the Saline Prairies Conference at Jarvis Christian College, Hawkins, Texas. The East Texas Natural History Collection, one of the newest members of TORCH, with a fledgling herbarium, hosted our consortium as part of this special conference. We did not have enough consortium attendees for a quorum so no formal business meeting was held; many of our members oversee smaller academic collections and the economy has resulted in little to no travel support. Plans are underway for a larger, stand-alone TORCH meeting in 2014 with the possibility of travel support that should attract more of our membership. There is not yet a portal to all the herbaria of this consortium, but there is an Oklahoma Vascular Plants Database (<http://www.oklahomaplantdatabase.org/>), as well as portals at the University of Texas, Austin, the Botanical Research Institute of Texas, and Texas A & M University.

### **Southeast** (as reported by Zack Murrell, Appalachian State University)

The Southeast Regional Network of Expertise and Collections (SERNEC) took the lead in organizing the southeastern states into a consortium of over 127 herbaria and initiated development of a regional network (<http://sernecportal.org>), but so far, funding has been obtained at the state-wide or herbarium level, rather than the regional, level. For example, Louisiana State has completed databasing and has a portal up. A number of herbaria in Florida have portals to their collections. Some herbaria, under the auspices of SERNEC, submitted a grant for NSF funding in 2013. In addition, SERNEC members are using crowd sourcing to get specimen image data entered into an online database. A number of southeastern states reported activity separately:

### **West Virginia** (as reported by Donna Ford-Werntz, West Virginia University)

West Virginia had a state meeting attended by 7 herbarium curators last June at Fairmont State University. Two herbaria in West Virginia are imaging, with a few thousand specimens digitized.

**Alabama** (as found on the internet)

Alabama has an informal consortium with a portal at: <http://www.floraofalabama.org/Specimen.aspx>

**Mississippi** (as reported by Lisa Wallace, Mississippi State University, Lucile McCook, University of Mississippi, Mac H. Alford, University of Southern Mississippi, Nina Baghai-Riding, Delta State University, Libby Hartfield, Angel Rohnke, & Heather Sullivan, Mississippi Museum of Natural Science)

The Mississippi Consortium (Magnolia grandifLORA) has received a digitization grant from NSF. The consortium plans to image, database, and georeference the herbarium specimens from Mississippi located in Mississippi herbaria. Those herbaria include Mississippi State University (MISSA), the University of Mississippi (MISS), the University of Southern Mississippi (USMS, now including the Gulf Coast Research Laboratory, HGCRL), Delta State University (DSC), the Mississippi Museum of Natural Science (MMNS, now including the Southern Weed Science Experiment Station, SWSL), the Mississippi University for Women (MSCW), and the Institute for Botanical Exploration (IBE). Funding from the National Science Foundation for this project began in 2012 and continues for five years. Before this project began, progress toward digitization was at different stages at different institutions, with some almost fully imaged (e.g., USMS) and others almost fully databased (e.g., MISS). During the first year of this project, approximately 76,500 specimens have been barcoded, 68,500 specimens have been imaged, 4000 specimens have been databased by keystroking, one database has been converted to SPECIFY, and a coordinator for education outreach and development of botanical information has been appointed at the Museum. A web portal integrating the data from all the institutions is in development and will be available at: <http://www.mississippiplants.org/>.

**Northeast** (as reported by Patrick Sweeney, Yale University)

The Consortium of Northeastern Herbaria portal (<http://portal.neherbaria.org/portal/>) is currently sharing 440,934 records from 19 herbaria located in the northeast region. The consortium currently has 61 member institutions, but not all share data through the portal. A major goal is to change this through sharing knowledge on digitization and other museum informatics technologies; coordinating with other relevant regional, national, and international networks and organizations; and obtaining funding to support the goals of the consortium. The consortium is currently using Symbiota software developed by Ed Gilbert of SEINet.

**Midwest**

A number of states placed into the Midwest region reported activity separately

**Michigan** (as reported by Anna Monfils, Central Michigan University)

Over nine small Michigan herbaria have procured databasing funding for the Michigan Small Herbaria Initiative (<http://www.micob.org/mshi/index.html>) from the Hanes Foundation. There is not yet one portal for all of Michigan, but several of the larger Michigan herbaria have portals to their own collections.

**Illinois** (see SEINet report).

**Indiana** (as reported by Rebecca Dolan, Butler University)

Butler University has taken the lead in coordinating a consortium of herbaria for Indiana and plans to create an online atlas of the Indiana flora and as well as a portal for digitized records from herbaria around the state.

**Iowa** (as found on the internet)

There is a portal to eight Iowa herbarium collections at <http://plantsofiowa.com/herbaria.html>

**Taxonomic Networks** (as reported by Mary Barkworth)

The regional networks primarily serve information about vascular plants. There are three networks that present digital information about other taxonomic groups: macrofungi (<http://mycoportal.org>), lichens (<http://lichenportal.org>), and bryophytes ([bryophyteportal.org](http://bryophyteportal.org)). These three networks use Symbiota software and are managed by Ed Gilbert. In addition, in 2013 NSF awarded a grant for digitizing macroalgae to Christopher Neefus of the University of New Hampshire. This leaves microalgae as the only major taxonomic group housed in herbaria that is not involved in a digitization grant.