WVA Herbarium Newsletter

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Names and Titles

The WVU Herbarium is featured in an exhibit designed by English faculty Dr. Lara Farina for her "Art in the Libraries" grant. The display, entitled "Big Green Data," opened fall 2019 in Wise Library room 1020 and will travel to other local sites in 2020. It covers historical botanical depictions and plant naming from antiquity through pre-modern time.

The exhibit profiles important works in B.C.E. philosophy, early medicine (herbal texts), medieval art, and Middle Ages literature. Posters from the display are viewable online at researchrepository .wvu.edu/biggreen-exhibit. Take a look: go to image #14 to see WVU Herbarium portion!

Another highlight of 2019 is the WVU Herbarium curator's promotion from Associate to Full Service Professor. Dr. Ford-Werntz is very appreciative for the supportive external reviews provided by six colleagues, as well as approval from her WVU peers and supervisors.

It is interesting to reflect on past activities in the context of 25 years total of WVU botany teaching and herbarium work. It has been a joy to interact with talented students in their plant studies, assist knowledgeable scientists with research projects, and provide programs and information for the general public.

Herbarium Begins Two New Grants!
WV Invasive Plants and Fern Digitization

Two new multiyear WVU Herbarium projects were funded in late 2018. The U.S. Forest Service awarded $12,000/ year to support student labor for invasive plant research directed by Dr. Cindy Huebner. During the school year, work is at the WVU Herbarium and Evansdale greenhouse, while summer emphasizes field studies. The goal is to document historical geographic patterns, as well as to discern species growth parameters.

During the initial semesters, three students investigated seven non-native species. Starting with existing WVU Herbarium records for West Virginia, they extended label databases to include all U.S. and foreign collections. After graduations, two more students are continuing the work, expanding on *Arthraxon hispidus* and *Polygonum caespitosum*. Their focus has been to use the iDigBio specimen image portal to transcribe labels from other online herbaria and to conduct greenhouse experiments.

The WVU Herbarium is one of 39 facilities participating in a three year, NSF funded pteridophyte specimens grant. This nearly $3 million award, distributed among nine centers, is to digitize fern herbarium collections and fossils. WVU Herbarium holdings are being sent to the University of North Carolina (Chapel Hill) for processing.

In 2019, two dedicated volunteers, community member Mike Breiding and student Rhiannon Newton, barcoded and packaged material for shipping. To date 2,445 fern specimens from foreign countries and non-southeastern U.S. states have been mailed. An additional 6,221 fern images were transferred from the SERNEC portal (see below left). Label data from nearly 5,000 West Virginia fern collections previously transcribed will be linked to the project website at pteridoportal.org.

SE Flora Digitization Project Results

The WVU Herbarium imaged more than 92,000 southeastern U.S. plant collections during the five year NSF "Keys to the Cabinet" grant. In the final year of digitization about 20,000 West Virginia dicotyledon specimens (through family #227, Umbelliferae) were photographed by undergraduate Emily McDougal. Work-study student Matthew Sheik did ongoing label data entry for West Virginia species in 2019.

The WVU Herbarium SE U.S. flora records represent 4,639 species from 1,314 genera in 223 families. To see WVU Herbarium uploads, as well as those from Marshall University (nearly 42,000 specimens) go to sernecportal. org. West Virginia Wesleyan College has digitized over 21,700 collections, which are also posted online.

In total, 115 herbaria from the 12-state southeastern region have over 4.7 million specimens publicly available. Of these, 89% are imaged, and the number of georeferenced collections is more than 421,000. These figures surpass the original grant goals, though more work remains to be done.

Information contained in the resulting database has numerous applications for field botany and plant community studies. It is particularly useful for both endangered and invasive species management, as well as large scale modeling of regional biodiversity and climate change impacts. Other outcomes from the project include significant staff and student training, as well as public outreach through citizen science volunteer involvement.

WWII Plaque History

Clark Hall is best known as WVU's chemistry building, but over 75 years ago it also served as an herbarium repository. This mostly forgotten story was recently reconstructed by Amy Weiss of the New York Botanical Garden (NYBG), who provided the following information.

After the World War II Pearl Harbor bombing, there was concern of possible future attack on the American mainland. The NYBG Herbarium decided to move its most valuable materials inland to safer storage. NYBG's Henry Gleason wrote to his colleague P.D. Strausbaugh at WVU, who arranged to house the items in the Chemistry Building (later renamed Clark Hall).

By May 1942, the first boxes of NYBG Herbarium type specimens and other important collections were at WVU. In addition, NYBG also sent rare books and the papers of John Torrey and Nathaniel Britton (famous New York botanists). A total of about 38 boxes arrived and were stored at WVU through September 1944. Following return of the specimens, NYBG commissioned a plaque to be sent to WVU in thanks.

Due to a shortage of bronze after the war, the plaque did not arrive at WVU until December 1948. It is still in place today on the side of Clark Hall facing the Wise Library as a testament to this past botanical collaboration.