



## 2021 Annual Report

From the Director, Dr. Neil Snow

### Overview of 2021

The past year was the first in which we fully occupied the new herbarium space in Hartman Hall 212, notwithstanding some filing cabinets, books and journals that still need to be moved.

The focus, as in recent years, mostly was on processing backlogged material. Approximately 3200 vascular plant specimens were mounted, many of which required that labels be created. Some specimens dated back thirty years or more. After mounting, about 75% required that barcode labels be added and updated in the database. All specimens being processed now have the phenological status added (flowering/fruiting/bud, or sterile/fertile for all non-flowering plants) on the label (in pencil) and in the database.

Several hundred bryophyte specimens also were databased. However, we did not track those numbers closely because the attention needed for each packet varied for some combination of affixing existing label and barcode, and checking for current nomenclature. Ashlyn Henderson (Spring of 2021) and Danielle Evilsizor (Fall) are thanked for their attention to detail curating the bryophytes.

Another major achievement in 2021 was the filing of approximately 4000 specimens of vascular plants. This thankless and slow process is constantly necessary. Many thanks to Taylor, Tabitha and Danielle for their dedication.

Another smaller project was curating 39 ethnobotanical specimens collected by William ("Bill") Grable in or near Iquitos, Peru, in 2000. Grable, whose contact information we have been unable to obtain, may have accompanied Dr. Timme to Peru at that time. The specimens were identified by colleagues at the herbarium in Iquitos shortly after they were collected. Most specimens have a color print photo attached, and a list of ethnobotanical uses is included with the specimens, which are housed together in a separate folder.

### Herbarium size, Updated:

The Sperry Herbarium currently has about 50,000 specimens, based on best current estimates, including undatabased bryophytes. When existing backlogs are processed, the figure will be approximately 55,000. In addition, current collecting activities by the Director and students will push the total to approximately 60,000 in 2-3 years. Over 1500 specimens were newly collected in 2021.

### Current Distributional Summary

The Sperry Herbarium presently includes specimens from 77 different countries, rank-ordered by the top five of which include: USA, Dem. Rep. Congo, Peru, New Caledonia, Madagascar. Rank-ordered holdings by the top ten states: Kansas, Missouri, Oklahoma, Texas, New Mexico, North Carolina, Arkansas, Colorado, Louisiana, Illinois.

### Current Taxonomic Summary

A total of 323 families of vascular or bryophyte families, 1713 genera, 5374 species, and 5931 unique taxa (species including their subspecies and varieties) are represented.

As evident from the above two paragraphs, the Sperry Herbarium houses a considerable diversity of plant taxa, especially for a university of this size.

### Personnel: Visitors and Updates

Three graduate students began this year.

Rachel Styers (BS 2020, PSU) will be studying the rate of spread and other demographic data of *Tripidium* (= *Saccharum*) *ravennae*, a tall and robust ornamental grass that is spreading rapidly in our area and (given its size) poses management problems for roadside mowing operations.

Michael Daines (BS 2021, Brigham Young University-Rexburg) is carrying out a floristic survey of the Caribou portion of the Caribou-Targhee National Forest in southeastern Idaho; he collected approximately 1400 specimens before matriculating in the Fall.

Danielle Evilsizor (BS 2021, Missouri State University) is studying the demography of Ozark chinquapin (*Castanea ozarkensis*) in Roaring River State Park in southwest Missouri, extending an undergraduate research project on the same topic. She documented 977 specimens during a 2021 before matriculating. This tree species has been hit hard by chestnut blight.

Madeline Gay (PSU, BS 2021) will be working for Oregon State University this summer (2022) on contract for vegetation sampling in the sagebrush steppe.

Many thanks to Andrew Braun of Prairie State Park for making or confirming identifications of the grass genus *Dichanthelium*, which is one of the most challenging genera in North America for that family.



Michael collecting plants on Meade Peake in southeast Idaho.

### Teaching and Education

Specimens were used for Taxonomy of Vascular Plants, Grass Taxonomy, and an independent study in Regional Wetland Plants. Each year a few specimens in the teaching collection are replaced with newer specimens that better document aspects of the plant, such as flowers and fruits.

Sixty-four student visits were logged, mostly using the Kansas and Regional Reference Collection to help with identifications.



Herbarium personnel, Fall 2021 (L-R): Danielle Evilsizor, Sara Scholes, Tabitha Caruthers, Snow, Madeline Gay, Rachel Styers, Taylor Michael, Michael Daines (Photo: Sarah Daines.)

Although not yet tallied accurately, approximately 25 student collections were added to the holdings, and approximately 50 are being retained (with permission, of course) for exchange with other herbaria.



Students in BIOL 405 collecting specimens as part of their course requirements at Mined Land Wildlife Area No. 25.

### General Curation and By the Numbers

(\* = much or most with student assistance)

External visitors: 10

First county occurrence records reported (\*): 17

Specimens newly collected (\*): 1955

Specimens annotated (\*): >350 (no longer tabulating)

Specimen labels made: > 2000 (no longer tabulating)

Specimens mounted (\*): >3200

Specimens added to Reference Collection: 48  
(present total = 1835 taxa)

Specimens databased (\*): ca. 5200

Specimens barcoded (\*): ca. 6000

Specimens conserved (\*): 102

Specimens de-accessioned: 11 (being retained for exchange)

Specimens received on loan for research: 95 (New Caledonia from Museum national d'Histoire naturelle in Paris)

Specimens on loan returned: 607 (from herbaria ARIZ, TAES, TEX, NY, US, WYAC)



Specimens sent as gift: 209 (to BRIT)

Specimens received as gift for research: 216 (from MO)

### Curatorial Assistance in 2021

For moving specimens and equipment from Heckert-Wells to Hartman: Madeline Gay, Blake Hansen, Daniel Munguia, and Taylor Michael.

For databasing: Ashlyn Henderson, Madeline Gay, Danielle Evilsizor, and Jessi Snow.

For mounting and filing: Danielle Evilsizor, Taylor Michael, Tabitha Caruthers, Sara Scholes, Becca Snow.

### Other general information

Snow assisted Nagaraju Siddabathula from the Botanical Survey of India, India, identifying a species of *Diplachne* growing in that region.

Collections made during field trips in Plant Taxonomy and Grass Taxonomy yielded thirteen county or state records (see at right Daines et al. in prep., 2022).



Danielle (above) curating bryophyte packets. Rachel (below) reviewing specimens of Poaceae.



Above, L to R: Sara, Austin Abram (standing), Taylor, and Tabitha mounting and databasing. Below: Michael at the dissecting scope keying out plant specimens.



### Professional Activity

(Student authors underlined; faculty in bold)

Daines, M. 2022. *Agastache cusickii* (Lamiaceae) in Idaho: A newly documented population and potential implications for conservation status. *Phytoneuron* 2022-17: 1-4.

Daines, M. 2022. Distribution of *Astragalus amnis-amissi* (Fabaceae), a plant endemic to east-central Idaho. *Western North American Naturalist* (in revision).

Daines, M., A. Anzjon, M. Gay, L. Headings, J. Huckabee, M. Marine, T. Poolman, S. Scoggins, R. Styers, I. Villafañe, and N. Snow. 2022a. Distributional novelties for Idaho, Kansas, Missouri, Oklahoma, and Texas. In review.

**Snow, N., J. Munzinger, M.W. Callmender.** Accepted (in revision). Additional taxonomic and nomenclatural notes on New Caledonian *Eugenia* L. (Myrtaceae). *Candollea*

**Snow, N., P.M. Peterson.** In review. A new and evidently rare new species of *Dinebra* (Poaceae: Chloridoideae: Cynodonteae) from Sonora, Mexico. *Systematic Botany*