

# T.M. Sperry Herbarium (“KSP”)

Department of Biology  
Pittsburg State University

## 2019 Annual Report

From the Curator, Dr. Neil Snow

### Brief overview of 2019

For the second year KSP participated in WeDigBio in October, the community-outreach volunteer event overseen by NSF to expedite the data basing of specimens. A total of 478 specimens were databased over 4 hours, with many thanks to: Maggie Murray, Peyton Williams, Amy Hammesfahr, Brady Taylor, Ashlynn Henderson, Ashlynn Sinclair, Cody Oliphant, Andrew Ortolani, Ryan McGinty, Dixie Smith, Jiawei Xu, Claire Campbell, Rachel Styers, Cobly Manley and Griff McDuff.

Dr. Mat Sharples (below in the field), a recent graduate of the University of Colorado-Boulder, gave a Departmental seminar in November and kindly annotated a few dozen specimens of Caryophyllaceae.



### Part I: Teaching and Education

In January Snow took several students to St. Louis for three nights. Full days were spent at the Missouri Botanical Garden, where we did a 4-hour service

project sorting specimens of returned loan specimens. Thanks as always to Dr. Jim Solomon at MO for coordinating these visits and providing a tour of the Bayer (formerly Monsanto) Building, including the collections and Peter H. Raven Library.

In November Snow took 10 students to Albuquerque, NM, for 2-day workshop that was NSF-sponsored on career preparation and the curation of museum specimens.

### Part II: Research (student authors underlined).

**Student research** – Jiawei Xu continued her research on patterns of leaf venation in New Caledonian Myrtaceae.

**Research-related travel** – Snow annotated ca. 600 specimens at the University of New Mexico and Missouri Botanical Garden for a taxonomic revision of *Leptochloa* sensu strito, and BOTANY 2019 in Tucson for several presentations. See below for additional loans for research.

**BIOTA of North America (BONAP)** – We continue to provide state and county-level first reports to Dr. John Kartesz of BONAP.

**BOTANY 2019** – Xu and Snow both gave posters and/or presentations on their research. Snow organized a colloquium entitled *Floristics in the 21<sup>st</sup> Century: Challenges, Opportunities and Priorities*, which included ten invited speakers from across North America (see photo).

**New Caledonian Myrtaceae** – Arrangements for a one-semester sabbatical (Spring 2020) were approved for time to work on taxonomic revisions of *Eugenia* and *Uromyrtus* in Paris at the Natural History Museum.

### Part III: Outreach

**Visitors** – 59 people used or visited the herbarium, including 38 student visits mostly to use the KS and Regional Reference Collection. We also hosted Will Callen, a case worker for US Congressman Steve Waktins of Kansas Second Congressional District, showing the existing herbarium and new space into which the herbarium is moving. PSU alumni Mike Robinson and Jacob Barnes each came by for visits, which we always appreciate.

**Specimens online** – The Sperry Herbarium is now a part of the Global Biodiversity Information Facility (<https://www.gbif.org/dataset/a92f4b3c-ae5c-45af-8dac-4a6a88d35ddd>) and IDigBio data portals, with its label information from databased specimens available online.

### Part IV: General Curation and By the Numbers (\* = much or most with student assistance)

**Herbarium size:** ca. 65,500

**First occurrences (state):** 45 (KS); including 44 by Pryer et al. (2019). Shown below is the first confirmed adventive (= naturalized) occurrence of Pampas grass (*Cortaderia selloana*) in KS, just north of the SEK Recycling Center in Pittsburg.



**Pampas grass (*Cortaderia selloana*)**

**First county occurrence records reported by KSP:** 260 (MO, OK, TX, MN, CO and mostly KS)

Specimens collected: 74

Specimens annotated: ca. 8100

Specimen labels made\*: 824

Specimens mounted\*: 1200

Specimens added to KS and Regional Reference Collection\*: 376 (Total: 1721)

Specimens data based\*: 10,725

Specimens barcoded\*: 9895

Specimens digitally imaged\*: 1531

Specimens conserved\*: 5

Specimens de-accessioned: 747 (sterile, lacking locality data, or horticultural)

Fields in database corrected or updated: 443 (at least... we're not going to track this henceforth!)

Specimens received on loan for research: 58 specimens of *Metrosideros polymorpha* (Myrtaceae) from Hawaii from Dr. Elizabeth Stacy (U. NV-Las Vegas)

Loans to KSP returned in 2019: ca. 400 (to Missouri Botanical Garden, Desert Botanical Garden, AZ State U., U. of AZ, Humboldt State U., Harvard U. Herbaria, U. of NM, Miami U. of OH, Sul Ross State U).

KSP specimens received as a gift for research: 7

KSP specimens sent as gift: 177. Many thanks to Dr. Dale Kruse of Texas A & M for sending gift specimens for use in the Wetlands Plants course, and to Dr. Michael Powell of Sul Ross State University for sending additional collections of grasses in Grass Taxonomy and cacti for use in Plant Taxonomy.

Specimens on loan to KSP: 325

Specimens sent on loan from KSP: 77

Specimens used in teaching (ca. 680): Plant Taxonomy (ca. 350); Grass Taxonomy (320); Evolution (5). Five specimens were used for identification quiz in Biology Bowl in February.

External requests for identifications or information: Requests for identifications of Myrtaceae came from South Africa, whereas those of Poaceae came from Israel, Nevada, and Jamaica.

Estimated backlog of vascular plants: 15,300

External requests for DNA material: Twelve leaf samples were sent for DNA extraction to the Royal Botanic Gardens, Kew, including of Poaceae for Dr. Maria Vorontsova and Myrtaceae for Dr. Eve Lucas.

### Curatorial Assistance in 2019

Many thanks to the following individuals, all of whom contributed to curatorial efforts in 2019: Ximena Bogarín, Andrew Ortolani, Jiawei Xu, Dr. Dixie Smith, Maggie Murray, Peyton Williams, Amy Hammesfahr, Brady Taylor, Ashlynn Henderson, Ashlynn Sinclair, Cody Oliphant, Ryan McGinty, Claire Campbell, Rachel Styers, Colby Manley and Griff McDuff. (With sincere apologies to anybody who may have been overlooked!)

### Other general information

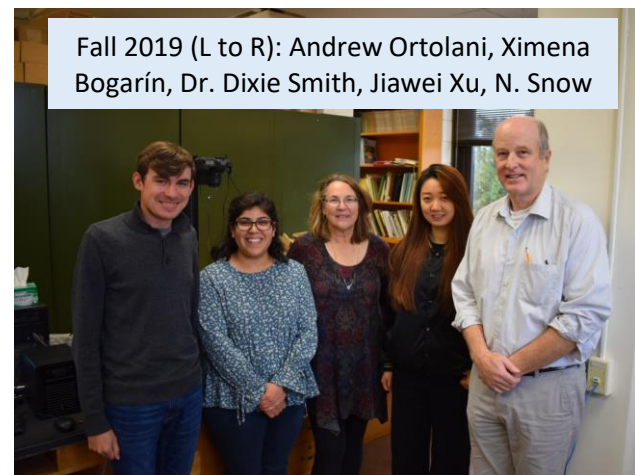
Herbarium tours: Do you know educational or civic groups (schoolchildren, scouts, 4-H, FFA, etc.) that would enjoy a tour of the herbarium? If so, then please contact the Director (nsnow [at] pittstate.edu), who will work to tailor a presentation to your group's interests.



PSU alumnus Mike Robbinson (L) during a visit and herbarium tour, Spring 2019.



Service project: Sorting specimens at the Missouri Botanical Garden in January.



Fall 2019 (L to R): Andrew Ortolani, Ximena Bogarín, Dr. Dixie Smith, Jiawei Xu, N. Snow



**Part V: Professional Activity:**  
**(Student authors underlined)**

**Publications**

Pryer, S.Y., N. Snow, J. Kartesz. 2019. Floristic survey of vascular plants in Crawford and Cherokee counties in southeastern Kansas. *J. Bot. Research Institute of Texas* 13: 545–591.

Stacy, E., T. Sakishima, H. Tharp, N. Snow. 2020. Isolation of *Metrosideros* ('Ohi'ia) taxa on O'ahu increases with elevation and extreme environments. *Journal of Heredity* 2019 (electronically) doi:10.1093/jhered/esz069. Pp. 1–16.

**Oral presentations:**

Snow, N. Upgrades and recent activity in the T.M. Sperry Herbarium. Sperry-Galligar Audubon Society, Pittsburg, December.

Snow, N. Plant biodiversity locally, nationally, and internationally: The role of the T.M. Sperry Herbarium at Pittsburg State University. Kansas Chapter of the Nature Conservancy 30<sup>th</sup> Anniversary Celebration, Pittsburg, KS, September 25.

Snow, N., J. Munzinger, J. Byng, M. W. Callmander. Thirteen additional new species of *Eugenia* from New Caledonia. Invited paper: Colloquium on the Evolution, Ecology, and Biogeography of Pacific Plants. BOTANY 2019, Tucson

Snow, N., J. Lendemer. Floristics as a foundation for training students broadly in plant and fungal diversity. Oral presentation as part of *Colloquium Floristics in the 21<sup>st</sup> Century: Challenges, Opportunities and Priorities*. Oral presentation, BOTANY 2019, Tucson

**Posters**

Byng, J., N. Snow. 2019. A visual representation of the floral and fruiting diversity of Malesian *Syzygium* (Myrtaceae) to aid identification. Flora Malesiana Symposium, Universitii Brunei Darussalam.

Byng, J., V. Hequet, J. Xu, N. Snow. 2019. A visual representation of New Caledonian *Syzygium* (Myrtaceae) to aid identification. BOTANY 2019, Tucson.



Left: Some of the invited speakers at the *Floristics* colloquium at BOTANY 2019 in Tucson (August), including (L to R): Drs. Christina Alba (Denver Botanic Gardens), Barbara Ertter (retired), N. Snow, Lynn J. Gillespie (Canadian Museum of Nature), Wendy B. Zomlefer (Univ. of Georgia), and John Kartesz (Biota of North America, Chapel Hill NC).