

BUTLER

UNIVERSITY

FRIESNER HERBARIUM



2018 Annual Report **Partial Year (January – August)**

Department of Biological Sciences
College of Liberal Arts and Sciences
Butler University
4600 Sunset Avenue
Indianapolis, Indiana 46208
<https://herbarium.butler.edu>

Rebecca W. Dolan, Director, Friesner Herbarium

Marcia E. Moore, Herbarium Assistant & Technology Specialist,
Layout and Photographs (unless otherwise noted)

Front Cover Photo: *Silene regia* (Royal catchfly) - a prairie plant
Dr. Dolan studied and published work on the effects of fire on
promoting stability of prairie plant populations

Herbarium Highlight

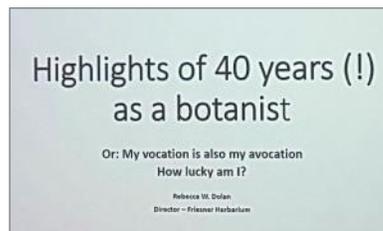
We celebrate the career of Dr. Rebecca Dolan who has been the Director of the Friesner Herbarium for over 30 years. She will be retiring from this position August 31, 2018, leaving a legacy of achievements, which includes the development and implementation of the Indiana Plant Atlas, an online searchable database of more than 40,000 Indianapolis and Indiana dried, pressed, and preserved plant specimens. With Becky's hard work over the years, the Herbarium has become recognized locally, regionally, and nationally. Becky has long promoted plant research and conservation, student research experiences, citizen science opportunities, and educational outreach. She will be missed as the Herbarium continues its mission of exploring and documenting Indiana's flora. We wish her well in her retirement and future endeavors.



Annual Report—Partial Year
FRIESNER HERBARIUM
January 1, 2018 - August 31, 2018

Accomplishments

- 1) Continued support for the Indiana Plant Atlas (begun with funding from a Butler University Innovation Fund Grant) was obtained in the form of a \$10,000 award from the Indiana Academy of Science. \$2,500 will be made available annually for four years starting in 2018 to support maintenance costs of the site.
- 2) The 31th annual Friesner Herbarium Special Lecture and Open House was held on Friday, March 31st. Retiring Friesner Herbarium Director Rebecca Dolan spoke on a retrospective of her career. We hosted over 50 guests for lunch and over 75 attended the lecture.



- 3) Butler was recognized for the 6th year as a Tree Campus USA by the Arbor Day Foundation. Student Grant Ksenak submitted this year's application.
- 4) Department of Biological Sciences students Devon Roese, Abby Baker, and Amanda Rosenfeld, along with recent grad Haley Coffman, continued in-house imaging of our Indiana specimens for the Indiana Plant Atlas, and assisted with other Herbarium projects. Over 10,000 new images have been added to the Indiana Plant Atlas in the past 6 months. Another 2,000 images are currently being processed and will be posted soon.

Loans, Inquiries, Gifts and Visitors

Loans returned:

All bryophyte specimens sent to the University of Wisconsin for databasing and addition to the Consortium of North American Bryophyte Herbarium portal (<http://bryophyteportal.org/portal>) in 2017 were returned and refiled in 2018.

BUT Collection Statistics from the Bryophyte portal:

- 957 specimen records
- 59 (6%) georeferenced
- 86 families
- 212 genera
- 426 species

A long-lost loan of hops, *Humulus*, was returned after it was discovered during imaging of its family for the IPA that these specimens were still out on a loan made in 2008 to Colorado State University. Another loan the same year of Oaks to the Morton Arboretum may still be out. We are waiting confirmation after renovations are done at the facility.

Loans made:

2 sheets of *Rubus argutus* to Iowa State University.

Gifts of specimens:

One specimen of *Sclerochloa dura*, collected by Ian Macdonald in Vigo County.

Scott Namestnik, Senior Botanist with Orbis Environmental Consulting, deposited approximately 75 specimens, mostly collected from LaGrange and Steuben counties in northern Indiana.

Mark Sheehan, retired Indiana University botanist, the following specimens:

- Red mulberry, *Morus rubra*, from IU's Lilly-Dickey Woods where it had not been reported previously.
- Common prickly ash, *Zanthoxylum americanum*, from an Indiana DNR nature preserve in Martin County, a species not recorded in Kay Yatskievych's index as occurring in that county.
- Linden viburnum, *Viburnum dilatatum*, from Yellowwood State Forest, had not been previously recorded in the state.

One specimen of *Tragopogon dubius* collected by Andrew Fritz, Urban Agriculture Conservationist with the Hamilton County Soil and Water Conservation District.

Visitors:

- Mike Homoya and Lee Casebere of I-DNR Division of Nature Preserves
- Scott Namestnik of Orbis Environmental Consultants
- Biology majors in the new BI111 course toured the Herbarium
- Dr. Phil Villani's Botany class toured the Herbarium
- Botanists working with Cardno Ecological Consultants
- School group tour from Carpe Diem, 9 4th graders visited on May 15th. Jamie Felling, teacher, and 5 parents toured the Herbarium and greenhouse. Marcia gave a mini-lab lesson to them where they looked at plant specimens under the microscope, looked at herbarium specimen sheets, and talked about plant morphology and leaf shapes. After their tours, they went to the Butler woods to collect wildflowers and press them.
- BSI Chemistry student of Anne Wilson

Inquiries, surveys, & requests for database information:

31 inquiries for information from specimen labels, from our Indiana specimen label database, or for collection of local plant material or information on local flora and natural areas were researched and responded to during the first nine months of 2018. Agencies and institutions looking to the Herbarium for plant related resources included the City of Indianapolis and the Indiana State Museum. A researcher with the USDA Forest Service requested permission to use Witness Tree data from a paper published in the Butler University Botanical Studies journal in 1956 by John Potzger. The researcher put the data into a GIS layer and is using it in a publication.

Endowment and Gift Funds

The Friesner Herbarium Endowment, established by Ray's widow, Gladys, paid the wages for student assistants working in the Herbarium.

Gifts were received from alumna Molly Redding, Professor Emeritus Willard Yates, and Thomas and Rebecca Dolan.

Happy Hollow Garden Club in Lafayette, IN, made a donation to support the Indiana Plant Atlas to thank Janice Gustaferra for making a presentation on the atlas.

Publications

Dolan, R. W. and M. E. Moore. Floristic inventory of Woollen's Gardens Nature Preserve, Indianapolis, Marion County, Indiana, USA, with quantitative vegetation sampling of permanent plots in 2003 and 2016. *Proceedings of the Indiana Academy of Science* 126:185-189.



Figure above—General location of survey transects in Woollen's Gardens nature Preserve.

Holland, J.D., R.W. Dolan, M.S. Finkler, B.E. Fisher, R.L. Hedge, N. Harby, R.P. Jean, M.K. Martin, B. McKnight, M. Milne, K. Roth, P. Rothrock, J.J. Sheets, C. Strang, and T. Swinford. 2017. Results of the 2016 Indianapolis biodiversity survey, Marion County, Indiana. *Proceedings of the Indiana Academy of Science* 126:166-175.

Volume 126 released in 2018.

Indiana Plant Atlas (IPA):

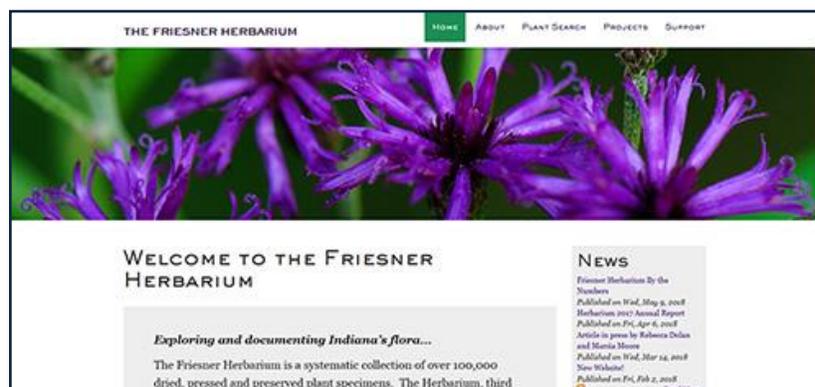
The Indiana Plant Atlas (IPA, www.indiana.plantatlas.usf.edu) had its second year of availability in 2018. Rebecca received a three year Butler University Innovation Fund Grant in March of 2013 to create an online Indiana Plants Atlas. Additional funding for this project was been secured from the Indiana Native Plant and Wildflower Society and the Indiana Academy of Science. Marcia More is digital curator for the site.

Data posted to the IPA are now also published to the iDigBio website (www.idigbio.org), an initiative of NSF that contains digitalized biodiversity data on organisms of all types and from there to the Global Biodiversity Information Facility (www.gbif.org), an international site that compiles and serves specimen data from across the globe.

Additional funding to help support maintenance of the site was obtained from the Indiana Academy of Science in 2018, as noted in the Accomplishments section of this report.

Website – herbarium.butler.edu

Our new website – with new url: <https://herbarium.butler.edu/> - debuted in the spring. Much work from Marcia and the IT department yielded a new background database supporting our photos and an overall more modern look and feel.



Friesner Herbarium Digital Collection (FHDC):

We continued to move toward completing the Friesner Herbarium Digital Collection of Indiana specimens. Marcia Moore is leading this project, working with student assistants. Since January 1, 2018, over 10,000 specimen sheets were imaged and metadata sent to Janice Gustafarro, metadata librarian at Irwin Library. Images are posted online at <http://palni.contentdm.oclc.org/cdm/landingpage/collection/herbarium4>. The collection now contains 30,934 images from 99 plant families, representing 1722 plant species.

We have approximately 13,000 specimens remaining to be imaged and hope to have this project completed in 2019.



At left, one of the oldest specimens from our collection:

Woodwardia virginica
(Virginia chain fern),
collected by E.J. Hill,
July 11, 1878, in a peat
marsh in Lake county,
Indiana.

Butler Prairie

Weather did not cooperate for a prairie prescribed burn in 2017 or 2018. However, the prairie was bush-hogged in May for the second year in a row. Late spring mowing is a recommended management practice for setting back Canada goldenrod, a species that has become dominant over recent years. The mowing seems to have some positive effect.

The prairie served as an outdoor laboratory for nine classes and as a research site by at least one professor, Andrew Stoehr, who will be taking over managing the site.



Dr. Stoehr brings his ornithology students to the prairie where there are feeders set up enabling them to observe foraging behavior, and they also conduct projects looking at diversity. At left, a yellow throated warbler (photo courtesy of Dr. Andrew Stoehr).

At right, *Monarda fistulosa* (Bee balm), being visited by pollinators. (photo by Marcia Moore)



Herbarium Sponsored Activities and Community Service

Many phone and e-mail questions from Butler staff, students, and the public were answered and plants were identified on request.

Rebecca again lead monthly nature walks open to the campus community throughout the spring and summer. Attendance ranged from 4–15.

We again helped organize the annual ecological restoration work day in the Butler Woods, removing invasive garlic mustard and small bush honeysuckles. Students from Marva Meadow's non-majors introductory biology classes, Phil Villani and Kathy Schmid's botany classes, and students in Butler's Sustainability Club joined in. The event was on Earth Day and was part of Earth Week celebrations on campus.

Rebecca led two spring wildflower walk for seniors at Robin Run Village in May (Rebecca and residents of Robin Run below).



Other News

Marcia attended the Digital Data in Biodiversity Research Conference: Emerging Innovations for Biodiversity Data, organized by iDigBio in Berkley, CA in June. She continues as Webmaster for the Indiana Academy of Science, Awards Committee chairperson, and this year will be the chair of the Plant Systematics and Biodiversity Section.

Rebecca attended the Santa Fe Science Writer's workshop in May and the Botany 2018 meeting in Rochester, MN in July.

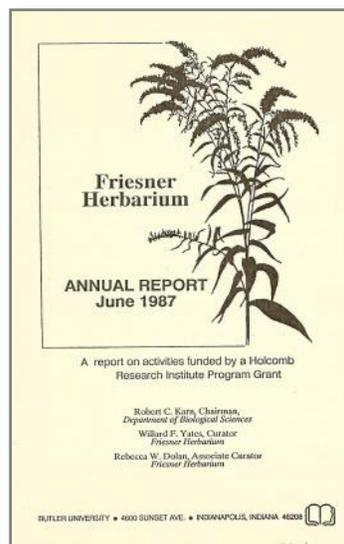
Rebecca received two awards in 2018: The Distinguished Service Award from the Indiana Academy of Science and the Woman of Distinction Award from Butler University. She will retire from Butler at the end of August, 2018.

Rebecca provided peer review for three professional journals and served as a reviewer for an honor's thesis written by a student working in the Center for Urban Ecology. She also proofed text for a brochure on pollinators for the CUE farm.

A complete run of Friesner Herbarium Annual Reports, beginning in 1987, was deposited in the Irwin Library Archives.

At right, scanned cover of the 1st Annual Report in 1987. Consisting of a whopping 3 pages, one of the noted accomplishments was an Open House and rededication ceremony, held June 12, 1987. At the rededication, the name "Friesner Herbarium," officially came into use.

Much has changed over the past 31 years, but our mission to increase access to, awareness of, and use by all Indiana citizens of the valuable historical botanical information contained within the Friesner Herbarium remains constant.



New and Continuing Activities for the remainder of 2018 and beyond

... To be determined by the new Director, Dr. Emily Gillespie

Emily comes to us from West Virginia where she was Assistant Professor and Curator of the Marshall University Herbarium. She is an evolutionary biologist and Northern Hemisphere biogeographer, particularly focused on the pattern and process of speciation among native azaleas and their relatives. Welcome Emily!

Butler University's Friesner Herbarium — exploring and documenting Indiana's flora

