ROCKY MOUNTAIN HERBARIUM

2026 Annual Update

University of Wyoming
College of Agriculture, Life Sciences and Natural Resources
Department of Botany



Director's Note

Friends of the Herbarium,

The past year has been a period of transition for the Rocky Mountain Herbarium as familiar faces leave and new faces join us. Longtime Curator Ernie Nelson retired in January, 2026, while Director Dave Tank departed in June for a new position at Michigan State University. Both left a lasting impact on the herbarium. The search for a new director will soon begin. Meantime, please join me in welcoming Sara Legler in her new role as Curator, filling the vacancy left by Ernie's retirement.

Yet, even as these transitions unfold, the herbarium continues its growth as a major research collection supporting students, scientists, and the public. That growth is exemplified by continued work to improve the collections through our National Science Foundation-funded herbarium expansion, renovation, and digitization project, along with efficiency improvements that helped us mount an incredible **26,000** specimens in one year, growing the collections to nearly **1.19 million specimens**, almost all imaged. We also grew our outreach efforts with events reaching K-16 students and the public, and celebrated the graduation of floristics M.S. students Dan Coles and Marguerite Trost and interdisciplinary doctoral student Erin Bentley.

Looking forward, our recent expansion creates new opportunities to develop museum-quality exhibits within the herbarium to better engage with students and the public. Join me during UW Giving Day later this month as the herbarium raises funds for these exhibits. Gifts to the **Rocky Mountain Herbarium Excellence Fund** will directly support exhibit design and development, with student involvement throughout the process.

As I take on the role of Interim Director, I want to express appreciation to the Botany Department and the College of Agriculture, Life Sciences, and Natural Resources for supporting the herbarium through these personnel changes, and thank the many donors, volunteers, and students who make the herbarium a vibrant, active collection.

Thank you for your support,

Ben Legler

Interim Director & Curator, Rocky Mountain Herbarium

Rocky Mountain Herbarium by the Numbers

Oct 2025 – Sep 2026

1,189,830

Accessioned plant and fungal specimens

Collections

26,240
Specimens mounted

39,877
Specimens imaged

1,145,551
Total imaged specimens

960,873
Publicly accessible databased specimens

735,963
Fully digitized specimens (with image & database record)

People

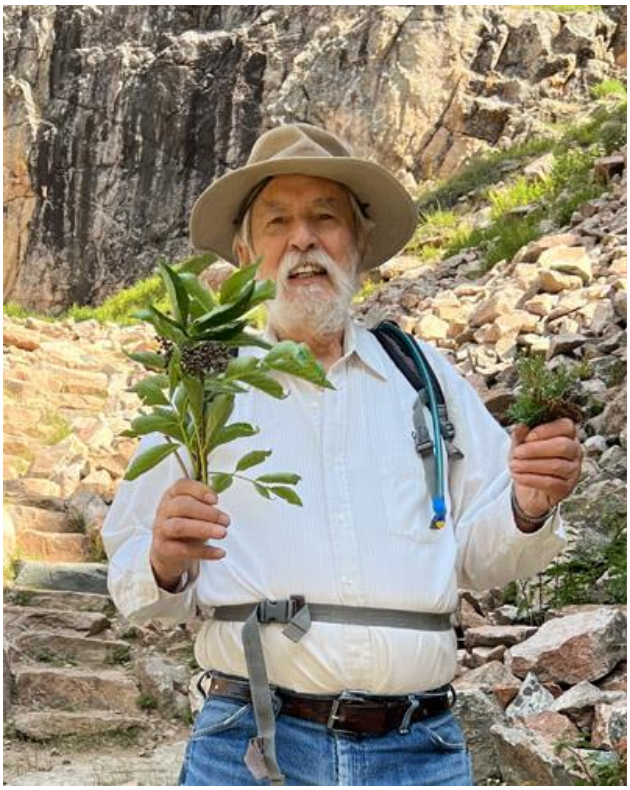
23
Student employees & interns

200
Specimens loaned to external researchers

206
Researchers, students, and community members visited the herbarium

469
Community members and elementary school students participated in outreach events outside the herbarium

Curator Ernie Nelson's Retirement



Long-time Curator Ernie Nelson retired in January 2026. During Ernie's remarkable 51-year career at UW as herbarium collections manager and curator, he participated in a rapid period of growth in which the collections increased by over 650,000 specimens, largely a result of the herbarium's renowned floristic inventory program. An astounding 87,000+ of those specimens were collected by Ernie himself! His contributions to our knowledge of Rocky Mountain plant life will have a lasting impact. Along the way, Ernie mentored numerous floristics graduate students and undergraduate students working in the herbarium. Fortunately, Ernie continues his connection with the herbarium, coming in regularly to work on his specimens.

Director Dave Tank moves to Michigan

In June, Herbarium Director Dave Tank departed the University of Wyoming and returned to his home state and his alma mater, Michigan State University, to begin a new position as Director of the MSU Herbarium. We are deeply grateful for Dave's leadership of the herbarium during the past five years, another period of active growth in which he guided the herbarium's expansion and reorganization, increased support for the herbarium, strengthened collaborations, enhanced outreach efforts, and mentored students. Dave will be missed, but his positive impact on the herbarium will be felt for a long time to come.



Sara Legler joins as new Curator



Sara Legler (2011 UW alumna) was hired as a Curator in August, filling the vacancy left by Ernie's retirement. While new to the role of curator, Sara has worked in the herbarium since 2023, serving as project coordinator for the herbarium's NSF-funded expansion. In that role, working closely with Ernie Nelson, she gained a detailed knowledge of the herbarium and practically everything in it. Her experience working in herbaria spans nearly 15 years of mounting, processing, and digitizing specimens, and she also brings excellent skills in project and people management along with a background in environmental education—assets that will enhance the herbarium's goals of better serving students and our constituents across the state.



Sara leading elementary school students through a workshop at the 2026 UW STEM Carnival.

Herbarium Expansion & Renovation



Herbarium expansion nears completion!

The Rocky Mountain Herbarium is completing the 4th and last year of its NSF-sponsored, $900K grant to expand the Herbarium. We fulfilled our grant goals to better house and protect the Herbarium's specimens and increase access, with time left to spare—we renovated new space, purchased 200 new specimen cabinets, reorganized the collection, processed and properly housed large amounts of our backlog specimens, and finished imaging the entire collection. Our open house last December celebrated many of these achievements and showcased the physical renovations.

We focused this year on digital curation tasks associated with the imaging work. This consists of linking newly captured specimen images to existing records in our database or creating new database records for specimens that currently lack one. Although currently slow work, we have begun leveraging recent advances in automated label transcription using AI to speed up the process by running images through VoucherVision, a transcription workflow using Google's Gemini LLM that can accurately read and extract structured data from the images. Once finished, nearly every specimen in the Rocky Mountain Herbarium will be represented by a searchable online digital record and image—an impressive feat for a collection of nearly 1.2 million specimens!



Digitizing UW's Grass Herbarium

Thanks to our careful stewardship of NSF grant funds, we've gone beyond our original grant goals and are using some of the remaining funds to image the Alan Beetle Grass Herbarium (WYAC) on campus. This valuable historical collection with about 30,000 grass specimens from around the world is distinct from the Rocky Mountain Herbarium, and inaccessible online. Imaging is currently underway, thanks to the hard work of our student employees and interns. Once imaging is completed, we will use VoucherVision to generate initial database records for each specimen and make the data and images available online, greatly expanding access to an important but hidden resource.

Plans for new herbarium exhibits



Our newly renovated spaces create an exciting new opportunity to develop museum-style, public-facing exhibits in the herbarium! These exhibits will literally bring the herbarium “out of the cabinets” and allow us to more effectively engage with students and the general public visiting the herbarium. As a bonus, exhibits will be visible to students attending classes adjacent to our space in the Aven Nelson building. And we are excited to work with students in the UW's Museum Studies program, inviting them to help design exhibits through capstone projects and internships, thereby enabling valuable career-building experiences and forging new and lasting cross-department partnerships.

The possibilities for display content are numerous. For example, we will highlight the history and unique collections of the Rocky Mountain Herbarium and its continuing value for the people of Wyoming. And importantly, our new exhibits will also highlight the work of graduate students in the Herbarium’s renowned Floristic Inventory program, helping inspire new prospective graduate students to pursue herbarium-based research. To make these exhibits happen, donor funding is essential. Consider joining our upcoming **Herbarium Giving Day campaign** as we raise funds to cover exhibit design, materials, and installation. Thank you for your support as we grow the herbarium’s impact within our University, across Wyoming, and the region!

UNIVERSITY of WYOMING GIVING DAY
IT'S GIVING
OCTOBER 21-22 NOON to NOON

Herbarium Giving Day Campaign

Student Highlights

Two new graduates of the herbarium's floristic inventory program exemplify the continuation of the Rocky Mountain Herbarium's tradition of training the next generation of botanists. Congratulations to Dan Coles and Marguerite Trost, who received their M.S. degrees in May 2026. To learn about their floristic inventories, look for their theses in ProQuest, their specimens in the RM online specimen database, and Marguerite's take on her community-powered project in the Plant Sciences Bulletin.



Dan Coles

Dan Coles successfully concluded his floristic inventory of the Bighorn National Forest, spanning 1.2 million acres in north-central Wyoming. Working in the rugged terrain of the Bighorn Mountains had its challenges, yet Dan's perseverance and motivation paid off. His project generated nearly 8,500 new specimens and a wealth of data, filling one of the last remaining gaps in our documentation of Wyoming's alpine flora and providing actionable data the Forest Service will use to inform conservation and management decisions. Dan's work was supported by funding from the U.S. Forest Service and a UW Distinguished Graduate Scholar Fellowship. Immediately after graduating, Dan took a position with the Bureau of Land Management in Lander, WY, and plans to build a career as a botanist right here in Wyoming.

Marguerite Trost

Marguerite Trost put an innovative spin on her floristic inventory of the Kootenai National Forest in northwest Montana by integrating public engagement into her project. Although Marguerite started field work alone, she soon began inviting bunkmates, local community members, friends, and UW students to join the collecting process. This grew into several citizen-science-style botanical forays and specimen curation nights through which Marguerite brought 86 participants into her research work. Her community-powered effort generated over 10,000 specimens from the 2.2 million acre forest. Marguerite's work was supported by U.S. Forest Service funding, the Aven Nelson Research Fellowship at UW, and several small grants. Following graduation, Marguerite is pursuing a series of experience-building side-quests, including a trip to South America.

Community Engagement

Building on previous work, we continued our focus on outreach and education events that connect people in our community and across Wyoming to the Rocky Mountain Herbarium. Participants ranged from elementary school and university students to members of the public.

Curatorial Nights



This five-part series held in the herbarium built on recent graduate Marguerite Trost's Community-Powered Floristic Inventory of the Kootenai National Forest. In partnership with Curator Sara Legler, Marguerite invited the community into the Herbarium to learn how to mount specimens from her inventory. We plan to hold more curatorial nights; stay tuned!

Wyoming BioBlitz



The Herbarium participates in the Wyoming BioBlitz each year. For 2026, we led several plant surveys in which participants learned about plants and used iNaturalist to document the flora near New Fork Lakes in the Bridger Teton National Forest, including the above observation of *Castilleja linariifolia*, Wyoming's state flower.

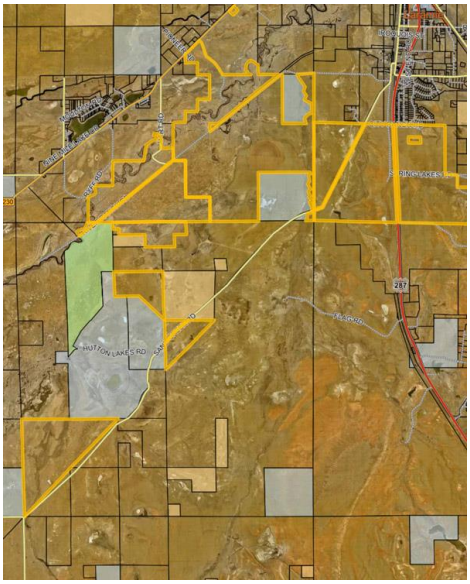
Educational Activities



New activities we created this year include a "plant design challenge" workshop for the UW's annual STEM Carnival for elementary school students across the state, and a pollinator activity for the Bee Jubilee in partnership with the Biodiversity Institute. These activities showcase the collection's educational and interdisciplinary value.

2026 Field Work Highlights

Laramie City Ranches



Sometimes, opportunities for new field projects arise fortuitously! Such was the case when graduate student Caroline Brose leveraged her connections with the City of Laramie to start a project documenting the flora of several City-owned ranches just south of town—the Monolith Ranch and Hart Ranch, which together cover over 14,000 acres and are managed for water rights, open space, and hunting. Caroline joined up with curators Ben and Sara Legler, herbarium research associate Bonnie Heidel, and two undergraduate herbarium interns, Delanie McFall and Andrew Stephens, to make a series of collecting trips to the ranch. Collecting efforts will resume in 2027, aiming to create a comprehensive plant checklist for the ranches and one or more bulletins or signs highlighting plants found there.

Uinta Mountains

Ben Legler continued two ongoing field projects during a weeklong trip to the Uinta Mountains in Utah, joined by colleagues from the University of New Mexico Herbarium (Harpo Faust) and Brigham Young University Herbarium (Jared Meeks). The Uintas were selected as a promising location to expand searches for diminutive and obscure ferns known as moonworts (*Botrychium*) as part of a multi-year, funded agreement between the Forest Service and the Wyoming Natural Diversity Database. Survey results were impressive, despite setbacks from daily thunderstorms and several torrential hailstorms! In total, over 90 *Botrychium* species occurrences were documented, many with specimens, including the first records of *B. furculatum* from Utah and a substantial range extension for the Southern Rockies endemic *B. echo*. Because many *Botrychium* species are considered rare, the data gathered supports Forest Service management and conservation decisions. The surveys also enhance our understanding of species distributions and abundances and build partnerships.

As a bonus, we comprehensively surveyed the vascular plant flora on one of the eastern-most alpine summits in the Uintas, Leidy Peak, as part of ongoing collaborative research investigating the patterns and drivers of alpine floras across Western North America. Data gathered from prior years contributed to an in-review paper submitted to the Journal of Biogeography, with Cornell graduate student Joseph Kleinkopf as lead author: *The roles of stochastic and deterministic processes in the assembly of alpine angiosperm communities across distinct mountain regions of western North America*. Expect the paper to appear in print by early 2027.

THANK YOU!

The Rocky Mountain Herbarium's mission is to champion the stewardship of plant diversity, inspire and prepare the next generation of botanists, and advance collections-based botanical research, education, and outreach at the University of Wyoming through innovative thinking, transformative educational experiences, and community engagement.

We could not do this without the support of our many donors, students, and volunteers, and want to take this opportunity to say thank you!

DONORS

Erin Bentley | Ann & Richard Boelter | Caroline Brose | Lisa & Mike Brose | Steve & Jan Brose | Lori Brummer | Sarah Chevalier | Tim Chumley | Karen & Dean Clause | Linda van Diepen | Peter Ebertowski | Samantha & Brent Ewers | Walter & Laura Welp Fertig | Kristin & Paul Gasser | Sara Germain | Kerry & Jane Greaser | Susan Halstedt | Bonnie Heidel | Cecilia Lynn Kinter | Alan Knapp | Ben & Sara Legler | Robert Lichvar | Christopher Liston-Kruschke | Hollis Marriott | Gregory Pappas | Andrea & Michael Pipp | Robert Rasmussen | Diane Renshaw | Robbin & Michelle Romberg | Malia Santos | Jack States | Dave Tank & Kara Ardern | Annie & Charles Trost | Marguerite Trost | Dorothy Tuthill | Sienna Wessel | Elizabeth Wommack | 4 anonymous donors

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STUDENTS

Ethan Bacon | Samantha Bingham | Carleigh Crouch | Irrissa Guyett | Leona Hackenburg | Wren Hybertson | Murie Judd | Elizabeth Linse | Lillianna Martens | Barigit Rau | Samantha Robinson | Raymi Rogers | Justina Scurlock | Andrew Stephens | Brianna Wrigley

HERBARIUM INTERNS

Greg Barr | Chris Folsom | Leona Hackenburg | Sara Loghry | Sabien Maez | Delanie McFall | Andrew Stephens | Desire Umbora

VOLUNTEERS

Esther Gilman-Kehrer | Jack Hartman | Bonnie Heidel | Yelena Kosovitch-Anderson | Jenny Lawrence | Heather Mehl | Carlo Migliaccio | TJ Poll | Dorothy Tuthill | Nancy Weidel



Botrychium furculatum



Botrychium echo



Eriogonum umbellatum var. porteri



Penstemon uintahensis



Polemonium brandegeei



Selaginella selaginoides

ROCKY • MOUNTAIN • HERBARIUM

Anelsonia eurycarpa (Gray) Macbr. & Pays.

UNIVERSITY OF WYOMING

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