

# Wyoming's Most Wanted Plants

## Overview:

Sienna Wessel, the new lead botanist for the Wyoming Natural Diversity Database, hosted a special session to discuss improving data recency for rare plants in Wyoming and the need for data submissions from multiple WYNDD partners. She presented on the importance of current field data for conservation status rankings and management decisions. The discussion focused on a few specific rare plant species that particularly need updated surveys to avoid becoming “state historical.” Participants shared information on data collection methods and discussed the potential for using iNaturalist and Survey123 for submitting plant observations to WYNDD. The group also explored the possibility of reviving a Wyoming rare plant conference and working group. Collaboration between WYNDD, the Rocky Mountain Herbarium, and other botanical organizations was emphasized as a key strategy for improving rare plant data collection and conservation efforts in Wyoming.

## Detailed Summary:

### Enhancing Rare Plant Data Recency

Sienna, the new lead botanist for the Wyoming Natural Diversity Database, hosted a special session to discuss improving data recency for rare plants in Wyoming. She shared her thoughts on forward-thinking approaches and presented a few slides, emphasizing the importance of keeping information current. Sienna highlighted a recent rediscovery of *Silene repens* (cover slide), a Species of Conservation Concern on the Bridger-Teton National Forest that had not been confirmed present since the early 1990s, as an example of why data recency matters. She invited participants to share feedback and discuss potential new directions for the botany team.

### Wyoming Rare Plant Data Gaps

Sienna presented an assessment of Wyoming's rare plant species data, highlighting that while extensive survey work by Bonnie Heidel has ensured that many priority species are well-documented, there are still significant data gaps as one botanist can only conduct so much field data collection. She identified two main categories of data needs: known rare species requiring updated surveys, and species lacking sufficient information to determine their conservation status/rank (Species of Greatest Information Need). Sienna shared a map visualizing data recency across the state, noting that many species still lack current observations, particularly those ranked G3/S3.

### Wyoming Rare Plant Updates

Sienna discussed several rare plant species in Wyoming that have not been surveyed in nearly 20 years, including Fremont Bladderpod (state endemic), Rollins' Cryptantha, Rydberg's parrya, and Garrett's beardtongue, seeking input from the group about their distribution and occurrence. Ben shared that Trevor Bloom had collected Rydberg's parrya in August 2025, which would be added to the Rocky Mountain database, which now transmits directly to WYNDD. Sienna also mentioned ongoing research into the taxonomy of Garrett's beardtongue, noting potential changes to its classification, and Bonnie Heidel discussed records from non-Wyoming herbaria that have not yet been entered. The group discussed the need for more data compilation for these species, with Sienna emphasizing the importance of community collaboration in gathering information.

### Botanical Data Collaboration Initiatives

Sienna discussed the importance of botanical community collaboration in documenting and rediscovering rare plant species in Wyoming. She highlighted several recent re-discoveries and discoveries, including Hall's milkweed and mountain holly fern, which have significantly impacted conservation status as they were previously state historical. Ben Legler has also discovered *Botrychium echo* for the first time in Wyoming and it is now considered a WYNDD species of concern.

### Data Submission Protocols

Sienna emphasized the need for continued contributions from various groups to maintain an up-to-date species of concern list. She also introduced an upcoming WYNDD electronic submission form using Survey123 to streamline data collection and submission. Additionally, Sienna mentioned developing a listserv and annual call for data submission to coordinate annual data collection efforts. Sienna discussed data submission with Greg Pappas, who agreed to provide annual data and confirmed that a template would help to streamline the process. Sienna explained that the template would serve as a guiding tool for data format and collection as needed but would not be a strict requirement for submission. Gary Beauvais confirmed that data on both species of concern and non-concern species are welcome, with priority given to species of concern. Sienna discussed multiple ways to submit data to WYNDD, highlighting that vouchered specimens sent to the Rocky Mountain Herbarium will be automatically submitted to WYNDD due to a newly established data pipeline.

### iNaturalist Pipeline Development Plans

Sienna introduced an initiative called the Wyoming Rare Plant Hunt on iNaturalist (<https://www.inaturalist.org/projects/wyoming-rare-plant-hunt>), which aims to prompt active users in Wyoming to collect observations of species of concern in Wyoming. The project has already captured nearly 1,500 observations and has already identified potential new locations for rare plants. Sienna invited feedback on the project's ease of use for contributors and emphasized that it is not intended to replace official data submission forms.

The team also discussed plans to eventually develop a pipeline from iNaturalist to the WYNDD Data Explorer, similar to their existing pipeline with the Rocky Mountain Herbarium. Beauvais mentioned that the database team is working on this infrastructure and noted that the Montana Natural Heritage Program would share their iNaturalist workflows and training materials. Sienna encouraged attendees to share their experiences with iNaturalist and highlighted its growing use in scientific research.

### Plant Working Group and Conference Planning

Sienna discussed organizing/reviving a Wyoming rare plant working group and annual conference, with interest expressed by several participants. The group agreed to start small and gather input through surveys and emails to initiate a virtual conference and working group meetings a couple of times a year which would focus on sharing out information gathered on rare species and guiding fieldwork priorities to avoid duplication. Sienna will continue compiling a list of botanically interested individuals in Wyoming to connect with, interested parties should email Sienna to be added to the list at [swessel1@uwyo.edu](mailto:swessel1@uwyo.edu). Stay tuned for a partner survey form.

### **Attendees:**

Derek Shea  
EMMuller  
Bryce Maxell  
Ronald Anderson  
Isaiah Smith  
Melanie Purcell  
Sienna Wessel  
Abel Guevara  
Britt Burdett (Britt Brito)  
David Damsky  
Mark Suchy  
Beauvais  
Sarah Newcomb  
Julie Wheeler - USFS  
dtur490  
Isaiah Smith  
JLindstrom  
gcam490  
Christian Carter  
Nicholas King  
Lindsey Samotis  
Sara Legler  
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Greg Pappas

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Triston Rice

Melissa

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Dan Coles

Marguerite Trost

Ben Legler

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Bill Ostheimer

Bonnie Heidel

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Tony Bridger (BLM-Rawlins)