

2023 Mary DeDecker Grant End of Year Report

## From museum to field and back: Inyo National Forest herbarium collections in the viewfinder

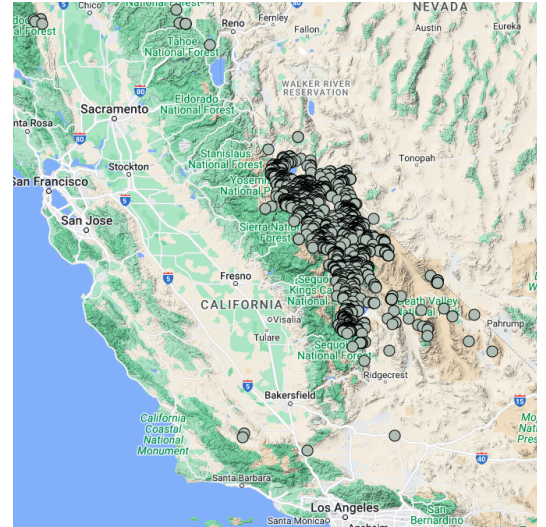
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In 2023 I used the Mary DeDecker Grant to work in collaboration with the Inyo National Forest Service on 1) an herbarium project integrating forest service practices with historical collection efforts, and 2) to create interpretive material and art linking herbaria and field specimens. Last year's record-breaking snow year made it an exciting time to conduct a project in the Eastern Sierra!

The Inyo National Forest herbarium (INF) holds 4,461 vascular plant and bryophyte specimens of 1,520 species within the Inyo National Forest Supervisor's Office in Bishop. In 2023, INF finished imaging and digitizing their collection with help from the Cal Poly SLO herbarium and virtual intern Bridget Lee, California Phenology Network and CNPS volunteers, and digital volunteers via the platform *Notes from Nature*. Anyone can now view and download information about these specimens, including their images and associated collection data, via the Consortium of California Herbaria (CCH2) web portal ([www.cch2.org/portal/](http://www.cch2.org/portal/)). During this project I collaborated with staff at the Inyo National Forest to cross-reference a spreadsheet of 107 species of conservation concern (SCC) with the CCH2 database. I used CCH2 to link individual specimen reference numbers and collection years with each species, which will aid the forest service in future conservation monitoring efforts. Additionally, I updated small discrepancies in the checklist, identified species with high resurvey priority, and gathered information for 32 of the 107 SCC not represented in the INF herbarium using iNaturalist, CalFlora, and CCH2 to assist future collection efforts.



*Images:* geographic distribution of specimens in the INF herbarium collection (top), and *Erigeron breweri* Oak Creek, Inyo NF with herbarium specimen INF00560, collected by Mary DeDecker 6 June 1971 and photograph taken May 21 2023 by Zoe Wood (bottom)

### INF Herbarium highlights

#### *Dedeckera eurekaensis*

INF has the oldest collected specimens of the shrub *Dedeckera eurekaensis* (July Gold, California Rare Plant Rank 1B.3) listed in CCH2. While the holotype or “type specimen” is housed at the United States National Herbarium at the Smithsonian Institution, it was actually collected a few weeks *after* (on July 29, 1975) the specimen that currently lives in INF, which was collected on July 4, 1975 by Mary DeDecker (INF03342) in the “N-facing limestone slopes” of the Last Chance Mountains, southeast of Eureka Valley Dunes. Mary DeDecker, founder of the CNPS Bristlecone Chapter, was the first to describe this species to science (along with five other plant species). *Dedeckera eurekaensis* turned out to belong to an entirely new genus, which was named in her honor. From “[A Tribute to Mary DeDecker](#)” comes this lovely excerpt:

“Mary's interest in the nearby desert mountains grew as she became involved with preservation of the Eureka Dunes, managed by the Bureau of Land Management (BLM). Not surprisingly, there was controversy over which roads should be open for ORV use. A "road" in the Last Chance Mountains from Saline Valley to Eureka Valley wound through a canyon and over dry falls. Mary was concerned about the impact vehicles might have on *Buddleja utahensis*, a rare butterfly bush that occurs in this canyon. While she was there doing a survey of buddleja, she "picked a sprig of this strange bush that looked like a buckwheat and took it home." She and Paul returned a month later on July 4 to collect it in



flower, and were impressed with the dramatic view of this golden shrub growing all over the dark canyon walls. After John Thomas Howell inspected the specimens Mary sent him at the California Academy of Sciences, he told her she had a new genus. He and James Reveal, a buckwheat expert from the University of Maryland, named it *Dedeckera*, in honor of Mary. Mary gave *Dedeckera eurekaensis* the common name of July gold. ... In a 1985 interview, Mary remarked "I was, of course, very happy to have it named after my namesake, but I think it's really a wonderful idea to have places named for plants because plants don't really get enough recognition." This discovery constituted the second new genus in California since 1949."

iNaturalist and CalFlora searches reveal several flowering specimens in recent years in Coldwater Canyon and between Silver and Poleta Canyons. The most recently collected *D. eurekaensis* specimen in INF was collected in 1984.

Most represented collectors (more than ~200 specimens) in the INF:

James D. Morefield (529 specimens), Jack L. Reveal (383 specimens), Mary DeDecker (376 specimens), Kathleen Nelson (253), Michael Honer (204), Michèle Slaton (301), and Kathryn Strohm (199)

### Artwork

I worked to develop a body of artwork that highlighted both the Inyo NF herbarium alongside the extant, diverse flora of the Eastern Sierra that the Forest Service aims to protect and preserve. Through an experimental film photography approach, I created multiple exposure photographs to manually layer images inside of the camera (i.e. no digital editing) to evoke the complexity of phenology, community ecology, coexistence, and change over time. I visited several areas mentioned in the Bristlecone Chapter brochure “Wildflower Hotspots of the Eastern Sierra.” In several photos, I placed natural “field” specimens in the same frame as herbarium specimens to allude to the relationship or “conversation” between specimens collected systematically for research and casual observations made while out in the field. Below are a few images from 2023. Looking forward, I am hoping to coordinate an exhibit in a local gallery in Bishop this spring or summer, and continue collaborating with the National Forest Service to bring my art to an Inyo NF trailhead in the future!



top – snapshot of 3 species in Fish Slough, 5-18-23;

bottom – *Aquilegia pubescens* (2023) in Sabrina Basin with INF3748 (1979, collected by Kathryn Strohm).

**Acknowledgements** Many thanks to Blake Engelhardt, Jonathan Knight, Ken Yamazaki, and White Mountain Research Center Staff Gaylene, Steven, and Sarah for their kindness and welcoming spirits.

31 Species of Conservation Concern (SCC) not represented in INF:

Alliaceae

*Allium atrorubens* var.  
*atrorubens*

Apiaceae

*Cymopterus globosus*  
*Lomatium foeniculaceum* ssp.  
*Inyoense*

Asteraceae

*Erigeron uncialis* var.  
*Uncialis*

Boraginaceae

*Phacelia inyoensis*  
*Phacelia monoensis*  
*Phacelia nashiana*  
*Plagiobothrys parishii*

Brassicaceae

*Boechera pendulina* (*Arabis*  
*p.*)  
*Boechera tularensis*

*Hesperidanthus jaegeri*  
*Physaria ludoviciana*  
*Polyctenium williamsiae*  
*Streptanthus oliganthus*  
*Thelypodium milleflorum*

Cyperaceae

*Carex davyi*  
*Carex petasata*  
*Carex praticola*  
*Carex stevenii*  
*Carex vallicola*

Fabaceae

*Astragalus kentrophyta* var.  
*elatus*  
*Ladeania lanceolata*  
(*Psoralidium lanceolatum*)

Helodiaceae

*Helodium blandowii*

Loasaceae

*Mentzelia torreyi*

Montiaceae

*Calyptridium pygmaeum*  
*Claytonia megarhiza*

Opphioglossaceae

*Botrychium lineare*

Peltigeraceae

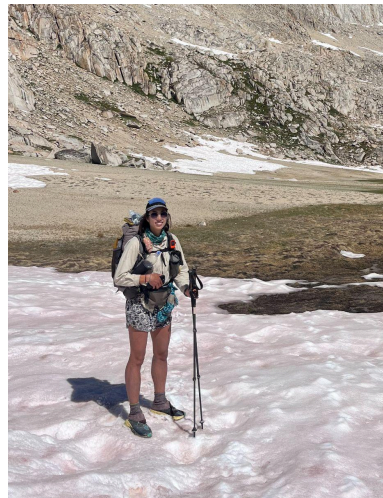
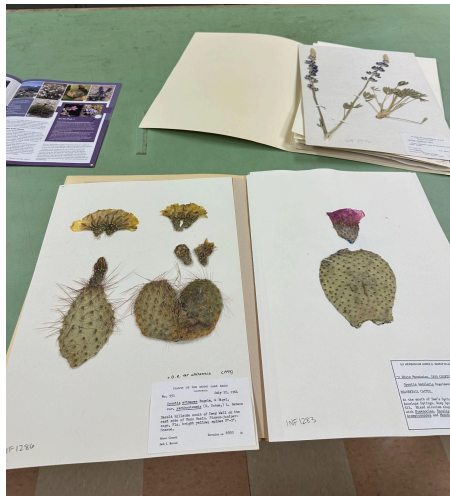
*Solorina spongiosa*

Polygonaceae

*Eriogonum alexanderiae*

Rosaceae

*Ivesia kingii* var. *kingii*  
*Petrophytum caespitosum*  
ssp. *acuminatum*



I enjoyed getting to know the Eastern Sierra more intimately through the Inyo National Forest herbarium, Wildflower Hotspots of the Eastern Sierra guide, and visiting the Bishop Paiute Tribe Conservation Open Space Area. I capped it off by hiking ~200 miles of Steve Roper's High Route in August, which was a technically challenging and extremely rewarding experience. I recorded natural history observations along the way, which I uploaded to iNaturalist.





*Polemonium eximium* near Gabbot Pass