Mary DeDecker Botanical Grant Progress Report

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I am a second-year master's student at the California Botanic Garden conducting a floristic inventory of the Owens River Headwater Area (ORHA) in the central eastern Sierra Nevada. My study area is approximately 52 mi^2 and includes the Owens River Headwater designated wilderness area in the Inyo National Forest. Located along the eastern side of the Sierra Nevada crest, approximately 12 miles northwest of Mammoth Lakes in Mono County. This area is unique as it is located near a transition zone between the California Floristic Province and the Great Basin Floristic Province. The elevational range of the OHRA is 7,200 - 11,520 ft and is characterized by pumice pebble flats, volcanic outcrops, forested mountain slopes, high elevation meadows and lakes, and alpine summits. The primary goal of my master's research is to conduct a comprehensive floristic inventory of the ORHA and surrounding areas through collecting herbarium specimens, compiling an annotated species checklist, and characterizing the vegetation types in each habitat.

For the first part of 2023 I started by compiling a species checklist, obtaining a permit from the Inyo National Forest, and preparing for field work by planning out trips based on the phenology of the plant species that occur in my study area. From May to September 2023, I spent approximately 55 days in the field collecting plant specimens, taking field notes, and making vouchers. In the 2023 field season, I collected a total of 1,016 specimens, representing 54 families and 124 genera.

Throughout the 2023 field season, I was able to relocate several rare, sensitive, or vulnerable taxa located within my study area, including *Lupinus duranii* (1B.2), *Fritillaria pinetorum* (4.3), and *Pinus albicaulis*. Additionally, I found new occurrences of *Botrychium simplex*, *Pyrola asarifolia*, *Platanthera sparsiflora* at Yost Meadow, Glass Creek Meadow, and *Lewisia pygmaea* at White Wing Mountain; all species are known to the area, just never collected in these meadows. More range extensions and population occurrences of species are expected as I continue to identify collected specimens.

At the start of the 2023 field season, I attended a training conducted by the Inyo National Forest for White Pine Blister Rust identification on *P. albicaulis*. During the field season I surveyed the National Forest for blister rust in *P. albicaulis* populations throughout my study area. White Pine Blister Rust is known in the area, however, during the past field season I did not find any trees infected with the rust.

I am very grateful to have received the Mary DeDecker Botanical Grant, which helped fund the cost of travel to and from my study area and aided in the purchase of necessary equipment I needed for my research. Thank you for your generosity, and I look forward to sharing more of my discoveries.

Pinus albicaulis found on the San Joaquin Ridge.

Fritillaria pinetorum found near the trailhead of Yost Meadow and Fern Lake.

Botrychium simplex found in Yost Meadow.

San Joaquin Ridge from Deadman Pass.

Glass Creek Meadow.