

A Vascular Floristic Inventory of the Owens River Headwater Area, Mono County, CA

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Introduction

The Sierra Nevada occupies ~20% of California's landmass, yet contains more than half of the state's plant diversity. Many areas in the Sierra Nevada need further botanical investigation. The Owens River Headwaters Area (ORHA) is one such area. California has been at the forefront of extreme biodiversity loss and experiencing threats including drought, high-intensity fires, logging, recreational activities, and other human impacts. This research directly applies to conservation and land management strategies to help maintain the ORHA, and more broadly, help understand species diversity and plant communities in California.

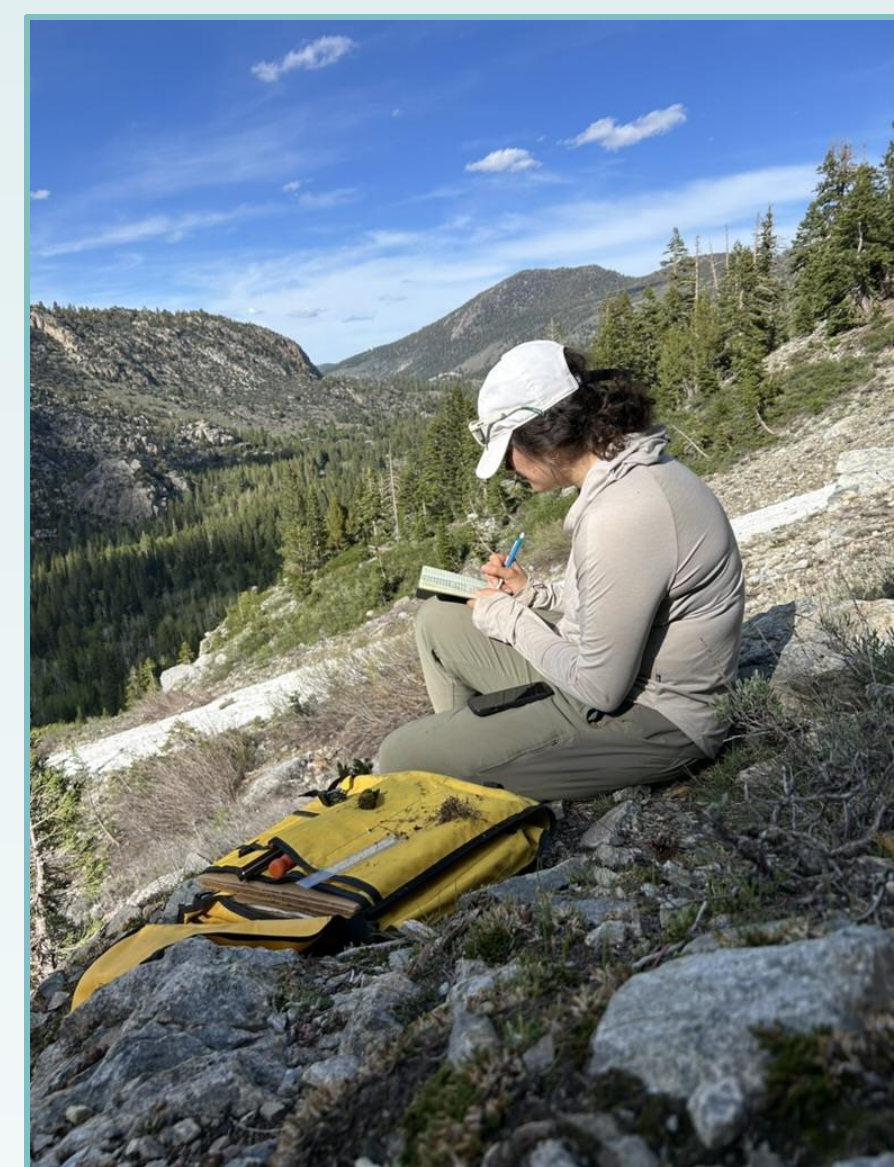


San Joaquin Ridge



Lilium parvum

Objectives



Rachel collecting field notes

- Produce an annotated species checklist through vouchered specimens.
- Relocate historical collections.
- Do a comparative floristic analysis with Helen Constantine-Shull's study.
- Identify vouchered specimens and annotate historic collections.
- Prioritize public accessibility of results.

Methodology

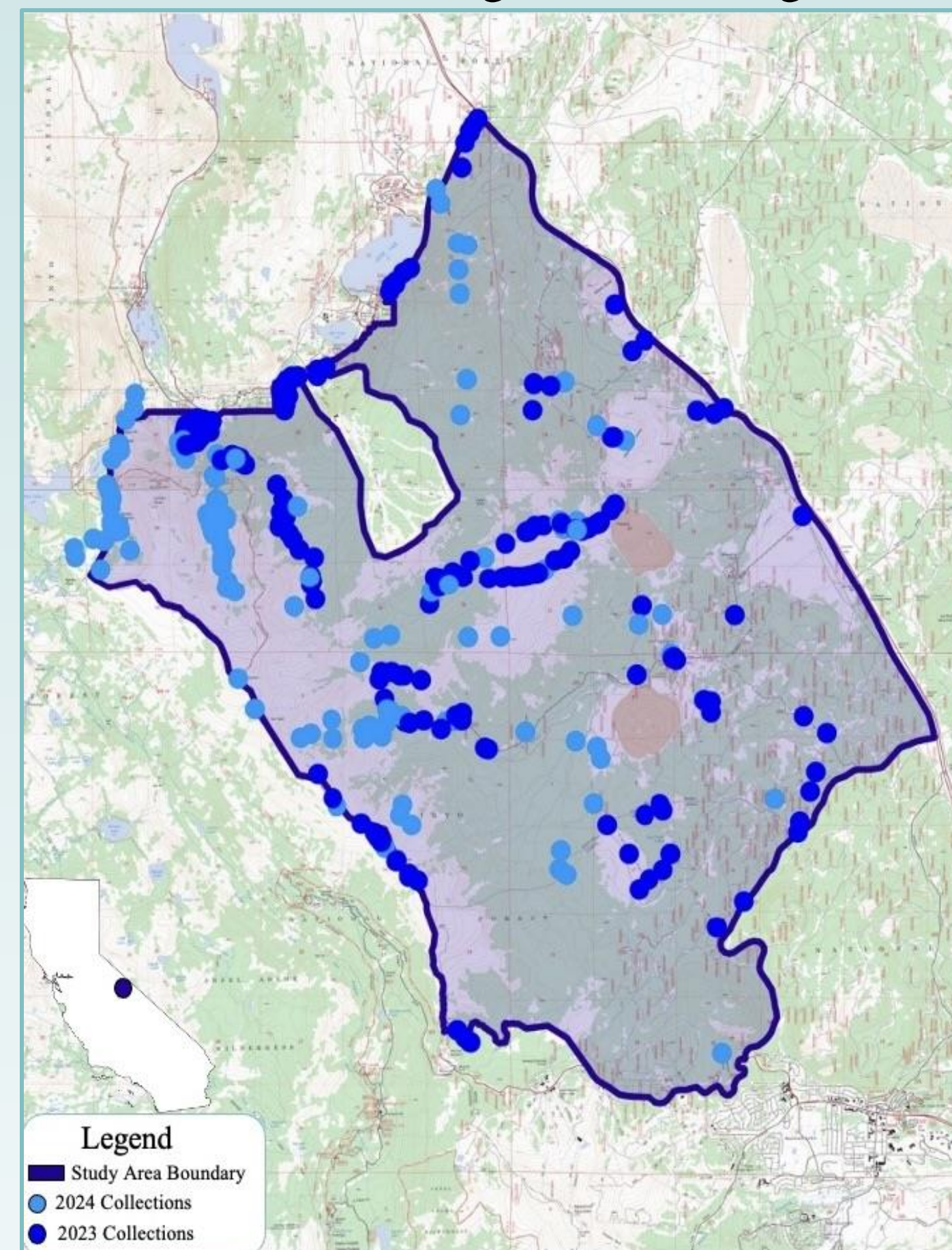
- Surveyed areas of unique geology, topology, habitat, poorly documented areas, and historical collections.
- Voucher specimens were collected in triplicate whenever possible with metadata including localities, elevation, associated taxa, habitat description, and other related specimen notes.
- Vouchered specimens will be distributed to several herbaria: RSA, CAS, JEPS, and INF.
- All specimen notes and images will be added to CCH2 and a curated iNaturalist project.



Unnamed lake in study area

Study Area

The ORHA was designated as a wilderness area on March 31st, 2009, to protect the Owens River's headwaters. Located 42 mi. NE of Bishop, CA, 43 mi. W of the White Mountains, and 8 mi. N of Mammoth Lakes. My study area encompasses approximately 54 square miles and includes two designated wilderness in the Inyo National Forest and National Forest lands along the eastern boundary of the OHRA. The elevational range of the study site is 7,259-12,000ft and is characterized by high-elevation meadows and lakes, creeks, forested mountain slopes, and alpine summits. Plant communities include Jeffrey pine forests, mixed conifer forests, alpine meadows, montane riparian communities, and influences of great basin sagebrush scrub.

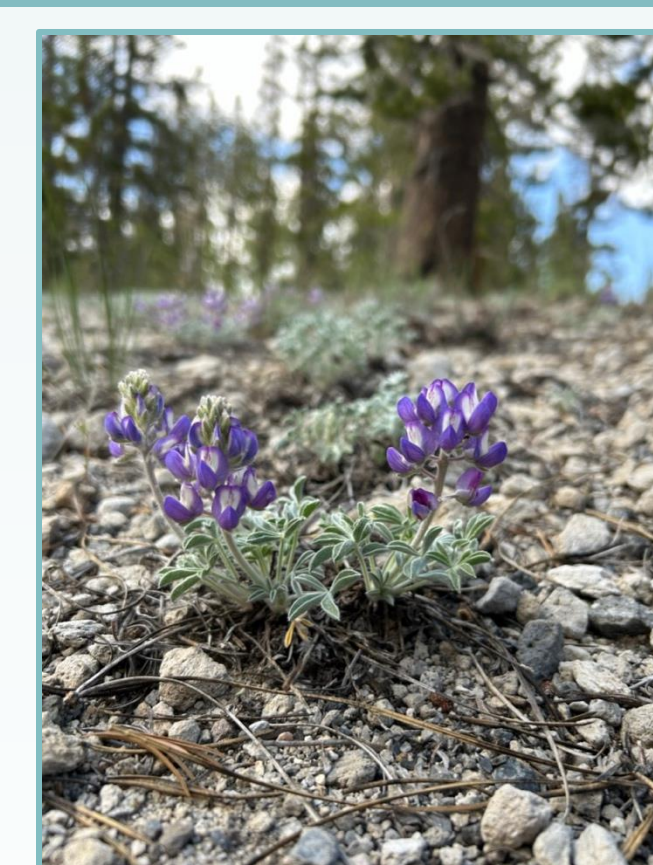


Map of study area

Notable Collections



Pinus albicaulis, Federally Endangered



Lupinus duranii, 1B.2



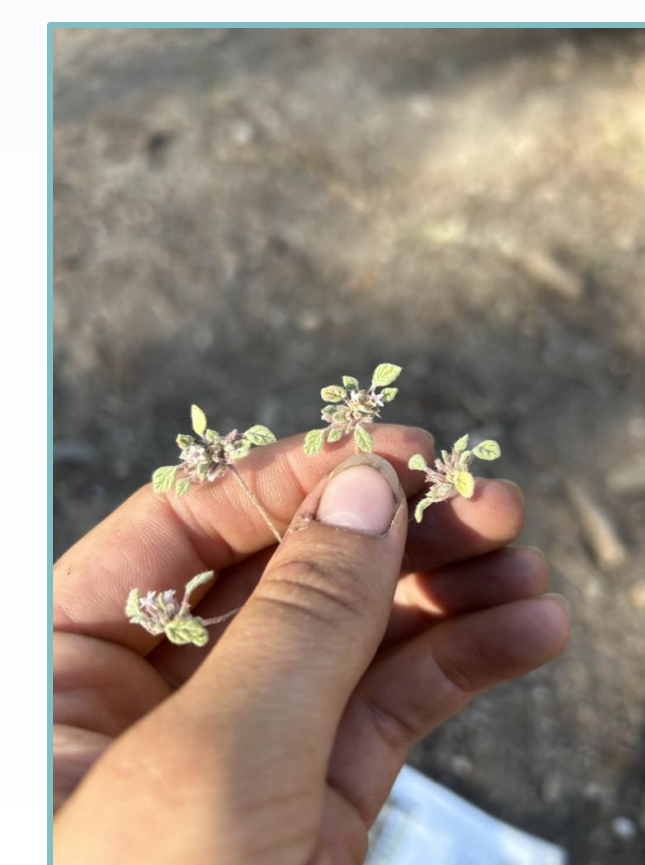
Boechea pinzliae, 1B.3



Eriogonum microthecum var. *alpinum*, 4.3



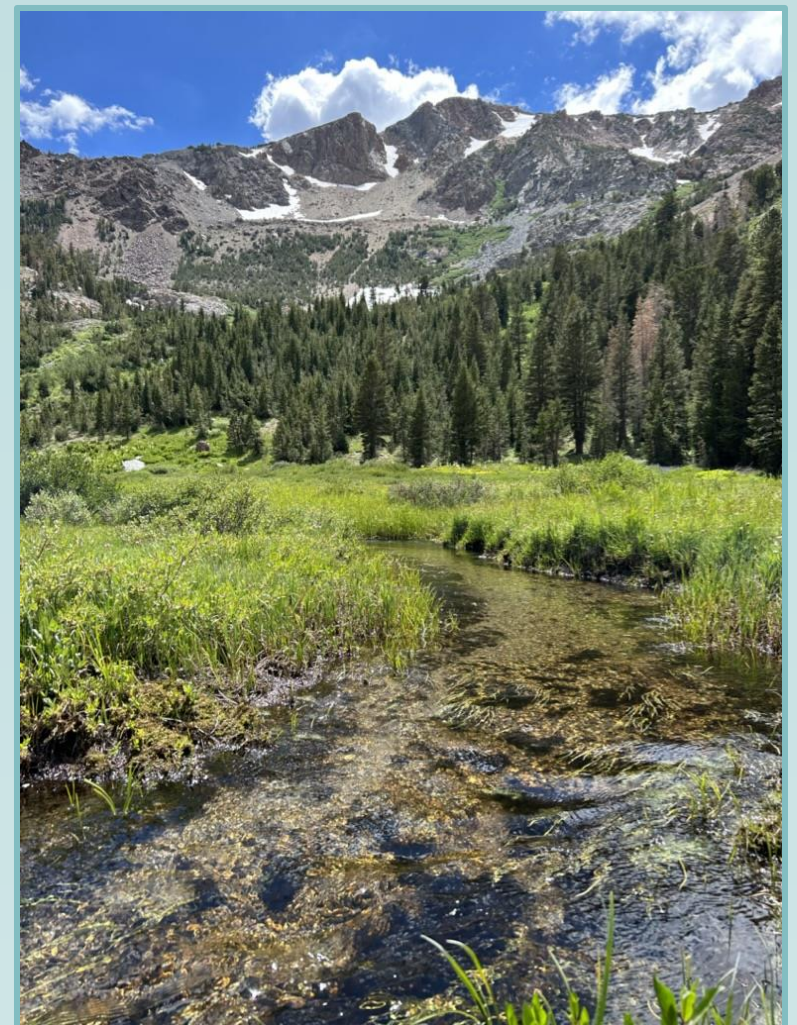
Fritillaria pinetorum, 4.3



Tiqulia nuttallii, new collection to the area

Results

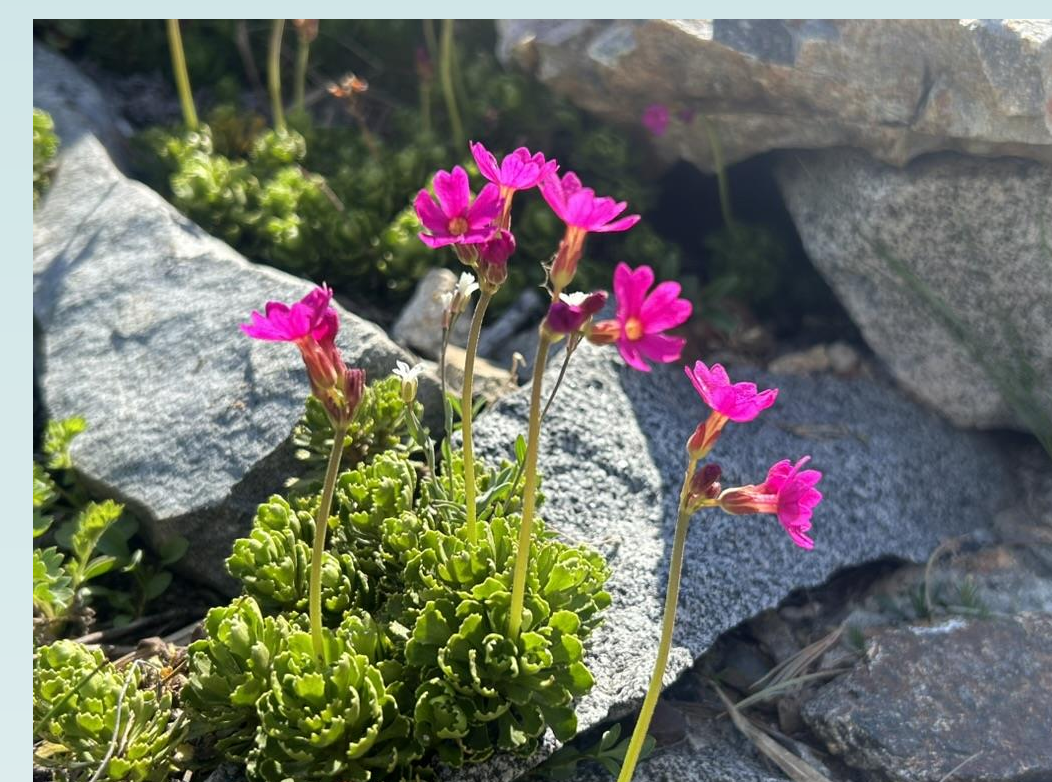
- 1,325 Collections
 - 50 Families
 - 152 Genera
 - Over 275 species
- 110 Days in the field
- 1,343 iNaturalist observations
- Collected 8 California Rare Plant Rank taxa
- Collected 1 Federally listed taxon



Glass Creek Meadow

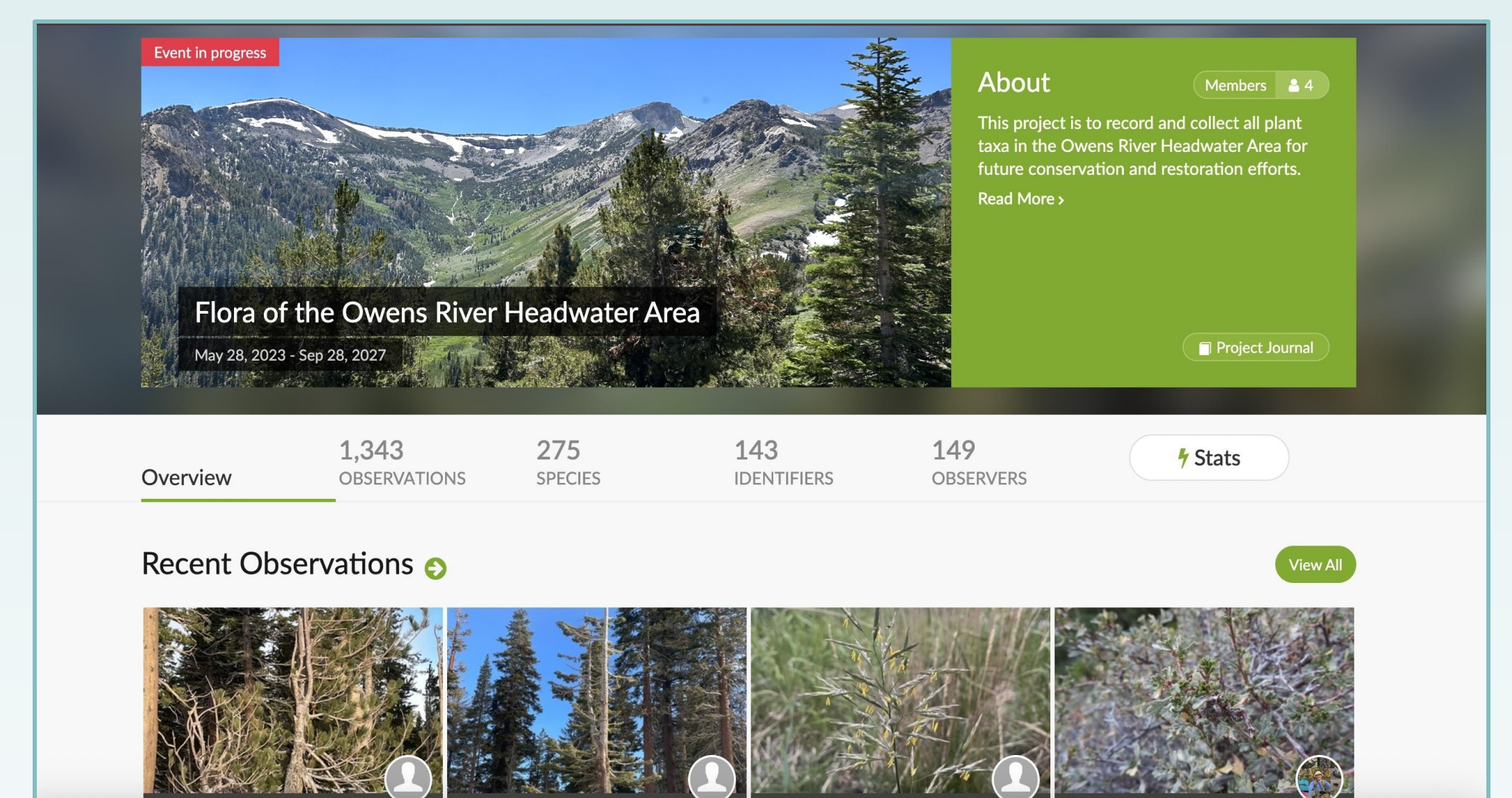


Bowl above Fern Lake



Primula suffrutescens

Citizen Science



iNaturalist project for the floristic inventory

Acknowledgements

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