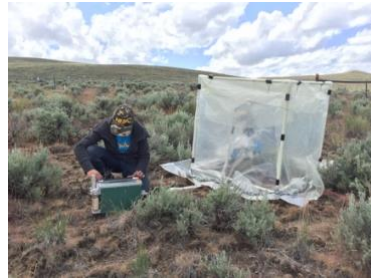
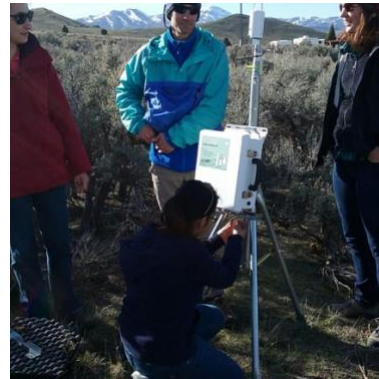


# Quantifying Phenotypic Diversity in Sagebrush and Trout



## What is the ambitious goal of the project?

Linking genetics to behavior and physical attributes is increasingly becoming a key part of natural resource management, from habitat restoration to wildlife conservation. Our team will take the critical first steps to linking these in sagebrush shrubs and redband trout--two iconic, and native species of Idaho. This will inform conservation and ecological restoration efforts in sagebrush steppe and stream ecosystems. We will conduct work outside in the field, in greenhouses, and in the computer lab, aimed towards research outcomes that can promote sustainable terrestrial and aquatic landscapes.



## Experience Gained

Students will learn/participate in

- standard methods in field ecology-diversity and abundance surveys, population structure and demography analysis, morphometric analysis
- coding and coding software
- ecophysiology and ecotypic diversity of plants and animals
- field collection techniques
- interdisciplinary team science
- how geospatial technology, including GIS software, drones, and GPS, are used plot to study ecological processes at landscape scales
- quantitative research methods



## Majors and Interests Needed

We are looking for students interested in working on teams, learning new tools, and from the majors (including but not limited to) of

- Biological Sciences
- Computer Science
- Engineering
- Earth and Environmental Systems
- Geosciences
- Interdisciplinary Studies
- Mathematics
- Physics



## VIP Coach Information

This is a team project led by Dr. Keith Reinhardt and Dr. Ernest Keeley. Dr. Reinhardt is an Associate Professor in the Department of Biological Sciences interested in plant ecophysiology, ecophysiology and climate change ecology. Dr. Keeley is a Professor in the Department of Biological Sciences interested in the ecology and conservation of native fish populations. Please see Dr. Reinhardt's (<https://keithreinhardt.com/>) or Dr. Keeley's (<https://sites.google.com/a/isu.edu/fish-ecology-laboratory/home>) profile for more information.

## Course Information

BIOL 2280, BIOL 4480 or BIOL 5580 Mentored Research Alliance  
Full semester course. Instructor permission required to register.

For sagebrush contact Dr. Reinhardt ([reinkeit@isu.edu](mailto:reinkeit@isu.edu)) and for trout contact Dr. Keeley ([keelerne@isu.edu](mailto:keelerne@isu.edu)).