

Developing and Testing Long-term Ecological Monitoring Protocols for Land Practitioners in South-Central Colorado

Fully Funded Student Summer Experiences in Colorado Available for 2022

The Partnership in Forestry and Rangeland Research Program at the Yale School of the Environment (YSE) has 3-4 *fully funded* summer experiences available during May-August 2022 for Yale students.

Background

These funded summer experiences are part of a larger and longer-term collaboration between YSE and on-the-ground practitioners in the western United States to increase knowledge and understanding of these landscapes, ecological processes, and effective land management strategies for conservation in the West. This work will directly benefit the scientific field and community, practitioners, and students.

Students participating in these summer experiences will collaborate closely with Yale School of the Environment faculty, staff, and students as well as ranch managers to study ecological questions associated with a large ranch in the San Luis Valley in south-central Colorado. The ranch is located within 40 minutes of Alamosa, Colorado and is managed by an experienced team.

Summer Experience Description

Goal

During the last year, our YSE team has collected field data at the ranch, studied ecological monitoring strategies, and drafted initial long-term monitoring protocols for the ranch. ***We are currently seeking Yale students to field test and implement these monitoring protocols at the ranch in Colorado during summer 2022.*** Student work this summer will directly contribute to our efforts to develop and test monitoring for the ranch and study important land management questions.

The monitoring protocols aim to answer key ecological questions about natural resources at the ranch to inform future land management decisions. Students will implement monitoring over a variety of areas on the ranch, which are likely to include:

- Riparian areas
- Sagebrush areas
- High-elevation forests

Duties

Students will collect field data at the Colorado ranch and work closely with YSE and ranch managers to adjust monitoring protocols as needed. Field work will likely include establishing long-term monitoring plots, sampling vegetation, establishing photo sites, visiting historic photo sites, sampling soil, taking plant specimens, and working close with the YSE team and ranch

managers. Students will work together in the field and the day-to-day work will vary between riparian areas, rangeland sites, and high-elevation forested areas. Students will need to communicate well and often with the YSE team about the monitoring protocols.

The Team

The YSE team supporting this program and students includes Dr. Bill Lauenroth (faculty director), Michelle Downey (program director), Dr. Joe Orefice (faculty collaborator), and a YSE post-doc. Students will work closely with these staff and faculty throughout their experience. Students working to field test the long-term monitoring protocol will collaborate closely with other Yale students researching the efficacy of sagebrush treatments (mastication and prescribed fire) and soil compaction and erosion potential of a new equipment for forestry.

Qualifications

- Familiarity with flora and vegetation sampling methods in the western United States (preferred)
- Ability to work in the field safely (i.e., operating vehicle on rough dirt roads, spending long days in the sun)
- Project management and problem-solving skills
- Excellent communication skills
- Experience working as a team
- Valid driver's license

General Student Expectations

- Commit 10-12 weeks of time during May-August 2022 and work 38 hours/week
- Conduct work professionally and timely with careful attention to quality
- Work closely and communicate often with YSE team

Compensation

- A \$12,000 award per student. This award is intended to cover permitted travel to Colorado as well as a monthly stipend.
- Housing will be provided or up to \$3,000 for housing will be awarded (only available if work is completed on site and housing isn't provided on site).

How to Apply

Applications are due **March 4, 2022**.

Please submit the following as 1 PDF to michelle.downey@yale.edu:

- Cover letter (1-page max.)
- Resume with 2 references and their contact information
- Unofficial transcripts (Yale and undergraduate)
- A document answering the following questions (max. of 300 words per question):
 1. Describe your career aspirations and what you hope to get out of this experience

2. Describe the specific skills, traits, and/or experience you would bring to this work and how you have demonstrated these in past experiences. For skills, please state skill level (e.g., novice, some experience, extensive experience, expert).
3. Briefly describe the amount of time you will have available to commit to this work during 10-12 weeks during May-August.

How to get more Information

To learn more about this opportunity, please join us for an information session on Thursday, February 24, 2022, during 12-1 in Sage 41C.

Additionally, you can direct questions to Dr. Bill Lauenroth (william.lauenroth@yale.edu) and Michelle Downey (michelle.downey@yale.edu).