2022 COOPERATIVE SUMMER FELLOWSHIP PROGRAM – PROJECT PROPOSAL

APPLICANT TYPE: ANY;

PROJECT TITLE: INVESTIGATING PLANT-SOIL INTERACTIONS TO SUPPORT RESTORATION IN SAGEBRUSH STEPPE ECOSYSTEMS

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Discipline: Ecology;

PROJECT DESCRIPTION

BACKGROUND

We produce basic and applied science needed to manage landscapes in ways that make them resistant and resilient to stressors such as wildfire, exotic plant invasions, drought, and temperature extremes.

Current projects evaluate emerging approaches for soil stabilization, control of exotic annual grasses, and restoration of desirable native perennials following wildfire in sagebrush steppe ecosystems.

An intern would have the opportunity to work specifically on a project seeking to better understand the soil legacies of invasive plants and how these are affected by various restoration treatments. An additional area of focus is understanding how restoration treatments impact carbon storage in soils.

INTERN TASKS

1) Vegetation monitoring -- various study sites in SW Idaho -- May and June

2) Soil sample processing -- texture, mineral nitrogen, nitrogen mineralization, total carbon and nitrogen (using Costech elemental analyzer), potential opportunity to measure stable isotopes of carbon in plant samples if interested -- July and August

3) Some entering and summarizing of data -- July and August

BENEFITS TO INTERN

The intern will become familiar with SW Idaho plant species and monitoring techniques as well as an array of soil analysis methods.

MENTORING PLAN

Meetings will be frequent (daily) as new tasks or field locations are introduced and will taper off to check-in's as needed (but not less than weekly) as the intern gains confidence and independence with each task.

ADDITIONAL DETAILS

STUDENT SKILLS AND INTERESTS

Willingness to do both field and laboratory work and also some office work (data entry, summarization, preliminary analysis if interested). Experience with plant ID would be very helpful, but we can teach this on the job if needed.

LOCATION: Boise, ID

ACTIVITY LEVEL:

Level 8-2: The work requires some physical exertion such as long periods of standing, walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; or recurring lifting of moderately heavy items. The work may require specific, but common, physical characteristics and abilities such as above-average agility and dexterity.

FIELD WORK	25-50%	VIRTUAL?	No
LAB WORK	25-50%		
OFFICE WORK	0-25%		
OTHER	None		

PROJECTED START DATE 5/16/2022
EXPECTED DURATION 3 months (but this is flexible -- opportunity exists to continue beyond the summer if the student's schedule allows