

Investigating Ranchers' Intervention Strategies for Grasshopper Suppression on Western Rangelands

Job Listing: # 36605

UCROSS - Research Fellow - Xerces Society- YSE

Employer: Ucross High Plains Stewardship Initiative at YSE

Western Partner Organization Name: The Xerces Society for Invertebrate Conservation.

We are an international nonprofit organization that protects the natural world through the conservation of invertebrates and their habitats.

Project Title: Investigating Ranchers' Intervention Strategies for Grasshopper Suppression on Western Rangelands

Short Project Description: The project will explore how land managers involved in cattle ranching respond to grasshopper and Mormon cricket outbreaks in the western United States. The hired student will use interviews/surveys with private and Native land managers to explore their attitudes, practices, satisfaction with outcomes, openness to ecological or non-chemical strategies, and decision-making processes.

Long Project Description:

Western grasslands and rangelands are home to a wide array of native grasshoppers. Some of these (including Mormon crickets) exhibit periodic "outbreaks" or high population densities that can result in defoliation of crops, grasses, and other plants on private and public lands. Western ranchers often try to avert economic losses by utilizing pesticide applications to kill juvenile or adult grasshoppers. Ranchers may choose to participate in a federal or local control effort, or may treat their lands independently.

Some research suggests that within the Northern Great Plains, land management strategies such as varying defoliation timing and intensity, preserving shading canopy, and minimizing bare ground may also head off high populations of several common damaging grasshopper species. In the Intermountain West, generalist pest grasshopper species can be more abundant on annual grasslands that have lost structural and plant diversity due to a history of disturbance.

The aim of this project is to gather data on what interventions land managers employ to address the potential or actual threat of grasshopper outbreaks, and to probe the factors that contribute to their choices. The student(s) hired for this role will draft interview tools, develop outreach plans, and conduct interviews, particularly in periodically affected grasshopper outbreak zones within eastern Montana and potentially eastern Oregon. The

student will collect this information directly from owners or managers overseeing the rangelands, through interviews and potentially surveys.

Objectives

- Conduct 12-25 interviews and/or complete surveys with at least 25 land managers within Eastern Montana and Eastern Oregon.
- Identify attitudes, land practices, preferred interventions, decision making processes, willingness to try new strategies and reduce pesticide use and satisfaction with results.
- Respectfully navigate Tribal governance frameworks and consent processes where applicable
- Determine which, if any, underlying factors are important for those ranchers who choose to avoid or minimize pesticide applications

Deliverables

- Outreach strategy for engaging with private and Native ranch land managers
- Draft and final survey and/or interview questions
- Summary report with quantified analyses of surveys/interviews (raw data appended) (contingent upon proper IRB approval)

Qualifications Needed

- Familiarity with a few of the following is preferred: ranch land management practices, Indigenous land ownership and governance, pest management, western rangelands ecology, rancher relations, and rural livelihoods.
- Interviewing and/or qualitative research experience or experience formulating interview questions and/or surveys is desirable.
- Demonstrated ability to build trust and communicate respectfully across diverse cultural and community contexts.
- IRB/human subjects training required- can be completed after hire

Commitment: 5-8 hours/week during September 22 2025 - May 8, 2026

Pay Rate: \$17.50/hour

How to Apply: Apply using the central Yale Student Employment application systems (yalestudentjobs.org) and search for job listing # 36605, **UCROSS - Research Fellow - Xerces Society- YSE**

- You will be asked to upload your resume and a statement of interest as one document

Special Note:

IRB approval of this work is required. The team is already working on getting the approval. But it will be important that the hired student be adaptable to suggestions made by the IRB board. Western Partner Organization Name: The Xerces Society for Invertebrate Conservation.

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