

Description:

A PhD research assistantship is available to study wildfire and landscape ecology at the Pine Ridge Biologically Unique Landscape (BUL) as part of Dr. Dirac Twidwell's Research Team at the University of Nebraska – Lincoln. The Pine Ridge BUL is a complex landscape over 150-km long in northwest Nebraska that consists of a dispersion of multiple grassland-forest alternative states that have been shaped by recurring wildfires over the past five decades. The student will lead empirical and modeling research to characterize spatiotemporal reorganization of ecosystems in the Pine Ridge landscape, with an emphasis on how contemporary management actions have altered the resilience of ponderosa pine forest stands.

This research project offers a number of unique opportunities for highly motivated PhD students:

1. Findings from this research are expected to serve as the foundation for understanding how various ecosystem services are associated with spatiotemporal dynamics driven by wildfire in the Pine Ridge. Immediate opportunities exist for the student to develop a geospatial database linking long term wildfire-vegetation relationships to (1) big horn sheep landscape use and movement, (2) cheatgrass invasions, and (3) grassland biodiversity.
2. The Pine Ridge Conservation Planning Committee, consisting of representatives from multiple conservation agencies and academic institutions, are anticipating that the findings from this research will help shape conservation actions. The successful candidate will therefore be expected to build relationships with a diverse group of agency personnel and communicate results in a manner that enhances learning and adaptive management in this landscape.
3. The successful candidate will be joining a collaborative group of graduate students conducting unique fire experiments throughout the Great Plains. Please explore Dirac Twidwell's research site for an overview of existing projects (<http://agronomy.unl.edu/twidwell>).

Qualifications

The successful candidate will be highly motivated, passionate about scientific inquiry, possess excellent writing and communication skills, and publish research in refereed scientific journals. The student will be expected to lead a team of undergraduate technicians to conduct field sampling in remote areas in stressful environments. Excellent GIS skills are required. Familiarity with spatial modeling and other quantitative statistical or mathematical techniques is also desired.

Position details:

1. Start date is flexible. May 1, 2015, is preferred but an earlier start date, up to January 1, 2015, can accommodate exceptional applicants.
2. PhD annual stipend is \$24,660.
3. Term is 3 years.
4. A full tuition waiver is provided (up to 12 credit hours per semester and 12 credit hours during summer sessions).
5. Health insurance is provided at a reduced rate.

Applications

Students interested in this position should send a statement of interest with research qualifications and career goals, GRE scores, your most recent transcript (unofficial is acceptable) and a CV that includes the contact information for three references (email is preferred). Review of applications will

begin November 21 and continue until a suitable candidate is found. Please send applications to Dirac Twidwell (dirac.twidwell@unl.edu).