

David L Nieland

Subject: MS or PHD position - Landscape Ecology in Wyoming

Graduate Assistantship:
Wetland Ephemerality and Biodiversity Patterns

I am recruiting a MS or PhD graduate fellow to investigate how long-term changes in climate will impact wetlands (distribution, abundance, water quality) and biodiversity in range systems. This position will be part of a team of students addressing complimentary (but independent) questions. The effects of climate change are critically important in semi-arid systems where water is the ultimate limiting factor. Water availability is predicted to decrease across rangelands regardless of precipitation due to temperature-related increases in vegetative evapotranspiration rates. In addition, annual water supply in high elevation systems is dependent on spring snowmelt from the mountains which may be significantly impacted by shifts in precipitation timing. Water shortage has negative consequences for both biodiversity and human resource use.

The selected student will use field-based and remotely-sensed data to characterize wetlands and quantify biodiversity under alternative scenarios of climate change. Depending on interests, the selected student may have the opportunity to incorporate molecular methods to quantify biodiversity (eDNA) and landscape connectivity (landscape genetics approaches). Prospective students with a background in natural resources, ecology, and/or population genetics are encouraged to apply. Evidence of robust analytical skills, strong work ethic, scientific writing, passion for scientific inquiry, ability to work under harsh field conditions and aptitude for collaborative research are expected. To apply, please send a statement of interest, complete CV, unofficial transcripts, unofficial GRE scores, and contact information for three professional references as a single PDF file to melanie.murphy@uwyo.edu.

My spatial ecology and landscape genetics research group is focused on understanding fine-scale distribution and functional connectivity of animal species in ecological systems (<https://sites.google.com/site/murphyabuwyo/>). University of Wyoming (www.uwyo.edu) is ideally located in Laramie, Wyoming with easy access to varied field sites and outdoor recreation opportunities. In addition, the campus is only 1 hour from Fort Collins and 2 hours from Denver, CO.

Requirements: GRE 300 (verbal + quantitative – or equivalent ~1200 on old system), GPA 3.0 (BS)/ 3.3 (MS). Students with GRE 309+ may qualify for a fellowship enhancement. Closing date: Preference for complete applications received by Nov. 23, 2014. Review of applicants will begin immediately. Send materials to Dr. Melanie Murphy (melanie.murphy@uwyo.edu). PhD students are encouraged to apply to the innovative Program in Ecology (www.uwyo.edu/pie), an integrated, interdepartmental PhD program in ecological science. Position starts January 2015.