

Subject: PhD opening - Wildlife, Ecosystem Services, Invasions, & Restorations

Modeling wildlife, ecosystem service responses to *Juniperus* invasions and landscape restorations

A Ph.D. research assistantship is available to study wildlife and ecosystem service responses to juniper invasions, the loss of grasslands and their potential recovery following landscape restorations. The position will be located within the Institute of Agriculture and Natural Resources at the University of Nebraska – Lincoln in the labs of Dirac Twidwell and Craig Allen.

The goal of this project is to compile existing data and information to explore new ways that wildlife and, more broadly, ecosystem services respond to woody invasions and management interventions at local, landscape, and continental scales. Years of monitoring data exist to assess the responses of juniper management interventions on wildlife (e.g. grouse and other grassland birds), but these data have not yet been analyzed at a statewide level in Nebraska to inform (i) whether current approaches to managing juniper invasions is sustaining or restoring wildlife populations, and (ii) how to best adapt management strategies, if warranted, in order to meet sustainability targets. In addition, a full ecosystem service assessment is needed to establish how juniper invasion affects resource benefits that society receives from the environment. The ideal candidate will use quantitative techniques for evaluating ecosystem services as a result of juniper invasions transforming native ecosystems (e.g. grasslands) to a juniper-dominated state.

Additional information:

In 2014, the Nebraska Conservation Roundtable, a panel consisting of state, federal and private conservation groups, identified *Juniperus virginiana* invasion as the biggest threat to conservation values in Nebraska. Those groups are anticipating the findings from this research project will shape future conservation actions and provide innovative solutions that reprioritize existing programs. 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.

Successful candidates will be joining a collaborative group of graduate students conducting unique experiments studying fire-invasion dynamics throughout the Great Plains. Students are given opportunities for cross-project collaborations and to pursue independent research interests.

Contact and application information:

Students interested in this position should send a statement of interest with research qualifications and career goals, GPA and GRE scores, your most recent transcript (unofficial is fine) and a CV that includes contact information for three references (email preferred). Please send applications to Dirac Twidwell (dirac.twidwell@unl.edu). Start date is flexible but anticipated to be between May 2016- January 2017. Full funding is available for 4 years. The stipend rate for 2016 is \$25,200. Full tuition waiver and graduate student health benefits are provided. Review of applications will begin March 10, 2016, and continue until a qualified candidate is identified.