PhD assistantship in rangeland ecology at Utah State University under supervision of
Dr. Kari E. Veblen and Dr. Tal Avgar

Climate change threatens the sustainability of rangelands worldwide. Criollo cattle, a heritage breed, appear to be better adapted to the more arid conditions that are likely under future climates, for example by being smaller, having broader diets, and venturing farther from water than conventional cattle breeds. Integrating Criollo into livestock operations may result in less intense impacts of cattle activity on the landscape and associated ecosystem services, while also effectively increasing forage availability and therefore the economic sustainability of livestock operations. The PhD student will be part of a USDA AFRI-funded project that assesses movements of an experimental herd of GPS-collared Criollo and evaluates their impacts on ecosystem services, as well as analyzes efficiency of beef production. The project is based out of the Canyonlands Research Center and Nature Conservancy's Dugout Ranch in southern UT.

The PhD student will be housed in the Dept. of Wildland Resources at USU. The student will work with an interdisciplinary team of researchers from the USGS Southwest Biological Science Center (led by Dr. Mike Duniway) and Utah State University with expertise in rangeland ecology, movement ecology, soil science, and foraging behavior. The student will assist in all aspects of project management and will have the opportunity to develop their own research projects related to the overall project objectives.

Desired start date: between June and August 2021. ***Minimum qualifications***: Degree in ecology, rangeland ecology, or related field. Ability to work in remote field conditions, independent field research experience, excellent written communication skills, and at least minimum qualifications for admission to USU's PhD program in Ecology. ***Desired qualifications***: experience collecting field vegetation data, using GIS, conducting statistical analysis of spatial data in R and/or Python, and presenting and publishing ecological data; the capacity to develop and apply quantitative models to address ecological questions; ranch experience; enthusiasm for engaging with USU Extension. Applicants should email the following materials, ***as a single pdf file***, with the subject line "Criollo PhD Assistantship" to kari.veblen@usu.edu and tal.avgar@usu.edu: (***a***) one-page cover letter describing relevant experience, interests, and professional goals, (***b***) CV, (***c***) scientific writing sample (an academic paper or report written primarily by the applicant), and (***d***) contact information for three professional references. Review of applications will begin **Nov. 9** and continue until position is filled. We particularly welcome applications from ***under-represented groups***, including (but not limited to) Native/African/Latinx Americans, LGBTQ+, women, and first-generation college students.

Utah State University is a Research I land-grant institution with 42 departments, 8 academic colleges, and diverse research programs. The main campus is located in Logan, 85 miles north of Salt Lake City in scenic Cache Valley, a semi-rural mountain basin with nearby ski resorts, lakes, rivers, and mountains providing many recreational opportunities. The area has a low cost of living and provides a high quality of life.