PhD Graduate Research Assistantship – African savanna ecology

This position is for a PhD student in ecology within an NSF-funded project studying the ecological legacy effects of elephant carcasses in African savanna ecosystems. Fieldwork will be in the Kruger National Park, South Africa. The student will be advised by Dr. Johan du Toit at USU and will work in a team of collaborators from UC Santa Barbara, Marquette University, and various South African institutions. This position will focus on the effects across space (landscape scale) and time (decadal scale) of elephant carcasses on ecosystem processes that influence communities of plants and large mammals. Fieldwork will offer an exciting and unparalleled opportunity to work in pristine savanna ecosystems across gradients of rainfall and soil nutrients. It will also require a special combination of personal attributes including self-reliance under the challenging conditions presented by the study system. The student will be required to advance the broader impacts of the research by working with a videography team, local students at South African institutions, and undergraduate interns at USU to (a) facilitate the production of a documentary video for an international audience and (b) collaboratively produce several educational pieces for K-12 and college audiences (e.g., lectures and educational videos).

Minimum qualifications: An MS degree in ecology, wildlife, biology, or other related discipline. Exceptional applicants with a BS degree will be considered if they have relevant experience and preferred skills.

Figure 1. Hypothesized variation in plant species richness at a megacarcass, plotted over time in relation to baseline (matrix) conditions. The initial two phases (- and +) represent local communities that are ultimately replaced by the matrix community. Scaling of the time axis is hypothetical. Background shows an elephant carcass 1 year post-death.
**Preferred skills:** Strong quantitative skills, passion for natural history, ecology, and evolution, self-reliance, enthusiasm for adventure, diplomacy, common sense, high responsibility, physical fitness. Applicants will need to confirm their preparedness to conduct fieldwork involving 4x4 driving, hiking through thick bush (accompanied by an armed guard) while being alert for wild animals, taking anti-malarial tablets, camping, working long hours in heat, and generally tolerating some discomfort in return for the unique opportunity of conducting research in Kruger. *Candidates from minority groups are encouraged to apply and the selection process will respect the core values of justice, equity, diversity and inclusion.*

**Funding:** The project provides a graduate research assistantship including a USU college-standard salary, medical insurance, tuition and fees for the PhD student. All research costs (including travel) are also covered. The successful applicant will be expected to apply for at least one year of additional personal support from competitive PhD fellowship programs at USU and elsewhere, including the NSF GRFP (if qualified).

**Start date:** Enrollment at USU for the fall semester of 2022, fieldwork in Kruger to commence in the summer of 2023.

**Application:** E-mail a letter of interest, your full CV, academic transcripts, and names and contact details of three academic references to Dr. Johan du Toit, Department of Wildland Resources, Utah State University: johan.dutoit@usu.edu. Review of applications will begin on 1\textsuperscript{st} February 2022.

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