

2021 CSU Extension Internship Application for Campus-Based and Experiment Station Faculty and Staff

Title: The role of the Cameron Peak megafire in shaping alpine mammal community resilience

1. **Faculty mentor name, department, college, and contact information:** Dr. Lise M. Aubry, Fish, Wildlife, and Conservation Biology, Warner College of Natural Resources, lise.aubry@colostate.edu
2. **Are there any other identified mentors (e.g. field-based Extension agent) associated with this project?** Karen Crumbaker, Ag/Natural Resources CSU Extension Larimer County, crumbakm@co.larimer.co.us
3. **In what region(s) will the student be working (county/region)?** Larimer County, Colorado State University Mountain Campus and its vicinity.
4. **Please describe the proposed internship goals, scope, and objectives.** The Cameron peak fire was unexpected in its timing and extent, and will likely have devastating short, and long-term impacts on both plant and animal populations and communities. The proposed applied research offers the unprecedented opportunity to examine the impacts of wildfire on fitness, physiology, and trade-offs among these traits, and to directly test how rapid environmental change affects physiological health, body mass, reproduction, and survival of free-living hibernators for which we have secured samples and mark-recapture data over the past 4 years. The ongoing study of Wyoming and golden-mantled ground squirrels from multiple populations will allow us to compare trade-off signatures in 4 populations prior to the fire (2017-20) and post-fire (2021), half of which have been exposed to the megafire.
5. **How was this applied research project identified?** Understanding how anthropogenic change, such as climate change and habitat fragmentation, affect mammal hibernator life history has been an integral part of my research program for the past 7 years (see [here](#)).
6. **With which stakeholder group(s) will the intern work?** The intern will work with Colorado K-12 teachers and students, as well as CSU University educators, undergraduate, and graduate students that conduct research, teaching/learning, and outreach activities at the CSU Mountain Campus each summer. We are happy to engage beyond these groups with the help of our extension mentor.
7. **What student learning outcomes do you anticipate and are there opportunities for professional development?** The selected student will have the opportunity to practice and master a number of field techniques (e.g. mark-recapture, pit-tagging), lab techniques (e.g. stress assays from fecal samples), research skills (this project will likely evolve into an undergraduate Honors' thesis), outreach and education (e.g. interventions for NR 220 Natural Resource Ecology and Measurements and BZ 340 Field Mammalogy classes).
8. **Do you have a specific mentor style that you would like to share with potential interns?** I adapt and tailor my mentoring style to the needs of the student. If they need constant feedback and require my presence at all times, I will be there for them. If they prefer independence, I will trust their ability and check in with them regularly without too much interference while ensuring internship goals are met.
9. **Are travel funds available? Opportunities to provide student assistance with housing?** The CSU Mountain Campus is close enough to Fort Collins to allow daytrips without a need for lodging. I will provide vehicle and gas support for daytrips. We will, however, apply for a WCNR summer internship offered each year that may provide additional support and allow the student to stay on at the Mountain Campus for the length of their internship, if they so desire.