

30. Ecosystem Stewardship and Adaptive Management on Western Ranches

Mentors: Robin Young, Paul Evangelista

Location: Archuleta County

The proposed internship opportunity will give a student the unique experience in day-to-day operations of ranching in the Rocky Mountain West, while learning how to design and implement an ecological study to help inform management decisions. The partnering ranches are located in Archuleta County south of Pagosa Springs in the San Juan Mountains of southern Colorado. They are managed for landscape-scale ecological sustainability with the health and viability of wildlife, water resources and forests being the highest priority. The Planning and Reporting Units (PRU) included in this opportunity is largely focused on natural resources, but may include varying aspects of livestock and range, environmental horticulture, and 4-H.

The goal of this internship opportunity is to expose the student to the complexities of working ranches in Colorado that aim to balance long-term economic viability with ecosystem stewardship. The student will work with ranch managers in maintaining healthy wildlife populations, improving watershed protection, controlling invasive species, mitigating risk of wild fire, and promoting healthy forests. Partnering ranch managers will provide hands-on training for routine activities that may include care of livestock, operating equipment, maintenance of infrastructure, and assisting in guest services. The student will also be expected to work with the mentor team in the design and implementation of a study examining the impacts of herbivory on aspen regeneration – a concern for many ranches throughout southern Colorado.

This opportunity is designed to meet the growing demand for a new generation of ranch managers and technicians that will be equipped with the interdisciplinary skills needed to address the challenges of ranching in today's changing world. While traditional livestock production remains an important component of many ranching programs, today's ranches have diversified their operations significantly to allow for more stable economic profitability and enhanced environmental sustainability. This is especially true in Colorado, where ranches often include timber operations, hunting, energy development, ecotourism, and other non-traditional activities that support ecosystem processes, foster lasting protection of the land, and achieve economic profitability.

This internship opportunity is also designed to provide a student the skills and tools necessary to formulate adaptive management strategies on working lands. Anchored in experiential learning and engagement within the ranching community, this internship provides extensive opportunities to interact with ranch managers, ranch owners and natural resource managers as part of the program's scope.

The Mentorship Team for this internship includes Dr. Paul Evangelista (paul.evangelista@colostate.edu), an ecologist at the [Natural Resource Ecology Laboratory](#), and Robin Young (robin.young@colostate.edu), the director of the [CSU Extension office](#) and Natural Resources and Agriculture agent for Archuleta County. Paul has a long history of mentorship that ranges from on-the-ground training of wildlife professionals in East Africa to developing satellite remote sensing skills for natural resource managers for NASA's [DEVELOP](#) Program. He works with ranches across Colorado and New Mexico, and leads Colorado State University's

new [Western Ranch Management and Ecosystem Stewardship Program](#). Robin has served as a mentor for many new hires within Extension, for 4-H leaders and youth, and mentors landowners to improve their stewardship on their land and with their animals. The Mentorship Team has an extensive working relationship with the host ranches and their staff. Partnering ranches will provide an additional small stipend to support housing costs and travel. The intern will be expected to work 40 hours a week for 12 weeks over the summer months of 2020. No experience in ranching is required; however, the student will be expected to have an understanding of ecological principles and natural resource management.