

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Understanding the impact of fire on pygmy rabbit distribution, abundance, and movement

Discipline: Natural

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: University of Colorado at Boulder

Effective Dates: 6/24/2007 - 9/30/2010

Funding Amount: \$39,540

Investigators and Agency Representative:

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Project Abstract: This project will include two years of field work on capture-mark-reobservation of pygmy rabbits (*Brachylagus idahoensis*) across habitat types and within vegetation mosaics created by fire in Fossil Butte NM. The ratio of burned to unburned vegetation (fire mosaic) is expected to vary considerably within and among burn units. Pygmy rabbits will be fitted with radio collars and their movements recorded. Home range for collared rabbits will be determined. Location data and field observation data will be analyzed to determine habitat utilization within the burn mosaic and in unburned habitat. Pygmy rabbits will also be live-trapped, marked, released and recaptured within the fire mosaic and in areas unaffected recently by fire. This will generate data that can be used to estimate pygmy rabbit densities in areas affected and unaffected by recent fires.

Line transects will be established in habitats occupied by pygmy rabbits, and used to measure shrub height and canopy coverage. Smaller plots (possibly Daubenmire plots) will be employed to estimate coverage by grasses, forbs, and shrub seedlings, sub-shrubs, litter, rock, and bare ground. Plants will be identified to the species level when all the characteristics needed for identification are present.

Outcomes with Completion Dates: Due by May 31, 2010: Final report on post-fire distribution of pygmy rabbit within FOBU Rock Creek/BLM area. Additional sections on (1) recommendation of fire management methodologies that promote sustainability of pygmy rabbit populations, (2) map of habitats used by pygmy rabbits within FOBU, (3) map of abundance, distribution, and movement of pygmy rabbits, (4) document shrub density, heights, and species composition, and soil characteristics of occupied rabbit habitat on maps, and (5) identify areas in FOBU requiring specific management prescriptions or protection from planned fires.

Keywords: pygmy rabbit, fire, mark-recapture, Fossil Butte NM, University of Wyoming.

For Administrative Use Only:

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: