



Photo by David Augustine

## The Role of Fire in Shortgrass Rangelands

**Presenter: David Augustine, Landscape Ecologist, USDA-ARS**

Semiarid rangelands of the western Great Plains (shortgrass steppe and the western portion of the northern mixed prairie) are characterized by limited and highly variable precipitation inputs. The region also historically sustained abundant populations of grazers, particularly bison and black-tailed prairie dogs. As a consequence, fuel loads are typically low, shrub encroachment is not a widespread concern, and prescribed fire is only infrequently used to manage rangelands in the region. Although fire return intervals in the region are difficult to estimate, fire was historically a component of the ecosystem and likely had important effects on plant communities, the distribution of herbivores, and habitat quality for some wildlife species.

In this webinar, we will discuss research on the role and use of prescribed fire in the western Great Plains, focusing on studies conducted in the shortgrass steppe of Colorado over the past decade. We will discuss the fuel loads and weather conditions under which prescribed burning has been possible (including considerations of drought versus wet years), and associated fire temperatures. We will then examine the ecological role of prescribed burning in terms of effects on cattle grazing distribution and production, differential effects on herbaceous plants versus cactus and dwarf shrub species, and consequences for grassland bird habitat. We will also discuss differences in the effects of burns conducted in spring versus fall and at varying frequencies. Prescribed burn planning in shortgrass steppe is complex because achieving specific goals while mitigating potential negative effects requires consideration of (1) previous growing season conditions (2) season of burn, (3) recent precipitation, (4) current weather conditions, (5) pre- and post-burn livestock grazing management, (6) size and distribution of the burn relative to pasture boundaries, and (7) location of the burn relative to existing wildlife populations. The webinar will provide an opportunity for managers and researchers to share their experiences concerning the use of prescribed fire in the western Great Plains, and discuss how they approach all of these considerations in burn planning.

**Co-hosted by:**

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**When:** November 21, 2013

**Time:** 1pm MST/2pm CST

**Use this link to join the webinar:**

<http://connect.ksre.ksu.edu/hfrr>

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