Elk and Cattle Grazing Can Be Complementary

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Elk and Cattle Grazing Can Be Complementary

Elk Response to a 19-Year Exclusion of Cattle Grazing

By Beth Burritt and Roger Banner

On the Ground

- In 1990, cattle grazed private land in Utah's Book Cliff Mountains until late July. Elk in the area ate about 50% of the forage regrowth on this land from late July to mid-September.
- This private land mentioned was sold in 1990 and managed for elk. At the same time cattle were permanently removed from the area.
- By 2009, repeat photography showed that vegetation in the area had changed and was dominated by dense stands of mature vegetation and weeds. In 2009 there were no signs of elk, whereas in 1990 many elk and signs of elk were observed in the area.
- Based on this study and many others, carefully managed cattle grazing can be a lost-cost method to improve forage quality for elk.

Keywords: cattle, elk, grazing, competition, rancher, wildlife, livestock.

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For decades, many wildlife managers and livestock producers disagreed about the impact livestock grazing has on forage for wildlife. A little over 20 years ago, one ranch family grazed their cattle on their private land as well as on a portion of Utah's State Trust Lands known as The State Roadless Area (TSRA) in the remote Book Cliffs Mountains of Utah (Fig. 1). Ranchers who grazed their cattle in TSRA wanted to know how elk affected the amount of forage for their cattle on their private land and how their private land contributed to elk forage and habitat.

In Utah, ranchers receive elk hunting permits to compensate them for elk grazing on their private land. However, these ranchers who owned private land adjacent to TSRA did not feel adequately compensated in terms of landowner elk permits for the following reasons: 1) permits were based on average forage production of both private and state land; 2) most of the private lands owned by ranchers were located along riparian areas, which were much more productive that the adjacent uplands in TSRA; 3) ranchers felt cattle grazing in early summer created high-quality forage for elk in the fall. On the other hand, state wildlife managers felt that cattle were reducing the amount of forage for elk.

In fall of 1990, local ranchers and Utah State University Extension personnel surveyed the area to determine 1) the amount of vegetative regrowth that occurred on private land after cattle grazed the area in early summer and 2) the quantity of forage used by elk on private land in late summer and fall. We planned to return to the area the following spring to determine the amount of forage used by elk on private lands before cattle began grazing in the spring.

Before the survey could be conducted in spring of 1991, 7,500 acres of private land adjoining TSRA was sold to The Nature Conservancy and the Rocky Mountain Elk Foundation. They in turn donated the land to the State of Utah to be managed for elk. The Utah Division of Wildlife Resources removed cattle from the area to improve habitat for elk. Cattle have not grazed the area since 1990.

In late July 2009, researchers and ranchers returned to the same survey locations to see what changes, if any, occurred on the formerly private lands that once supported cattle grazing. They also took photos of each survey location to compare them with photos taken 19 years earlier in July and September 1990. Our study examines the effects of early summer cattle grazing on forage used by elk in late summer and early fall and documents the effect of long-term exclusion of cattle grazing on meadow vegetation in the Book Cliffs Mountains.

Utah's Book Cliffs Mountains

Our study took place in Grand County, Utah, on private land and TSRA in the South Book Cliffs Mountains of Utah (Fig. 1). The Book Cliffs Mountains are located in a remote area of eastern Utah. Steep canyons with riparian areas located in the can-