
****LIVESTOCK DEPREDATION BY GRIZZLY BEARS ON FOREST SERVICE GRAZING ALLOTMENTS IN THE GREATER YELLOWSTONE ECOSYSTEM**

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Grizzly bear population growth and range expansion over the last several decades in the Greater Yellowstone Ecosystem (GYE) has led to increased human-bear conflicts, including livestock depredation. In 2015, we began a study to evaluate spatio-temporal relationships between livestock grazing, grizzly bear habitat characteristics, and livestock depredations by grizzly bears on public lands in the GYE during 1992–2014. In collaboration with the U.S. Forest Service (USFS), Interagency Grizzly Bear Study Team, and National Park Service, we have obtained 23 years of grazing allotment attributes for 316 USFS and Grand Teton National Park grazing allotments including: livestock stocking information, grizzly bear habitat characteristics, grizzly bear density and distribution, and livestock depredation counts. Overall counts of livestock depredation events, total livestock killed, and the number of allotments experiencing depredations increased from 1992 to 2014, concurrent with range expansion and increasing grizzly bear densities. Annual depredation events per allotment differed by livestock class, where allotments stocked with cow-calf pairs and sheep experienced the majority of depredations. Livestock depredation counts will be modeled with livestock stocking data and grizzly bear habitat variables to better understand which attributes of grazing allotments had the greatest association with the number of depredations over the study period. We will evaluate habitat attributes at two spatial scales, representing daily and annual grizzly bear activity areas. Our results will enhance adaptive approaches to conserve grizzly bears, while also maintaining the economic viability of livestock operations.