

****Grizzly Bears Change Their Behavior Near Trails in a Protected Area**

Elise Loggers*, Ecology, Montana State University, Bozeman

Andrea Litt, Ecology, Montana State University, Bozeman

Kerry Gunther, Yellowstone Center for Resources, National Park Service, Mammoth, WY

Mark Haroldson, Interagency Grizzly Bear Study Team, U.S. Geological Survey, Bozeman, MT

Frank van Manen, Interagency Grizzly Bear Study Team, U.S. Geological Survey, Bozeman, MT

*Indicates Presenter

**Indicates Student Presentation

Outdoor recreation has grown in popularity, increasing the need to understand how animals respond to these activities. In Yellowstone National Park, areas identified as important to grizzly bears (*Ursus arctos*) have additional restrictions on human recreation for 2–7 months every year. These Bear Management Areas comprise about 21% of the national park and were established to protect bears and people. Using these seasonally restricted areas, we tested how low-intensity backcountry recreation (i.e., hiking) influenced the behavior of grizzly bears. We quantified how bears changed their speed and selection near trails based on restrictions to human access and time of day. We used GPS locations of 19 male and 16 female grizzly bears to develop integrated step-selection models to test our hypotheses. Males moved faster near trails during all times and selected for trails during night and crepuscular hours. Females moved faster near trails in unrestricted areas and slower in restricted areas during night and crepuscular hours. Females avoided trails in restricted areas at night. Although individual bears differed in their responses, bears changed their speed and selection in response to low-intensity recreation, even within a protected area. Restricting recreation likely reduces human-bear conflict in areas with higher densities of bears and reduces displacement of bears from important food resources. Restricting trail use during certain times (i.e., crepuscular hours) would likely further reduce human-bear interactions.