



Moose

RESOURCE BRIEF

Importance

Alces alces shirasi, one of four subspecies of moose in North America, is found in forested areas and willow flats from southeastern British Columbia to northern Colorado. They are better adapted to survival in deep snow than other ungulates in Greater Yellowstone. Although some moose in Grand Teton and Yellowstone migrate to lower elevations in winter, others move to higher elevations where they can browse beneath a mature forest canopy that reduces snow accumulation. Except during the rut, moose are usually found alone or in small family groups. This behavior, and their use of habitat where they are often well concealed, impedes accurate estimates of population size and distribution.



Status

Archeological evidence of moose has not been found in northwest Wyoming and south central Montana. Moose appear to have been scarce in Yellowstone until the latter half of the 19th century and in Jackson Hole until early in the 20th century. Forest fire suppression, restrictions on moose hunting, and moose transplantations contributed to their subsequent range expansion and population increase. Moose from Jackson Hole were released in the Bighorn Mountains starting in 1948 and are occasionally seen in Bighorn Canyon. Although some Rocky Mountain moose populations have continued to grow and spread into new habitat, those in Yellowstone and Jackson Hole have declined since the 1980s. Estimated at roughly 1,000 in

the 1970s, the current Yellowstone moose population is now believed to be less than 200, with the northern range population down by at least 75% since the 1980s. The estimated size of the Jackson moose herd, which was more than 4,000 in 1990, has been less than 1,000 since 2008.

Discussion

Unlike most North American moose populations, those in Greater Yellowstone are generally associated with late successional conifer forest rather than post-disturbance shrubland. Northern Yellowstone lacks woody browse species that re-sprout quickly after a fire. Consequently, the drop in the moose population evident after the 1988 fires in Greater Yellowstone has been attributed to the loss of mature fir forests. Predation of moose calves by growing bear and wolf populations may be continuing to limit population growth, but the low pregnancy rates of Greater Yellowstone moose suggest limits set by food availability. Long-term studies suggest that North American moose populations tend to erupt, crash, and then stabilize for awhile at a density that depends on current ecological conditions and hunting pressure.

The state of Montana has limited moose hunting in the districts immediately north of Yellowstone to antlered bulls since 1996 and reduced permits to 15 a year. Eight bulls were harvested in 2008, when Montana Fish, Wildlife & Parks estimated that the population in those districts was 150. In Wyoming, hunting permits for the Jackson herd (outside Grand Teton National Park) have been reduced from 495 in 1991 to 44 in 2009, when 36 bulls were harvested. To assess what may be limiting the Jackson Hole moose population, the Wyoming Cooperative Fish and Wildlife Research Unit is overseeing a study of population demographics, physiological health, and seasonal resource selection and distribution.

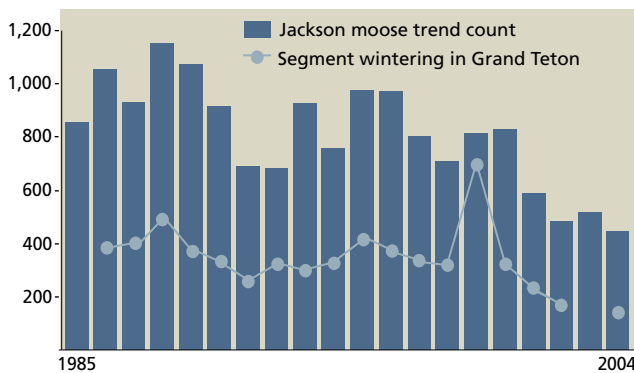


Figure 1. Winter trend count for the Jackson herd and the Grand Teton National Park segment. Fluctuations reflect population trend as well as snow cover and other factors that affect the animals' visibility when the aerial survey is done. The Wyoming Game and Fish Department uses the trend count to arrive at a population estimate, which was 936 in 2010.

