

EFFECTS OF SELECTIVE HUNTING ON PRONGHORN BEHAVIOR
AT FORT BELKNAP INDIAN RESERVATION ^{TWS}

Christine R. Maher
Department of Biological and Physical Sciences
Montana State University - Billings 59101

Carl D. Mitchell
Management Assistance Office, U.S. Fish and Wildlife Service
Lewistown, MT 59457

Sport hunting usually is not considered to impact wildlife populations negatively. However, trophy hunting, a highly selective form of hunting, raises some concern among biologists because a distinct group of males is removed from the population. Among other effects, selective hunting can produce changes in breeding patterns. The objective of this study was to investigate effects of a selective hunt, which occurred during the breeding season, on behavior patterns of male pronghorns (*Antilocapra americana*). We compared demographic variables, activity patterns, and interaction rates among individually recognized males that were subjected to light, moderate and heavy amounts of hunting pressure at Fort Belknap Indian Reservation in northcentral Montana. Although group size, time budgets and interaction rates changed from the prerut time period to the rut, males living in areas subjected to the three treatments did not vary significantly in the amount of time they spent active, walking or reclining, nor did they vary in interaction rates. The number of fawns present in a male's group, however, was lowest in areas that received the heaviest hunting pressure. We conclude the trophy hunt, which is restricted to a maximum of 100 tags, did not adversely affect the reproductive activity of pronghorns in this population. However, biologists should continue to monitor age structure, sex ratio, and productivity in order to detect any changes that may occur as a result of the hunt. Furthermore, genetic diversity should be monitored to detect any changes that may result from a loss of prime males from the population.