THE ROLE OF PREDATOR CONTROL AS A TOOL IN GAME MANAGEMENT, CASE STUDY: ROLLING PLAINS

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Abstract: I present historical and current trends in the relationship of coyotes (*Canis latrans*) and white-tailed deer (*Odocoileus virginianus*) in the Rolling Plains of Texas. Trends presented are based on >25 years of personal observations and from informal interviews with area ranchers.

OBSERVATION AREA

These observations were made on ranches that comprise over 400,000 acres of land in Knox, King, Dickens, Stonewall and Kent counties in the Rolling Plains. The author has been familiar with population dynamics of both coyotes (*Canis latrans*) and white-tailed deer (*Odocoileus virginianus*) in all areas included herein. The information offered is from personal observations afield and from informal interviews with ranchers across the described region.

HISTORICAL REVIEW

The first food habit study on coyotes in a selected region in the Rolling Plains was conducted over a two year period beginning in 1972 (Meinzer et al. 1975). Meinzer et al. (1975) concluded that predation on white-tailed deer in the Rolling Plains was minimal, after collection efforts yielded only one field sample out of hundreds that indicated a coyote ingesting white-tailed deer remains.

Population dynamics of coyotes in these areas indicated a relatively stable population as indicated by the mean age of coyotes sampled. Intensive predator control efforts were not in progress on any of the study areas at that time. No information was available on the population density of white-tailed deer in the study area but personal observations indicated low numbers relative to the densities evident at the present time.

CURRENT OBSERVATIONS

Due to a strong demand for wild fur from 1974 through 1980 high levels of hunting pressure on coyote and bobcat (*Felis rufus*) populations in the Rolling Plains maintained a consistent mortality rate throughout this region for about 6 years. During this time no perceptible change could be determined in the population dynamics of white-tailed deer throughout this same area. In 1986 the first cases of sarcoptic mange were observed in the Rolling Plains coyote population followed by a near 80% infection rate by the mid 1990's. Also, ranching techniques had changed by the early to mid 1980's from conventional cow/calf operations to stocker cattle production. The latter application effectively reduced livestock pressure on native range land for much of the year and reduced the competition between cattle and white-tailed deer significantly.

By the late 1990's field observations indicated white-tailed deer numbers

increased dramatically throughout the Rolling Plains region. Interviews with ranchers across the area indicated an excellent fawn survival rate this past season despite coyote numbers at a near 14 year high.

LITERATURE CITED

Meinzer, W., D. N. Ueckert, and J. T. Flinders. 1975. Foodniche of the coyote in the Rolling Plains of Texas. Journal of Range Management 28:22-27.