



Physiological Effects of the North Kaibab Winter Habitat on Mule Deer

Matthew W. Acton, William H. Miller and Ann Steffler; Arizona State University; Contact Author Email: matthew.acton@asu.edu

The mule deer herd on the north Kaibab Plateau of Arizona has been considered one of the premier deer populations in the west. Recent concerns on the ability of the winter range to adequately meet the metabolic needs of over wintering deer have been expressed. To answer these concerns blood and body measurements were collected from 20 mule deer/collection on the Kaibab Plateau in the late fall and early spring from November 2005 to March 2008. Assays for Albumin, creatinine, plasma urea nitrogen, glucose, alkaline phosphatase and other metabolic parameters indicate that mule deer arriving on the Kaibab winter range are in generally good condition, with resulting conceptions rates as high as 180 fawns:100 does in the spring collections. Comparisons of spring verses fall physiological indicators on the other hand demonstrate a significant decline in overall body condition while on the range and when returning to summer habitat. With the goal of ensuring a continued sustainable natural resource, indications are that range and wildlife management principles will need to be reviewed and adjusted to meet the increasing demands that the mule deer herd has placed upon the limited forage resources of the Kaibab plateau.

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