

POPULATION DYNAMICS OF BIGHORN SHEEP ON THE BEARTOOTH WILDLIFE MANAGEMENT AREA, MONTANA^{TWS}

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A study of reintroduced Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*) was conducted on the Beartooth Wildlife Management Area in west-central Montana between 1995 and 1998. Research included investigation of post-dieoff population dynamics and evaluation of a sheep augmentation program. Data were collected on sheep distribution and habitat use, reproduction, and lamb recruitment, lamb and adult mortality, and general health. Particular emphasis was placed on assessing the role of mountain lion (*Felis concolor*) predation on adult sheep. Transplanted sheep ($n = 39$) were closely monitored to determine the effectiveness of herd augmentation. Sheep were limited in distribution to low elevation, winter range-type habitats and did not express seasonal migration. Results suggest that limited annual lamb production, in conjunction with late summer lamb mortality and annual adult losses due to predation and disease, were responsible for a stable or declining sheep population. Augmentation had no influence on herd productivity due to loss of relocated sheep and limited annual reproduction.