Ecological Relationships Between Bears and Predation by Cougars on Ungulates [TWS]

Kerry M. Murphy
Hornocker Wildlife Institute
P.O. Box 526, Mammoth Hot Springs, WY 82190
Gregory S. Felzien
Maurice G. Hornocker
Hornocker Wildlife Institute, P.O. Box 3246,
University Station, Moscow, ID 83843
Toni K. Ruth
Hornocker Wildlife Institute
P.O. Box 1242, Columbia Falls, MT 59912

Black bears (*Ursus americanus*) or grizzly bears (*Ursus arctos*) visited 26 of 106 ungulates killed by cougars (*Felis concolor*) that we found in Glacier National Park, Montana, and in Yellowstone National Park, Wyoming, from 1990 to 1995. Bears displaced cougars from carcasses in 16 of these 26 visitations. We estimated that cougar predation provided an average of 3.4 kg/day (range = zero to 12 kg/day) of biomass to bears and other scavengers that fed on cougar-killed ungulates. This biomass was potentially an important proportion (up to 290%) of the daily energy needs of bears when compared to their caloric requirements as reported in the literature. We suggest that ungulate carrion provided as a result of cougar predation could be

important nutritionally to bears in some areas and seasons. We estimated that when bears displaced cougars from their ungulate kills, single adult cougars lost an average of 1.1 kg/day of ungulate biomass, or 29-45% of their daily food requirements. Cougar predation rates on ungulates were significantly higher ($P = 0.04$) when bears displaced them from their kills than when bears did not displace cougars. Biologists modelling or measuring cougar predation rates should be aware that losses to scavengers may not be trivial.

[1]Deceased