
BIGHORN SHEEP MOVEMENTS AND MINERAL LICK USE IN WATERTON-GLACIER INTERNATIONAL PEACE PARK (POSTER)

Elizabeth P. Flesch*, University of Montana, USGS Glacier Field Station, West Glacier, MT

Tabitha A. Graves, Northern Rocky Mountain Science Center, USGS, West Glacier, MT

Mark J. Biel, Glacier National Park Science Center, NPS, West Glacier, MT

This study used bighorn sheep telemetry data collected in Glacier National Park, Waterton Lakes National Park, and the Blackfeet Reservation to examine bighorn sheep movements and use of known mineral licks. Over 168,400 GPS locations were collected between 2002 and 2011 on 97 bighorn sheep individuals from 17 different social groups. We examined the proximity of bighorn sheep telemetry data to 32 known mineral lick locations to describe timing and frequency of mineral lick use. Fifty individuals had locations near known mineral licks, and most mineral lick visits took place between May and August. We compared movements towards known mineral lick locations with general bighorn sheep movements. After estimating bighorn sheep kernel home ranges, we evaluated how movement towards the lick, timing, and frequency of use varied depending on location of the lick relative to sheep home ranges. We conducted a k-means cluster analysis of movement characteristics to identify potential locations of unknown mineral licks and movement pinch points. We will discuss options for using these locations to monitor bighorn sheep health and population size.