

Seasonality of Bobcat Resource Selection

Roberta K Newbury*, Biology, University of Providence, Great Falls, MT

Karen Hodges, Biology, University of British Columbia Okanagan, Kelowna, British Columbia, Canada

*Indicates Presenter

**Indicates Student Presentation

Home range size of bobcats varies by sex, season, and latitude, with bobcats reducing home range size in winter. Additionally, bobcats may shift habitats seasonally, but may also reduce movements to conserve energy in winter. We found that bobcats on the Flathead National Forest, Montana seasonal home ranges did not change size significantly for all bobcats pooled; thus, bobcats did not reduce winter home range size as compared to other seasons. For all bobcats combined, winter home ranges ($N = 3$) were $65.3 \hat{\pm} 37.5 \text{ km}^2$, spring home ranges ($N = 5$) were $74.2 \hat{\pm} 16.7 \text{ km}^2$, summer home range ($N = 4$) were $81.4 \hat{\pm} 13.9 \text{ km}^2$, and fall home ranges ($N = 4$) were $72.0 \hat{\pm} 10.9 \text{ km}^2$. Bobcats significantly reduced daily movement distances dependent on season, specifically reducing movement distances in winter and increasing movements summer. Habitat selection differed significantly for both 2nd order (home range to study area) and for 3rd order habitat selection (GPS locations to home range), but did not differ across seasons, or for the interaction of 2nd and 3rd order selection season. Specifically, habitat selection differed with burned and wetland habitats being avoided, and lodgepole and dry site mixed species coniferous stands being preferred. Bobcats on the Flathead exhibited seasonal movements comparable to Canada lynx. If bobcats were typical of the broader population, bobcats in northwest Montana may demonstrate a mixture of behaviors characteristic of both bobcats and lynx that allow them to be successful in deep winter snows of this region.