
****MODELING SUMMER HABITAT SELECTION OF SYMPATRIC BIGHORN SHEEP AND MOUNTAIN GOATS IN THE GREATER YELLOWSTONE AREA**

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With introduced mountain goat (*Oreamnos americanus*) populations continuing to expand throughout the mountainous regions of the greater Yellowstone area (GYA), wildlife managers

have expressed a need for reliable information to understand mountain goat ecology specific to this region as well as any potential impacts to native species and communities, especially to native and restored bighorn sheep populations. In response to this need for ecological knowledge, we developed and implemented rigorous occupancy survey methodologies in two study areas for three field seasons (2011-2013). A total of 611 surveys were performed over 550 observer-days, capturing spatially-precise locations of 128 bighorn sheep groups and 286 mountain goat groups. These data are being used to develop fine-scale summer habitat-selection models for both mountain goats and bighorn sheep that account for imperfect detection. This presentation reports on the accomplishments from the three field seasons, including what we have learned from preliminary analyses and the next steps to completing a full analysis of the data. Products from this research will provide insight into the potential for resource competition between bighorn sheep and mountain goats. Development of a mountain goat habitat-selection model will also allow prediction of range expansion of mountain goats into the extensive ranges of bighorn sheep in the eastern mountains of the GYA where small numbers of colonizing mountain goats have recently been observed.