

Comparative Ecology of Mountain Goats in Coastal Alaska

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ABSTRACT Mountain goats (*Oreamnos americanus*) are among the least studied large mammals in North America and, in most parts of their range, basic knowledge about the species ecology is needed to advance conservation efforts. Mountain goat populations are often isolated at relatively small geographic scales. Consequently, simultaneous study of discrete populations provides an opportunity to further our knowledge of factors that influence mountain goat ecology. In this study, we examine the comparative ecology of 6 genetically distinct mountain goat populations in coastal Alaska. We collected data from 270 radio-marked mountain goats during 2005-2014 to examine how ecological characteristics varied between populations. Specifically, we analyzed data relative to nutrition, morphology, migration strategies, reproduction, survival, and population dynamics in a comparative context. Overall, we detected differences in ecological characteristics of certain populations that appear to be related to winter climate, carnivore community assemblage, genetic isolation, and population history. These findings are important for describing the natural variability of the quasi-archipelagic mountain goat populations in coastal Alaska and have key implications for informing site-specific conservation strategies.

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