

Survival of Mountain Goats in Coastal Alaska: Synthesis and Applications

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Abstract: Estimating survival is critical for modeling population dynamics and, ultimately, conservation of free-ranging wildlife species. Mountain goats are among the least studied large mammals in North America and, with few key exceptions, knowledge about patterns of survival is limited. In this study, we use data collected from 264 radio-collared mountain goats (116 males, 148 females) in 8 separate study areas over a 30-year period to characterize patterns of mountain goats survival in coastal Alaska. Specifically, we use Kaplan-Meier survival analysis to derive generalized estimates of sex- and age-specific survival for mountain goats. In addition, we assess how regional geography and variation in winter severity influence mountain goat survival. We further describe seasonal patterns and causes of mortality. Our findings are discussed in the context of life-history theory and, in addition, we explore how these data can be used in conservation and management applications.

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