
FACTORS INFLUENCING PIKA FORAGING BEHAVIOR IN THE NORTH CASCADES NATIONAL PARK SERVICE COMPLEX, WASHINGTON

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The American pika (*Ochotona princeps*) is a small lagomorph restricted to talus slopes at higher elevations or latitudes throughout mountainous regions in western North America. Pikas respond to seasonal fluctuations in food availability by haying, i.e., storing, vegetation for use during winter, and are considered a climate change indicator species because of their sensitivity to heat and restricted habitat requirements. Prior to 2009, no data existed on pika populations or foraging behavior in the North Cascades National Park Service Complex (NOCA) in Washington. To help address these data needs, we collected behavioral data on 95 foraging pikas throughout NOCA during summer 2009 and 2010 to better understand abiotic and biotic factors affecting foraging behavior and potential impacts of climate change on pikas. We calculated the proportion of time pikas spent grazing and haying, and developed competing hypotheses for each behavior expressed as logistic regression models consisting of climate, vegetation, elevation, date, and year covariates. We selected top models for both behaviors using information-theoretic techniques, and found that time spent grazing decreased while haying behavior increased through summer. Pikas spent more time haying as elevation increased while time spent grazing was negatively correlated with elevation, suggesting possible constraints in time available for foraging at higher elevations. Time spent grazing was also negatively correlated with temperature, a result likely in response to thermoregulation limitations of pikas. These results demonstrate how multiple factors may affect pika foraging behavior, thereby providing an opportunity to assist resource managers in future decisions regarding pika conservation.