
INCORPORATING ECOHYDROLOGIC VARIABLES INTO MODELING OF PATTERNS OF MONTANE-MAMMAL DISTRIBUTION AND ABUNDANCE

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Montane ecosystems have been suggested by both paleontological and contemporary research to often be systems of relatively rapid faunal change, compared to many valley-bottom counterparts. In addition to often (but not always) experiencing greater magnitudes of contemporary change in climatic parameters than species in other ecosystems, mountain-dwelling wildlife must also accommodate often-greater intra-annual swings in temperature and wind speeds, poorly developed soils, and generally harsher conditions. We present new results of ecoregional-level analyses of American pikas (*Ochotona princeps Richardson*) that illustrate how biologically relevant derived hydrological variables can be important to predictors of abundance. We also present new results from the Northern Rocky Mountains that illustrate how behavioral plasticity can, in at least some cases, ‘soften’ the boundaries of species’ bioclimatic niches. Landscape Conservation Cooperatives and Climate Science Centers are newly emerging efforts that may contribute greatly to broad-scale, mechanism-based investigations to inform management and conservation of diverse montane wildlife and the ecosystem components with which they interact. Based on our empirical findings and our review of the literature, we propose tenets that may serve as foundational starting points for our expanding research on montane animals across the Northern Rocky Mountain Region.