**Are Talus Sites Important Winter Habitat? A Case Study Monitoring Rare Mammals in Northwestern Nevada**
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 **Abstract:**Talus deposits, the rock formations associated with scree at the base of mountains or cliffs, are important habitats of western North America that provide year-round shelter to a diversity of small mammal species. Rocky habitats such as talus are also long-term refugia against increasing climate variation as organisms can be buffered from the temperature extremes being experienced in more open environments. However, little is known about how rare and threatened mammal species use these buffered habitats for thermoregulation throughout the winter months. The American Pika (Ochotona princeps) is a known rock-dwelling obligate in northwestern Nevada, but previous studies have yet to describe winter activity patterns in pika, in large part to the difficulty of accessing remote areas in snow conditions. In contrast to pika, some bat species that roost in rock crevices during the summer are thought to migrate to warmer locations during the winter, though many bat species are understudied because of their difficulty to capture, tag, and track. Here, we present a novel method of monitoring pika and bat activity through the winter season using passive acoustic detectors. In October 2019, we deployed sets of Wildlife Acoustics SM4 and SM4 Full Spectrum recorders with iButton temperature loggers at 9 talus sites in northwestern Nevada on BLM land and in Sheldon National Wildlife Refuge for 6 months. American Pika vocalizations were identified manually in RavenPro sound visualization software and bats were identified to species using Sonobat. With these new methods, we were able to 1) describe the activity patterns of pika in relationship to available sunlight and temperature fluctuations at sites with known pika presence in the summer and 2) compare bat species richness across seasons for the 15 species we have recorded in the region from 2017-2019. By developing this protocol for assessing presence and activity for rare and hard to track mammals, we are providing land and wildlife managers with the low-cost tools needed for seasonal monitoring in order to understand short- and long-term changes to talus habitats.