

****Predator Avoidance by Partially Migratory Mule Deer**

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Within partially migratory ungulate populations, selection of forage and security may vary greatly between migrants versus residents, and with spatial scale. Predation risk and forage limitation may be limiting the growth of mule deer (*Odocoileus hemionus*) populations in northwest Montana, which appear to be in decline. We asked how avoidance of mountain lions (*Puma concolor*) and wolves (*Canis lupus*) varies between migrant versus resident deer in 3 partially migratory populations throughout western Montana. We used GPS collar locations of 113 mule deer collared from summers 2017-2019 and developed resource selection functions (RSFs) to assess the effect of predation risk (estimated using mountain lion and wolf RSFs) on home range (2nd order) and within-home range (3rd order) selection by mule deer. Across study areas and migratory strategies, mule deer avoided wolves more strongly at the 3rd order than at the 2nd order. Migrants were indifferent to wolves at the 2nd order, whereas 2nd order selection by residents was more variable. Mule deer in each study area and strategy avoided lion risk at at least one scale, though lion avoidance strategies were highly variable. We hypothesize that mule deer's indifference to predation risk at a given scales was a result of prioritization of forage at that scale. Our findings highlight the ability of partially migratory ungulates to adjust scale-specific predator avoidance strategies based on local conditions. By incorporating forage quality estimates, we may be able to understand how scale-specific forage/risk tradeoffs vary between migrant and resident mule deer in different ecotypes.