
HABITAT QUALITY INFLUENCES MIGRATORY STRATEGY OF FEMALE WHITE TAILED DEER

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Partial migration is a life history strategy that is common for ungulate species living in seasonal environments. One factor that influences the decision to migrate by ungulates is access to high quality habitat. We evaluated the influence of access to winter habitat of high quality on the probability of an individual migrating, seasonal habitat use between and within migratory and resident classes of deer, and the effects of this decision on the survival of female white-tailed deer. We radio-collared 67 female white-tailed deer (*Odocoileus virginianus*) in 2012 and 2013. The odds of being a migrant increased as home range size increased and decreased as proportion of cropland within home range in winter increased. The habitat with the highest relative probability of use in winter for residents was pasture (1.00, SD = 0.01) and for migrants was riparian (0.73, SD = 0.39). In summer both groups had the highest relative probability of using pasture (resident = 0.96, SD = 0.15; migrant = 0.99, SD = 0.08). We integrated the migration probability and survival models to estimate annual and seasonal survival rates of migrants and residents. We found no difference between the annual and seasonal rates of survival for the different migration strategies. Our results indicate that access to habitat of high quality may be a strong influence on a female white-tailed deer's decision to migrate. We suggest the presence of partial migration in a population may be a response to competition for high quality habitat.