
****NUTRITIONAL AND DEMOGRAPHIC CONSEQUENCES OF VARYING ELK MIGRATORY BEHAVIORS**

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Elk (*Cervus elaphus*) populations in the American West exhibit wide variation in migratory behavior. The traditional view of elk migration holds that migratory elk move from winter range in order to track growth of highly nutritious fresh vegetation into higher elevation areas. Non-migratory elk forego this seasonal movement, typically foraging in lower elevation winter range areas throughout the summer. Although the effect of summer nutrition on elk body condition and reproductive success is well known, the nutritional and demographic consequences of these differing migratory behaviors remain unclear. We developed a predictive model of summer forage quality to compare the nutrition available to migrants and non-migrants in a partially migratory population of elk in western Montana. Non-migratory elk had access to significantly higher forage quality than their migratory counterparts; the lower forage quality available to migrants is predicted to result in reduced reproductive success based on published studies linking nutrition with elk demographic rates. We therefore expect non-migrants to have higher fecundity rates and to comprise a higher proportion of the population relative to migrants. Harvest management actions that reduce survival rates of non-migrants or increase survival rates of migrants may be an effective tool for maintaining migratory behavior in partially migratory populations.