

Increased migrant density does not affect body condition or stopover duration for Northern Saw-whet Owls in Kespukwitek

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Increased migrant density at migration stopover sites can affect a bird's rate of mass gain. Consequently, individuals in poor condition may need to extend the duration of their stopover to ensure that they acquire energy necessary to resume migration. Species undertaking irruptive migrations are suitable candidates for testing associations between migrant density and body condition and stopover duration because numbers of individuals using stopover sites can vary considerably among years. We used banding and radiotelemetry data to assess body condition and stopover duration in a nocturnal irruptive migrant, the Northern Saw-whet Owl (NSWO; *Aegolius acadicus*), at a fall stopover site in Kespukwitek. Over a 9-year period, irruptive migrations occurred every other year and were characterized by elevated capture rates of immature NSWO. Body condition indices (BCI) did not differ between irruptive and non-irruptive migrations, despite a nearly threefold increase in capture rates during irruptive years. Stopover duration of radio-tagged NSWO was unrelated to BCI, and mean stopover duration during an irruptive year (2.5 d) was nearly identical to that of a non-irruptive year (2.4 d). Irruptive fall migrations occurred during years in which breeding abundance indices for NSWO in Nova Scotia and New Brunswick were greater than those during years with non-irruptive migrations, suggesting that elevated breeding productivity and dispersal of immatures helped drive irruptive fall migrations. We hypothesize that prey availability during years with irruptive fall migrations was sufficient to sustain high breeding productivity in Nova Scotia and New Brunswick and minimize effects of elevated numbers of fall migrant NSWO on rates of mass gain and stopover duration.

Keywords: Northern Saw-whet Owl, irruptive migrations, stopover site, body condition, stopover duration

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