

FEATURE ARTICLES

SEX AND NEST STAGE DIFFERENCES IN THE CIRCADIAN FORAGING BEHAVIORS OF NESTING BURROWING OWLS

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Abstract. We used infrared cameras to accurately record the circadian provisioning behaviors of nesting Burrowing Owls (*Athene cucularia*) in southern Saskatchewan, Canada. We monitored 19 nests over three years and recorded 4675 prey deliveries. We found a sex-based difference in foraging behavior: males hunted vertebrates during crepuscular periods, and females hunted insects during diurnal periods. Males delivered between 82% and 96% of all vertebrate prey depending on the stage of the nest. Males delivered at least 90% of all insects during early nest stages, after which females delivered an average of 76% of the insects. The rate of vertebrate deliveries increased from 1.3 to 7.7 per 24 hr as the summer progressed, and the number of insect deliveries increased from less than 1 to 18.6 per 24 hr. Vertebrates comprised 98%–99% of prey biomass delivered until females began delivering insects, but even then vertebrates still comprised 94% of prey biomass. Insects were consistently delivered at the highest rate during the day and vertebrates were consistently delivered at the highest rates during the dusk and dawn periods.

Key words: *Athene cucularia*, *Burrowing Owl*, *diet*, *foraging behavior*, *provisioning*.