

The Condor
Volume 104, Number 3
August 2002 C.E.
Abstracts

FEATURE ARTICLES

NEST PREDATORS, NEST-SITE SELECTION, AND NESTING SUCCESS OF THE DUSKY FLYCATCHER IN A MANAGED PONDEROSA PINE FOREST

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Manuscript received 10 August 2001; accepted 9 April 2002.

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Abstract. Among hypotheses explaining nest-site selection, the potential-prey-site hypothesis predicts that birds place nests in areas with many potential nest sites, while the nest-concealment hypothesis predicts nest placement in sites with greater surrounding vegetation. We examined these hypotheses by comparing habitat attributes between Dusky Flycatcher (*Empidonax oberholseri*) nest sites and random sites, successful and unsuccessful nests, and nests depredated by birds versus mammals. Nesting success was 28% ($n = 167$), and predation was the most important cause of nest failure (96%) during the study (1998–2000) at our site in northeastern California. We identified 28 nest predators using surveillance cameras. Sciurid mammals were the most common predators (17 of 28, 61%), with Cooper's Hawks (*Accipiter cooperii*; 25%), small owls (11%), and Steller's Jays (*Cyanocitta stelleri*; 3%) accounting for the rest. Raptors preyed on nestlings more frequently than on eggs, while small mammals depredated nestlings and eggs in proportion to their availability. Dusky Flycatchers nested in larger shrub patches with greater shrub cover than at random sites, supporting the potential-prey-site hypothesis. Successful nests were in larger shrub patches surrounded by fewer seedlings and saplings compared to depredated nests, providing equivocal support for the potential-prey-site hypothesis. Nests depredated by birds were less concealed, located in smaller shrub patches, surrounded by fewer seedlings and saplings, and were closer to the shrub edge than nests depredated by mammals. Our results, strengthened by identification of nest predators, suggest that differences in search strategies among predators may constrain the ability of Dusky Flycatchers to optimize nest-site selection.

Key words: *Dusky Flycatcher, Empidonax oberholseri, nest predators, nesting success, nest-site selection.*