

# NESTING AND POSTFLEDGING ECOLOGY OF NEOTROPICAL MIGRANT SONGBIRDS IN MISSOURI FOREST FRAGMENTS

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## ABSTRACT

The postfledging period, after fledging and before migration, is a critical stage for Neotropical migrant songbirds, with high rates of mortality and shifting resource requirements. However information regarding this period remains vague or absent for all but a few species. We monitored nests and conducted a radio-telemetry study of postfledging Ovenbirds (*Seiurus aurocapilla*) and Acadian Flycatchers (*Empidonax virescens*) in mature-forest fragments from 2012 to 2015 in Missouri, USA. Fledgling Acadian Flycatchers (n = 45) utilized more vertical space and had 59% smaller natal home-ranges than fledgling Ovenbirds (n = 62). We found strong positive effects of age on movement distances and survival for both study species. Nest period survival was comparable between species (~0.30) while postfledging period survival was 43% lower for Ovenbirds (~0.50) than for Acadian Flycatchers (~0.89). Projected population growth was sensitive to estimates of postfledging survival in our populations. Factors that affected Acadian Flycatcher survival or resource selection did not shift between life stages as greatly as factors affecting Ovenbird survival and resource use in our forest fragments. Resource selection models indicated that Acadian Flycatcher habitat selection requirements relaxed from nesting to postfledging, while Ovenbirds shifted selection preferences. Understory structure, a nonfactor or negative contributor during the nesting stage, contributed positively to fledgling Ovenbird resource selection and reduced daily postfledging movements. Our results illustrate that we should not assume that species occupying similar nesting habitat will have similar changes in risk or habitat requirements after fledging.