

ABSTRACT

THESIS PROJECT: Cerulean Warbler (*Setophaga cerulea*) nest provisioning behaviors and the effects of forest management practices on nest success in southern Indiana.

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The Cerulean Warbler (*Setophaga cerulea*) is a Nearctic-Neotropical wood warbler that breeds in the hardwood forests of eastern United States and southern Ontario, Canada and winters in the Andes mountain range in South America. Breeding bird surveys indicate a population decline of 70% over the past five decades and the Cerulean Warbler is a federal species of concern in the United States and is state-endangered in Indiana. The objectives of this study were to (1) determine the diet composition of Cerulean Warbler nestlings, (2) determine prey preferences of Cerulean Warbler parents feeding nestlings, (3) describe nest provisioning behaviors, (4) determine whether two types of silviculture affected nest success, and (5) describe the nesting behaviors of Cerulean Warblers in southern Indiana. I used a “digiscoping” method to film prey deliveries to nestlings and collected branch clippings from the canopy to determine arthropod availability. Lepidoptera larvae were fed most often and were a preferred item; other arthropods included Diptera, Orthoptera, and Araneae. Mayfield nest success was an average of 24.7% during 2011-2013. Due to the small sample size of nests, results for silviculture treatment effects on nesting success were inconclusive and further research is needed.