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A Comparison of Cerulean Warbler Nest-Patch Vegetation Characteristics Between Core and Peripheral Breeding Populations

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A COMPARISON OF CERULEAN WARBLER NEST-PATCH VEGETATION
CHARACTERISTICS BETWEEN
CORE AND PERIPHERAL BREEDING POPULATIONS

A Thesis

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the

Requirements for the Degree

Master of Science

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Title: A Comparison of Cerulean Warbler Nest-patch Vegetation Characteristics between Core and Peripheral Breeding Populations

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The Cerulean Warbler (*Setophaga cerulea*) has experienced an annual range wide population decline over the last 40 years. To identify common habitat features important to Cerulean Warbler nest placement in different geographic locations, I compared nest-patch vegetation at core (Kentucky) and peripheral (Pennsylvania) breeding range study areas. Specifically, from 2005-2009, I examined Cerulean Warbler nest-tree and nest-patch selection relative to availability in each study area. Additionally, I compared nest-tree and nest-patch habitat characteristics between study areas. In both core and peripheral study areas, Cerulean Warblers inhabited forests with similar nest-tree and nest-patch characteristics. Most notably, at the nest tree scale, Cerulean Warblers selected white oak and avoided red oak, and on average selected the largest trees available for nest placement. At the nest-patch scale, Cerulean Warblers sought out areas with approximately 25% shrub cover. Results from my research suggest that forest management practices that 1) favor white oak as a prominent canopy species; 2) provide adequate shrub cover (ca 20-25%) should benefit Cerulean Warbler breeding populations regardless of geographic location.