

HERMIT THRUSH BREEDING RANGE EXPANSION AND HABITAT PREFERENCES IN THE SOUTHERN APPALACHIAN HIGH-ELEVATION FORESTS

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The hermit thrush (*Catharus guttatus*) is a wide-ranging migratory songbird that is found throughout much of North America. In eastern North America, the hermit thrush spends the winter months in the southeastern states. During the summer breeding season, it migrates north and breeds across much of Canada, New England, and down the ridge of the Appalachian Mountains south of Pennsylvania. Over the last several decades, this bird has been expanding its breeding range further south along the chain of the Appalachian Mountains into the spruce/fir and spruce/northern hardwood forests of Virginia, Tennessee, and North Carolina. Though no nest has yet been discovered in Tennessee or North Carolina, evidence of breeding exists from the banding of fledglings on Roan Mountain over the last several years, and other reports of fledglings found near attending parents.

No formal study of the habitat preferences of the hermit thrush in the spruce/fir and spruce/northern hardwood forests has yet been conducted. For my master's thesis at East Tennessee State University, I will compare the habitat preferences of the hermit thrush and its closely related congener, the veery (*C. fuscescens*). The veery has been a breeding resident in these high-elevation forests since bird surveys began over a century ago, but the hermit thrush is a relatively new arrival. Comparing the habitat preferences of these two forest thrushes will shed light on the local ecology of the hermit thrush, and delineate any habitat partitioning occurring between them. This study will also indicate how these birds are responding to the changes that are taking place in these highly fractured forests.

The forests in which this study will take place are under major stress due to several factors, including acid deposition, the balsam woolly adelgid, and perhaps climate change. Preliminary data indicates that the hermit thrush may be taking advantage of the recent canopy openings and subsequent understory development occurring from the massive Fraser fir die-off. It is important to document how birds that are area-sensitive like the forest thrushes are utilizing different levels of the forest structure. This is especially relevant for forest managers in the dynamic environment of the Southern Appalachian high-elevation forests.

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