Spatial Prioritizations for Implementing Habitat Guidelines for Regional Species of Greatest Conservation Need in the US Northeast

Supplement to Guidelines for Managing Habitat for Regional Species of Greatest Conservation Need in Northeastern and Mid-Atlantic Forests (link)

Contents

American Marten ------------------------------------------ 1

Bicknell’s Thrush -------------------------------------- 6

Canada Warbler ---------------------------------------- 11

Rusty Blackbird --------------------------------------- 12

Scarlet Tanager ---------------------------------------- 13

Wood Thrush ------------------------------------------ 14

Acknowledgments -------------------------------------- 15

Contact:
Dan Lambert
High Branch Conservation SErvices
3 Linden Road
Hartland, VT 05048
dan@highbranchconservation.com
Figure 2. Maximum entropy (MaxEnt) species distribution models (SDM) predicting the probability of American marten (*Martes americana*) occurrence (*P*) given environmental conditions in the Adirondack (ADK) and Green and White Mountains/Estri (GWE) subregions of the Northern Appalachians ecoregion (top panel). White areas in Québec are due to missing land cover/land use data. Logistic threshold values of *P* ≥ 0.40 and ≥ 0.43 defined predicted marten presence for the ADK and GWE subregions, respectively (green; bottom panel). Elevations ≥500 m are shown in grey (bottom panel). Reprinted from Jensen, P. 2012. Ecology of American martens in northern hardwood forests: Resource pulses and resource selection across temporal and spatial scales. Dissertation. McGill University, Montreal, Quebec, Canada. Please note that Paul Jensen, Senior Wildlife Biologist with the New York State Department of Environmental Conservation, is leading a multi-state effort to update this model.
Figure 4. Probability of American marten occurrence in New Hampshire (J. Kilborn, New Hampshire Fish and Game Department).
Bicknell’s Thrush Distribution, Occupancy, and Landscape Capability Maps
Compiled to Support Implementation of US Habitat Guidelines

Figure 2. (A) White Mountain National Forest in New Hampshire. (B) Probability surface of detecting a Bicknell’s Thrush in at least one of five annual surveys. (C) Presidential Range; area highlighted by red frame in (B). Reprinted from Hale, S. R. 2006. Using satellite imagery to model distribution and abundance of Bicknell’s thrush (Catharus bicknelli) in New Hampshire's White Mountains. Auk 123:1038-1051.
Figure 4. Bicknell’s thrush probability of occupancy model for Boundary Mountains region of Maine (K. McFarland, Vermont Center for Ecostudies).
Figure 5. Representative species model showing predicted landscape capability for Bicknell’s thrush, created by W. DeLuca (University of Massachusetts) in October 2015 as part of the Designing Sustainable Landscapes project. For a detailed description of the Landscape Capability modeling process, visit http://jamba.provost.ads.umass.edu/web/lcc/DSL_documentation_species.pdf.
Canada Warbler Relative Abundance in Northeastern Forests

Map 1: Canada warbler relative abundance in the northeastern US based on a five-year mean of Breeding Bird Survey route counts (2008-2012). Abundance classes were set by natural breaks in the data.


Northeastern Forest Ownership Types

Map 2: A model of forest ownership types in the northeastern US based on Forest Inventory and Analysis data circa 2009.


Canada Warbler (CAWA) Management Opportunities

Map 3: Canada warbler management opportunities based on a weighted overlay of relative abundance ranks (weight = 0.67) and forest ownership type ranks (weight = 0.33).

Relative abundance ranks of 1-5 were assigned according to classes shown in Map 1. Ownership types were ranked from lower value (Family lands = 1) to higher value (Corporate lands = 5) based on a qualitative assessment of each ownership type’s compatibility with the forest age-class and area requirements of the species. Darker greens indicate areas where high relative abundance is expected to align with compatible ownerships. This map is intended to inform regional assessments and is not a substitute for knowledge of local conditions.
Rusty Blackbird Breeding Range in the US Northeast

Legend
- Blue: Rusty Blackbird Range
- Green: Boreal Upland Forest
- Brown: Northern Swamp
- White: County Boundaries
A Spatial Prioritization for Implementing Scarlet Tanager Habitat Guidelines in the US Northeast

J. Daniel Lambert¹ and Andrew Toepfer²

¹ High Branch Conservation Services, ² Andrew Toepfer Natural Resource Mapping, Environmental Services and Cartography

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**Map 1**: Scarlet tanager relative abundance in the northeastern US based on a five-year mean of Breeding Bird Survey route counts (2008-2012). Abundance classes were set by natural breaks in the data.


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**Map 2**: A model of forest ownership types in the northeastern US based on Forest Inventory and Analysis data circa 2009.


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**Map 3**: Scarlet tanager management opportunities based on a weighted overlay of relative abundance ranks (weight = 0.67) and forest ownership type ranks (weight = 0.33).

Relative abundance ranks of 1-5 were assigned according to classes shown in Map 1. Ownership types were ranked from lower value (Family lands = 1) to higher value (Federal/state lands = 5) based on a qualitative assessment of each ownership type’s compatibility with the forest age-class and area requirements of the species. Darker greens indicate areas where high relative abundance is expected to align with compatible ownerships. This map is intended to inform regional assessments and is not a substitute for knowledge of local conditions.
A Spatial Prioritization for Implementing Wood Thrush Habitat Guidelines in the US Northeast

J. Daniel Lambert\textsuperscript{1} and Andrew Toepfer\textsuperscript{2}

\textsuperscript{1} High Branch Conservation Services, \textsuperscript{2} Andrew Toepfer Natural Resource Mapping, Environmental Services and Cartography

\textbf{Map 1:} Wood thrush relative abundance in the northeastern US based on a five-year mean of Breeding Bird Survey route counts (2008-2012). Abundance classes were set by natural breaks in the data.


\textbf{Map 2:} A model of forest ownership types in the northeastern US based on Forest Inventory and Analysis data circa 2009.


\textbf{Map 3.} Wood thrush management opportunities based on a weighted overlay of relative abundance ranks (weight = 0.67) and forest ownership type ranks (weight = 0.33).

Relative abundance ranks of 1-5 were assigned according to classes shown in Map 1. Ownership types were ranked from lower value (Family lands = 1) to higher value (Federal / state lands = 5) based on a qualitative assessment of each ownership type’s compatibility with the forest age-class and area requirements of the species. Darker greens indicate areas where high relative abundance is expected to align with compatible ownerships. This map is intended to inform regional assessments and is not a substitute for knowledge of local conditions.
Acknowledgments

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