



Birding by Ear

Annual volunteer landbird survey results for Marsh-Billings-Rockefeller NHP

Background

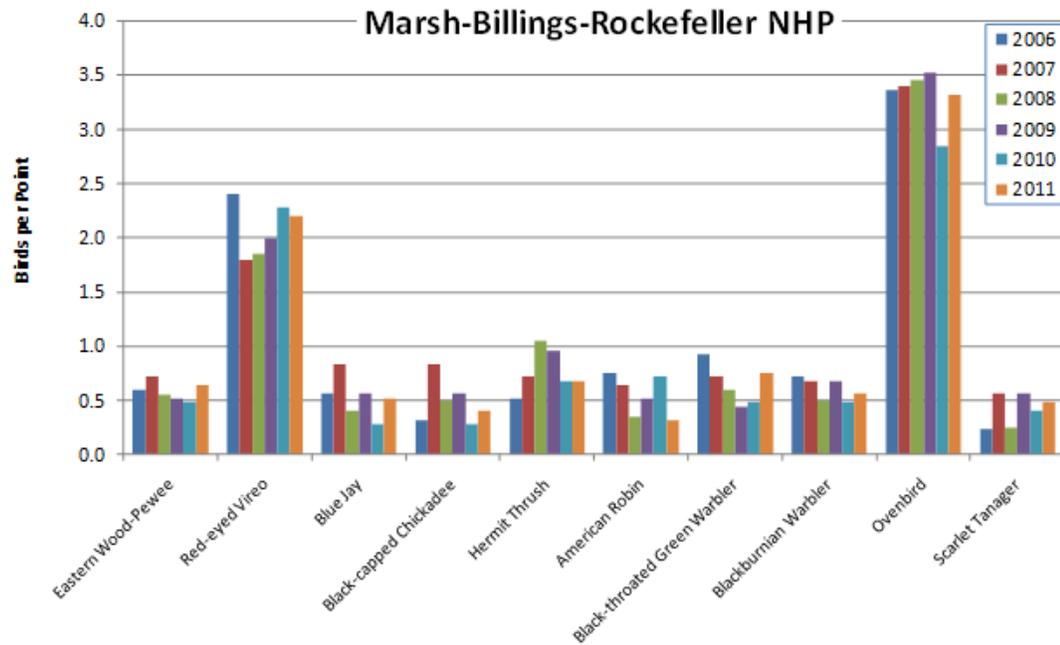
The Northeast Temperate Network (NETN) monitors a variety of natural resource indicators, called vital signs, for 12 parks in the northeast and the Appalachian National Scenic Trail. Breeding birds are one of these vital signs because they are a reliable indicator of ecological integrity and a high profile taxonomic group. 2011 marked the sixth year of continual landbird monitoring in the forests of Marsh-Billings-Rockefeller NHP and many other network parks. NETN and the Vermont Center for Ecostudies accomplished this only with the invaluable help of volunteer birders who crawled out of bed at ungodly early hours, endured hordes of biting mosquitoes and black flies, and contributed their time, efforts, and expert birding skills.

On a broad scale, all 13 NETN parks are located within the temperate deciduous forest biome. At a more refined level, the parks range across four Bird Conservation Regions (BCR) with this park lying in the Atlantic Northern Forest BCR. BCR's, developed by the North American Bird Conservation Initiative, are ecologically defined areas that provide a consistent framework for bird conservation across North America. Each BCR has its own unique list of "priority" species ranked by conservation importance according to a standardized set of criteria.

A recently published NETN report summarizes data collected from 2006 through 2011. In an attempt to better characterize the bird community at each park, the assessment results presented for each park were produced by



Blackburnian Warblers mostly dwell high up in the treetops where they forage for insects. Laura Gooch photo.



Most commonly detected species in the park.

combining data from all survey years (up to 6 years of data). In the future, project organizers plan to work with park managers to produce a parallel assessment based on park management goals.

Methods

Three forested study sites were established at Marsh Billings-Rockefeller National Historical Park and have been surveyed annually since 2006. Two of the sites consist of 10 point count locations each, and the other - five point count locations. A volunteer birder visits each point at least once between late May and June, and records the species of each individual detected, the time each individual is first detected, and the distance band within which each individual was first detected (0-10 m, 10-25 m, 25-50 m, and > 50 m).

To get a "bird's eye" view of all the park's sites, visit the Google Earth Park Maps web page (accessible through the leftmost suite of menu choices on NETN's homepage), which also contains bird monitoring routes, Avian Ecological Integrity Assessments and species detection frequencies for all participating NETN park units.

The avian ecological integrity assessment is based on groups of bird species that require similar habitat, food, or other elements for their health and survival. Over time, it will help

American Crow	Great Crested Flycatcher
American Goldfinch	Hairy Woodpecker
American Redstart	Hermit Thrush
American Robin	Indigo Bunting
Baltimore Oriole	Least Flycatcher
Barred Owl	Louisiana Waterthrush
Black-and-white Warbler	Mourning Dove
Blackburnian Warbler	Mourning Warbler
Black-capped Chickadee	Nashville Warbler
Black-throated Blue Warbler	Northern Flicker
Black-throated Green Warbler	Ovenbird
Blue Jay	Pileated Woodpecker
Blue-headed Vireo	Pine Warbler
Bobolink	Purple Finch
Broad-winged Hawk	Red-breasted Nuthatch
Brown Creeper	Red-eyed Vireo
Brown-headed Cowbird	Red-winged Blackbird
Cedar Waxwing	Rose-breasted Grosbeak
Chestnut-sided Warbler	Scarlet Tanager
Chimney Swift	Song Sparrow
Chipping Sparrow	Tufted Titmouse
Common Grackle	Veery
Common Raven	White-breasted Nuthatch
Common Yellowthroat	Wild Turkey
Dark-eyed Junco	Winter Wren
Downy Woodpecker	Wood Thrush
Eastern Kingbird	Yellow-bellied Sapsucker
Eastern Wood-Pewee	Yellow-rumped Warbler
Golden-crowned Kinglet	

All species that have been detected during initial point count surveys in the park since 2006.

shed light on changes in a broader, landscape context and indicate the direction that breeding bird habitat at the park may be going. For forest breeding birds, a rank of Good, Caution, or Significant Concern is assigned based on species richness thresholds and ranks. “Good” represents acceptable or desired conditions; “Caution” indicates a problem may exist; “Significant concern” indicates undesired conditions that may be in need of management actions. Project organizers recognize that the assessment is based on ecological criteria, and that park management goals may not always seek to attain “ecological integrity.” In the future, a management assessment may be developed by park staff and NETN scientists that could reflect progress

towards avian and ecological management goals for individual parks. For more information about the Avian Ecological Integrity Assessment, as well as project methodologies, sampling scheme, etc., see the Breeding Landbird Monitoring Protocol available on NETN’s website.

Results and Findings

During 2011 surveys, observers detected a total of 407 birds representing 42 species. A total of 57 species have been recorded over the 6 years of monitoring. Average abundance during the first site survey across all 6 years was 13.92 birds per point (Appendix A). In 2011, relative abundance (13.4 birds per point) and species richness increased from 2010’s 5-year low, and included a first-time detection of a Nashville Warbler. Of the ten most commonly detected species across all years, the relative abundances of eight species were equal to or increased over 2010, while four species had relative abundance in 2011 that were above the 6-year average. Ovenbird and Red-eyed Vireo were the most abundant species detected. Two species of regional conservation concern have been detected the surveys: Wood Thrush (which have been detected every year) and Bobolink (a grassland species that was only detected in 2006 and 2007). A list of all species is provided on the left. Relative abundances, and other summary statistics are available in the full report.

The park-wide forest avian ecological integrity assessment for all years combined for the park resulted in seven categories ranked as “Good,” six ranked as “Caution,” and none ranked as “Significant Concern”. Although four of the guilds that ranked as “Caution” (low canopy forager, omnivore, forest-ground nester, and shrub nester) were less than 3 percentage points away from a “Good” rating. Overall these ratings suggest that the forest bird community is doing well at Marsh-Billings-Rockefeller NHP. The assessment has also been calculated for each site, individually, and these results are provided in the full report.

More Information

Steve Faccio
Project Lead Scientist

E-mail
sfaccio@vtcostudies.org

Brian Mitchell
NETN Program Manager

Phone/E-mail
802-457-3368 ext. 37
brian_mitchell@nps.gov

Full Report online at:
<http://science.nature.nps.gov/im/units/NETN/index.cfm>



Northeast Temperate Network
54 Elm Street, Woodstock, Vermont 05091
802-457-3368
<http://www.science.nature.nps.gov/im/units/netn/>



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