



ACADIA NP • APPALACHIAN NST • BOSTON HARBOR ISLANDS NRA • MARSH-BILLINGS-ROCKEFELLER NHP • MINUTE MAN NHP
MORRISTOWN NHP • ROOSEVELT-VANDERBILT NHS • SAINT-GAUDENS NHS • SAUGUS IRON WORKS NHS • SARATOGA NHP • WEIR FARM NHS

Spring Bird Monitoring with Sight and Song

2012 volunteer landbird survey results for Acadia National Park

Background

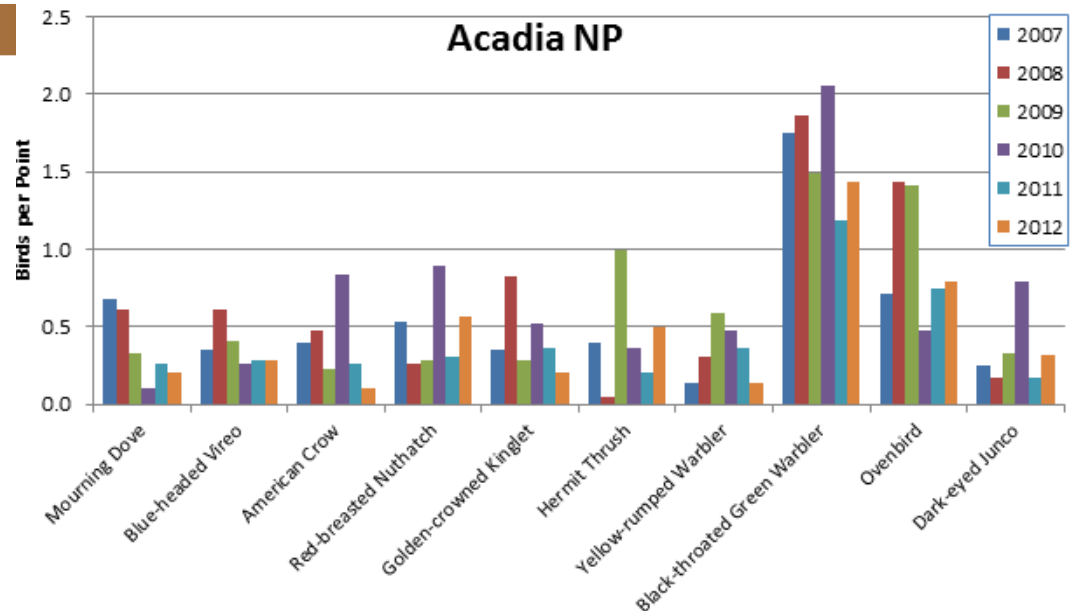
The Northeast Temperate Network (NETN) monitors a variety of natural resource indicators, called vital signs, for 12 parks in the northeast and the Appalachian National Scenic Trail. Breeding birds are one of these vital signs because they are a reliable indicator of ecological integrity and a high profile taxonomic group. 2012 marked the sixth year of annual landbird monitoring in the forests of Acadia. NETN and the Vermont Center for Ecostudies accomplished this only with the invaluable help of volunteer birders who crawled out of bed at ungodly 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 Acadia 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 report summarizes data collected from 2006 through 2012. Part of the results for each park is an avian ecological integrity assessment that is produced by combining data from all survey years at a

Ovenbirds are an oft heard, though seldom seen resident of Acadia's forests. UFW's photo.



Most commonly detected birds in the park

given park (up to 7 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

Acadia has seven study sites with a total of 51 point count stations between them. Volunteer birders visit each point at least once per year between late May and June, and record the species of each individual bird as well as the time and distance away when they were first detected.

One way in which the health of the park's bird community is measured is through the Avian Ecological Integrity Assessment. This 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 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 especially at historical parks, management goals may not always seek to attain "ecological integrity." A management assessment could be developed by those parks and NETN



Alder Flycatcher	Least Flycatcher
American Crow	Magnolia Warbler
American Goldfinch	Mourning Dove
American Redstart	Nashville Warbler
American Robin	Northern Cardinal
Baltimore Oriole	Northern Flicker
Barred Owl	Northern Parula
Black-and-white Warbler	Ovenbird
Blackburnian Warbler	Palm Warbler
Black-capped Chickadee	Pileated Woodpecker
Blackpoll Warbler	Pine Siskin
Black-throated Blue Warbler	Pine Warbler
Black-throated Green Warbler	Purple Finch
Blue Jay	Red-breasted Nuthatch
Blue-headed Vireo	Red-eyed Vireo
Boreal Chickadee	Red-winged Blackbird
Broad-winged Hawk	Rose-breasted Grosbeak
Brown Creeper	Ruby-crowned Kinglet
Brown Thrasher	Ruby-throated Hummingbird
Cedar Waxwing	Ruffed Grouse
Chestnut-sided Warbler	Scarlet Tanager
Common Grackle	Song Sparrow
Common Loon	Spruce Grouse
Common Raven	Swainson's Thrush
Common Yellowthroat	Swamp Sparrow
Dark-eyed Junco	Veery
Downy Woodpecker	Warbling Vireo
Eastern Phoebe	White-throated Sparrow
Eastern Towhee	White-winged Crossbill
Eastern Wood-Pewee	Winter Wren
Golden-crowned Kinglet	Wood Thrush
Great Crested Flycatcher	Yellow-bellied Flycatcher
Hairy Woodpecker	Yellow-bellied Sapsucker
Hermit Thrush	Yellow-rumped Warbler
Herring Gull	

All species that have been detected in Acadia since 2007.

scientists that would reflect progress towards avian and ecological management goals. 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 2012, volunteer birders performed 47 surveys, and detected 392 birds from 44 species, including four species detected for the first time (Broad-winged Hawk, Scarlet Tanager, Song Sparrow, and Rose-breasted

Grosbeak). A total of 69 species have been recorded over the 5 years of monitoring, including a Yellow-Bellied Sapsucker which was detected only on a repeat site visit to Seal Cove East in 2008. The park-wide forest avian ecological integrity assessment for all years combined at Acadia National Park resulted in five categories ranked as "Good," eight ranked as "Caution," and none ranked as "Significant Concern," indicating that the forest bird community appears to be doing well. The assessment has also been calculated for each study site, and those results are in the full report.

Average abundance during the first site visit increased from 7.3 birds per point in 2011 to 7.5 birds per point in 2012, the second lowest since point counts began at the park in 2007. Despite the slight increase in number of individuals in 2012, species richness dropped slightly from 47 to 43 species detected during the first round of surveys. Only one species of regional or USA/Canada conservation concern (Scarlet Tanager) was detected during the 2012 surveys, while two species exhibiting significant declines across the region were detected: Ruffed Grouse and Pine Siskin. Appendices in the full report detail the species and relative abundances found throughout the park and at each site during the first survey of each year, plus additional summary statistics.

Of the 10 most abundant species detected at all Acadia sites combined across all years, the relative abundances of four (Red-breasted Nuthatch, Hermit Thrush, Black-throated Green Warbler, and Dark-eyed Junco) increased from 2011, and the relative abundances of eight of the 10 species were below the 6-year average.

More Information

To get a "bird's eye" view of all of Acadia's sites, visit the Google Earth Park Maps web page (accessible through the left most 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 parks.

Contacts and Websites

Steve Faccio
Project Lead Scientist

E-mail
sfaccio@vtecostudies.org

Brian Mitchell
NETN Program Manager

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

Full Report online at:
<https://irma.nps.gov/App/Reference/Profile/2194186>

NETN Website
<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/>

