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Spring Bird Monitoring with Sight and Song

Annual volunteer landbird survey results for Saint-Gaudens NHS

Background

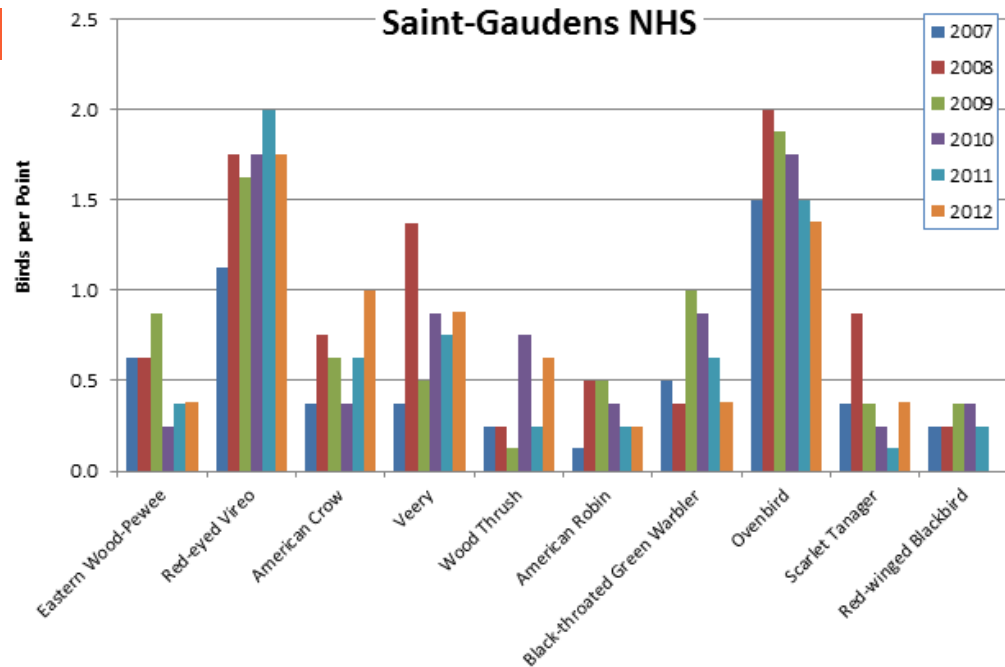
The Northeast Temperate Network (NETN) monitors a variety of natural resource indicators, called vital signs, for 12 parks in the northeast and the Appalachian National Scenic Trail. Breeding birds are one of these vital signs because they are a reliable indicator of ecological integrity and a high profile taxonomic group. 2012 was the sixth year of continual landbird monitoring in the forests of Saint-Gaudens NHS 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



Male Red-winged Blackbirds fiercely defend their territories during the breeding season, and sometimes goes after much larger animals, including horses and people. Kelly Colgan Azar photo.



Most commonly detected species in the park.

NETN report summarizes data collected from 2006 through 2012. In an attempt to better characterize the bird community at each park, the assessment results presented for each park were produced by combining data from all survey years (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

Eight point counts stations were established at Saint-Gaudens NHS and surveyed annually since 2007. The park has been surveyed twice in all years except 2007. Volunteer birders visit each point at least twice 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

Alder Flycatcher	Magnolia Warbler
American Crow	Mourning Dove
American Goldfinch	Northern Flicker
American Redstart	Northern Waterthrush
American Robin	Ovenbird
Baltimore Oriole	Pileated Woodpecker
Belted Kingfisher	Pine Warbler
Black-and-white Warbler	Red-bellied Woodpecker
Blackburnian Warbler	Red-breasted Nuthatch
Black-capped Chickadee	Red-eyed Vireo
Black-throated Blue Warbler	Red-winged Blackbird
Black-throated Green Warbler	Rose-breasted Grosbeak
Blue Jay	Scarlet Tanager
Blue-headed Vireo	Solitary Sandpiper
Brown Creeper	Song Sparrow
Cedar Waxwing	Swamp Sparrow
Chestnut-sided Warbler	Tufted Titmouse
Common Yellowthroat	Veery
Dark-eyed Junco	White-breasted Nuthatch
Downy Woodpecker	White-throated Sparrow
Eastern Phoebe	Willow Flycatcher
Eastern Wood-Pewee	Winter Wren
Gray Catbird	Wood Thrush
Great Crested Flycatcher	Yellow Warbler
Hairy Woodpecker	Yellow-bellied Sapsucker
Hermit Thrush	Yellow-rumped Warbler
Least Flycatcher	Yellow-throated Vireo
Louisiana Waterthrush	

All species that have been detected in the park since 2007.

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 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 surveys, observers detected a total of 200 birds representing 37 species, including 10 species that were detected only

on the repeat survey. A total of 56 species have been recorded during the 6 survey years. This number includes a Yellow-rumped Warbler detected on the second survey in 2012, and Black-throated Blue Warbler, Cedar Waxwing, Downy Woodpecker, Red-bellied Woodpecker, Solitary Sandpiper, Swamp Sparrow, and Yellow-throated Vireo detected on the second survey in previous years.

Average abundance during the first site survey was 11.08 birds per point. Relative abundance during the first survey decreased from 2011, while species richness remained the same. Of the ten most commonly detected species across all years, the relative abundances of six equaled or increased from 2011, while the relative abundances of half were above the 6-year average. Five species of regional or USA/Canada conservation concern have been detected in the park: Belted Kingfisher, Eastern Wood-Pewee, Veery, Wood Thrush, and Scarlet Tanager; all of these species were detected in 2012. A list of species, their relative abundances, and other summary statistics from the first survey of each point are provided in in the full report.

The park-wide forest avian ecological integrity assessment for all years combined in the park resulted in six categories ranked as “Good,” six ranked as “Caution,” and one “Significant Concern”. The 2012 data did not alter the 2011 results. Overall, composition metrics were generally “Good,” while function and structural guilds were largely “Caution.” The predominance of “Caution” ratings for structure and function might warrant further exploration. This pattern tends to occur at parks without much understory structure and diversity, and is often associated with ungulate (in this case most likely white-tailed deer) over-browsing.

More Information

To get a “bird’s eye” view of all the park’s monitoring 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.

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

NETN Website
<http://science.nature.nps.gov/im/units/NETN/index.cfm>



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