



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

Forest Bird Monitoring

Background

The parks of the Northeast Temperate Network (NETN), excluding the Appalachian National Scenic Trail, include over 45,000 acres of diverse cultural and natural resources. They range across one forest biome, two avifaunal (relating to birds of a specific region) biomes, and four Bird Conservation Regions (BCRs). A BCR is an ecologically defined unit that encompasses landscapes having similar bird communities, habitats, and resource issues, and provides a consistent spatial framework for bird conservation across North American landscapes. BCRs employ broad scale units that are ecologically meaningful to bird populations, and allow conservation efforts to be tailored to support bird species throughout the heart of their ranges.

Purpose & Scope

WHY MONITOR LANDBIRDS?

Breeding birds are a high-priority vital sign for NETN parks. Breeding landbirds (a general term used to describe relatively small, terrestrial birds, excluding raptors and upland game birds) are an important component of park ecosystems. Their high body temperature, rapid metabolism, and prominent position in most



Neotropical migrant birds, like this Scarlet Tanager, are especially sensitive to habitat loss and forest fragmentation. These processes increase the prevalence of forest edges, resulting in higher rates of brood parasitism and nest predation within the remaining breeding habitat. Photo: Ed Sharron

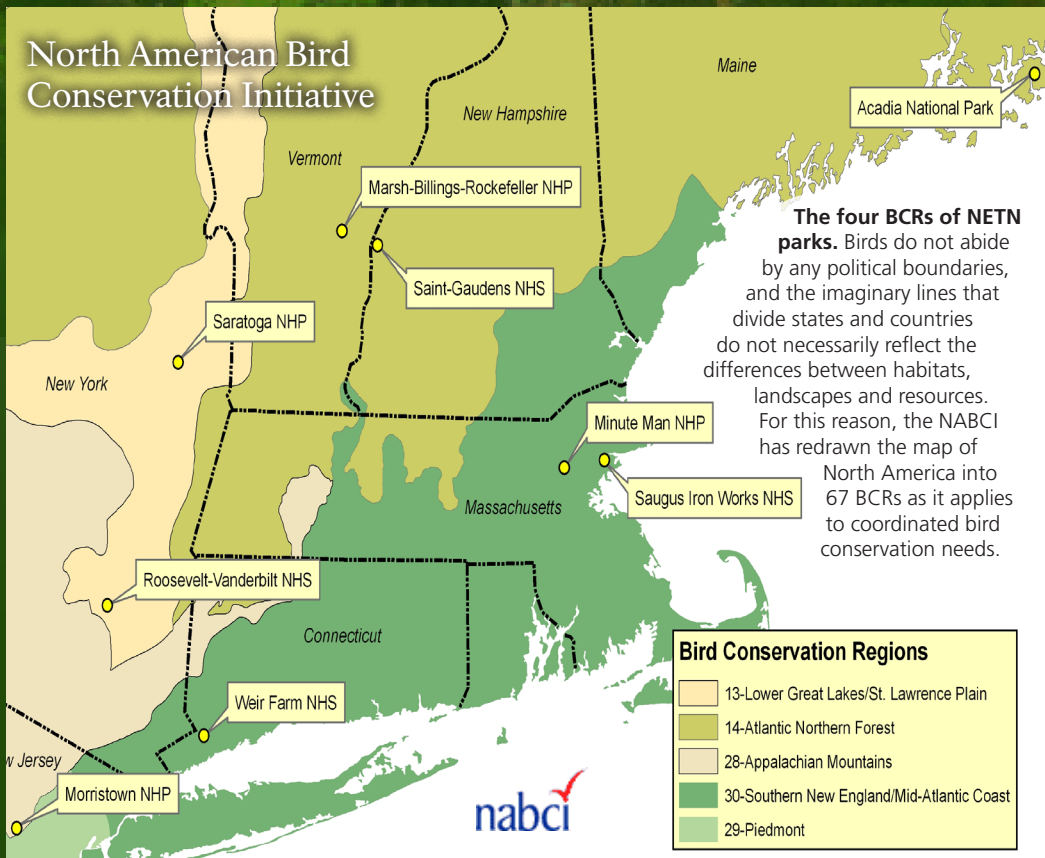
food webs make them good indicators of local and regional ecosystem change.

Birds are sensitive to habitat loss and forest fragmentation. Although the National Park Service has management

control within the parks themselves, fragmentation outside park boundaries is widespread throughout much of the Northeastern region. Also, many NETN parks have been founded with mandates to interpret and preserve cultural/historical features located on site. Because of this, their relatively small size, and their land use histories, many NETN parks are especially impacted by fragmentation. Neotropical migrants (such as the Scarlet Tanager, Wood Thrush, and American Redstart) appear to be particularly vulnerable to this kind of habitat degradation.

Also, a uniform landbird monitoring protocol across NETN parks will provide insight into the long-term trends of avian species composition/relative abundance, and a measure for assessing the ecological integrity of Northeastern temperate systems. Habitat changes that result from deer browsing, invasive species spread/control, fragmentation,

North American Bird Conservation Initiative





Every spring monitoring season, about two-dozen experienced volunteer 'citizen scientists' conduct early morning bird surveys at parks throughout the Northeast Temperate Network. NPS Photo.

and silvicultural practices directly impact a park's avian community. Monitoring long-term patterns of bird composition and abundance relative to these stressors will improve our understanding of their effects and help guide management actions within NETN parks. This protocol will also contribute to greater understanding of bird population trends beyond NETN, as it is compatible with those being developed by the Great Lakes Network and the U.S. Fish and Wildlife Service.

Monitoring

During the breeding season within the dominant forest habitat of each park, the landbird monitoring program tracks the status and trends of the 10 most commonly detected landbird species, ecologically similar groups of species, and overall community composition. The monitoring program is managed by a partnership with the Vermont Forest Bird Monitoring Program (a regional landbird monitoring project of the Vermont Center for Ecostudies). Data from some parks can be combined with data from 28 VCE study sites for more powerful estimates of population trends. Most NETN parks are involved in the program, including : Acadia NP, Marsh-Billings-Rockefeller NHP, Minute Man NHP, Morristown NHP, Roosevelt-Vanderbilt NHS, Saint-Gaudens NHS, Saugus Iron Works NHS, Saratoga NHP (where grasslands will also be sampled), and Weir Farm NHS. This volunteer-based program will provide park managers with useful information about breeding bird populations and bird/habitat relationships within NETN parks, as well as nurturing a community of park volunteers and informed ecological stewards.

More Information

Volunteer information: Contact Steve Faccio, Brian Mitchell, or each park directly.

Annual field summaries: <http://science.nature.nps.gov/im/units/NETN/inventory/inventory.cfm>

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