



Temperate Times



Scorecards Illustrate Ecological Expectations

The Northeast Temperate Network (NETN) and the Vermont Center for Ecostudies began monitoring forest birds in 11 of the 13 network parks in 2006. One of the primary objectives of this monitoring program is to track changes in the abundance of breeding bird species by functional guilds. Functional guilds are groups of bird species that share life history traits, such as nesting in shrubs or feeding in the forest canopy. Evaluating forest breeding birds by functional guilds

provides insights into the integrity of forest ecosystem function, structure, and composition.

Recently, NETN scientists presented the results of forest breeding bird monitoring efforts in three network parks: Acadia NP (ACAD), Marsh-Billings-Rockefeller NHP (MABI), and Minute Man NHP (MIMA). Scientists calculated the number of birds present in each of 13 guilds and compared



Ovenbird, a forest breeding bird © Charles Eiseman.

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Network Staff Update

In November 2008, the Northeast Temperate Network (NETN) welcomed new Science Communication Specialist, Sarah Lupis Kozlowski. Sarah has a bachelor's and a masters in wildlife biology and 5 years experience as a state extension specialist. The NETN anticipates that Sarah's technical

knowledge and practical hands-on communication and collaboration experience will help advance and improve communication with network parks, cooperators, and park visitors. Sarah can be reached at 802-457-3368, ext. 23, or via email at Sarah_Lupis_Kozlowski@nps.gov.



Scorecards, continued

Integrity Element	Guild	ACAD	MABI	MIMA
Functional	Omnivore	0.29	0.30	0.44
	Bark Prober	0.12	0.16	0.19
	Ground Gleaner	0.07	0.08	0.05
	High Canopy Forager	0.07	0.08	0.05
	Low Canopy Forager	0.22	0.16	0.15
Compositional	Exotic Species	0.00	0.00	0.05
	Residents	0.32	0.28	0.41
	Single Brooded	0.54	0.54	0.41
	Nest Predators/Brood Parasite	0.07	0.06	0.08
Structural	Canopy Nester	0.34	0.34	0.26
	Shrub Nester	0.22	0.18	0.28
	Forest-Ground Nester	0.12	0.12	0.05
	Interior Forest Obligate	0.41	0.38	0.18

WITHIN EXPECTED RANGE NEAR RANGE BOUNDARY OUTSIDE EXPECTED RANGE

(continued) that to the total number of species present in the park (also called “proportional species richness”). They compared these scores to the expected range for a forest with high biological integrity; the results are presented in the scorecard above.

Scorecards like this one help convey monitoring results to park managers. In this case, the scores for breeding bird guilds support NETN’s ecological expectations for the network parks

being monitored, and reflect differences in the habitats they contain and the landscapes they are located within. Minute Man, a small park in fragmented, early succession habitat near Boston, has several red scores. The park has few forest obligate species, a high proportion of resident bird species (i.e., few migrants), and many species that nest in shrub habitat. The other parks have less fragmentation, more late succession forest, and are farther from major population centers; their scores are all green or yellow.

Rocky Intertidal Monitoring

Park visitors are attracted to the rocky intertidal systems found at Acadia NP and Boston Harbor Islands because of their scenic beauty and because they offer opportunities for shoreline exploration and hands-on discovery. However, the plants and animals of this sensitive community can be adversely affected not only by contaminants and invasive species, but also collection and disturbance by park visitors.

Monitoring will help park managers determine appropriate usage levels to ensure that these systems can be both enjoyed by visitors and protected.

The region’s glacial history has shaped the northeastern coastline and, as a result, intertidal systems are rocky with limited areas of mud, sand flats, or

coastal marsh. Rocky intertidal systems teem with plant and animal life, supported by an algae and plankton based food web. Organisms in this system are adapted to live in harsh conditions that result from changing tides, rocky substrates, and stark vertical structure.

Rocky intertidal monitoring began in summer 2008 at Acadia, where 6 plots were established and sampled and Boston Harbor Islands, which had 3 plots. Sites at Acadia were monitored 3 times while data for the Boston Harbor sites was collected once.

At each site, photoquadrats were taken to track changes in seaweed, algae, barcacle, and mussel cover and surveys were conducted to identify other animal species, like crabs and snails. Finally, sensors were



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Parks

Acadia National Park
Appalachian National Scenic Trail
Boston Harbor Islands, a National Park Area
Marsh-Billings-Rockefeller National Historical Park
Minute Man National Historical Park
Morristown National Historical Park
Roosevelt-Vanderbilt National Historic Sites
Saratoga National Historical Park
Saugus Ironworks National Historic Site
Saint-Gaudens National Historic Site
Weir Farm National Historic Site

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.



Seasonal park staff, interested scientists and citizens, and university students helped collect data in 2008 and will be part of future monitoring efforts © Jeremy Long.

installed to track temperature fluxuations over time. Monitoring will be ongoing with visits to each plot taking place at least once a year.