

# Status of Vermont Forest Birds

A Prospectus for the Vermont  
Forest Bird Monitoring Program



**Vermont Center For Ecostudies**

PO Box 420  
Norwich, VT 05055  
802.649.1431  
info@vtecostudies.org  
www.vtecostudies.org

A project of the  
**Vermont Center For Ecostudies**

## Introduction: Dawn in the Woods

On two mornings every June for the past 25 years, they have awakened well before dawn, earlier than even these hearty birdwatchers would care to admit. Packing little more than binoculars, a stopwatch, and a clipboard, they drive in the dark to forest study sites across Vermont. And as the woods around them rouse into a dawn chorus of song, they begin to count birds for one of North America's most promising investigations of birds and forests.

A quarter century after its inception, the Vermont Forest Bird Monitoring Program (FBMP) is poised to reach its goal of uniting people and science for conservation at a time when our forests may be on the threshold of change. The knowledge to be gained from this investigation will support strategies to understand, mitigate, and adapt to emerging threats to forests and birds alike. Here, by the numbers, is a sense of the project's scope:

- 25:** years of survey data
- 31:** Vermont forest bird monitoring sites
- 58:** citizen-scientists participating in the project
- 136:** number of bird species encountered
- 2,670:** hours spent in the woods
- 54,045:** bird observations in the FBMP database

The Vermont Center for Ecostudies (VCE), which directs FBMP, will analyze the data to produce an essential report, *The Status of Vermont Forest Birds*. In the era of a warming planet, invasive pests, and other urgent concerns, this landmark publication will elucidate current population trends of forest birds. The findings will help policy makers, landowners, conservationists, and birdwatchers develop land-use and forest conservation strategies for the future. VCE is now raising funds to finance the data analysis and publication of this report, which will be among the first of its kind in the United States.

## Background: Birds, Forests and Threats

Vermont would hardly be Vermont without forests, which cover 75 percent of the state. Forests provide jobs, timber products, clean air and water, and countless recreational opportunities. Aside from trees, forests comprise a community of plants and animals. And among forest wildlife, no group is as iconic as birds. Vermont forests support more than 80 species of breeding birds. Most are insectivores that appear to play a critical role in sustaining the ecological balance and productivity of forests. A classic



study in the 1990s demonstrated that forest songbirds significantly increase tree growth by consuming leaf-eating insects, and that a decline in bird abundance could dramatically reduce forest productivity and health.

Songbirds also bring voice and color to our forests. The Scarlet Tanager adds a crimson blast to hardwoods. A rainbow of warblers, more than 20 species, spans forest niches from lowland swamps to mountain summits. And Vermont's state bird, the Hermit Thrush, issues an ethereal, fluty song that hangs like mist in the woods.

Residential and commercial development, causing fragmentation of Vermont forests, can be mitigated with wise land-use planning. But forests now face more pervasive and urgent threats:

**Non-Native Invasive Species** – More than half of Vermont's tree species are threatened with devastation from three non-native insects: the emerald ash borer, Asian long-horned beetle, and hemlock wooly adelgid.

**Climate Change** – A warming planet may gradually but profoundly alter biodiversity, productivity, and economics of our forests. Scientists in Vermont have already detected changes in the distribution of tree species in high elevation spruce-fir forests.

**Acid Deposition** – In addition to increasing winter injury to red spruce, acidic compounds in rain, snow, and fog leach valuable nutrients from soils, limiting their availability for tree growth. Of particular concern is calcium depletion and increased aluminum toxicity, which have been shown to harm sugar maple and reduce the abundance of amphibians and Wood Thrush.

## The Report: *The Status of Vermont Forest Birds*

Awaiting discovery from FBMP's rich data set is a bounty of insights. Which bird species are declining? Which are increasing? What forest types hold the most bird diversity? Where might that diversity be most at risk? What can Vermonters do to protect and enhance their state's birds and forests? How can this innovative Vermont study inform prospects for birds and forests elsewhere? *The Status of Vermont Forest Birds* will offer answers and guidance.

The task of making sense of the data falls to VCE Conservation Biologist Steve Faccio. A veteran scientist, Faccio has scaled cliffs to study Peregrine Falcons and followed salamanders through muddy forests. Now on his agenda, however, is time in the office at his computer. Steve will check the database for errors. He will analyze population trends of various bird species and groups of species (such as long- and short-distance migrants or canopy nesters). Steve will compare his results to those of other projects, including the *Vermont Breeding Bird Atlas*, and he will run rigorous statistical analyses to examine patterns in the data. From all this work, Steve will interpret, challenge, and write about the project results in two formats:

- *The Status of Vermont Forest Birds* will be a report for all audiences and interests. It will present results with easy-to-read text, graphs, tables, and illustrations. The report will flag species and groups showing the steepest and most troubling population declines. And it will be widely available free of charge in print and electronic formats.
- A scientific paper in a peer-reviewed journal will bring the FBMP, its methods and conclusions, to a broad community of biologists and conservationists who understand the benefits of rigorous science. This journal publication will lend necessary credibility to the FBMP's recommendations in the scientific and policy arenas.



Data analysis begins in the fall of 2013. Report writing begins in the spring of 2014. Final report preparation, design, and layout begin in the fall of 2014. The complete report will be released at an event for state, national, and international news media, as well as for the general public. This event will recognize the FBMP's corps of citizen scientists — those early risers without whom none of this would be possible.



## The Challenge: Funding

VCE and its partners have raised more than \$250,000 to run FBMP over the last 25 years. Bringing to fruition these complimentary publications – analyzing data, writing reports, and publicizing results – will require an additional \$50,000. VCE has already secured \$4,000 toward this funding target from the Davis Conservation Foundation. To complete this landmark project, VCE is approaching a select group of potential funders. These donors, "Forest Bird Partners," will receive regular project updates and recognition in the final report. More importantly, they will gain the satisfaction of supporting an innovative, much-needed, and enduring conservation effort on behalf of birds and forest ecosystems.

To discuss options for contributing, please contact Chris Rimmer, VCE's Executive Director, at [crimmer@vtcostudies.org](mailto:crimmer@vtcostudies.org) or 802.649.1431.



The Vermont Center For Ecostudies excels in science that guides and inspires conservation. Our work gathers strength from volunteers who monitor wildlife in the Northeast and from a network of professional partners that extends from Canada to South America. This approach is successful because conservation is as much about people as it is about science. VCE brings 20 years of experience to our core mission of promoting conservation practices to benefit biodiversity. With a reach extending from northeastern Canada through the Caribbean to South America, our work in wildlife research and monitoring unites people and science for conservation.