Bird Conservation

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Yale Forest Study Shows Long-term Community Change

The boreal-breeding White-throated Sparrow has receded from much of the southern edge of its range.

This June, BCR began its second year of follow-up surveys at Yale-Myers Forest near Union, CT on property managed by the Yale University School of Forestry. Surveys were first conducted there in 1985 as a pilot study for the eight year long *Forest Bird Survey of Southern New England.* These early surveys were of note because they sampled for the first time the population densities of forest birds of

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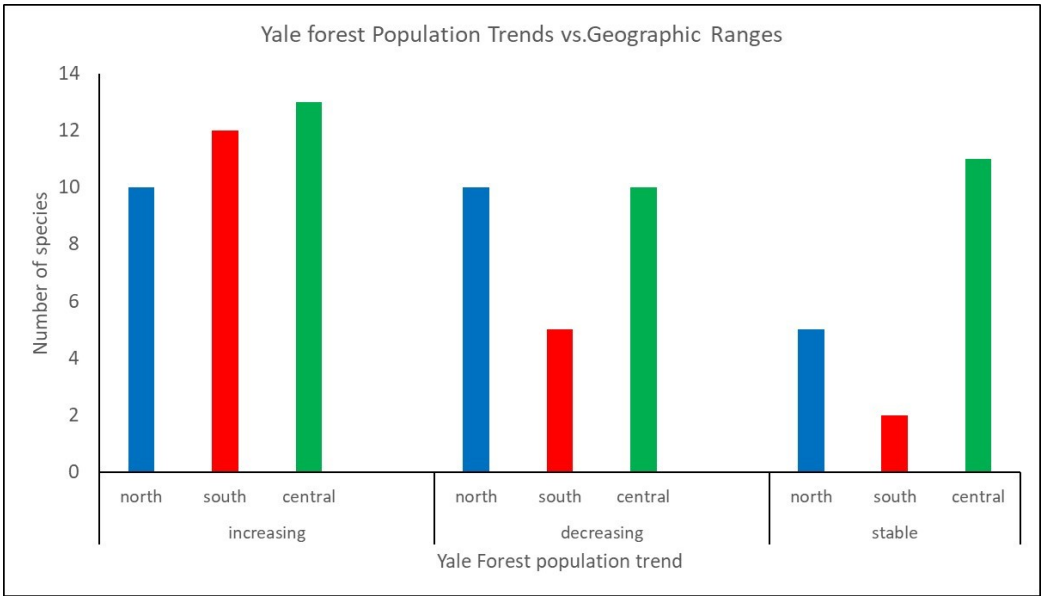
YALE FOREST
-CONTINUED



The majority of species with increasing populations at Yale Forest have geographic ranges largely to the south of Connecticut or for which Connecticut is central to their range. Few southerly-distributed species are declining. About the same number of northerly-distributed are increasing as decreasing.

"Causes of the long-term changes appear to be varied and complex, and we are now working to relate individual species' changes to specific causes."

Connecticut's Northeast Uplands ecoregion. They used a less sophisticated sampling protocol than that of the *Forest Bird Survey* called an Emlen strip census, and we repeated this procedure the past two years in order to make data comparable.

Changes in community composition over the 34-year period have been profound, although changes between last year and this year have been comparatively slight. This finding ties into our argument that bird communities are dynamic and not static groupings of species that change continually over long periods. That they do has implications for how we view the conservation importance of locally declining species.

Causes of the long-term changes appear to be varied and complex, and we are now working to relate individual species' population changes to specific causes. Climate change may explain some of the changes, such as the appearance of southern-breeding species like the Hooded Warbler and Kentucky Warbler. In addition, the decline of northern breeding species like the Blackburnian Warbler, Winter Wren and Dark-eyed Junco may be tied to climate change.

Some of the population changes observed also likely occur in response to the forest management activities conducted by the Forestry School. The occurrence of early successional species like the Least Flycatcher, Nashville Warbler, Magnolia Warbler and Chestnut-sided Warbler appears related to this management.

However, there are other species like the now common Yellow-bellied Sapsucker whose population growth seems unrelated to either of these factors and may instead be related to the rapid spread through its population of some key adaptation.

Forest Birds of CT & RI Most Popular Title

Eastern Phoebes inhabit forest openings and edge habitats.

Since its appearance last year, *Forest Birds of Connecticut and Rhode Island*, the compilation of our eight year study of populations, habitat use and distributions of the region's forest birds, has been downloaded over *2050* times, making it one of the few technical works to attain a wide readership. It continues to attract an expanding readership at the rate of about 30 new downloads per month.

It is downloadable at no cost via our publishing partner, *Arts and Academic Publishing*. It is available at http://www.artsandacademic.net/pdf/forest%20birds%20of%20ct%20and%20ri%202.pdf. A print version is also available.

Its companion volume, *Forest Birds of Connecticut and Rhode Island: Maps of Distributions and Population Densities,* is available at http://www.artsandacademic.net/pdf/forest%20birds%20of%20ct%20and%20ri-%20maps.pdf. It provides GIS-compatable maps of distributions for conservation planners and researchers.

"… *Forest Birds of Connecticut and Rhode Island* … has been downloaded over 2050 times, making it one of the few technical works to attain a wide readership."

Importance of CT Agriculture to Birds

The White-crowned Sparrow is one of the species making use of agricultural landscapes as migratory habitat.

"...our farmland continues to serve as both migratory pathway and potential new breeding grounds for species that typically breed elsewhere..."

When a singing male White-crowned Sparrow remained at the field station for a week this spring, behaving territorially and with a female nearby (banded, above), the possibility that a vast range expansion could occur seemed plausible. Indeed, the conifer bordered wetland that it occupied was rather similar in appearance to breeding habitats occupied in the high Rocky Mountains. However, within a few more days, the male and female departed, likely for the bog borders of far northern Canada.

However, within another week, a Midwestern species, the Clay-colored Sparrow, established a territory, also occupying habitat virtually indistinguish-able to that used in the heart of its Wisconsin breeding range– deciduous trees and shrubs bordering our hayfield. In previous years, we have similarly had other typically Mdwestern species like the Vesper Sparrow do the same. In this case, however, the possibility of breeding was significant. As Midwestern habitats have degraded due to the elimination of shrubby field borders, the species has begun to range east, with regular breeders now occurring as close to us as central New York.

All this points toward the importance of New England agricultural land for birds. We do not practice the types of mechanized "clean" farming that is expanding in the Midwest, so our farmland continues to serve as both migratory habitat and potential new breeding ground for species that typically breed elsewhere on the continent.

Field Station Update

Recently hilled potatoes are representative of the many crops organically grown at the field station. Squashes are under the row cover.

With the growing season now well underway, our agricultural operations continue to expand. Our major field crops in addition to hay include corn, tomatoes, onions and potatoes. We have as well established an orchard that is now fenced against depredation by deer.

Indeed, fence posts form an important aspect of our organic farming protocol, as these posts form hunting perches for the birds that feed upon insects inhabiting the fields. Regular users of these posts include Indigo Bunting, Chipping Sparrow, Song Sparrow and Eastern Phoebe. Although birds can have a difficult time making a dent in pests undergoing a population outbreak, they can be effective in controlling pests present in more modest numbers.

In addition to encouraging vertebrate and invertebrate predators, we also treat our fields with parasitic nematodes to destroy soil pests like wireworms. We also make use of bacteria like *Bacillus thuringiensis*, which attacks and kills a variety of caterpillars as well as some beetles. Furthermore, we employ cultural practices like crop spacing to prevent disease and we use floating row covers (photo above) to prevent insects from laying eggs on certain crops.

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The Newsletter of
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Putting all our eggs in one basket.

MEMBERSHIP

Thanks to all those who have become BCR members for 2019. If you have not yet become a member, it is never too late. Memberships remain one of our principal means of funding the projects that we conduct, so please consider joining us. Membership applications and contribution options are available at www.birdconservation-research.org.