BIRD CONSERVATION

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WINTER SURVEY OF NORTHWEST CONNECTICUT

A starry night ends as dawn approaches at Tunxis State Forest, Hartland.

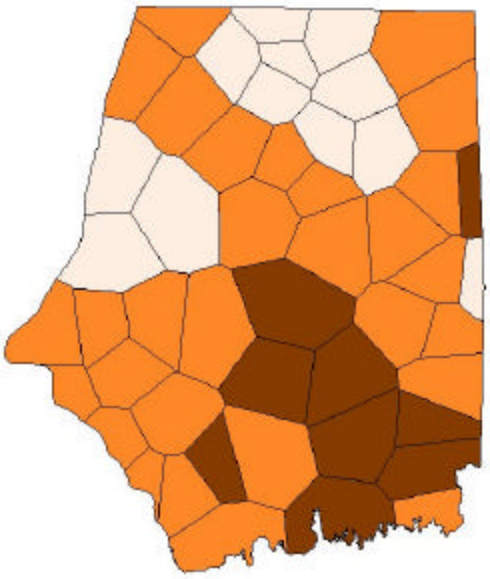
BCR's tenth year began in the hills of northwestern Connecticut, where winter surveys are underway to characterize the region's bird populations.

To date, winter observations have corroborated previous finding that comparatively few species and small populations inhabit the forests of northern Connecticut. The high elevation forests along the New York and Massachusetts borders are particularly devoid of birds.

Despite the low bird densities found this winter, 2007-2008 is proving to be good for boreal visitors to our region. Finches characteristic of far northern forests have been present nearly everywhere. **Pine Grosbeaks, Redpolls, Evening Grosbeaks** and **Pine Siskins** have been particularly in evidence.

The most notable find of early winter was a **Gray Jay** in the montaine forests of Mt. Riga, Salisbury. The species is one of southern New England's rarest visitors.

Patterns Emerge From Forest Bird Survey



Wintering species concentrated in southern Connecticut. Highest species numbers are shaded darkest and lowest numbers are white.

"Birds must, therefore, expend more calories (energy) to survive the winter in the north than in the south."

Intensive analyses of nearly 31,000 eastern Connecticut bird observations are presently underway. Because the region has been surveyed twice, our data permit determination of whether observed trends are statistically meaningful.

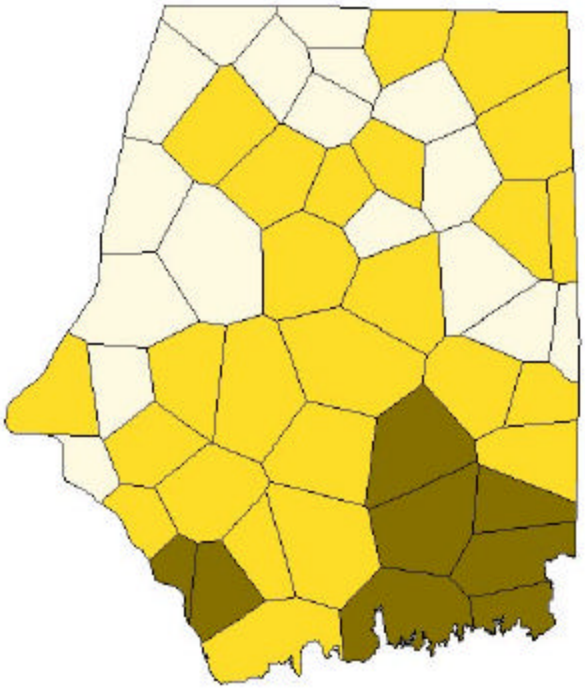
One of the most notable patterns found to date is the consistent increase in wintering species from the high elevation forests near the Massachusetts border to the low elevation forests near Long Island Sound (see above maps). Population densities also increase along this gradient (see maps, next page).

Such patterns as these are consistent with an important emerging idea in science: the Metabolic Theory of Ecology. The theory proposes that, at large geographic scales, energy availability is ultimately responsible for producing species and population patterns. In short, more energy can support larger populations of more species.

In eastern Connecticut, average winter temperatures are lowest (hence, energy availability is lowest) in the mountainous regions near the Massachusetts border and highest in the vicinity of Long Island Sound. Birds must, therefore, expend more calories (energy) to survive the winter in the north than in the south. Consequently, fewer species and individuals winter in the north than in the south.

To be sure, other factors like habitat and the vagaries of individual winters also influence where birds occur, so the relationship between populations and energy is only a general one.

In winter, individual birds tend to be far less tied to a particular location than they are in summer. Birds can opportunistically move to where conditions are most favorable. Because of this variation in where birds may be present, only multiple data sets like those gathered here can permit recognition of general patterns.



Winter population densities were also greatest in southern Connecticut. Highest population densities are shaded darkest and lowest densities are white.

ONLINE *BIRD CONSERVATION*

Bird Conservation is available as an e-mail attachment and from the BCR website (www.birdconservationresearch.org). The electronic newsletter is in full color, and illustrations are much more detailed than they appear in the print version. Moreover, the online illustrations are available for other conservation groups to download for use in their own documents.

A number of members have pointed out that the high quality, electronic ***Bird Conservation*** precludes the need for a print version of it. We have, therefore, moved to producing most newsletters in electronic form only. Doing so has the added benefit of saving more of our resources for research activities. We will, however, continue to print the January newsletter so that we can send it out along with annual membership renewal forms. If any members still require printed newsletters, they may request them in this format.

In addition to the online newsletter, an electronic form of our traveling presentation, ***The Forest Bird Survey of Southern New England***, will shortly be available for download from our web site. The presentation has been been popular with conservation groups working to protect extensive parcels of forest within their communities.

"the Metabolic Theory of Ecology... proposes that energy availability is ultimately responsible for producing species and population patterns"

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If you have not yet done so, please support our annual membership drive by returning your member renewal form. Your memberships have recently purchased for us the latest in statistical analysis software, paid our student interns, and helped defray our considerable travel expenses. In order to expand our programs, we need your continued support.

Please help bird conservaton by renewing your membership. Membership applications and payment options are also available at www.birdconservation-research.org.