

BIRD CONSERVATION

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SOUTHEAST CONNECTICUT SURVEYED



Eastern Connecticut's forests have been much more snowy this winter than last.

Winter surveys are underway that will characterize the density, distribution, and habitat needs of forest birds in southeastern Connecticut. They will complement last year's surveys to produce a comprehensive portrait of winter birdlife in eastern Connecticut.

To date, about one third of the 3 mile long survey transects have been visited. By the end of February, all 25 sites will have had their birds tallied.

Observations thus far have documented large populations of Red-bellied Wood-

peckers in this region. Species near the northern end of their winter distribution, like the Yellow-rumped Warbler and Hermit Thrush, also have been detected. Other notables encountered include Eastern Phoebe and Goshawk.

DIRECTOR'S MESSAGE

I can still see the last woodland. It was a poor example even then, filled as it was with the flotsam of urbanization. But for

city boys it was a window onto a world that we otherwise didn't know.

The neighborhood in which I grew up had been known

one generation earlier as Vinegar Hill. Old people on our street reminisced about its apple orchards, which survived until about 1920. But by 30 years

DIRECTOR'S MESSAGE (CONTINUED)

later, the length of time I have lived in eastern Connecticut, they had receded into only those memories.

Our woodland survived until 1962, when all its three acres were leveled for construction of a parking lot. It was the end, the final event in the urban conversion of a rural landscape. Twenty years before, the last farm had been replaced by high rise apartments. Still twenty years earlier, the Victorian estate that owned all the farmlands surrounding my home had been similarly leveled for construction of

apartments.

Even though the process was virtually complete before my birth, with only the closing act witnessed by my own eyes, the knowledge of it has, I now realize, caused me a lifetime of internal trouble. I still have dreams that just behind the row of houses on my hometown street there really are woodlots and meadows, and I keep tucked away a photograph of the elm-lined walk leading to that phantom estate.

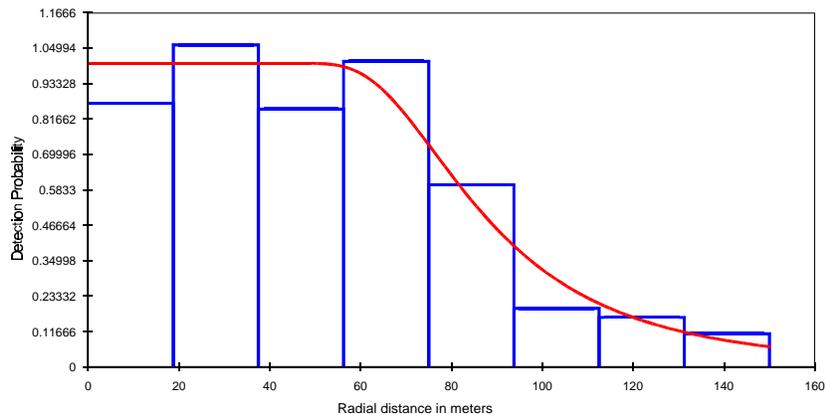
Now I notice a subtle shift in my adopted landscape of

eastern Connecticut. In 1973, I characterized it as a forested one dotted with houses. In 2003, I find that I can better describe it as a landscape of houses dotted with forest. The forest is still extensive, but the tide against it has turned.

This revelation is the genesis of the forest bird survey of eastern Connecticut. We are down to the last chance to characterize what was here, the last chance to provide a roadmap for landscape conservationists to follow. I think I know what 30 years more will bring.

“We are down to the last chance to characterize what was here, the last chance to provide a roadmap for landscape conservationists to follow.”

ESTIMATING POPULATION DENSITY (RESEARCH REPORT)



The detection function of the Eastern Towhee shows a characteristic shape.

Going from field observations to estimates of a bird population is a complex mathematical process. However, the reward for wading through the daunting analyses is in producing

the first ever large scale estimates of bird densities in southern New England.

Population estimation begins in the field, where the distances from survey

points of sampled birds are determined. Once a number of distances have been measured (for example, we made 276 such measures for the Eastern Towhee), then a graph of

detection probability vs distance from sample points can be constructed.

The graph above, made using data from the Eastern Towhee, shows how detectable a particular species is at increasing distances from sample points. Referred to as a detection function, the graph typically shows a detection probability of near 100% out to some distance from sample points. This region is

called the graph's "shoulder." Beyond this shoulder, the species becomes more difficult to detect, so the detection function begins to slope towards a detectability of zero. Our graph shows this characteristic pattern.

Once the observations have been graphed, the next step is to find an equation producing a slope approximating that of the data. In the case of the Eastern Towhee, the equation is

one referred to as a hazard rate function with cosine adjustment (remember sines and cosines from high school math?).

It is this equation that can be used to calculate population densities. With the equation, we can know what proportion of birds present are actually being observed and, thus, we can estimate how many birds an area really contains.

FIELD TRIPS



Wet but triumphant ... Kim McDonald, Robert Craig, and Barbara Lussier approach the summit of Mt. Monadnock, NH on a rainy October day (photo: Matthew Carroll).

Monthly field trips to West Thompson Lake proved to be productive outings. Our late September trip was a particularly good one which yielded large numbers of migrating warblers, particularly Yellow-rumped Warblers. Other notable finds of the day included Pintail,

Red-shouldered Hawk, Pileated Woodpecker, Yellow-bellied Sapsucker, Ruby-crowned Kinglet, Blue-headed Vireo, and Lincoln's Sparrow.

In addition to these trips, impromptu outings also headed to Mt. Monadnock, NH and Hammonasset

State Park, CT. The Mt. Monadnock expedition took place on a dreary and drizzling October day better suited for photography than birdwatching. Still, we encountered a number of late migrating warblers. The Hammonasset outing, in contrast, was a stellar birdwatching day with rari-

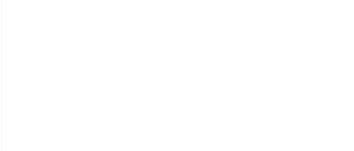
“Going from field observations to estimates of a bird population is a complex mathematical process.”

The Newsletter of
Bird Conservation Research, Inc.

90 Liberty Highway
Putnam, CT 06260

Phone: 860 928-2178
E-mail: mail@
birdconservationresearch.org

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FIELD TRIPS (CONTINUED)

ties and notable species appearing at nearly every turn. Highlights of the trip include Gannet, Laughing Gull, Ipswich Sparrow, Lapland Long-

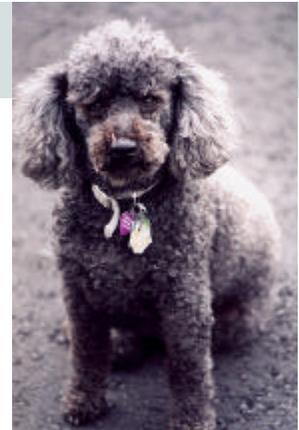
spur, Peregrine Falcon, Cooper's Hawk, and Northern Harrier.



MEMBERSHIP

Membership is something that we at BCR are pleased and impressed to see just keep growing. If you haven't yet joined our expanding family, we hope that you will do so soon. We are funded entirely by memberships, grants and gifts.

Our modest budget has already permitted us to institute a vigorous research effort, produce a substantial body of technical publications, and offer an expanding program of technical assistance to towns.



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