

# BIRD CONSERVATION

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## SOUTHWEST CONNECTICUT SURVEYS NEAR COMPLETION



**The Warbling Vireo is a fairly common but inconspicuous occupant of forest edges.**

The Forest Bird Survey is nearing completion of its final summer season. This year, southwestern Connecticut is our focus. Since beginning in 2001, the survey has covered all of Connecticut and Rhode Island.

Some of the highlights of the summer surveys include observations of southerly range expansions by the Black-throated Blue Warbler, Common Raven and Yellow-bellied Sap-

sucker. In heavily urbanized southwestern Connecticut, some ominous trends have also become apparent— trends previously noted in urbanized parts of central Connecticut and eastern Rhode Island. Whole groups of species abundant in more rural areas are uncommon or absent even in large forest tracts.

Ground-nesting species seem to be particularly vulnerable to the conse-

quences of urbanization and the forest fragmentation associated with it. Species like the Ovenbird and Veery have been notable by their absence from forest tracts near urbanized areas.

Ongoing investigation of forest fragmentation in the vicinity of our 148 study sites will quantify the relationships between fragmentation, urbanization and bird distributions.

## EDITORIAL: WHAT CAN WE PRESERVE?

**“The forest ...  
is also the  
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**The endangered Tufted Titmouse?**

Here in New England, our quintessential ho-hum bird that occurs virtually everywhere is the Tufted Titmouse— a generalist species that has explosively expanded its populations and range in recent decades. Populations burgeon so that they straggle west even to outposts of woodlands on the Great Plains.

How would we in the East view efforts by Midwesterners to mount conservation efforts on behalf of these isolated, “endangered” populations of Tufted Titmice? We might argue that Midwesterners have bigger fish to fry— much bigger fish— species of the prairie

provinces with real continent-wide problems like the Henslow’s Sparrow, Baird’s Sparrow and Sedge Wren, to name a few. The Midwest is home to the kinds of landscape conditions that, if managed properly, can have substantive impacts in preserving the ecosystems that these species are a part of.

Here in the Northeast, we have focused inordinately species peripheral to our region (see *Avian Conservation and Ecology*, Vol.1, Issue 2, article 1 at [www.ace-eco.org](http://www.ace-eco.org)) in our conservation efforts. For example, a common prairie species, the Grasshopper Sparrow, manages to

straggle into the eastern forested provinces. It has immense continental populations estimated at 15,000,000 and a range larger than even that of the Tufted Titmouse. Yet, we in New England list it as a high priority conservation target. Does it make sense for us to expend our meager conservation resources on behalf of species like this one when we have much bigger fish to fry? Let us consider what such fish might be:

We are lulled into a sense of security about the vastness of our prevailing natural habitat— temperate seasonal forest, which presently covers about 60% of southern New England. The forest harbors most of the region’s biodiversity, and it is also the prime remaining example of a system that at the global level has been virtually obliterated. We in the Northeast are, therefore, the stewards for this ecosystem on Planet Earth.

Temperate seasonal forest is not a uniform entity, and the species that call it home are no more uniform in their needs than the habitat itself. Just among birds, some 100-odd species are present. They include species that prefer mature forest, young forest, closed forest, open forest, dry forest, moist forest, wet forest, conifer forest, mixed forest, deciduous forest, oak-hickory forest, beech-



**The fragmenting forests of southern New England are under unrelenting assault from development pressure.**

birch-maple forest, elm-ash-maple forest, pine-oak forest, cool forest, warm forest, forest borders, forested slopes and still more. In short, this is an immensely complex system that will take a titanic effort to preserve in its entirety.

What does it take to preserve temperate forest and its inhabitants? Land. Lots of it. There must be extensive enough examples of the various forest types to support viably the species that live within them. For species to be viable, they must be able to sustain their populations over the range of variability typical of natural environments (e.g. insect outbreaks, wet springs, cold springs, dry springs, long winters, snowy winters). This takes a lot of land, and the configuration of this land counts as well.

Fragmented forests do not work the same as contiguous forest. They tend to have less food,

less conducive microhabitats, more predators, more nest parasites and, consequently, much lower reproductive success among birds. Many have been shown to contain non-viable bird populations that are maintained only by immigration from contiguous forests elsewhere. Moreover, data from the *Forest Bird Survey of Southern New England* is suggesting that even large forests near urban areas may not be as suitable for birds as forests in more rural landscapes (i.e. landscape context counts).

Geographically separate regions also make their own contributions to maintaining the forest bird community. In winter, for example, the *Forest Bird Survey of Southern New England* has shown that it is coastal forests that provide the principal population reservoir for our permanent resident species. Hence, in developing a conservation program for forest, we must consider processes occurring not only during the breeding season but throughout the year.

Southern New England's landscape at present provides ample habitat for most of our forest inhabitants (although even now some of our bird species, notably those associated with younger forest, are experiencing habitat crunches). However, protected forest land presently amounts to only a few percent of our total land area. Is that enough? Certainly we may assume that it is not. If we also note that Connecticut alone is losing to development 6,000 acres of forest every year, we may conclude that within a matter of a few decades our window of opportunity for protecting this system will close. It is very likely that we are the last generation with any realistic hope of preserving the forest system intact.

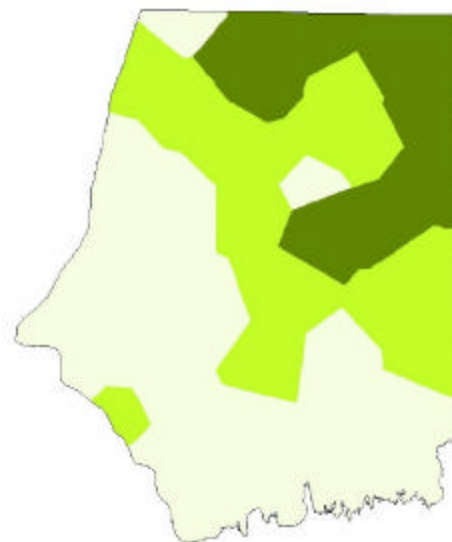
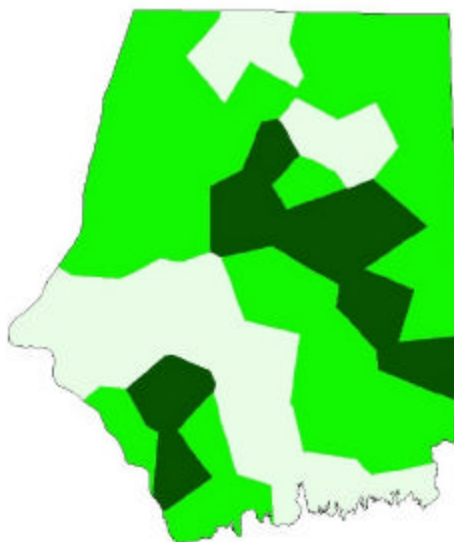
We of a nature conservation bent may be described as having our collective thumbs in the holes of a crumbling dike. In the face of explosive regional growth, our struggle appears to be a losing one, with the forces of land development holding most of the cards and virtually all of the money in this struggle. Considering the enormous cost of land in our region, how are we to accomplish preservation of forest systems? We must focus on the prize— the entire temperate seasonal forest ecosystem— and not dissipate our efforts into areas where we have little hope of making a substantive continental impact.

Robert J. Craig

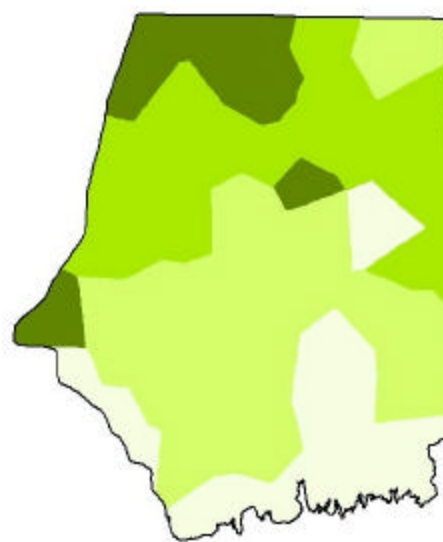
**“What does it take to preserve this system and its inhabitants? Land. Lots of it.”**

## DIVERSITY CHANGES SEASONALLY ... AND REGIONALLY

*The maps opposite provide the first ever regional view of the distribution of bird species diversity and habitat variables that help to explain diversity patterns.*



**In summer, forest bird diversity (left) in eastern Connecticut shows a peak (dark green) roughly coincident with the dividing line between mixed conifer-deciduous (pale green) forest and heavily deciduous (white) forest (right).**



**In winter, forest bird diversity (left) tends to be lowest (white) at high elevations (dark green) and greatest (dark brown) in the lowest elevation (white) portions of eastern Connecticut (right).**



# HABITAT VIDEO SERIES IN PRODUCTION



**Floodplains, such as this one along the Connecticut River, are the focus of the first habitat video to be produced.**

Production of a video series that is aimed at educating students about New England habitats has begun. The pilot episode features the floodplain environment— the lowlands along major rivers that absorb spring floodwaters and develop a series of distinctive habitats. These habitats include forests, marshes and shrub swamps that often occur interspersed with each other.

The video explores how the physics of moving water and the water’s transport of sediments creates the physical environment in which floodplain habitats develop. The chemistry of the environment is studied next, and connections are made between water chemistry and the types of life that inhabit the floodplain. Based on this understanding of the physical nature of the system, the plant and animal inhabitants are examined and the types of communities they develop are explored.

The episode also highlights student research being conducted in the floodplain environment, including chemical analyses, measures of floodplain forest composition, and surveys of insect and bird populations.



**Dr. Craig in the field planning for the day’s video taping of floodplain habitats.**

***“The episode also highlights student research being conducted in the floodplain environment...”***

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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!

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