# Bird Conservation

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# Bird Communities And Core Forest

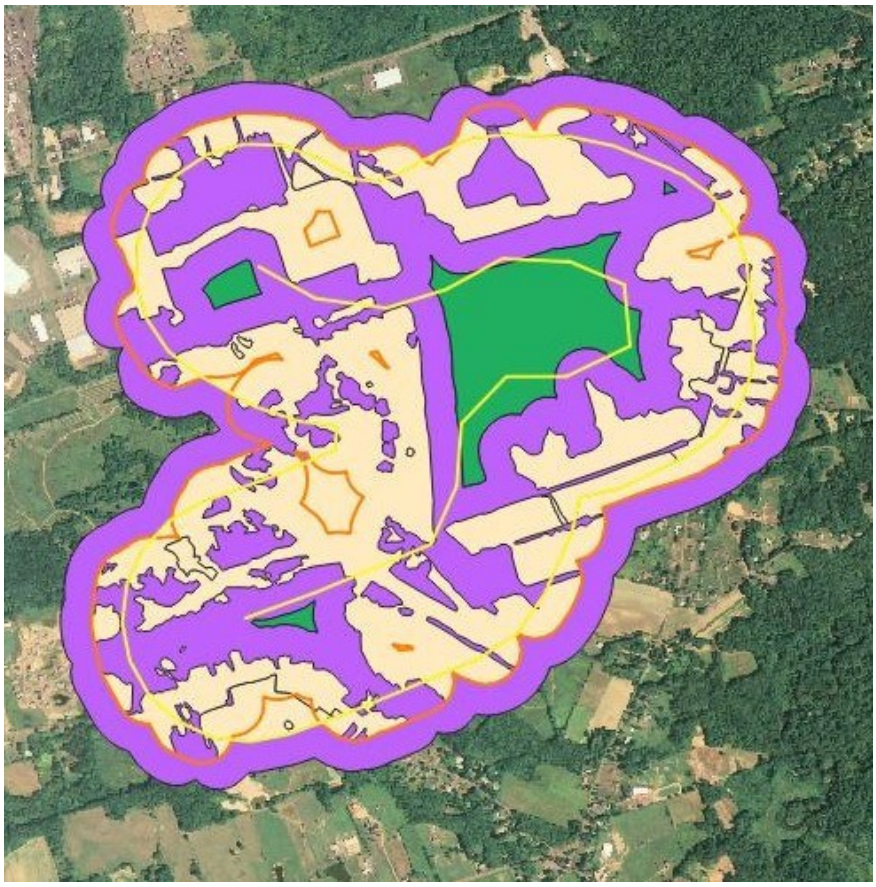
**Our forest study area in East Windsor, CT shows a highly fragmented forest sitting within an agricultural and urbanized landscape.**

Our investigations into the effects of forest fragmentation on bird populations in southern New England (http://www.artsandacademic.net/pdf/forest%20birds%20of%20CT%20&%20RI%202.pdf) is continuing. This phase of the study is mapping the distribution of forest at 147 sites in Connecticut and Rhode Island. The photo above shows the study site in East Windsor, CT, which is a highly fragmented forest

*(Continued on page 2)*

# CORE FOREST
## -CONTINUED

**"...core forest (dark green) covers only 11% of this area."**



**The dark green area above (core forest) is that portion of the forest remaining after a 100 m buffer (purple) around all non-forest areas are subtracted from the total forest cover.**

set within a matrix of farm fields and urban development. The central yellow line is the nearly two mile-long survey transect used to count birds. The yellow line encircling the transect measures 400 m from the transect—the distance to which virtually all birds detections occurred. Within this 400 m buffer, dark green areas are forests, pale green areas are fields, blue areas are open water and red areas are urbanized landscapes.

The orange line outside the 400 m boundary is a 100 m buffer extending beyond the edge of forested areas. When a 100 m buffer is also constructed around all non-forested area in this region as well as those within the 400 m boundary (purple area above), we can determine how much of the study area consists of core forest—forest over 100 m from a non-forest environment.

In the image on page 1, forest covers only 52% of the total area within the 400 m buffer. In the image above, core forest (dark green) covers only 11% of this area. If we then examine the location of the survey transect, only a third of its 15 survey points lie within core forest.

The effects of such fragmentation on forest

# CORE FOREST
## *-CONTINUED*

**Our study area in Haddam, CT also shows some urban development, but most of the forest present still classifies as core forest.**

bird communities is apparent particularly among ground-nesting birds, which are largely absent at this as well as other highly fragmented forest study areas.

In contrast to this site, our study area in Haddam, CT above consists of 89% forest and 64% core forest. In this environment, ground-nesting birds, particularly the Ovenbird and Veery, are among the most abundant community members. Further study will examine the effects of fragmentation on each member of the forest bird community.

**"In this environment, ground-nesting birds, particularly the Ovenbird and Veery, are among the most abundant community members."**

# Field Station Update

The persistent fruits of the invasive European Privet are still apparent as this shrub begins to open buds for spring.

**"Both invasives are fleshy-fruited species spread by birds and small mammals, so keeping them eradicated will involve ongoing maintenance to remove new seedlings."**

This spring, we are working to eradicate two invasive shrubs from our field borders—the alien European Privet and European Common Buckthorn. The plan is to plant native fruiting species to replace them—particularly dogwood and viburnum species, many of which are aggressive competitors that can hold their own against invasive alien species.

Both invasives are fleshy-fruited species spread by birds and small mammals, so keeping them eradicated will involve ongoing maintenance to remove new seedlings. However, once the local seed source from shrubs currently present is eliminated, doing so should involve only limited vigilance.

Removal will involve cutting down existing shrubs and following up with herbicide treatment to prevent re-sprouting from stumps. This is the same procedure we followed last year when a large Asian Ailanthus tree was discovered on adjacent Wyndham Land Trust property. Removal of this tree was essential for preventing its spread. Ailanthus has separate male and female trees, so removing this male tree before it could pollinate a potential female tree was critical. A population of Ailanthus already exists in nearby Putnam.

# The Expansion of American Beech

This American Beech sapling in our field border is one of many that have seeded in to forests and forest borders across southern New England.

**D**espite the warming climate of southern New England, a species typically associated with northern forests is spreading throughout the region. This species, American Beech, is a core constituent of the beech-birch-maple forests found in northern New England and New York. It is a valuable species for wildlife because of its periodic production of prodigious nut crops.

Despite being prone to a number of diseases, including bleeding canker, root rot, leaf disease and bark disease, it is tolerant of shade and reproduces well in the shade of other trees. USDA Forest Service estimates of 1998–2019 Connecticut live tree volume have shown a 28% increase over that time, whereas the number of live trees has fallen by 13%, indicating that Connecticut's forests are trending toward more old growth-like conditions. As a consequence, conditions have been right for beech seedlings to spread through the understory of regional forests and forest borders. Their spread is particularly noticeable in winter and early spring, because the saplings hold their dry leaves until new ones emerge.

**"Flowering tree and shrub species with persistent fruits are particularly valuable for wildlife."**

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# Bird Conservation Research, Inc.

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*This female Red Junglefowl is the wild ancestor of the domestic chicken.*

# *MEMBERSHIP*

It is time to become a member for 2022. Existing members have received renewal forms in the mail. If you have not yet become a member, you may do so online through GoFundMe (.https://www.gofundme.com/f/1nqlss). Memberships remain one of our principal means for funding the projects that we conduct, so please consider joining us. Membership applications and contribution options are also available on our web site.