

BIRD CONSERVATION

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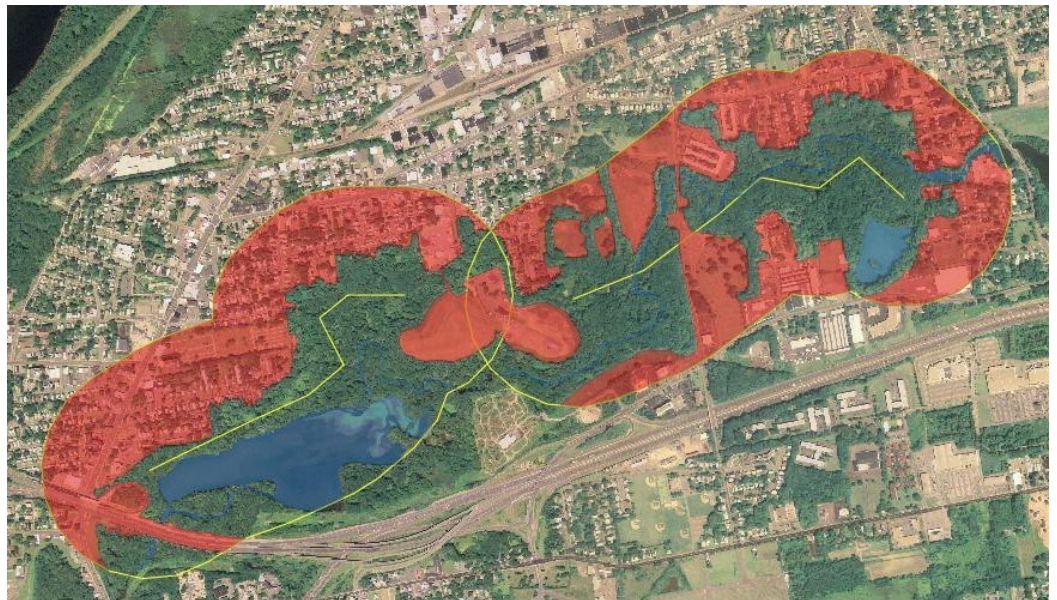
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FOREST FRAGMENTATION EFFECTS ON BIRD COMMUNITIES



Our forest study area in East Hartford, CT sits within a highly urbanized landscape.

Our 2001-2009 study of forest birds populations in southern New England (<http://www.artsandacademic.net/pdf/forest%20birds%20of%20CT%20&%20RI%202.pdf>) has entered a new phase. The photo above shows

a study site in East Hartford, CT being analyzed for its landscape characteristics. The central yellow lines represent the survey transect used to count birds. The yellow lines encircling the transect measure 400 m from the

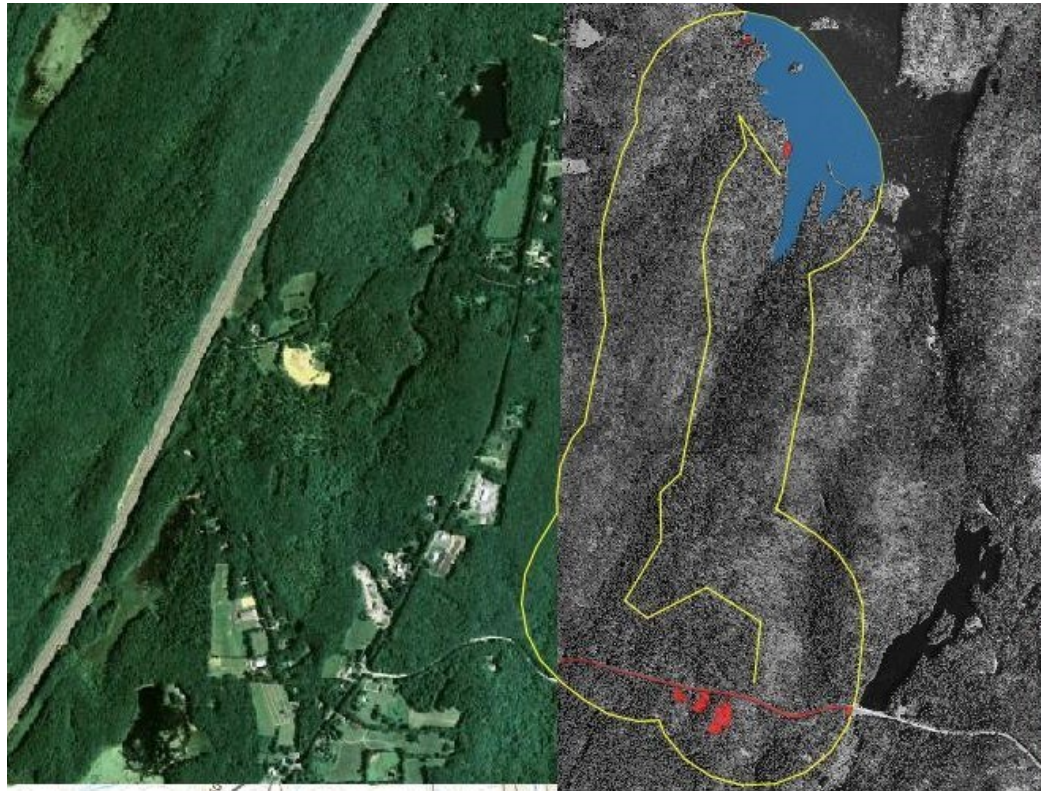
transect— the distance to which virtually all birds detections occurred. Within this 400 m buffer, green areas are forest, blue areas are open water and red areas are urbanized landscapes. By examining the config-

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FOREST FRAGMENTATION

-CONTINUED

“By examining the configuration of such features for all ... of our transects, we can study how forest fragmentation affects the types and numbers of birds present in forests.”



In contrast to East Hartford, our study site in Union, CT sits within a region of extensive forest.

uration of such features for all 147 of our Connecticut and Rhode Island transects, we can study how forest fragmentation affects the types and numbers of birds present.

This analysis involves overlaying satellite and aerial photographic images onto topographic maps in a process called georeferencing. Doing so permits the photos to be related to geographic coordinates, which then permits measurements to be made concerning such features as area, perimeter and distance.

Although this study will take months to complete, some patterns became evident even when we were originally performing surveys. Forest study sites in close proximity to urban areas were notably lacking in ground-nesting birds like Veeries and Ovenbirds, which in more extensively forested regions were among the most abundant birds present. In contrast, forest canopy species like the Red-eyed Vireo and Scarlet Tanager were present even in urban forests, although their comparative population

densities in fragmented vs. unfragmented landscapes remain to be studied.

This study has the capacity to examine not only breeding bird communities but also those of winter, when effects of fragmentation may be quite different. A number of typical wintering forest species appear capable of occupying suburban and even urban locations where shade trees are present.

MARIANA CROW STUDY FOCUSES ON HABITAT



This captive Mariana Crow is one of a dwindling number of this species.

Our study of the forest birds in the Mariana Islands of Micronesia, performed in the early 1990s, have been yielding new results. The most recent study may be viewed at <http://www.birdconservationresearch.org/pdf/forest%20birds%20of%20marianas.pdf>.

Still other studies are underway, notably that of the endangered Mariana Crow. During those years, the species was

still a fairly common forest bird on the island of Rota. Since that time, its numbers have dropped steadily as a consequence of poor reproductive success.

From 1991 through 1993, we undertook a series of seasonal population surveys throughout Rota. While performing these, we also plotted the geographic location of each individual encountered so that at a later date the habitat surrounding the location

could be analyzed. That later date has now arrived, and by examining the habitats present on aerial photographs, we expect to provide the first broad scale view of habitat use by this species.

“... we expect to provide the first broad scale view of habitat use by this species.”

FIELD STATION UPDATE

“We look forward to the spring, 2022 growing season, when we hope to watch our seedlings grow to sapling size.”



An electric fence has been installed around our seedling American Chestnuts to prevent deer browsing.

To prepare our chestnut plantation for winter, we installed an electric fence to discourage deer from browsing on seedlings. This involved hammering in about 70 six foot posts, running strands of wire around them, hammering in a six foot grounding post and attaching a solar powered pulse generator to the fence and post.

American Chestnut prefers drier conditions, so we planted seeds in the driest part of our field.

However, because of the uncharacteristically wet summer of 2021, seedling growth was slowed compared to that of a typical summer. We also lost some of our seedlings to flooding and pests so that in the fall we replanted seedlings where our spring plantings failed.

We look forward to the spring, 2022 growing season, when we hope to watch our seedlings grow to sapling size. American Chestnut is one of our fastest growing trees, so tree heights of greater than six feet are possible by

the end of the growing season.

ENHANCING FIELD BORDERS FOR BIRDS



This wild hawthorn is a flowering and fruiting species with high wildlife value.

Management activities continue on our field borders in order to improve the quality of their thicket habitats. As they improve, we hope to attract a greater variety of bird species to them.

Flowering tree and shrub species with persistent fruits are particularly valuable for wildlife. Persistent fruits are used in fall and winter as an important food source by species like the Cedar Waxwing and American Robin, which are regular

inhabitants of the field station during these seasons.

Improving the quality of the thickets is also important to species like the Ruffed Grouse and Bobwhite, which are now all but absent from much of southern New England. Together with the selective logging that has occurred on adjacent Wyndham Land Trust properties, an increasing availability of earlier successional habitats can benefit both species.

The American Woodcock is still another species that uses these habitats and also nests in them at the field station.

“Flowering tree and shrub species with persistent fruits are particularly valuable for wildlife.”

The Newsletter of
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Bird Conservation Research, Inc.

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Sandhill Cranes, such as this pair in Pomfret, CT are reclaiming their Northeastern range for the first time since Audubon's day.

MEMBERSHIP

It is time to become a member for 2022. Existing members will receive 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](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.