

# BIRD CONSERVATION

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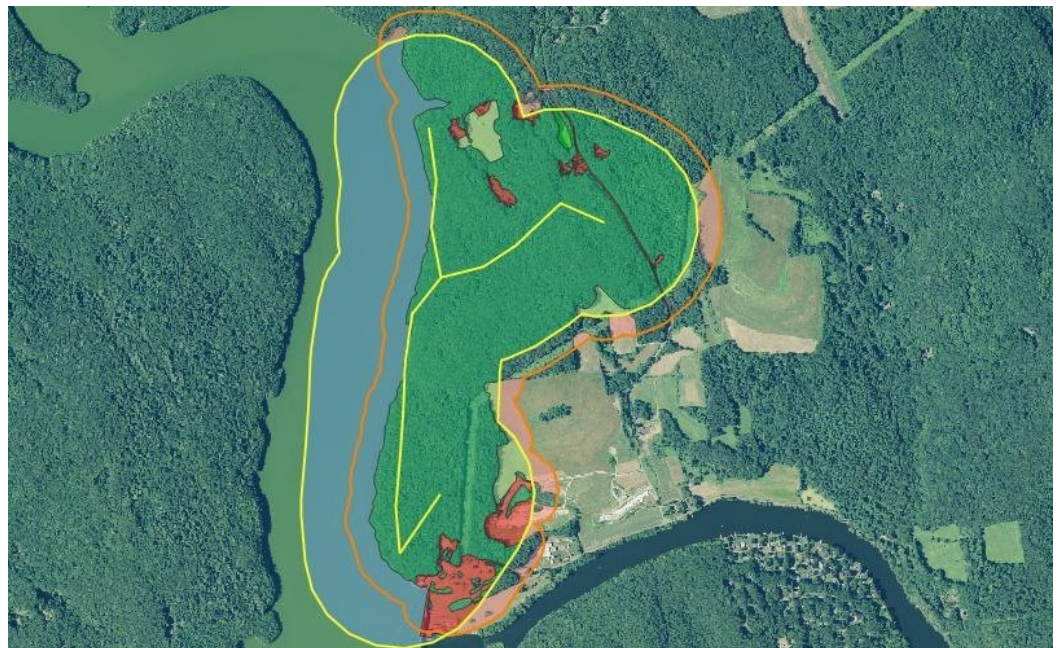
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## FRAGMENTATION STUDY MOVES INTO SOUTHWEST CT



Our study area (yellow-bordered area) adjacent to the Housatonic River in Southbury, CT is part of a largely forested region.

**A**s *Bird Conservation* enters its 25th year of publication, the largest forest bird study ever undertaken in southern New England is reaching one of its most important goals: to determine how large-scale patterns of habitat fragmentation influence the

composition of forest bird communities. Over 100 study sites have already had the distribution of their landscape elements delineated, and southwestern Connecticut is the final region to be characterized. Once completed, we will compare habitats to the

types of bird species found at each study site.

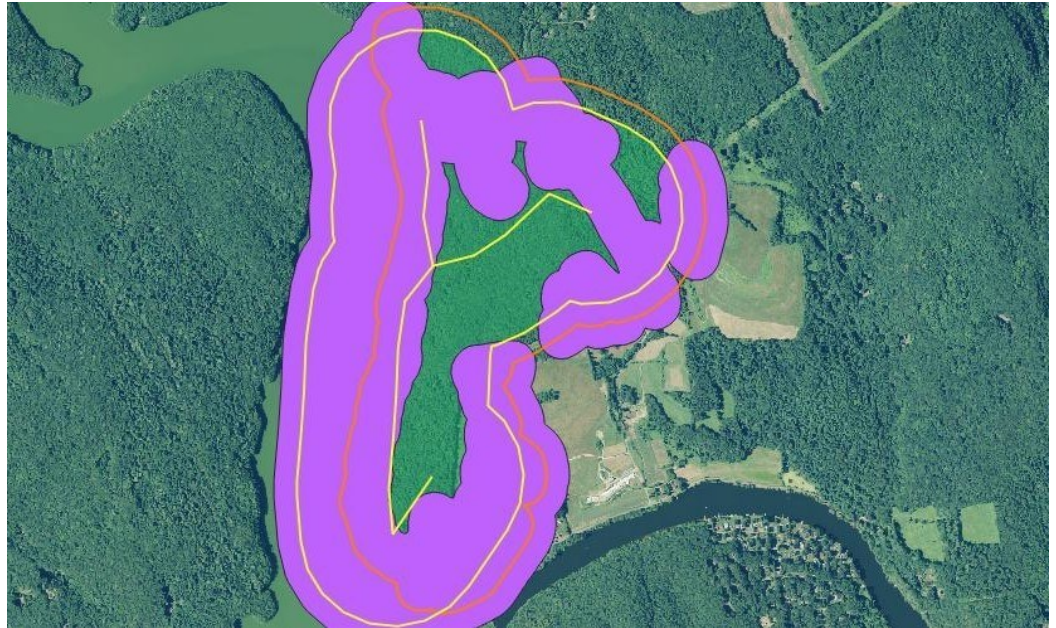
Southwestern Connecticut is one of the most urbanized parts of the state, so it has the potential to help uncover factors associated with deterioration of forest bird

*(Continued on page 2)*

# FRAGMENTATION

## *-CONTINUED*

“An important question to ask is how natural forest breaks like watercourses affect forest bird communities ...”



Despite the extensive forest in this area, when a 100 m buffer (purple) is constructed around the forest break of the Housatonic River, comparatively little of the study area's forest qualifies as core forest. Do natural breaks like watercourses affect bird communities in the same way as human disturbances of forest?

communities. Forests tend to exist there as isolated islands within a matrix of urbanization, so they may not function the same as forests that occur within an undisturbed landscape.

However, not all of southwestern Connecticut is urbanized. The study site in Southbury illustrated in the images above exists within an extensively forested region bordering more rural northwestern Connecticut. It is notable in that for much of its length, its bird survey transect (yellow line) is near the Housatonic River.

An important question to ask is how natural forest breaks like watercourses affect forest bird communities and how these effects compare to those caused by human-associated breaks like urbanization. Similarly, we are examining how breaks due to agricultural land affect forest birds.

Bird community parameters to be examined include the number of species present, the number of interior forest birds present, population densities and the occurrence of particular

groups of species such as those that nest on the ground.

# MARIANA CROW STUDY TO APPEAR IN *PACIFIC SCIENCE*



Into the 1990s, even the natural grasslands of Rota's volcanic soils supported a small population of Mariana Crows.

Our studies on habitat use and populations of the endangered Mariana Crow are now complete (<https://www.birdconservationresearch.org/pdf/Mariana%20Crow.pdf>) and accepted for publication in the scientific periodical *Pacific Science*.

This study was undertaken on the Micronesian island of Rota before the species had undergone a precipitous population decline to its present 178 individuals. Our 1992-1993 estimates were 943

birds during the wet season and 459 during the dry season. Because in the 1990s the species' population was likely near the maximum supportable on this small island of 85 km<sup>2</sup>, observations on habitat use during this time provide a more complete view of the range of habitats that the species is capable of using.

Although we confirmed earlier studies' view that the principal habitat occupied was forest, we also documented that the species used a range of forests including stunted

coastal strand, forests composed of primarily alien species and mature native forest. Moreover, we found it to inhabit grasslands interspersed with copses of trees. One of the less frequently occupied habitats was native swordgrass savanna (photo above) that occurs on volcanic soil exposures.

**“This study was undertaken on the Micronesian island of Rota before the species had undergone a precipitous population decline ...”**

# FIELD STATION UPDATE

“In November, we were able to complete removal of Eurasian Privet trees from the field border, as this alien species retains its leaves after other species have dropped theirs.”



The fall-fruiting European Spindle Tree is a characteristic species of old growth forests in its native range.

**F**all management activities at the field station involved continued efforts to remove alien invasive species from our field border thickets. In the early spring, we will underplant these areas with native shrub and tree species that exhibit the ability to compete with aliens.

In November, we were able to complete removal of Eurasian Privet trees from the field border, as this

alien species retains its leaves after other species have dropped theirs. This made remaining individuals visible so that they could be located and cut down. These small trees will continue to sprout from their roots, but we hope that they will eventually be shaded out by our expanding canopy of native shrubs and trees.

Not all alien species are being removed, however. Some non-invasive aliens replace

native flowering species that were present in New England's landscape before the last ice age. One of these, the European Spindle Tree, is illustrated above. It provides flowers and fall fruits used by birds. Within its native European range, it is a characteristic species of old growth forests. Here, it is an uncommon escape that was originally introduced to gardens because of its attractive fall fruits.

# HABITAT MANAGEMENT



Dr. Tracy Rittenhouse's (right) wildlife techniques class came to the BCR field station to view habitat management techniques employed here.

With the return of students to in-person classes at the University of Connecticut, a return to class field trips has also occurred. This fall, we hosted Dr. Tracy Rittenhouse's wildlife techniques class at the BCR field station so that they could observe our efforts at habitat management for birds.

We reviewed the history of the property and its original state of being overrun with invasive shrubs and vines. We then examined its present state in which invasive cover has been reduced and replaced by

native species. Chief among changes have been reduction in cover by Japanese Bittersweet, Asiatic Amelopsis, Multiflora Rose, Eurasian Privet and Eurasian Buckthorn. We also examined our efforts to free from competition some existing native species like American Beech and Panicked Dogwood and our interplanting of the thickets with native shrubs like Sweet Pepperbush and Shadbush.

In addition to our habitat management efforts, we reviewed our efforts to

capture and band songbirds migrating through our agricultural lands. All of our activities have been formalized into a lab handout that can be accessed at <https://www.birdconservationresearch.org/pdf/labs/Habitat%20management.pdf>.

“All of our activities have been formalized into a lab handout that can be accessed at <https://www.birdconservationresearch.org/pdf/labs/Habitat%20management.pdf>.”

The Newsletter of  
Bird Conservation Research, Inc.

P.O. Box 209  
Pomfret, CT 06258

Web:  
[www.birdconservationresearch.org](http://www.birdconservationresearch.org)

E-mail: [info@birdconservationresearch.org](mailto:info@birdconservationresearch.org)

# Bird Conservation Research, Inc.

## Membership

\_\_\_\_\_ \$25 Regular member  
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*The Cedar Waxwing is a common inhabitant of the BCR field station where it is involved in dispersing the seeds of shrubs and vines.*

## MEMBERSHIP

It is time to renew your membership for 2023. If you have not yet become a member, you may do so online through GoFundMe ([.https://](https://www.gofundme.com/f/1nqlss)

[www.gofundme.com/f/1nqlss](https://www.gofundme.com/f/1nqlss)). Memberships remain one of our principal means of funding the projects that we conduct, so please consider joining us.

Membership applications and contribution options are also available on our web site: <https://www.birdconservationresearch.org/membership.php>.