

BIRD CONSERVATION

VOLUME 24, NUMBER 4 OCTOBER 2022

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FRAGMENTATION STUDY MOVES INTO RURAL NORTHWEST CT



This study site in Harwinton, CT is heavily forested (green within yellow boundary) and only shows limited breaks in the forest canopy due to watercourses and human activity (cream).

Analysis continues in our study of how habitat fragmentation has affected the forest bird communities of Connecticut and Rhode

Island. Of the 147 study sites surveyed for forest birds between 2001 and 2009, about two thirds have now had habitats surrounding

transects analyzed. All study sites are primarily forested, although the degree to which the forest is broken by

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FRAGMENTATION -CONTINUED

“How such fragmentation affects the structure of bird communities remains to be determined.”

watercourses, urbanization, roads, farms and other sorts of open habitats varies substantially. Some, like those in more rural northeastern and northwestern Connecticut, show limited forest fragmentation, whereas others, particularly in urbanized central and southwestern Connecticut, show substantial fragmentation.

The effects of fragmentation are typically thought to extend about 100 m away from a forest break, so the amount of truly unbroken forest, termed core forest, can

be much less than presumed. The two figures above show a largely forested (green within the yellow study site boundary) location in less populated Northwest Connecticut that still has comparatively little core forest. Of the 15 bird survey points in the area (central yellow line), only three occur within core forest.

How such fragmentation affects the structure of forest bird communities remains to be determined. A number of factors are likely to contribute to community structure—extent of total

forest cover, extent of core forest cover, types of fragmentation agents (i.e., does fragmentation due to the presence of watercourses and marshes affect communities in the same way as urbanization and roads?), shape of forest fragments and others. Once habitat cover is characterized for each of the study sites, then we can begin to investigate these questions.



Despite the extensive of forest in this area, when a 100 m buffer (purple) is constructed around forest breaks (cream), comparatively little of the forest qualifies as core forest.

MARIANA CROW STUDY NOW AVAILABLE



This image shows a difficult-to-photograph wild Mariana Crow perched in a breadfruit tree growing a short distance from the ocean.

Studies of the habitat use and population of the endangered Mariana Crow are now complete (<https://www.birdconservationresearch.org/pdf/Mariana%20Crow.pdf>) and in the process of peer review. In this study, we gathered habitat data by plotting onto aerial photographs the locations of birds encountered during crow censuses. From the photographs, we mapped the types of habitats in the vicinity of these sightings.

This work demonstrated that, contrary to the

traditionally held belief, the species is not confined to forest environments but rather uses all habitats in about the proportions at which they are present on its Pacific island home of Rota. This finding fits well with the observation that most of the world's crow species are generalists.

The study also questioned whether populations had really declined by the 1990s, as no quantitative surveys had been conducted before the 1980s. Results of this survey suggested that

populations had not changed much before 1995, when a clear and substantial decline began.

“The study also questioned whether populations had really declined by the 1990s...”

FIELD STATION UPDATE

“Cultivation of American Chestnut seedlings at the field border also continues, with 15 of the originally planted seeds surviving ...”



This tomato plantation represents a portion of our agricultural operations at the field station.

With the approach of the end of the growing season, we can review our accomplishments for the year. We began last winter by clearing diseased ash trees from our field border—a process that will continue with the fall of this year’s leaves and the return of cold weather.

In early spring, we also began our first attempts at eliminating alien Eurasian Privet and Common Buckthorn

from field borders. Nearly all mature seed-bearing individuals of these trees are now gone, although we have yet to remove seedlings. Next spring, we plan to continue removal of exotics by focusing on Multiflora Rose and Russian Olive. We are replacing these aliens with wildlife-friendly natives.

Cultivation of American Chestnut seedlings at the field border also continues, with 15 of the

originally planted seeds surviving both a year of unprecedented rain and one of severe drought. Construction of an electric fence around the seedlings protects them from deer browsing.

Organic vegetable culture also continues, with the harvest of close to 1000 lbs of tomatoes, 1000 ears of corn and 300 lbs of potatoes among other crops grown. We continue to monitor the effects of birds on these efforts.

CURLEW SEARCH CONTINUES



This aerial view of the coast of southern Labrador shows the last location on the continent where large numbers of migrating Eskimo Curlews staged.

With a single likely sighting of an Eskimo Curlew (<https://www.blogger.com/u/1/blog/post/edit/7977687054125630178868109822920940020>)

since our efforts on relocating individuals of this critically endangered species began in 2010, hope for the continued existence of the species appears dim. The only other credible recent sighting occurred in Nova Scotia in 2007.

Despite this, we continue our annual efforts to locate individuals at sites where curlews were

regularly reported into the early 20th century. This year's search occurred in coastal Rhode Island in a spot well-known for turning up rarities. Indeed, over the years we have found such local rarities there as Blue Grosbeak, Ruff, Orange-crowned Warbler, Wilson's Petrel and Parasitic Jaeger, among others.

In previous years, we have explored a number of sites around Cape Cod, Massachusetts in locations where the greatest number of curlew specimens were collected historically. It

was at one of these sites in 2012 that we observed at the edge of a dune swale a medium-sized, long-billed shorebird with cinnamon wing linings. This kind of habitat is precisely the type where 19th century hunters sought this species. The presence of cinnamon wing linings alone strongly points to this individual being an Eskimo Curlew, as it rules out most all other shorebird species."

"The presence of cinnamon wing linings alone strongly points to this individual being an Eskimo Curlew, as it rules out most all other shorebird species."

The Newsletter of
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Bird Conservation Research, Inc.

Membership

- \$25 Regular member
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- \$100 Contributor
- \$250 Patron
- \$500 Benefactor
- \$1,000 Grand benefactor

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The Great Shearwater, a frequent summer visitor to the coast of eastern North America, breeds on only a few islands in the South Atlantic.

MEMBERSHIP

There is still time to become a member for 2022. 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.

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Membership applications and contribution options are also available on our web site.