

BIRD CONSERVATION

VOLUME 24, NUMBER 3 JULY 2022

INSIDE THIS ISSUE:

<i>Endangered crow</i>	1
<i>Crow—continued</i>	2
<i>Forest fragmentation</i>	3
<i>Field station update</i>	4
<i>American Holly</i>	5
<i>Membership</i>	6

Keep up with what's new:

Web site:

[https://
www.birdconservation
research.org/](https://www.birdconservationresearch.org/)

Facebook:

[https://www.facebook.com/
#!/pages/Bird-Conservation
-Research-
Inc/119775051450412?
sk=wall](https://www.facebook.com/#!/pages/Bird-Conservation-Research-Inc/119775051450412?sk=wall)

Blogspot:

[https://
birdconservationresearch.
blogspot.com/](https://birdconservationresearch.blogspot.com/)

Flickr:

[https://www.flickr.com/
photos/birdconservation/
sets/72157628082844564/](https://www.flickr.com/photos/birdconservation/sets/72157628082844564/)

AN ENDANGERED ISLAND CROW



This high elevation cloud forest-like habitat on the tropical Pacific island of Rota is one of the locations occupied by the critically endangered Mariana Crow.

Along with our collaborators at the Division of Fish and Wildlife, Commonwealth of the Northern Mariana Islands, we are working to understand the range of habitats occupied by the critically endangered

Mariana Crow. The species is now effectively confined to the island of Rota, where numbers have plummeted over the past few decades.

In 1992-1993, when the species was still fairly common, a series of wet

and dry season population surveys on Rota were accomplished. During surveys, the location of each bird encountered was recorded so that at a later date habitat occupancy could be evaluated. That date has

(Continued on page 2)

ENDANGERED BIRDS

-CONTINUED

“Survivorship by first year birds has been demonstrated to have plummeted...”



This aerial photo of Rota shows several survey points (red dots on road) as well as the locations of occurrence of four different Mariana Crows. The yellow circles surrounding the locations are 50 m radius circles within which habitat occupancy can be evaluated.

now arrived, and using aerial imagery we are working to understand the range of habitats occupied during a time when the species was still widespread.

Using the 1992-1993 data, we computed the maximum population of crows to be 1058. This occurred during the wet season when birds appeared to be most vocal. In contrast, the maximum dry season computations was 489, which demonstrates that the behavior of birds influences population estimates. Still, these counts are far above those of present counts,

which place the total population below 200.

Survivorship by first year birds has been demonstrated to have plummeted, and this appears to be responsible for causing the decline. Predation by feral cats has been implicated in reducing survivorship, although disease also seems to be involved.

Because the variety of habitats a species occupies often declines as a population declines, examination of present habitat use provides an incomplete view of the

range of habitats that the species is capable of using. To better understand the sorts of conditions that the species can use, examining the data from 1992-1993 will be invaluable. Such data will likely be important in developing translocation efforts.

FOREST FRAGMENTATION STUDIES



The American Robin is one of the edge/successional species that tends to have larger populations in highly fragmented forests.

Studies of the effects of forest fragmentation on bird communities are ongoing, with 69 of 147 study sites having been evaluated for the composition of their habitats. These evaluations include measures of forest cover, agricultural land, wetlands, urbanized areas and open water. The areas and perimeters of each are computed and

from these measures indices of fragmentation are calculated.

Study sites are defined based on the locations of our previously performed bird survey transects. Transects are about two miles long each and a 400 m radius perimeter is drawn around them. Within the zone created, all habitats present are delineated.

Study areas vary widely in their fragmentation characteristics. Particularly those in northeastern and northwestern Connecticut and northwestern Rhode Island may contain nearly unbroken forest. Others, particularly in central and southwestern Connecticut and eastern Rhode Island may exhibit highly fragmented conditions.

“Study areas vary widely in their fragmentation characteristics.”

FIELD STATION UPDATE



“About 18 of 30 originally planted seedlings continue to grow...”

Our American Chestnut seedlings are now prospering in the drier spring conditions of 2022 compared with the poor, wet growing season of 2021.

The new growing season of 2022 is proving to be a good one for our American Chestnut seedlings, which are now emerging from their protective sleeves. About 18 of 30 originally planted seedlings continue to grow, and plans are in the works to replace missing individuals with new seedlings this fall.

In addition to our efforts

at re-establishing important native tree species to our field borders, our work continues on removing invasive alien woody plants. To date, we have functionally eliminated the Eurasian Buckthorn and Eurasian Privet by cutting down all mature individuals. Doing so prevents new seeds from being produced. However, both species sprout from roots, so additional treatment to eliminate

these as well as seedlings will continue.

Future efforts will address removal of invasives like Multiflora Rose and Russian Olive, which also occur within the field borders. Presently, the most widespread alien species is the Asian Winged Euonymus.

THE EXPANSION OF AMERICAN HOLLY



This sapling American Holly tree present near the Connecticut coast is a representative of a species now establishing itself inland across Connecticut and Rhode Island.

Birds are important dispersal agents for a number of native woody plant species with fleshy fruits. These include the various species of viburnums, dogwoods, elders, raspberries and hollies, among others.

One small tree species historically rare in Connecticut, although more widespread in coastal Rhode Island (and also widespread as a cultivated tree), is the American Holly. In fact, during 1975's first comprehensive biological survey of Connecticut,

only a single wild tree was found in extreme southeastern Stonington.

Since that time, however, American Holly has expanded its distribution. By our 2003-4 forest bird survey of southeastern Connecticut (<https://www.artsandacademic.net/pdf/forest%20birds%20of%20CT%20&%20RI%202.pdf>), we found sapling and seedling trees to about eight miles inland from the coast—likely spread there by species like the Gray Catbird, Cedar Waxwing and American Robin.

The principal factor determining American Holly's northern range limit is winter and spring minimum temperature. Sustained periods of extreme cold appear to prevent seeds from germinating or flowers from producing fruit. However, as regional temperatures continue to moderate, we are likely to see American Holly become a more frequent feature of the forest understory.

“...during 1975's first comprehensive biological survey of Connecticut, only a single wild tree was found...”

The Newsletter of
Bird Conservation Research, Inc.

P.O. Box 209
Pomfret, CT 06258

Web:
www.birdconservationresearch.org

E-mail: info@birdconservationresearch.org

Bird Conservation Research, Inc.

Membership

_____ \$25 Regular member
_____ \$35 Family membership
_____ \$50 Sustaining member
_____ \$100 Contributor
_____ \$250 Patron
_____ \$500 Benefactor
_____ \$1,000 Grand benefactor

Name _____

Address _____

Town _____

City _____

State, zip _____

Phone _____

E-mail _____



The iridescent male Red Junglefowl is a common forest bird in the tropical Pacific.

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.