

BIRD CONSERVATION

VOLUME 26, NUMBER 4, OCTOBER 2024

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BIRDS OF LARGE VS. SMALL TIDAL MARSHES



This June, 1987 photo of the vast Cromwell Meadows tidal marsh illustrates the habitat type where Black Rails were present that year.

Our long-term study of birds that inhabit the freshwater tidal marshes of the Connecticut River began in 1999 and 2000 (<https://www.birdconservationresearch.org/pdf/species-area.pdf>). This initial investigation examined

sites that differed in size, degree of isolation, mudflat cover, water cover and extent of individual plant communities.

Analysis revealed a positive relationship between number of bird species present and

marsh size, but none between species and habitat types. This lack of a relationship between habitat and species appeared to be a consequence of most vegetation types not being sufficiently distinct for

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RIVER BIRDS

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This May, 2024 Red-winged Blackbird nest was photographed at an isolated, small tidal marsh that occurs along the same Connecticut River tributary as the much larger Cromwell Meadows.

“Observations from 2024 seemed a bit at odds with those from 1999-2000.”

birds to differentially associate with them. There was also no relationship between bird density and marsh size, suggesting that habitat quality did not improve with increasing marsh size. In addition, species evenness (how similar population densities were among species) declined with increasing species number because the presence of more species was associated with the occurrence of rare species.

Larger marshes had more rare species, species with larger populations and species with a minimum threshold

area for occurrence. Thus, results were consistent with theoretical predictions that larger populations are less prone to local extinction and, as individuals are added to a community, more rare species are present.

Observations from 2024 seemed a bit at odds with those from 1999-2000. Species were missing from both large and small sites, apparently because of late river flooding making habitats unsuitable for them. Even several species that are normally common and widespread suffered

from late flooding. This phenomenon also occurred in 1986, when river flooding that lasted well into May resulted in species like the Virginia Rail being largely absent from marshes. Whether this pattern repeats itself will be the subject of next summer's investigations.

PACIFIC ISLAND BIRDS: LIFE HISTORIES



The Rufous Fantail of Saipan in the Mariana Islands has been given separate species status and renamed the Micronesian Rufous Fantail.

Three life history studies of the largely unstudied birds of tropical Pacific islands are now complete and additional studies are underway. To date, we have published studies of the Rota White-eye (<https://www.birdconservationresearch.org/pdf/rotawhite-eyebirdsoftheworld.pdf>), Saipan Reed-warbler (<https://www.birdconservationresearch.org/pdf/reed-warblerBNA.pdf>) and Golden White-eye (<https://www.birdconservationresearch.org/pdf/goldenwhite-eye.pdf>).

The next species to which our attention has turned is the Bridled White-eye, the

final white-eye species still surviving in the Mariana Islands (other now extinct species prehistorically inhabited these islands). This is one of the better studied species of these islands, although even in this case there has been little study aside from population surveys for over 20 years. The older studies focused on foraging ecology, microhabitat choice, social behavior and inter-island differences in these phenomena. One recent study focused on molts and plumages.

The last of the small songbirds of the Mariana Islands is the Micronesian Rufous Fantail. Like most

of the other species, few data exist beyond periodic population estimates. It is a species of the forest understory, where it principally feeds upon flying insects. It is also notable in that it uses the Golden White-eye to assist with its food-finding activities.

“Three life history studies of the largely unstudied birds of tropical Pacific islands are now complete and additional studies are underway.”

CONNECTICUT'S CHANGING FORESTS

“Connecticut’s forests are changing, and as they do the bird communities that inhabit them also may be expected to change.”



The Eastern Redbud, historically known from only a single location in southwestern Connecticut, is now expanding its distribution in coastal Connecticut. This seedling was found in a forest near the lower Connecticut River.

Connecticut’s forests are changing, and as they do the bird communities that inhabit them also may be expected to change. A number of tree and shrub species are limited in their distribution to where they can survive minimum winter temperatures. As the state’s climate warms, already by an average of 3°F since 1900, species typically associated with the Southeast are expanding their distributions northward.

One of the species that has prospered in recent decades is the American Holly. Into the 1970s, naturally occurring individuals were largely restricted to a few coastal locations. Seedling and sapling trees can now be found miles inland as viable seeds are transported by such animals as fruit-eating birds. Similarly, the Eastern Redbud, historically known from only a single Connecticut population, is now expanding its range as viable seeds are surviving winter and being transported to inland woodlands from

the coast. Another typically southern species that has expanded its occurrence in Connecticut is the Tulip Poplar, which has become abundant in many locations in the state.

Still other species that historically have been associated with the coast include such typical Southeast coastal plain oaks as the Post Oak and Dwarf Chinkapin Oak. Moreover, the Mockernut Hickory is found primarily in southern Connecticut. As environmental conditions moderate, these species may be expected to expand their

HABITAT

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This Post Oak-Mockernut Hickory-Eastern Redcedar woodland on a rocky headland along the shore of Long Island Sound is poised to expand its occurrence further inland in Connecticut.

range north, and in the process convert forests into those more like ones on the coastal plain.

As Connecticut's forests evolve, we may expect that bird species more typical of the Southeast will expand their range into the state. Species like the Prothonotary Warbler have already established a tiny breeding population, and the Yellow-throated Warbler also is showing signs of beginning to invade the state. In addition, the Fish Crow, once only an infrequent

inhabitant of the coast, has in recent years greatly expanded its range to cover much of the state.

A species that might eventually range northward into Connecticut is the Swainson's Warbler. Individuals have been reported from the Northeast in spring, and it occasionally breeds north to Maryland and possibly New Jersey. Its continental population appears to be growing, and particularly coastal Connecticut forests are

similar to its preferred habitat types. It is frequently associated with a dense forest understory of Spicebush, Sweet Pepperbush and Catbriar, and these plants are abundant in moister coastal Connecticut habitats.

“As Connecticut’s forests evolve, we may expect that bird species more typical of the Southeast will expand their range into the state.”

The Newsletter of
Bird Conservation Research, Inc.

P.O. Box 84
Hadlyme, CT 06439

Web:
www.birdconservationresearch.org

E-mail: info@birdconservationresearch.org

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The Great Egret, once primarily an inhabitant of salt marshes, is now a regular inhabitant of freshwater tidal marshes.

MEMBERSHIP

It is time to renew your membership for 2024. 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). 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>.