



Connecticut State of the Birds

From [Connecticut State of the Birds 2021](#) — “3 Billion Birds Are Gone. How Do We Bring Them Back?”

Copyright 2021 by the Connecticut Audubon Society & Dr. Brooke Bateman, National Audubon Society

Birds are Telling Us It’s Time to Act on Climate Change. Natural Climate Solutions Show the Way

Today, more species than ever are sliding toward threatened and endangered status. Not only does that mean more species are closer to extinction, it also means that, if listed, species will be subject to regulatory action and cost taxpayers hundreds of millions of dollars.

by Brooke Bateman

As one of the most beloved and ubiquitous forms of wildlife, birds are our connector to nature. Birds are also messengers, and if we pay attention, they’re showing us that our world is changing. Over the last 50 years North America has lost about 30 percent of its birds—that’s nearly 3 billion fewer birds to fill our skies today than in 1970. We are altering nature at an unprecedented rate, and we are in the midst of a biodiversity crisis that is threatening the well-being of our world. We are also facing a climate crisis. Given that climate change amplifies existing threats, it is the biggest issue that birds and people will face over the next 50 years. Climate change and biodiversity loss are intertwined, and we can no longer afford to look at them as separate issues.

There is a scientific consensus that we need to limit global temperatures to 2°C (or

preferably 1.5°C) above pre-industrial levels to avoid a climate tipping point—a critical threshold beyond which we would see dramatic, detrimental, and irreversible system-level changes to our planet. One consequence of crossing this threshold is potentially losing billions more birds. Audubon’s 2019 report, *Survival by Degrees: 389 Bird Species on the Brink*, shows that two-thirds of North American bird species are at risk of extreme range loss and potential extinction from unmitigated climate change. In Connecticut, over 80 species are climate vulnerable, including Scarlet Tanager, Wood Thrush, American Woodcock, and Saltmarsh Sparrow. The federally threatened Piping Plover could be completely lost from Connecticut’s shores. Forest birds are particularly at risk, with 65 percent of the species in Connecticut vulnerable to climate change. The birds of our eastern forests have already seen a loss of 170 million birds, a decline of 17 percent, since 1970. If forest specialists like the Ovenbird no longer find suitable conditions under a no-mitigation climate future—which is what models indicate might well happen—the familiar “teacher, teacher, teacher” call will be lost forever from the soundscape of Connecticut’s forests.

However, there is hope. If we act now to reduce greenhouse gas emissions and stabilize the climate below the tipping point, the science from *Survival by Degrees* shows that 76 percent of birds in North America will suffer less range loss, experience fewer extreme events, and be less vulnerable to climate change. We already have a lot of the tools we need to reduce the effects of global warming. A range of policy strategies and conservation actions can be used together as a climate change toolkit.

First, we must focus on climate mitigation—drawing down greenhouse gases from the atmosphere, to help stabilize the climate below the 2°C tipping point. We also need to focus on climate adaptation, through protecting, managing, and restoring habitats that

benefit biodiversity and provide for better climate resilience. Providing better habitats and natural infrastructure helps both birds and people better withstand climate change threats. These changes include creating living shorelines, preserving habitat to protect water quality, and implementing heat island cooling strategies such as increasing tree and ground vegetation cover.

Natural climate solutions, a nature-based solution pathway, provide a promising strategy to simultaneously address the biodiversity and climate crises. Natural climate solutions harness the ability of plants and soils to store carbon for climate mitigation. It is achieved through maintaining and restoring—protection and sustainable management, restoration, and conservation practices—natural and modified habitats that benefit biodiversity and promote adaptation and resilience. To achieve “net-zero” emissions by mid-century—the goal set forth by the Paris Agreement—we need major investments in natural climate solutions today. These solutions cost-effectively provide roughly a third of the climate action needed by 2030 and are available and proven now and will have the added effect of helping to protect the important ecological services that our natural infrastructure provides, e.g. water quality protection, oxygen production and buffering from natural disasters.

Audubon’s Natural Climate Solutions Report: Maintaining and Restoring Natural Habitats to Help Mitigate Climate Change (2021) identifies areas that are important for carbon storage and sequestration. It also identifies areas that support birds under climate change, areas called Climate Strongholds. The places where these two kinds of areas overlap are key. They include forests, wetlands, coasts, grasslands, aridlands, and green spaces in cities and suburbs. They offer an opportunity to help solve the biodiversity crisis and the climate crisis simultaneously.

Some of these areas are prime candidates for sustainable management and conservation actions; we've identified these as priority areas to maintain. Others have been modified by human actions or disturbances. We've identified these as priority areas to restore. With targeted conservation, management, and restoration actions, these areas can have increased value for birds and draw down considerably more carbon than they do now. Combined, these priority areas already store over 100 billion tons of carbon. If human disturbance is minimized, they have the potential to sequester up to twice as much carbon per year as they do currently while also improving bird habitat. That gets us to 23.2 percent of the country's 2016 commitment to the Paris Agreement while also helping to build resilience for birds.

In Connecticut, there are more than 1.5 million acres of priority areas to maintain and restore. Collectively they store over 500 million tons of carbon. Forests keep large stores of carbon locked in plants and soils, providing the best opportunity for total carbon storage. In Connecticut, these include landscape-scale Important Bird Areas such as the Lyme Forest Block along the east side of the lower Connecticut River, and the Macedonia Forest Block, in Litchfield County. The keys are to preserve, protect, and restore large forests and to restore native plants and forests in suburbs and cities. These actions will also benefit forest birds such the climate-vulnerable Wood Thrush.

Coastal wetlands, a priority area to restore, also pack a big carbon mitigation punch, storing more carbon per acre than any other ecosystem across the state. These coastal areas have undergone extensive change as a result of human activities and urbanization. Restoration of these areas in Connecticut can lead to 2.5 times more carbon drawdown per year, improving the habitats for coastal birds. These include

Saltmarsh Sparrow, a species at risk of extinction because of sea level rise, as well as rising temperatures, and urbanization. Restoring these wetlands not only leads to increased carbon absorption, but also helps alleviate flooding and storm surges associated with sea level rise and more intense storms and hurricanes.

The bottom line: what's good for birds is also good for stabilizing climate change. Natural Climate Solutions tackle the dual biodiversity and climate change crises together. Working strategically across ecosystems will provide a healthy future for both people and nature. We know what we need to do. We need to plan for a better future, working on mitigation and adaptation, and pursuing Natural Climate Solutions—to benefit all living things. That way, 50 years from now, we won't be lamenting billions more birds lost from the skies but instead will be celebrating the more resilient world we helped build.

Birds are telling us, the time to act on climate change is now. We can do this.

Brooke Bateman, Ph.D., is Director of Climate Science for the National Audubon Society.