



Audubon



HOODED
WARBLER



GREAT
CORMORANT



KING
RAIL



SUMMER
TANAGER



LONG-BILLED
CURLEW



CRESTED
CARACARA



ROSEATE
SPOONBILL



LOUISIANA
WATERTHRUSH



RUDDY DUCK

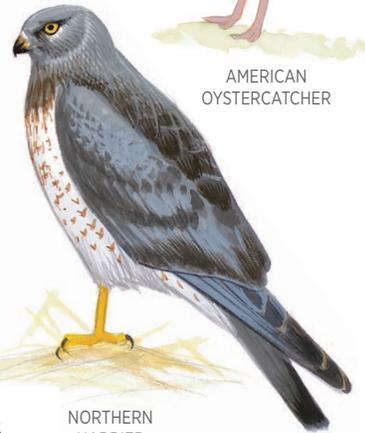


GOLDEN-WINGED
WARBLER



AMERICAN
OYSTERCATCHER

AUDUBON'S PRIORITY BIRDS



NORTHERN
HARRIER



LEAST TERN

2021



PIPING PLOVER



WOOD STORK



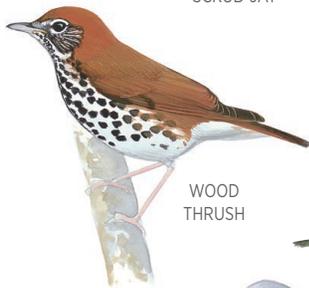
ROSE-BREADED
GROSBEAK



SCARLET
TANAGER



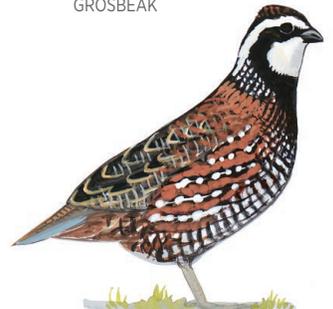
FLORIDA
SCRUB-JAY



WOOD
THRUSH



PRAIRIE
WARBLER



NORTHERN
BOBWHITE



SWAINSON'S
HAWK



WILSON'S PHALAROPE



RED KNOT

Project Team

Report Leads

National Science

Nicole Michel
Sarah Saunders
Tim Meehan
Chad Wilsey

Bird-Friendly

Communities

John Rowden

Coasts

Abby Darrah
Walker Golder
Karen Hyun
Andrea Jones
Marianne Korosy

Water

Andrea Jones
Stephanie Beilke
Elizabeth Brown
Paul Gray
Julie Hill-Gabriel
Nat Miller
Tice Supplee
Caitlin Wall

Working Lands

Michael Burger
Steve Hagenbuch
Sarah Hewitt
Alison Holloran
Marshall Johnson
Mark LaBarr
Ronald Rohrbaugh
Curtis Smalling
Kristal Stoner
Khara Strum
Daniel Suarez
Aimee Tomcho

Migratory Bird Initiative

Jill Deppe
Nat Seavy
Melanie Smith

Audubon Art Department

Kristina Deckert
Sabine Meyer
Melanie Ryan
Susan Loreda
Julie Rossman
Alex Tomlinson
Camilla Cerea
Felicia Pardo

Table of Contents

Call to Action	3
List of Priority Birds	4
Bird-Friendly Communities	8
Coasts	10
Water	12
Working Lands	14
Migratory Bird Initiative	16
Equity, Diversity & Inclusion	18
Stewardship Benefits Coastal Birds	20
What We Did	21
What We Found	22

National Audubon Society

The National Audubon Society protects birds and the places they need, today and tomorrow, throughout the Americas using science, advocacy, education, and on-the-ground conservation. Audubon's state programs, nature centers, chapters, and partners have an unparalleled wingspan that reaches millions of people each year to inform, inspire, and unite diverse communities in conservation action. Since 1905, Audubon's vision has been a world in which people and wildlife thrive.

Copyright © 2021 National Audubon Society. Audubon is a non-profit conservation organization. Learn more at www.audubon.org and follow us on Twitter and Instagram at [@audubonsociety](https://twitter.com/audubonsociety)

Bird losses presented here were derived from supplementary data and code associated with the paper documenting the loss of nearly three billion birds in North America: Rosenberg, K.V., et al. 2019. Decline of the North American avifauna. *Science* 366(6461): 120-124.

Cite this as: Michel, N.L., S.P. Saunders, T.D. Meehan, and C.B. Wilsey. 2021. Audubon's Priority Birds Report: 2021. National Audubon Society, New York, NY.



Priority birds

Priority birds are species of conservation concern that benefit most from our conservation work. They include species representing the range of habitats we work in across the Americas, and include year-round residents, Neotropical migrants, and everything in between.

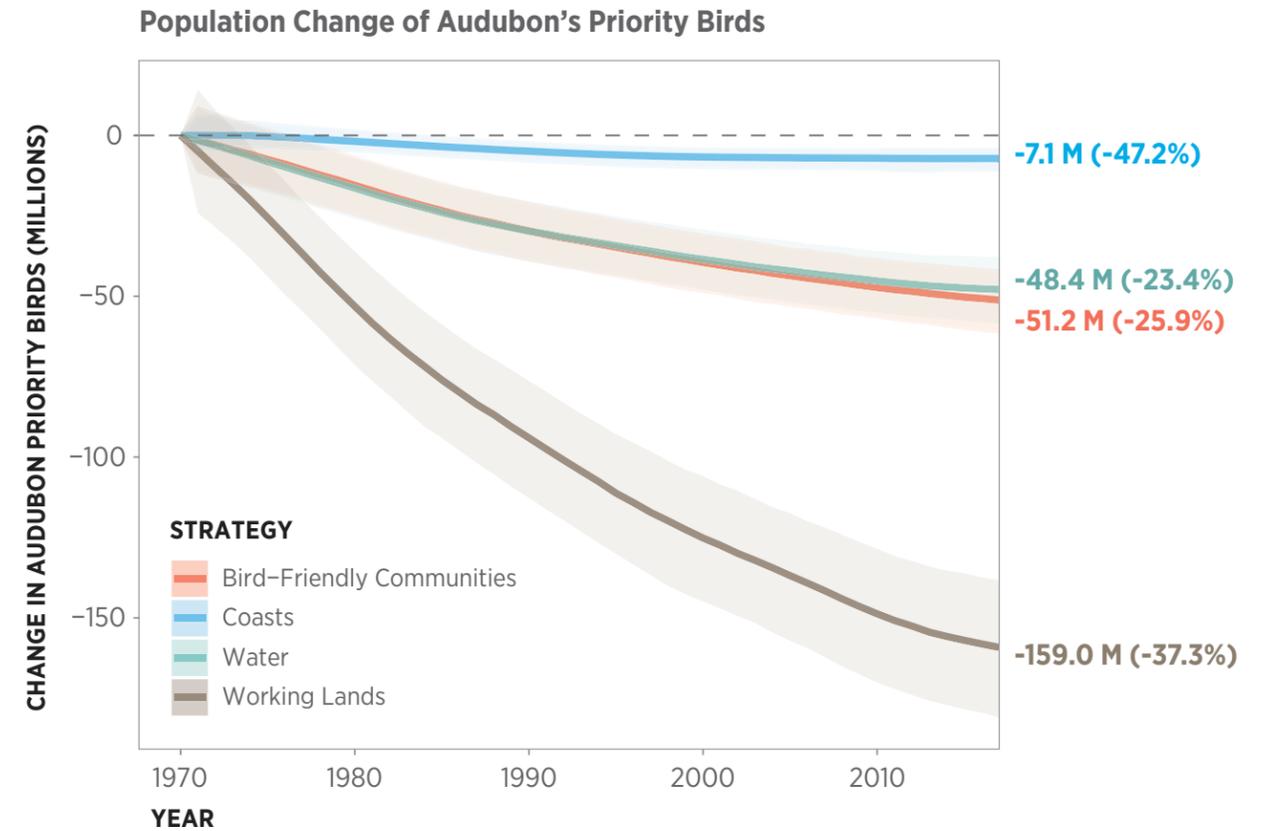
American Avocet

**165 million
(36%) of
Audubon's
priority birds
have been lost
since 1970**



Hooded Warbler

An Urgent Call to Action



Note that some bird species appear on multiple initiative-level priority bird lists. Their losses or gains are counted for each initiative, but only count once towards the overall 165 million priority bird loss.

Cause for concern. Motivation to act.

The sustained decline of North American bird populations is a conservation crisis. Nearly three billion birds have been lost since 1970 (Rosenberg et al. 2019). Most impacted were grassland birds, where >60% of grassland habitat and 159 million priority birds have been lost, the greatest total loss of priority birds for any habitat type. Coastal birds have declined 48% since 1970, the greatest proportional loss. Similarly, priority birds for Audubon's Water and Bird Friendly Communities strategies experienced sustained population losses since 1970. Population losses at this scale require an unprecedented response.

National Audubon Society is committed to protecting birds and the places they need. Our priority birds are species of conservation need representing the range of habitats and communities we work in. Here we review what the loss of nearly three billion birds means for our priority birds, and what Audubon is doing to reverse these declines.

Audubon's Priority Birds

Priority birds are species of conservation concern that benefit most from our conservation work. They include species representing the range of habitats we work in across the Americas, and include year-round residents, Neotropical migrants, and everything in between.

	Bird-Friendly Communities	Breeding Biome	Pop change* in mil. (%)
	Bell's Vireo	Shrubland	+1.8 (63.0%) 
	Black-throated Blue Warbler	Boreal Forest	+1.4 (142.7%) 
	Brown-headed Nuthatch	Eastern Forest	-0.3 (-15.4%) 
	Canada Warbler	Eastern Forest	-4.2 (-61.8%) 
	Golden-winged Warbler	Eastern Forest	-0.8 (-65.7%) 
	Hooded Warbler	Eastern Forest	+2.6 (102.4%) 
	Prairie Warbler	Eastern Forest	-3.8 (-51.6%) 
	Prothonotary Warbler	Eastern Forest	-1.3 (-38.2%) 
	Rose-breasted Grosbeak	Eastern Forest	-2.0 (-29.4%) 
	Scarlet Tanager	Eastern Forest	-0.3 (-10.5%) 
	Summer Tanager	Eastern Forest	+1.5 (15.6%) 
	Wood Thrush	Eastern Forest	-15.2 (-55.5%) 
	Yellow Warbler	Forest Generalist	-30.5 (-24.8%) 
	Total	-	-51.2 (-25.9%) 

	Coasts	Coast List	Pop change* (mil., %)
	American Oystercatcher	Atlantic, Gulf, Pacific	+0.004 (49.2%) 
	Black Oystercatcher	Pacific	+0.009 (878%) 
	Black Skimmer	Gulf	-0.04 (-39.6%) 
	Brown Pelican	Atlantic, Gulf	+0.13 (466.7%) 
	Clapper Rail	Atlantic, Gulf	-0.06 (-25.5%) 

	Least Tern	Atlantic, Gulf	-0.15 (-74.8%) 
	Long-billed Curlew	Pacific	+0.003 (2.5%) 
	Marbled Godwit	Gulf, Pacific	-0.06 (-26.5%) 
	Piping Plover	Atlantic, Gulf	-
	Red Knot	Atlantic, Gulf, Pacific	-0.79 (-85.0%) 
	Reddish Egret	Atlantic, Gulf	+0.002 (118.5%) 
	Ridgway's Rail	-	-
	Semipalmated Sandpiper	Atlantic, Gulf, Pacific	-4.76 (-67.8%) 
	Snowy Plover	Atlantic, Gulf, Pacific	+0.005 (17.9%) 
	Sooty Shearwater	-	-
	Western Sandpiper	Gulf, Pacific	-0.34 (-8.9%) 
	Total	-	-7.1 (-47.6%) 

	Water	Program	Pop change* (mil., %)
	American Avocet	Western Water	+0.1 (23.5%) 
	American Black Duck	Delaware River	-0.3 (-36.9%) 
	Bell's Vireo	Western Water	+1.8 (63.0%) 
	Belted Kingfisher	Delaware River	-1.6 (-45.8%) 
	Black-throated Blue Warbler	Delaware River	+1.4 (142.7%) 
	Cerulean Warbler	Delaware River	-1.2 (68.7%) 
	Crested Caracara	Everglades	+0.2 (366.8%) 
	Eared Grebe	Western Water	+1.0 (96.0%) 
	Golden-winged Warbler	Delaware River	-0.8 (-65.7%) 
	Great Cormorant	Delaware River	-
	King Rail	Great Lakes	-0.3 (83.8%) 
	Least Bittern	Great Lakes	+0.03 (34.6%) 

*Population change estimates are derived from Rosenberg et al. 2019 and represent number (in millions) and percent lost or gained since 1970 across North America. Species without population change data in this publication are marked with '-'. Coast List and Program report which priority birds lists the species appear on, not their geographic distribution.

	Least Tern	Hemispheric	-0.2 (-74.8%)	
	Louisiana Waterthrush	Delaware River	+0.1 (50.0%)	
	Northern Harrier	Delaware River	-0.3 (-29.5%)	
	Prothonotary Warbler	Hemispheric	-1.3 (-38.2%)	
	Red Knot	Delaware River	-0.8 (-85.0%)	
	Reddish Egret	Hemispheric	+0.002 (118.5%)	
	Roseate Spoonbill	Everglades	+0.05 (131.4%)	
	Ruddy Duck	Delaware River, Western Water	+0.8 (139.4%)	
	Saltmarsh Sparrow	Delaware River	-	
	Sandhill Crane	Western Water	+0.7 (358.2%)	
	Snail Kite	-	-	
	Snowy Plover	Western Water	+0.005 (17.9%)	
	Summer Tanager	Western Water	+1.5 (15.6%)	
	Western Sandpiper	Western Water	-0.3 (-8.9%)	
	White-faced Ibis	Western Water	+1.3 (1914.4%)	
	Wilson's Phalarope	Western Water	-0.1 (-4.2%)	
	Wood Stork	Everglades	+0.01 (161.1%)	
	Wood Thrush	Delaware River	-15.2 (-55.5%)	
	Yellow Warbler	Western Water	-30.5 (-24.8%)	
	Yellow-breasted Chat	Western Water	-3.9 (-20.6%)	
	Total	-	-48.4 (-23.5%)	
Working Lands				
	Program		Pop change* (mil., %)	
	American Woodcock	Healthy Forests	-1.7 (-32.2%)	
	Bell's Vireo	Shrubland	+1.8 (63.0%)	
	Black-necked Stilt	Central Valley	+0.1 (261.2%)	

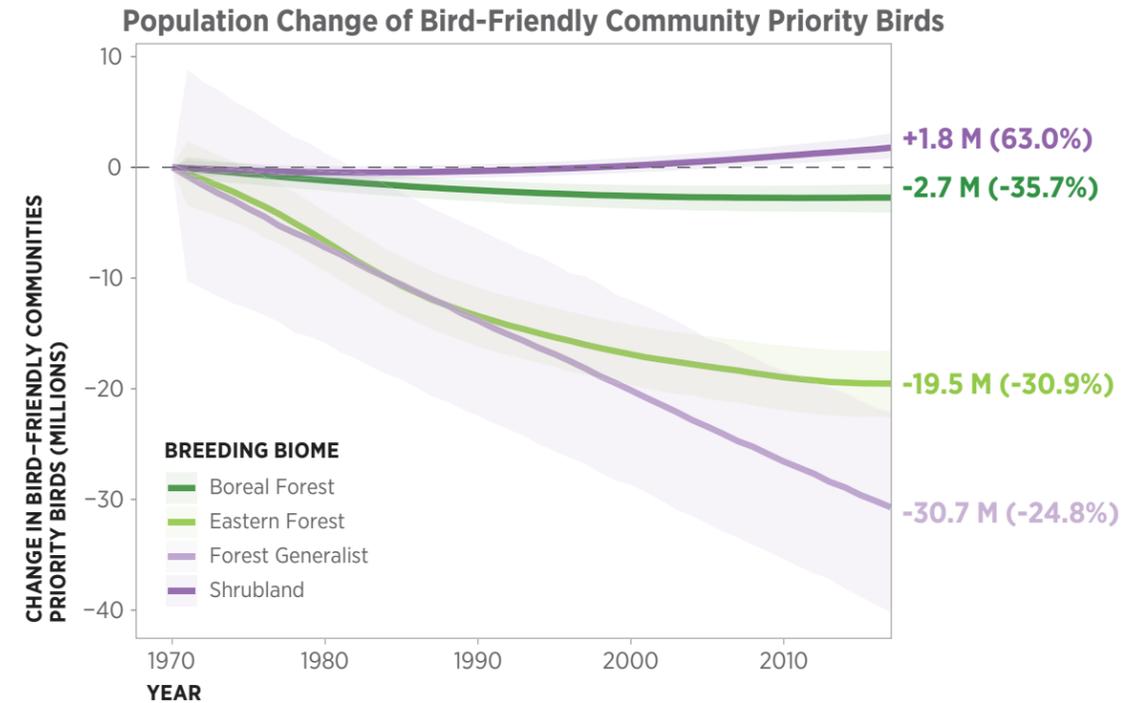
	Black-throated Blue Warbler	Healthy Forests	+1.4 (142.7%)	
	Bobolink	Grasslands	-15.8 (-60.7%)	
	Brown-headed Nuthatch	Healthy Forests	-0.3 (-15.4%)	
	Canada Warbler	Healthy Forests	-4.2 (-61.8%)	
	Cerulean Warbler	Healthy Forests	-1.2 (-68.7%)	
	Florida Scrub-Jay	Healthy Forests	-	
	Golden-winged Warbler	Healthy Forests	-0.8 (-65.7%)	
	Greater Sage-Grouse	Sagebrush	-0.6 (-59.4%)	
	Hooded Warbler	Healthy Forests	+2.6 (102.4%)	
	Lesser Prairie-Chicken	Grasslands	-	
	Long-billed Curlew	Central Valley, Grasslands	+0.003 (2.5%)	
	Northern Bobwhite	Healthy Forests	-21.0 (-78.4%)	
	Prairie Warbler	Healthy Forests	-3.8 (-51.6%)	
	Rose-breasted Grosbeak	Healthy Forests	-2.0 (-29.4%)	
	Sandhill Crane	Central Valley	+0.7 (358.2%)	
	Swainson's Hawk	Central Valley	+0.3 (69.2%)	
	Swainson's Warbler	Healthy Forests	+0.1 (259.4%)	
	Tricolored Blackbird	Central Valley	-0.03 (-8.1%)	
	Upland Sandpiper	Grasslands	+0.2 (26.1%)	
	Western Meadowlark	Grasslands	-65.1 (-40.6%)	
	Western Sandpiper	Central Valley	-0.3 (-8.9%)	
	Wood Thrush	Healthy Forests	-15.2 (-55.5%)	
	Yellow Warbler	Central Valley	-30.5 (-24.8%)	
	Yellow-breasted Chat	Central Valley	-3.9 (-20.6%)	
	Total	-	-159.0 (-37.3%)	

*Population change estimates are drawn from Rosenberg et al. 2019 and represent number (in millions) and percent lost or gained since 1970 across North America. Species without population change data in this publication are marked with '-'. Coast List and Program report which priority birds lists the species appear on, not their geographic distribution.



51.9 million (26%) of Bird-Friendly Communities' priority birds are gone

Bird-Friendly Communities



The Bird-Friendly Communities Strategy works to provide birds with the things that they need to thrive—including food, shelter, safe passage, and places to raise young—in the communities that we share with them

The birds in our communities breed in a variety of habitats, each with different rates of decline. Birds that spend part or all of their lives alongside us in and around our communities are at risk, with over 50 million birds lost since 1970—a cumulative loss of 26%. The boreal forests—our bird nursery—have seen losses of nearly 3 million priority birds. But the greatest losses were in eastern forests, where nearly 20 million priority birds were lost, and among forest generalists such as the Yellow Warbler, which saw losses of over 30 million birds since 1970. The shrublands are a ray of hope, with a gain of nearly 2 million Bell's Vireos. Here's what Audubon is doing to reverse these declines in our communities.

THREATS

- Loss of food, shelter, and habitat in urban and suburban communities
- Challenges of the built environment that lead to building collisions
- Loss of nesting sites, including dead trees and suitable nesting cavities

CONSERVATION ACTIONS

- Promoting the use of native plants, which provide more choices of food and shelter for birds and other wildlife
- Partnering with cities and municipalities to introduce ordinances that reduce use of glass, reduce reflectivity, and dim lights during key migratory periods
- Supporting chapters in building and placing nest boxes for cavity-nesting birds and provide other nesting structures



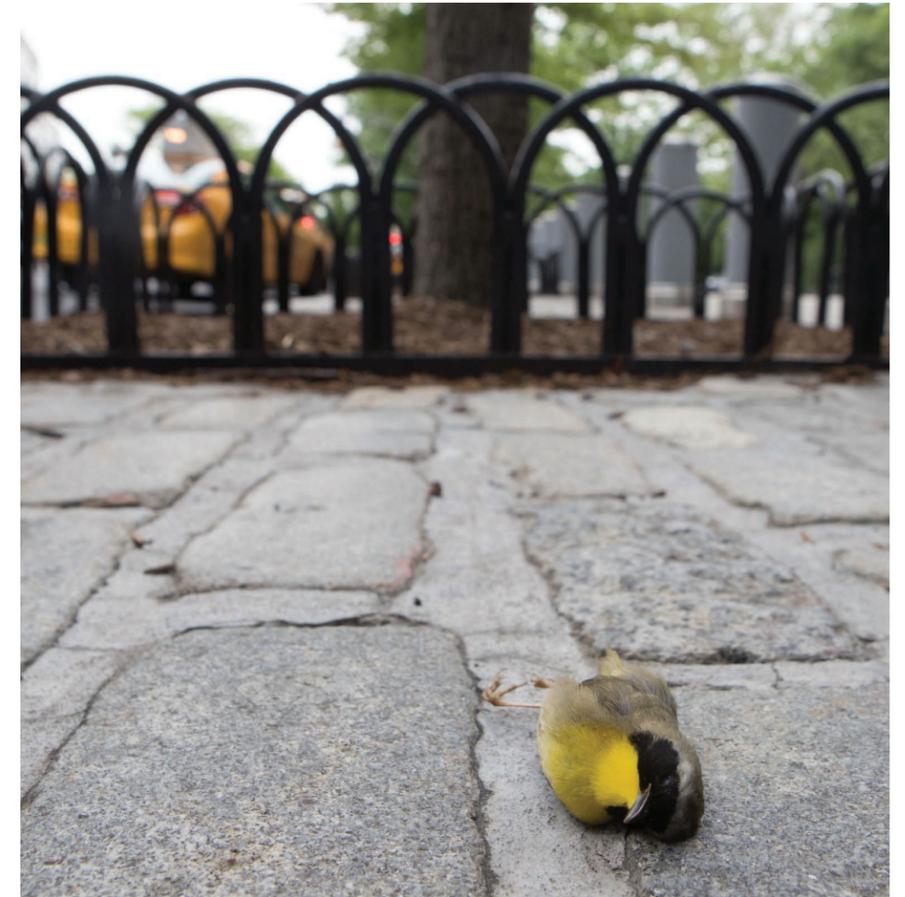
HUMMINGBIRDS AT HOME

Audubon's Hummingbirds at Home program encourages participants to provide native plants and supplemental feeders for hummingbirds and monitor visitation. A recent study published in *Landscape and Urban Planning* found that hummingbirds are more likely to visit gardens with feeders and a variety of plants native to the U.S. Plants flower at different times, and providing multiple options helps support hummingbirds year-round.



DEMONSTRATING PLANTS FOR BIRDS

Native plants are best for birds and wildlife—and demonstration gardens are popping up across the United States to showcase plantings that are as beautiful as they are beneficial. Plants for Birds demonstration gardens have been built at Audubon Centers such as Randall Davies in New Mexico, on college campuses in California and Florida, and even on the grounds of governors' mansions in North Carolina and South Carolina.



LEGISLATION MOVING THE NEEDLE

Audubon volunteers and staff around the country are spearheading passage of legislation that encourages or mandates the use of native plants and reduces hazards the human-dominated environment poses for birds. From changes to the building code in New York City that require bird-friendly features in new construction to a law in North Carolina that prioritizes the use of native plants along rights of way to passage of the Federal Bird Safe Buildings Act in the U.S. House, Audubon is impacting policy at multiple levels that benefit birds in our communities.

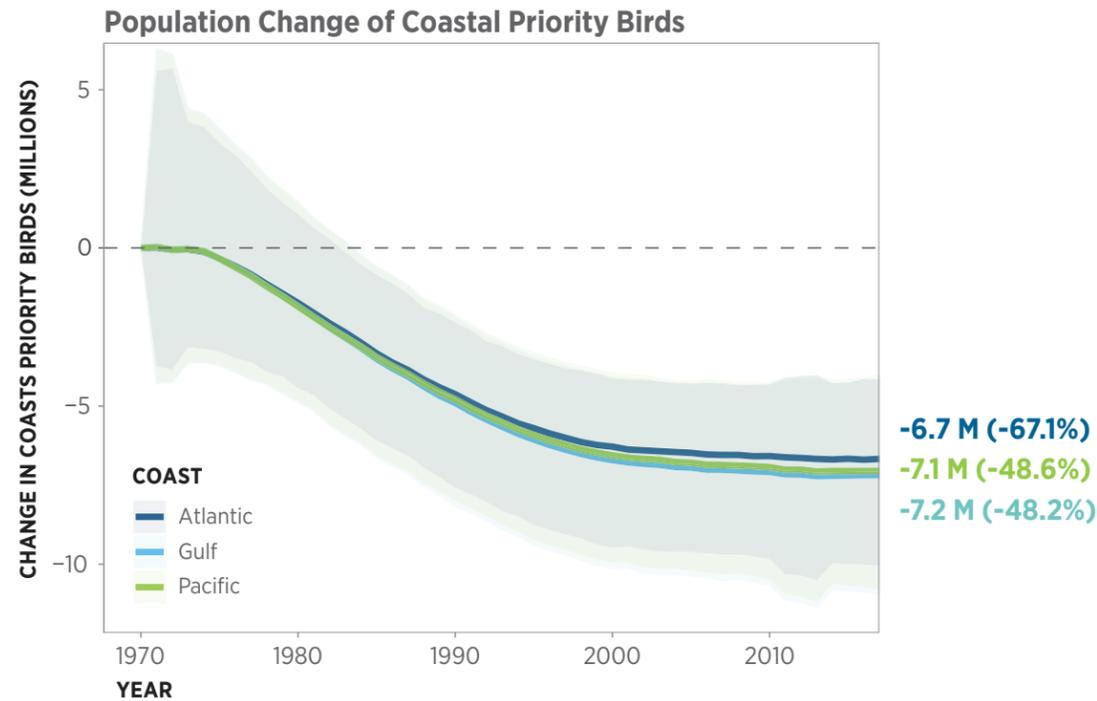


MAKE A LITTLE ROOM FOR NUTHATCHES

Brown-headed Nuthatches—a quintessential Southern bird—have lost the dead pines that once provided nest cavities to urbanization and deforestation. In response, Audubon North Carolina mobilized volunteers to place 12,000 nest boxes around the state. Thanks in part to these efforts, Brown-headed Nuthatches are rebounding in North Carolina with 1.4% population growth each year, despite declining across their range overall.



Coasts



Audubon's Coasts Initiative works to reverse threats to coastal and marine birds through increasing coastal resilience, implementing coastal stewardship, expanding Gulf of Mexico Restoration, and enhancing marine conservation

Coastal birds are in crisis, with over 7 million North American birds lost since 1970. Coasts priority bird populations are declining across the Pacific, Gulf of Mexico, and Atlantic shores. Shorebirds are at greatest risk, with losses of 5.5 million Semipalmated Sandpipers and 1 million Red Knots. But some coastal birds, including Brown Pelicans and Snowy Plovers, have recently rebounded thanks to conservation interventions. Here's what Audubon is doing to reverse these declines on our coastlines.

THREATS

- Coastal habitat loss and degradation, increasing development, and shoreline hardening (e.g., building seawalls, jetties, etc.) in sensitive coastal areas
- Human disturbance of breeding, wintering, and migrating birds
- Climate change impacts to coastal and marine habitats including sea level rise, more intense coastal storms, shoreline erosion, water pollution, ocean warming, and ocean acidification.

CONSERVATION ACTIONS

- Protecting coastal birds from human disturbance and other threats, habitat protection and management, advocacy, education, and other conservation measures to ensure food and habitat are protected for coastal birds
- Implementing coastal stewardship in the forms of symbolic fencing around active nesting sites, advocacy, education, on-the-ground disturbance management, and other conservation measures to ensure food and habitat are protected for coastal birds
- Defending and supporting policies that enhance coastal resilience, securing funding to protect coastal communities and habitats most at risk from sea level rise, reducing risks of oil spills, ensuring clean waters, and maintaining healthy forage fish populations in support of coastal birds

7.1 million (47%) of Coasts' priority birds are gone



SONOMA CREEK ENHANCEMENT

Sonoma Creek is an Important Bird Area in the northern end of San Francisco Bay that provides critical habitat for birds of the Pacific Flyway, yet mining and agriculture have greatly limited wetland function. Audubon and our partners have completed a multi-year demonstration project to revive 400 acres of tidal marsh to provide habitat today, as well as resilience to future climate change, by building channels through the marsh to allow it to drain and creating upland transitional habitat as refuge during storms and high tides. Phase 2 has been completed this year, and near-threatened Ridgway's Rails have already returned to use the newly-restored habitat.



REFINING COASTAL STEWARDSHIP

Audubon Florida and their partners have spent 20 years refining coastal bird stewardship methodology. Coastal managers have learned that vegetation and predation management tools combined with stewardship methods—fencing, signage, and onsite education—yields increased nesting success. But not all beaches are the same—each site needs its own unique management strategy to increase the efficiency of our bird conservation efforts.



LEAST TERN STEWARDSHIP

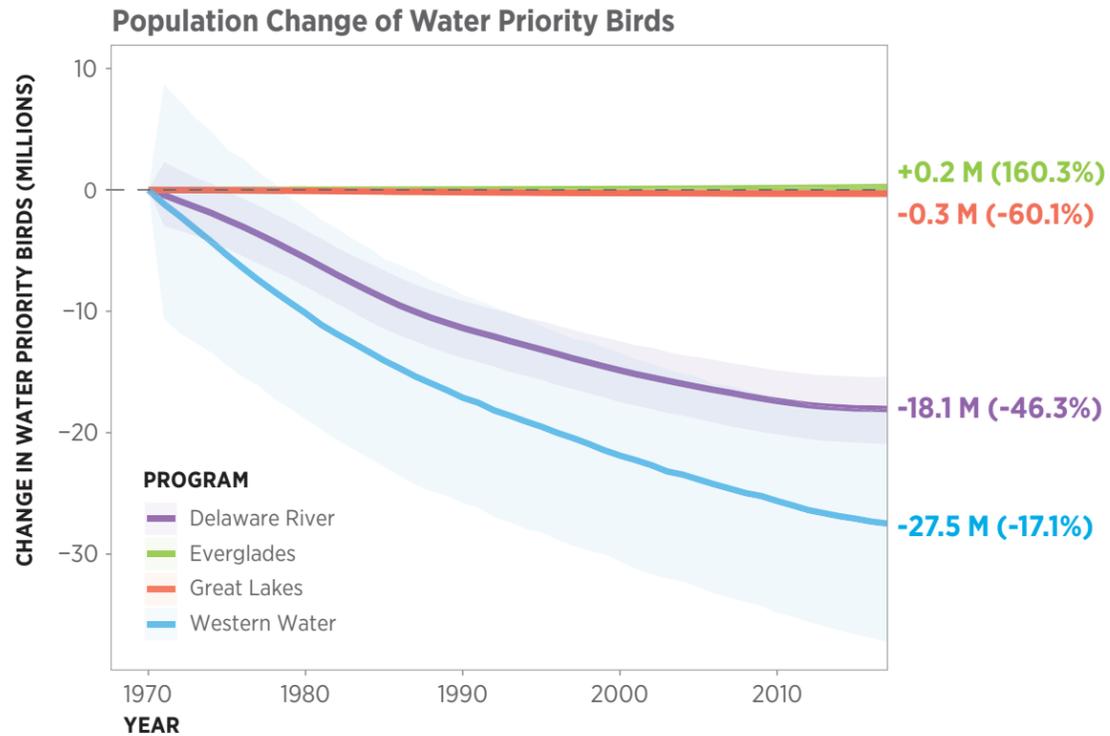
Human disturbance is one of the primary threats to coastal birds, particularly on crowded Gulf of Mexico beaches. Stewardship actions such as fencing, signage, and patrols let birds focus on their young rather than fleeing threats. A recent study published in *Ornithological Applications* found that active stewardship of Least Tern colonies in Mississippi increased nest success. Audubon's work is demonstrably making a difference for coastal birds.



RESTORING LONG ISLAND SOUND

Audubon is restoring salt marsh in Long Island Sound. Past conservation efforts at Sunken Meadow State Park restored low marsh habitat, removed impervious surfaces, and reduced runoff. To further enhance habitat, Audubon NY and partners will complete an engineering plan that targets high marsh and Saltmarsh Sparrow habitat for a dynamic 83-acre area. On the other side of the Sound, Audubon CT is working with partners to restore 40 acres of habitat at the Great Meadows Unit of the Stewart B. McKinney NWR. The project will establish natural marsh elevations; clear invasive and plant native vegetation; build-up subsiding marsh; construct intertidal channels to restore tidal flow; create hummocks to benefit the Saltmarsh Sparrow; and construct viewing platforms, improving visitor access.

Water



The Water Initiative aims to advance sustainable water management to protect the most important rivers, lakes, streams, wetlands, and delta habitats for birds across the hemisphere

Water birds are under threat, with nearly 30 million birds lost since 1970. The greatest losses have been among birds that use the rivers and saline lakes of the interior West, where over 4 million Yellow-breasted Chats and 9% of Western Sandpipers have been lost. Yet Everglades priority birds are recovering, with an increase of over 1 million White Ibis across North America. Here's what Audubon is doing to put water birds on the road to recovery.

THREATS

- Decreased water quantity due to diversions, drawdowns, and climate change
- Reduced water quality due to excess agricultural chemicals, nutrients, and other pollutants
- Wetland loss, degradation, and drainage

CONSERVATION ACTIONS

- Supporting and defending policy actions, local community engagement, and funding to ensure adequate water levels and flows to critical ecosystems
- Pursuing policy actions to reduce nutrient inputs and improve water quality through natural infrastructure projects and restoration programs
- Providing science through monitoring and research to inform conservation actions by agencies and landowners
- Restoring and enhancing wetlands in the Great Lakes, Salton Sea, and elsewhere

48.4 million (23%) of Water's priority birds are gone



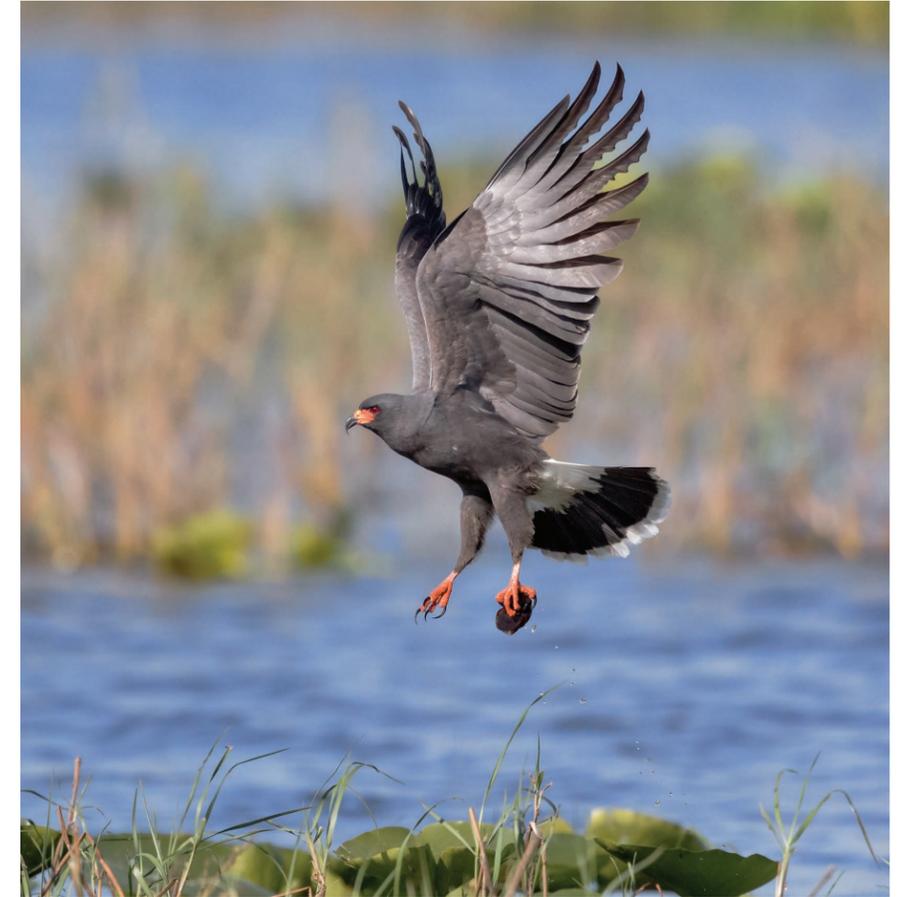
RESTORING CALUMET WETLANDS

The Calumet wetlands of Illinois and Indiana once covered 45,000 acres, supporting regionally significant numbers of breeding marsh birds. However, wetland loss and degradation led to near-total loss in populations. Audubon Great Lakes and partners are working together to restore wetlands for marsh birds across 15,000 acres in Calumet. Thanks to these efforts we are seeing population recovery, with increases in eight of the species of greatest conservation concern. For instance, at Big Marsh Park, we have documented the return of imperiled species such as Least Bittern and Common Gallinule, which had not been active at the site in decades.



UNCOVERING YUMA RIDGWAY'S RAIL

The endangered Yuma Ridgway's Rail is a secretive marsh bird restricted to the southwest. Until recently, their breeding and wintering habitats were little-known. Two recent studies have shed light on this rare bird, identifying expanded wetland availability along Arizona's Gila River, and tracking wintering birds to mangrove wetlands in Mexico. Together these studies identify critical areas for conservation, and provide more opportunities for protection.



SNAIL KITE RECOVERY Between 1999 and 2009, the endangered Everglade Snail Kite population declined by 80%. The kite population has recovered since, in sporadic super-nesting events based on exotic apple snails. Yet, Florida apple snail populations have not recovered, nor has Snail Kite nesting in the Everglades themselves, reminding us that problems persist. Audubon's Dr. Paul Gray co-chairs the Kite Committee and we are the leading advocate for them.



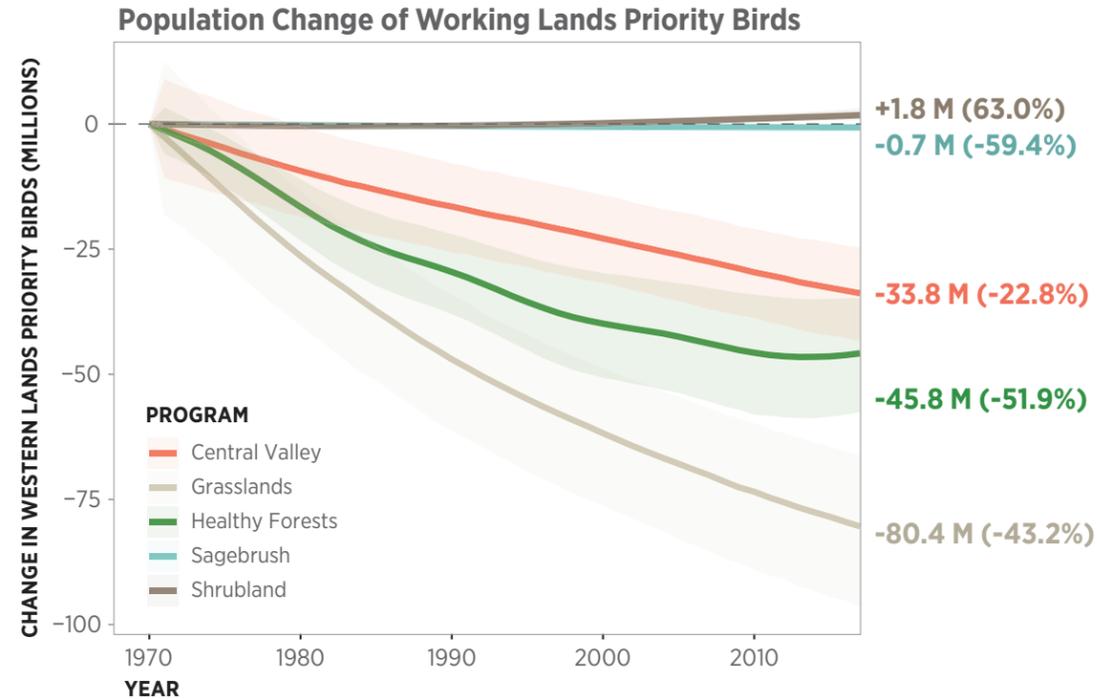
PROTECTING THE DELAWARE RIVER WATERSHED

The Louisiana Waterthrush depends on healthy streams supporting aquatic macroinvertebrates for food and suitable stream banks for nesting. In a region of the Delaware River Watershed where water quality is exceptional, but development pressure is high, Audubon is engaging stream-side homeowners to plant native vegetated stream buffers, improving habitat for Louisiana Waterthrush while absorbing stormwater runoff and maintaining water quality.



159.0 million (37%) of Working Lands' priority birds are gone

Working Lands



Through the Working Lands Initiative, Audubon partners with landowners, land managers, government agencies, and private industry to increase the quality of habitat on private and public lands to benefit birds and people

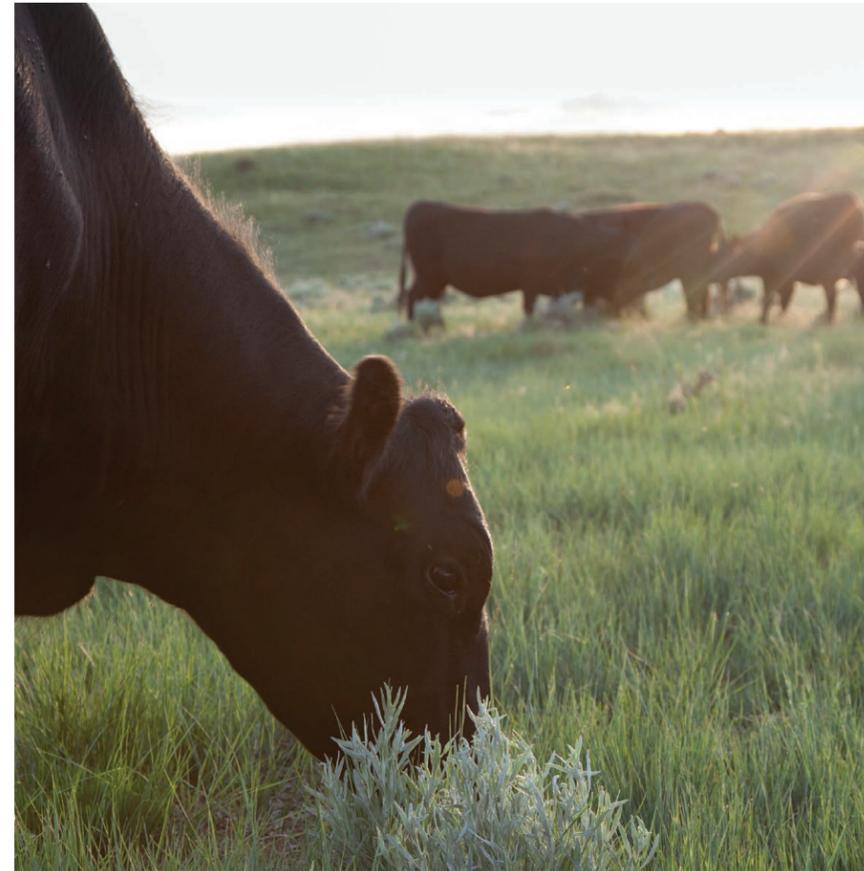
Working Lands priority birds have experienced the most severe losses, with 159 million birds lost since 1970. Working Lands include our grasslands, forests, shrublands and wetlands where private landowners are managing habitat to meet economic needs. Among working lands, grassland habitats—where cattle are fed and grazed—account for over half of the losses, including 65 million Western Meadowlarks. Eastern forests—which support multiple uses including lumber and maple syrup—have also faced losses of nearly 46 million birds. Meanwhile, the Central Valley of California—where birds rely on crop fields for food and habitat—has lost nearly 34 million birds. Audubon is partnering with industry or private land owners in each Working Lands program to ensure that habitat continues to support both birds and people. Audubon is pivoting to increasingly focus on protecting grassland birds, where market-based approaches like Audubon’s Conservation Ranching, sustainable use incentives, and emerging carbon markets have potential for landscape scale benefits.

THREATS

- Grassland, forest, and wetland habitat loss and degradation on breeding and wintering grounds as well as critical migratory stopover sites
- Water diversions away from wetlands and beneficial crop types
- Invasive species that alter habitat suitability and quality, and altered fire regimes

CONSERVATION ACTIONS

- Protecting and restoring the habitat birds need across their full annual cycles
- Pursuing policy actions to ensure Central Valley wetland birds have the water they need
- Managing invasive species that are altering southwestern grassland habitat and fire cycles
- Partnering with farmers to manage crops to create habitat for birds and contribute to climate solutions



AUDUBON CONSERVATION RANCHING INITIATIVE

Grassland birds are severely declining across North America, yet on Audubon-certified ranches these same birds are thriving. Unprecedented partnerships between Audubon and private landowners have led to marked rises in grassland bird populations, including a five-fold increase in Eastern Meadowlarks and a six-fold increase in Northern Bobwhites in Missouri alone. Ranches enrolled in the Audubon Conservation Ranching Initiative across 2.3 million acres in the US support more abundant and resilient grassland bird communities than conventionally managed land. We are now unlocking the opportunity for these same lands to contribute to climate mitigation by driving carbon sequestration in healthy soils.



SAVING TRICOLORED BLACKBIRD COLONIES

Tricolored Blackbirds, the last large-scale, North American, land-based colonial nester, has adapted to nest in agricultural fields. Unfortunately, this nesting can conflict with harvest. Working with Natural Resources Conservation Service and the dairy industry, Audubon helps farmers delay harvest to protect nesting birds. This year, 100% of at-risk colonies in the Valley were protected, saving 177,000 adult birds. Over the last five years, 680,000+ Tricolored Blackbirds have been saved through this effort.



CONSERVING CHICAGO'S GRASSLANDS

Audubon Great Lakes is working closely with public landowners in the Chicago region to coordinate and prioritize grassland management to benefit imperiled species such as Bobolink and Henslow’s Sparrow. Using the Grassland Bird Conservation Areas spatial model, potential grassland complexes have been mapped for the entire region, helping inform partners’ land acquisitions and management actions in a highly fragmented landscape.



ENDORISING FORESTERS FOR BIRDS

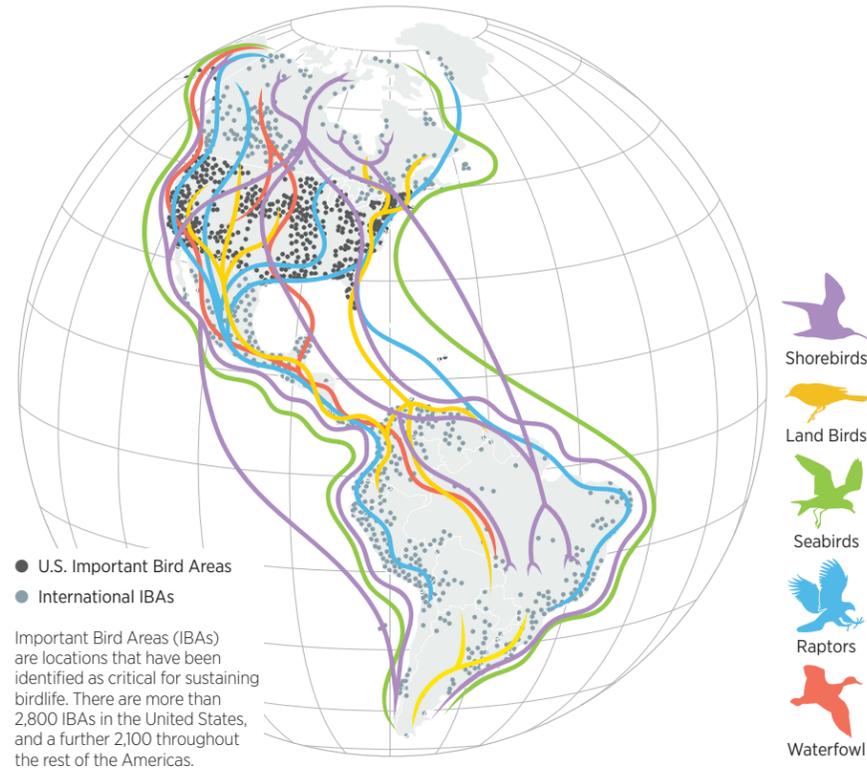
The eastern forests of North America support a diverse bird community, yet face numerous stressors. The vast majority of working forests are privately owned and managed. Audubon’s Forester Endorsement Program is creating a community of trained foresters who have demonstrated their ability to plan and implement science-based bird-friendly forest management. It’s a winning formula for habitat, forest health, and rural economies throughout eastern forests at a scale necessary to have positive landscape-level impacts to bird populations.

Migratory Bird Initiative

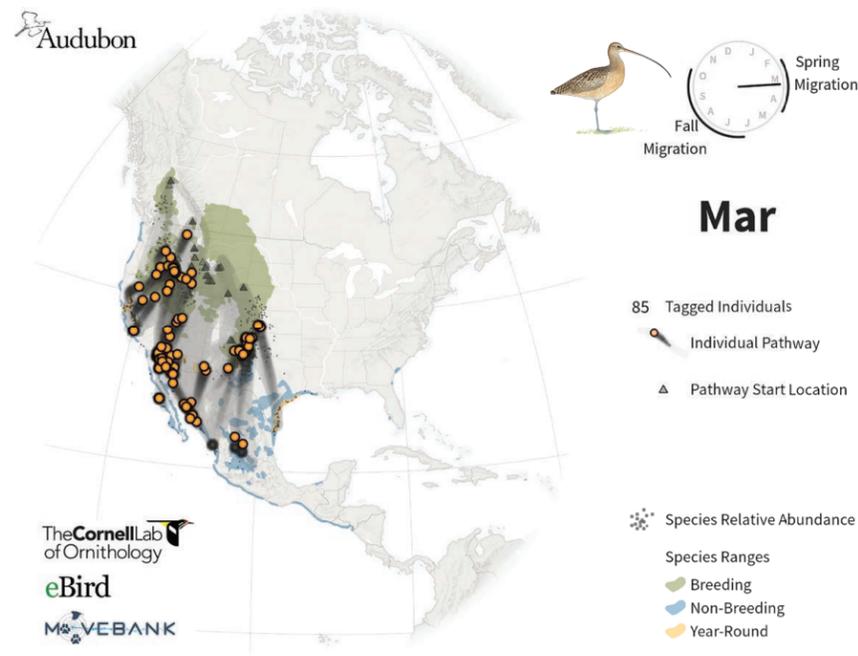
Securing the future of North American migratory birds by identifying the places they need to thrive across the Americas, taking actions to protect them and reduce threats, and engaging people in the joy of migration.

More than 70 percent of the bird species that breed in the United States and Canada are migratory, and they spend most of the year—up to eight months—in Latin America or the Caribbean. It's not enough to protect the places these birds need within our own borders, as evidenced by the loss of 2.5 billion migratory birds since 1970. We must know where they go—migration corridors and refueling or resting stopovers, as well as wintering and breeding sites. In understanding these vital connections, we gain a clear pathway toward full annual-cycle protection for migratory birds.

The Migratory Bird Initiative and its Conservation Platform and applications will enable us to reach our goal of hemispheric conservation. The Conservation Platform will aggregate disparate migratory bird data from across the Western Hemisphere, letting people see the connections between their communities and far-away places that birds depend on. Applying this migration data also supports Audubon's conservation strategies by revealing the hemispheric importance of the priority landscapes where we work. By highlighting the threats migratory birds face, we will be able to make a sound, science-backed case for conserving birds and their habitats in the most critical places that they—and we—need to thrive.



Long-billed Curlew



Integrating tracking data and relative abundance from eBird helps identify important places for Long-billed Curlews

CITATIONS: 1) BirdLife International and Handbook of the Birds of the World. (2017). Bird species distribution maps of the world. Version 7.0. Available at <http://datazone.birdlife.org/species/requestdis> Bradley, D., BC LBCU Tracking Study. https://www.movebank.org/cms/webapp?gwt_fragment=page=studies,path=study256084367, Accessed January 10, 2020. 2) Carlisle, J., Long-billed Curlew Migration from the Intermountain West. http://www.movebank.org/panel_embedded_movebank_webapp?gwt_fragment=page=studies,path=study42451582, Accessed January 10, 2020. 3) Fink, D., Auer, T., Johnston, A., Strimas-Mackey, M., Robinson, O., Ligocki, S., Petersen, B., Wood, C., Davies, I., Sullivan, B., Illiff, M., Kelling, S. (2020). eBird Status and Trends, Data Version: 2018; Released: 2020. Cornell Lab of Ornithology, Ithaca, New York. <https://doi.org/10.2173/ebirdst.2018>

Audubon protects short- and long-distance migrants alike



AUDUBON SAGEBRUSH ECOSYSTEM INITIATIVE

The sagebrush steppe is North America's largest ecosystem, extending across 14 western states with over 60 percent on public lands. More than 350 bird species depend on the sagebrush ecosystem. Audubon's science and convening power led to the historic 2015 collaborative conservation agreements that protected 60 million acres across the west for grouse habitat. The past four years have been an uphill battle as threats to the sagebrush ecosystem have mounted in scope and breadth. In 2020, Audubon continued to be the conservation leader for the ecosystem, elevating the voices of 103,000 members in federal actions and winning a monumental lawsuit concerning oil and gas leases on our public lands in critical grouse habitat.



PROTECTING HORSESHOE CRABS TO SAVE RED KNOTS

Red Knots travel an impressive 19,000 miles each year, often flying for six to eight days nonstop. This herculean feat is only made possible by fueling up on abundant prey at their migratory stopover locations. Red Knots have long timed their migrations to line up with the migrations of a very different species: horseshoe crabs, which haul themselves ashore on Atlantic beaches to spawn just as the shorebirds arrive. Unfortunately for the crabs—and the Red Knots—horseshoe crabs are often used as bait, and their blood is in great demand for use in biomedical testing. As a result, horseshoe crab populations have crashed, leaving few eggs for migrating Red Knots to fuel up on. In response, Audubon, its state offices in New York and Connecticut, and New Jersey Audubon are working to reduce threats to horseshoe crabs to protect Red Knots. New Jersey Audubon was instrumental in passing a bill to ban the use of horseshoe crabs as bait, and has trained hundreds of volunteers to monitor crabs at spawning beaches.



GOLDEN-WINGED WARBLER FULL ANNUAL CYCLE CONSERVATION

Golden-winged Warbler populations are declining. Though Golden-winged Warblers breed in shrubland and early-successional forest, this bird needs at least 70% of the surrounding landscape to be forested. That requires maintaining a complicated forest mosaic with different age-classes. Audubon biologists in NC, NY PA, and VT work with farmers, forest managers, and private landowners to steward sustainable practices that support both early-successional and forest interior species. Because Golden-winged Warblers are threatened by habitat loss and degradation throughout their annual cycle, Audubon NC is also working with scientists and partners in Nicaragua to better understand their winter habitat needs and connectivity through the deployment of geolocator tracking devices. Our work in Nicaragua has helped identify threats and strongholds for the species across its winter range and inform conservation actions like land protection and management. By working with partners to improve our understanding of Golden-winged Warbler habitat needs and increase availability of suitable habitat, Audubon is helping to curtail the population decline of this vulnerable bird.

Equity, Diversity, and Inclusion

ForestHer: Training the Next Generation of Foresters

Audubon North Carolina is increasing equity and diversity in forestry stewardship through the ForestHer program (left). Forests have traditionally been owned and managed by white men, but over the last decade the percentage of private forests with a woman as the primary decision-maker doubled from 11% to 22%. Through the ForestHer NC Initiative, Audubon is partnering with state and national conservation groups to host workshops teaching foundational forestry skills including tree identification and valuation, invasive species management, and encouragement of wildlife habitat. Over 700 women have participated in workshops to date, including a large number of BIPOC women. The workshops empower women by teaching valuable skills while providing opportunities for networking and relationship-building. By creating a community of women foresters, ForestHer NC has the potential to change the way conservation happens across North Carolina's forests.

Let's Go Birding Together

Let's Go Birding Together was launched by Jason St. Sauver at Spring Creek Prairie Audubon Center in 2016 to build community by making birding accessible to and inclusive of everyone. Since then, the series of inclusive walks and other events for LGBTQIA birders, their families, and allies has expanded across the country, accompanied by logos splashed across clothing, mugs, and stickers. Let's Go Birding Together helps create a safe space where people can be themselves without fear of judgment, and everyone can share the joy of birds while developing community.

Birdability

The Birdability initiative was launched by Virginia Rose at Travis Audubon in 2018. The initiative's mission is to introduce mobility-challenged people to the joys of birding, and connect them locally and nationally. Virginia Rose started by creating and sharing an interactive map of accessible birding sites in and around Travis County, Texas. In 2020, National Audubon Society joined the initiative and helped develop and share a national Interactive Birdability Map that lets users across the country share reviews of accessibility at their birding sites. The national map was launched in conjunction with Birdability Week 2020, which featured Facebook Live events, Twitter hashtags, and a survey. Stay tuned for Birdability Week 2021, when (Covid-allowing) chapters and bird clubs will host accessible bird outings to introduce more people to the love of birding and the outdoors.



Virginia Rose, Birdability founder, visits an accessible birding site.



ForestHers building community in the mountains of NC. Pictured: Lauren Sarah and Cara Sylvine.



Jason St. Sauver searches the canopy during a Let's Go Birding Together walk in Central Park, New York.

Stewardship Benefits Coastal Birds

For over a century, Audubon has worked with volunteers and partners to steward coastal sites across North America. Today, we work at an astounding 1,090 coastal sites across 16 US states plus The Bahamas, Chile, and Panama. At these sites, we employ a variety of stewardship techniques, including fencing, signage, predator management, habitat restoration, and posting wardens to patrol the beach and engage with the public.

But until recently, we've been unable to evaluate the effects of our stewardship actions on birds at scale. **Here, we present the results of a new peer-reviewed study published in *Conservation Biology* (Michel et al. 2021) showing that Audubon's stewardship actions are benefiting coastal birds.**



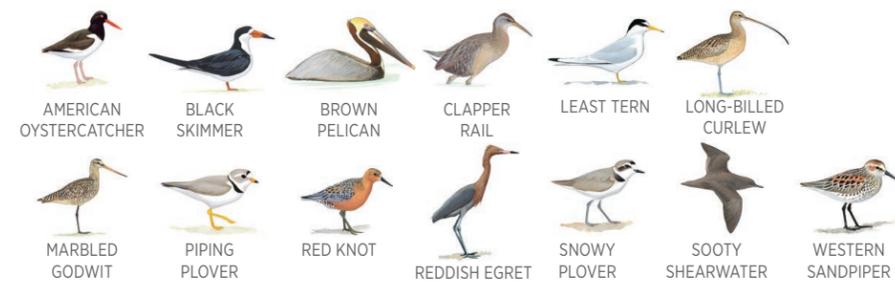
Children created bird-friendly signs for their beach in Point Lookout, NY.

What We Did

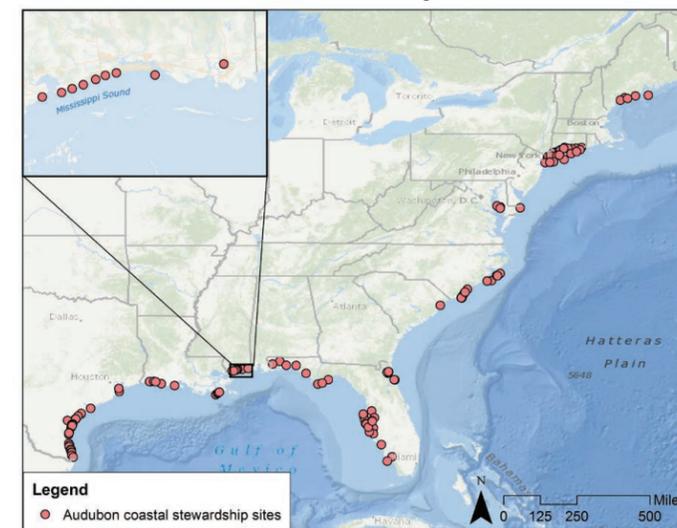
We evaluated the effects of stewardship actions on Audubon's 13 Coasts priority birds along the Gulf of Mexico and Atlantic coasts of the United States. We estimated the mean abundance and 12-year trend (2007–2018) for each species by aggregating eBird data collected within 2.5 km of each of Audubon's 392 sites with stewardship and management.

We also estimated mean abundance and trends for Coasts priority birds at protected areas (including local, state, and federal parks and wildlife refuges), as well as across unprotected areas (that is, all areas not designated as Audubon sites or protected areas). We compared abundance and trends between stewardship sites, protected areas, and unprotected areas to answer the question: **do priority birds have greater abundance or more positive trends where Audubon works?**

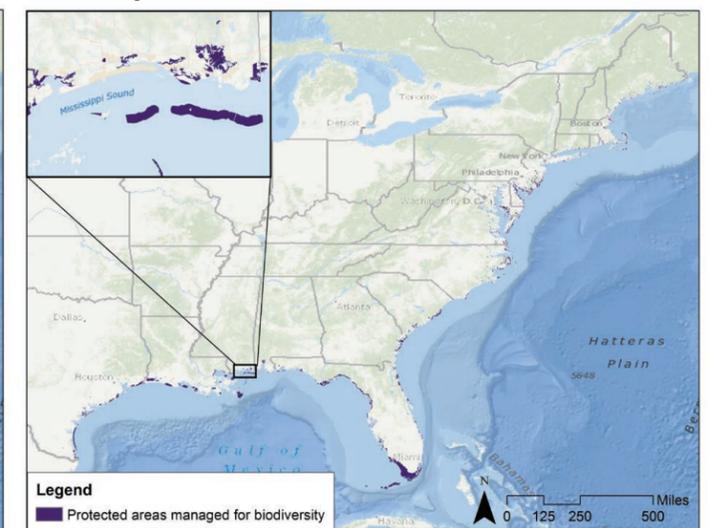
Gulf and Atlantic Coast Priority Species



Audubon's coastal stewardship sites

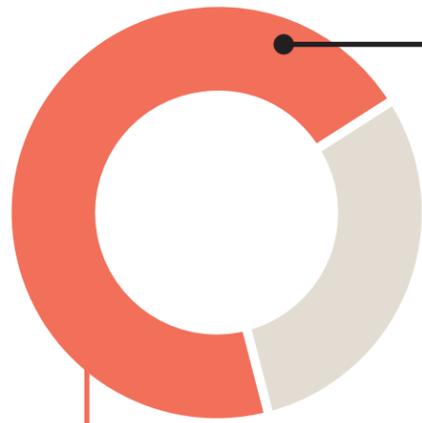


Coastal protected areas



Michel, N.L., S.P. Saunders, T.D. Meehan, C.B. Wilsey. 2021. Effects of stewardship on protected area effectiveness for coastal birds. *Conservation Biology*, <https://doi.org/10.1111/cobi.13698>

What We Found



77%
of Coasts priority birds were more abundant and/or had more positive trends where Audubon conducts stewardship and management than at unprotected sites.

More importantly, we found that populations of four coastal-breeding birds—Black Skimmer, Brown Pelican, Least Tern, and Piping Plover—grew 2–34 times faster where stewarded than at other protected areas.

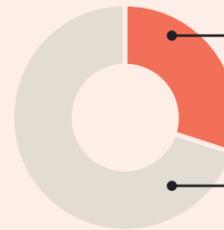
Do Coasts priority birds have greater abundance or more positive trends at Audubon sites than in unprotected areas?



YES
10 species
NO
3 species



Do Coasts priority birds have greater abundance or more positive trends at Audubon sites than at other protected areas?



YES
4 species
NO
9 species



Piping Plover populations grew faster where Audubon conducts stewardship



Audubon's stewardship actions demonstrably move the needle for Coasts priority birds, providing a conservation benefit that supports growing populations of these vulnerable birds.

Piping Plovers do better where Audubon works than at either protected or unprotected areas in both seasons

Piping Plover

Notes

Copyright ©2021 National Audubon Society

Bird illustrations: David Allen Sibley. Photos: American Avocet, Evan Barrientos/Audubon Rockies (p1); Hooded Warbler, ps50ace/iStock (p2); Parker Seibold (p8); clockwise from top left: Anna's Hummingbird, Luke Franke/Audubon; Common Yellowthroat, Camilla Cerea; Brown-headed Nuthatch, Matt Tillet/ Flickr (CC by 2.0); Allison Farrand (p9); Noah Densmore/Shutterstock (p10); clockwise from top left: Luciane Coletti; Least Tern, Ursula Dubrick/Audubon Photography Awards; Benjamin Maher; Nicholas Wetzel/Audubon Photography Awards (p11); Great Blue Heron, Mike Fernandez/Audubon (p12); clockwise from top left: Stephanie Beilke/Audubon; Snail Kite, Caroline Samson/Audubon Photography Awards; Louisiana Waterthrush, Darla J. Oathout/Audubon Photography Awards; Yuma Ridgeways Rail, Claudio Contreras Koob (p13); Evan Barrientos/Audubon Rockies (p14); clockwise from top left: Evan Barrientos/Audubon Rockies; Boblink, Caroline Samson/Audubon Photography Awards; Ronald Rohrbaugh; Tricolored Blackbird, Becky Matsubara/ Flickr (CC BY 2.0) (p15); from top: Greater Sage-Grouse, Evan Barrientos/Audubon Rockies; Red Knots, Gregory Breese/USFWS/Flickr (CC Public Domain); Golden-winged Warbler, Arni Stinnissen/Audubon Photography Awards (p17); Aimee Tomcho (p18); clockwise from top: Mike Fernandez/Audubon (2); Aimee Tomcho (p19); Luke Franke/Audubon (p20); Camilla Cerea/Audubon (p23)



[AUDUBON.ORG](https://www.audubon.org)