



**Testimony of Erin McGrath  
Policy Manager, Audubon New York  
Before the Senate Standing Committee on Environmental Conservation  
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Chairman Kaminsky, and distinguished members of the New York State Senate, thank you for granting Audubon New York the opportunity to offer testimony on the Climate and Community Protection Act. I am Erin McGrath, and I serve as the Policy Manager for Audubon New York.

As a leading state program of the National Audubon Society, Audubon New York leads our network of 65,000 members, 27 locally-affiliated chapters, seven sanctuaries and nature centers and our thousands of annual visitors, volunteers, and partners throughout the state. Audubon achieves its mission to protect birds and their habitats by connecting our vast and powerful network through science, advocacy, education and on-the-ground conservation programs.

In the absence of federal action, we are heartened by New York State's leadership in addressing climate change with the urgency it deserves. Unabated, the impacts of climate change will put New York State's birds, people, and environment at risk within our lifetimes. The report from the United Nations' Intergovernmental Panel on Climate Change has demonstrated that we need to develop a comprehensive mitigation strategy for reducing our carbon emissions and a robust adaptation strategy that combats the effects of climate change that we are already seeing in the natural world.

Developing a successful mitigation strategy will require us to examine every sector of our economy - including transportation, manufacturing, agriculture, building emissions, and electricity production - to identify where we can reduce, neutralize, or eliminate carbon emissions. Of equal importance will be identifying those emissions which we cannot eliminate in the near future, and developing a strategy to offset those emissions through carbon sequestration.

We must also analyze and catalogue the risks posed by climate change, and prioritize where we will need to pursue adaptation in response to either current risks or risks that will occur despite successful mitigation strategies. The IPCC Working Group II,<sup>1</sup> the United States National Academy of Sciences,<sup>2</sup>

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<sup>1</sup> Climate change 2001: impacts, adaptation and vulnerability, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, edited by J. J. McCarthy, O. F. Canziani, N. A. Leary, D. J. Dokken and K. S. White (eds). Cambridge University Press, Cambridge, UK, and New York, USA, 2001.

<sup>2</sup> Engineering, and Public Policy (U.S.) Panel on Policy Implications of Greenhouse Warming Committee on Science (1992). Policy Implications of Greenhouse Warming: Mitigation, Adaptation, and the Science Base. National Academies Press. p. 944.

and the United Nations Disaster Risk Reduction Office<sup>3</sup> all agree that while we must undertake aggressive mitigation to curtail catastrophic warming, pursuing adaptation to the current hazards of global warming will still be necessary.

Lastly, it is important that New York State back its climate and energy goals with the force of law. Successfully combatting climate change will be a decades-long effort, and we must ensure that New York State government continues to make progress toward climate mitigation and adaptation despite any future changes in political climate. Setting the Clean Energy Standard, other emission-reduction standards, and a mitigation and adaptation strategy into law will ensure that we remain focused and help to prioritize state and federal funding for these efforts.

## Climate Change and the Threat to Birds

**By the Numbers.** Audubon scientists have used hundreds of thousands of citizen-science observations and sophisticated climate models to predict how birds in the U.S. and Canada will react to climate change. Our work defines the climatic conditions birds need to survive and then maps where those conditions will be found in the future as the Earth's climate responds to increased greenhouse gases. This work has produced the broadest and most detailed study of its kind, and is the closest thing we have to a field guide to the future of North American birds.

The numbers are stark. By 2080, Audubon's climate model projects that 314 out of 588 species will either be "climate-threatened" or "climate endangered", including at least fifty species in New York State. Birds are sensitive to subtle changes in their environment. Changes in the availability of food, water, and habitat – all of which are influenced by climate – can cause them to shift or lose their ranges. The 188 climate-threatened birds face losing more than half of their current ranges by 2080, although they have the potential to shift into new areas, provided that habitat is available. The 126 climate-endangered species are projected to lose more than 50 percent of their current ranges by 2050, with no net gain from range expansion. That means that dozens of avian species across the country could be hurtling toward extinction—and not just birds that are already in trouble. Both the Mallard and Wild Turkey, familiar sights in New York State, may be under threat before the end of the century.

Some bird species will be able to adapt to new climatic conditions, but certainly not all. And while many people assume that climate change will simply shift habitats farther north or to higher elevations, for the 126 climate-endangered species, including the Piping Plover and Bald Eagle, their climatic ranges are not only shifting but also dramatically shrinking.

**Predicting Climate's Impact on Birds.** To make predictions about the effects of climate change on animals, scientists need detailed longitudinal data on where and when species have been in the past. While such data is not common for most species, Audubon has been able to utilize observations made through its annual Christmas Bird Count and the North American Breeding Bird Survey, which contain records made by volunteer birdwatchers throughout the Americas. These observations go back over a hundred years, and provide a historical record of bird species, their ranges, and average numbers.

Using hundreds of thousands of standardized observations from both the Christmas Bird Count and the North American Breeding Bird Survey, Audubon was able to describe the "climate envelope" for each of

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<sup>3</sup> "Themes and Issues in Disaster Risk Reduction". UNISDR.

the 588 North American bird species—pinpointing the range of temperatures, amount of rainfall, and other climate characteristics of the habitats occupied by each species. They then looked for each combination of characteristics within sophisticated computer projections of the global climate, finding the future climate envelopes—and, by extension, the potential future ranges—of the species and mapping them to a resolution of 10 square kilometers. The study projects, for instance, that the Common Loon will lose 56% of its summer range and 75% of its winter range by 2080; shifting its range entirely out of the Adirondack waters that it so synonymous with. With this information, we can predict where species will be pushed to the brink and prioritize the protection of areas that provide future climate envelopes for endangered, threatened, or high concentrations of species.

**Threat from Sea Level Rise.** Audubon included only climatic variables and focused on birds within the United States and Canada when it conducted its report on climate change and its impact to birds. It did not include climate change-driven threats, such as sea-level rise and changes to prey base and species competition, or human development. If those threats were added to Audubon’s predictions, the situation has the potential to be much direr. One such example is the Saltmarsh Sparrow. This small songbird is endemic to the Atlantic Coast, where it nests in coastal saltmarshes just above the high tide. A significant portion of their entire population nests in the saltmarshes of Long Island, and is under threat from the immediate impacts of climate change. As sea level has risen, the area of saltmarsh safely above the high tide level is decreasing. That means fewer areas exist where these birds can nest successfully, because strong spring tides are increasingly swamping their nests, drowning eggs and nestlings. Relatively new data show that this species’ population is declining by nine percent every year, putting it firmly on the road to extinction unless we act quickly.

## Solutions to the Climate Crisis

The United Nations recently released a report from the Intergovernmental Panel on Climate Change, which found that if carbon emission continue to increase at their current rate, the atmosphere will warm as much as 2.7 degrees Fahrenheit above preindustrial levels by 2040. The report also stated that this increase in temperature would have more devastating consequences sooner than the initial projections made by the panel. These effects will include inundated coastlines, intensifying droughts, famines, and increased poverty. The authors of the report concluded that we must begin taking aggressive steps to combat climate change immediately.<sup>4</sup>

These findings show that we must develop a comprehensive approach to reducing carbon emissions. It is critical that we focus our efforts on taking affirmative steps to reduce major contributions to greenhouse gas emissions, including curtailing emissions from electricity production (25% of GHG), agricultural practices and food waste (24% of GHG), manufacturing (21% of GHG), transportation (14% of GHG), and buildings (6% of GHG).<sup>5</sup> This will require a number of actions to curtail our carbon

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<sup>4</sup> IPCC, 2018: Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, Maycock, M. Tignor, and T. Waterfield (eds.)]. *World Meteorological Organization, Geneva, Switzerland, 32 pp.*

<sup>5</sup> IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen,

emissions, and promoting carbon sequestration for the emissions we cannot eliminate due to lack of financial resources or available technology.

**Natural Climate Solutions.** An important part of our strategy to reduce atmospheric carbon must be the development of natural climate solutions; including better management of our forests, grasslands, marshes, and soils. Better management of our natural resources has the potential to offset as much as twenty-one percent of our annual carbon emissions, providing thirty-seven percent of the mitigation needed between now and 2030 to keep global temperature rise below 2° Celsius.<sup>6</sup>

The U.S. Climate Alliance has also identified better land management practices as a critical tool in combatting climate change, and the Alliance's Natural and Working Lands Initiative is working to develop strategies to increase the volume of carbon stored in ecosystems, reduce losses of already-stored carbon, and decrease greenhouse gas emissions caused by poor management.<sup>7</sup> Replanting trees, promoting forest resiliency and sustainable management, and restoring and maintaining coastal wetlands like salt marshes will be essential to achieving these offsets and must be included in New York State's strategy to combat climate change. These actions can also have the added benefit of creating or improving quality habitat for birds and other wildlife.

Promoting forest resiliency and sustainable management is already a core part of Audubon's mission. Sixty-three percent of New York State is covered by forests, which provide important habitat for more than a hundred species of birds throughout the year. One of the most important ecological functions of those forests is to provide breeding habitat for several dozen bird species, many of which are experiencing population declines due to a number of factors, including habitat fragmentation and the loss of quality habitat.

Audubon has identified more than forty-five priority forest bird species that would benefit from the creation of additional quality forest habitat. This can be achieved by making sure that New York State's public and private forests are actively managed to promote a diversity of tree species and different age-classes. To help promote responsible and active management of our forests, Audubon has developed the Healthy Forests Initiative, which pairs professional foresters with private and public landowners.

This Healthy Forests Initiative promotes the use of bird-friendly forest management techniques, which preserve intact forests and diversifies age classes, types of tree species, and other native plants. These silvicultural recommendations, when acted on by landowners, can create favorable conditions for birds and ensure that forests are resilient to undesirable stressors such as climate change. With this two-for-one benefit, natural climate solutions are the perfect solution for combating climate change and improving habitat for declining birds. Protection and better management of our forests will facilitate greater carbon sequestration and ensure that our forests provide quality habitat for species that are struggling to find suitable breeding and nesting habitat.

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S. Schlömer, C. von Stechow, T. Zwicker and J.C. Minx (eds.)). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

<sup>6</sup> Fargione, J. E., Bassett, S., Boucher, T., Bridgham, S. D., Conant, R. T., Cook-Patton, S. C., ... Griscom, B. W. (2018). Natural climate solutions for the United States. *Science Advances*, 4(11), eaat1869. <http://doi.org/10.1126/sciadv.aat1869>

<sup>7</sup> Natural & Working Lands — An Initiative of the U.S. Climate Alliance. (n.d.). Retrieved January 19, 2019, from <https://www.usclimatealliance.org/nwlands/>

We are pleased to see that the Climate and Community Protection Act's scoping plan prioritizes long-term carbon sequestration and sustainable land management as strategies for reducing atmospheric carbon. Audubon has the means, ability, and expertise to contribute to this strategy, and we are looking forward to working with the State to outline a path to New York's maximum potential for sequestration. We strongly recommend that the State undertake a baseline measurement of its current capacity for carbon sequestration as part of this scoping, and then build out targets for achieving greater sequestration, as well as the means to achieve them.

Additionally, we recommend that these strategies and goals be inclusive of existing state plans that either directly or indirectly increase our capacity for carbon sequestration, including land acquisitions made under the Open Space Conservation Plan, habitat conservation and restoration under the State Wildlife Action Plan, and resiliency and stewardship projects under the NY Parks 2020 Plan. This will provide a dual benefit by quickly populating the strategy with existing plans to conserve natural resources and leveraging consistent state and federal funding streams.

**Adoption of Responsibly-Sited Renewable Energy.** Audubon and other leaders in the conservation science space agree that in order to help prevent species extinctions and other catastrophic effects of climate change, we must reduce carbon pollution as quickly as possible. This will require us to rapidly increase energy efficiency, expand energy storage, modernize transmission capabilities, and accelerate the development of renewable energy. Investing in renewable energy, like solar and wind, will help to reduce carbon pollution and protect birds threatened by climate change. Audubon strongly supports the development of renewable energy projects and technologies that avoid, minimize, or effectively mitigate negative impacts to birds and their habitats.

**Solar power.** More than 1 million homes across the United States now run on energy generated by rooftop solar panels, 1,294 MW of community solar have been installed, and more than 6,000 solar projects over 1 MW are in operation or development. This trend is certainly encouraging. With solar power more accessible than ever, many people can now do their part to transition to cleaner sources of energy at home, and save money on electricity bills in the long run. Large-scale solar installations place many solar panels in a single location to generate electricity for utility companies, which then distribute that power to its customers. Because these large-scale solar sites can impact bird habitat, it is vital for developers to minimize harm to wildlife by carefully considering the placement of these installations. Solar installers should avoid siting installations in areas that provide habitat, food, or water for threatened, endangered, or high concentrations of bird species, and prioritize the development of brownfields, rooftops, and capped landfills that can't otherwise provide suitable habitat for birds.

**Wind Power.** Audubon strongly supports wind power as a renewable energy source that helps reduce the threats posed to birds and people by climate change. Wind power is currently the most economically competitive form of renewable energy, and as of January 2017, the wind facilities installed in the United States provided more than 82,000 MW of capacity. With our current transmission infrastructure, the Department of Energy estimates that wind has the potential to generate 20 percent of the nation's energy. If the United States obtains 20 percent of its electricity from wind power by 2020, it would be equivalent to taking a quarter of US cars off the road or planting 104 million acres of trees, which would cover an area the size of the state of California.

Wind power is an important component of New York State’s renewables portfolio, and achieving 9,000 MW of offshore wind by 2035 is a critical part of our path to 100% clean energy by 2040. We look forward to continuing to work with New York State to make sure that new wind projects are responsibly planned, sited, and operated in order to minimize harm to birds and other wildlife. Simple steps, such as avoiding migration corridors and critical habitat, can reduce bird collisions and other negative outcomes while allowing for the continued development of offshore wind.

We are glad that the Climate and Community Protection Act recognizes the potential of these renewable energy resources, but ask that it goes a step further by requiring that such projects are sited to minimize impacts to birds and other wildlife. Avoiding unnecessary impacts will benefit birds and other wildlife and also go a long way towards reducing opposition to renewable energy development projects. Audubon successfully advocated for the inclusion of environmental guidelines in New York State’s procurement process for offshore wind, and provided technical expertise that will help minimize threats to birds and other wildlife. We are looking forward to continuing to work with the Public Service Commission and NYS Energy Research and Development Authority to refine these guidelines and promote the adoption of best management practices for the construction and operation of wind turbines in New York State’s coastal waters. We hope that we would also be afforded the opportunity to do so under future procurements for solar and wind energy, and ask that Audubon and other groups representing the interests of New York State’s wildlife be guaranteed that input as part of this bill.

## **Adaptation and Resiliency in the Face of Climate Change**

**Protect and Restore New York State’s Wetlands and Coastlines.** Protecting and restoring coastlines, especially salt marshes and other wetlands around Long Island, will increase climate resiliency and support vulnerable populations of coastal birds. The marshes that buffer the coasts of Long Island provide essential habitat for millions of waterfowl, shorebirds, seabirds, and marsh birds. Thirty-six Important Bird Areas (IBAs) have been designated within the greater Long Island area, and support species like the federally threatened Piping Plover, federally endangered Roseate Tern, American Oystercatcher, Least Tern, and the rare and declining Saltmarsh Sparrow. Marshes also support rich fisheries and other wildlife, improve water quality, and are important for carbon sequestration.

Resilient, healthy coastal ecosystems not only benefit birds, they also serve as the first line of defense for coastal communities facing stronger, more frequent storms and sea level rise. The natural processes that replenish sand and sediment—and once sustained coastal shorelines and enabled them to adapt to changes—are hampered by seawalls, roadways, and hard structures that accelerate erosion and habitat loss. In addition to impacts to human development, our marshes are suffering from chronic flooding, excessive nutrients, and loss of high marsh that is required by birds such as the Saltmarsh Sparrow, Willet, Clapper Rail, and others.

That is why Audubon is advancing nature-based strategies to help our shorelines weather the impacts of climate change. Marshes, oyster beds, seagrass, beaches, and islands — also known as “green infrastructure”—harness nature’s own defenses and are often more effective in containing storm surge and protecting coastal communities than “gray infrastructure” like jetties, groins, and seawalls. These climate-smart solutions not only buffer storm impacts, reduce flooding, and minimize wetland loss, they also preserve biodiversity and support healthy populations of birds and fish.






The Climate and Community Protection Act currently directs the Department of Environmental Conservation to promote adaptation and resilience to mitigate sea level rise, extreme weather, flooding, and impacts on “species and other natural resources”. As noted above, we believe that New York State’s strategy for resiliency and adaptation should prioritize the use of green infrastructure and incentivize its use by municipalities engaged in local resiliency efforts. Additionally, we hope that such planning would include prioritized adaptation efforts to protect the habitat of species like the Saltmarsh Sparrow that are facing extinction in the face of sea-level rise.

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Thank you again for allowing me to testify today, and should you need any additional information, please contact me at 518-869-9731 or [emcgrath@audubon.org](mailto:emcgrath@audubon.org).







## Appendix 1







The list below includes a sample of climate threatened and endangered birds from New York State.




Bird Names	Conservation Status	Climate Status
 Black-throated Green Warbler <i>Setophaga virens</i>	Has declined as a nesting bird in parts of the northeast during recent decades. Elsewhere, still widespread and common.	Climate Threatened
 Evening Grosbeak <i>Coccothraustes vespertinus</i>	Extended its breeding range eastward during the late 19th century and early 20th century. In recent decades, eastern population has declined again, but reasons are poorly understood.	Climate Threatened
 Scarlet Tanager <i>Piranga olivacea</i>	Vulnerable to loss of habitat, on both summer and winter ranges. For breeding, seems to require large blocks of forest. Does poorly in smaller forest fragments, often being parasitized by cowbirds.	Climate Threatened
 Hooded Merganser <i>Lophodytes cucullatus</i>	Undoubtedly declined in past with loss of nesting habitat (large mature trees near water). Now population seems to be increasing, helped by artificial nest boxes, including those intended for Wood Ducks.	Climate Endangered
 American Redstart <i>Setophaga ruticilla</i>	Still widespread and very common, but surveys suggest that numbers may be declining slightly.	Climate Threatened



 <p>Northern Harrier <i>Circus cyaneus</i></p>	<p>Has disappeared from many former nesting areas, especially in southern parts of range, and surveys suggest that it is still declining in parts of North America.</p>	<p>Climate Endangered</p>
 <p>Wood Thrush <i>Hylocichla mustelina</i></p>	<p>Numbers have declined seriously in recent decades. Cowbirds lay many eggs in their nests, so the thrushes often raise mainly cowbirds, with few young of their own. As forests are cut into smaller fragments, it apparently becomes easier for cowbirds to penetrate these small woodlots and find more of the thrush nests. The Wood Thrush is probably also losing wintering habitat in the tropics.</p>	<p>Climate Threatened</p>
 <p>Bobolink <i>Dolichonyx oryzivorus</i></p>	<p>Declining significantly in recent decades; loss of grassland nesting habitat is a likely cause.</p>	<p>Climate Threatened</p>
 <p>Mallard <i>Anas platyrhynchos</i></p>	<p>Still one of the most abundant ducks in the world. Numbers fluctuate considerably, and population of northern Great Plains is probably permanently reduced from historical levels. Status of wild birds is clouded by large number of feral populations.</p>	<p>Climate Endangered</p>
 <p>Bald Eagle <i>Haliaeetus leucocephalus</i></p>	<p>Numbers declined seriously during the first two-thirds of the 20th century. Shooting was one major cause; even after the eagles were given full legal protection, they continued to decline, probably because of the effects of DDT and other persistent pesticides. Following the banning of DDT, numbers have been increasing gradually since the 1970s, with spectacular recoveries in some states.</p>	<p>Climate Endangered</p>
 <p>Ovenbird <i>Seiurus aurocapilla</i></p>	<p>Numbers have declined seriously in recent decades. Overabundant deer and forest fragmentation leading to increased nest parasitism by Brown-headed Cowbirds are likely causes, along with loss of wintering habitat in the tropics.</p>	<p>Climate Threatened</p>

 <p>Wild Turkey <i>Meleagris gallopavo</i></p>	<p>Numbers seriously depleted by beginning of 20th century, but has been reintroduced to most of former range and established in new areas. Still increasing in many regions, and is now adapting to edges of suburban habitat in many eastern states.</p>	<p>Climate Threatened</p>
 <p>Herring Gull <i>Larus argentatus</i></p>	<p>Numbers declined sharply during 19th century when hunted for eggs and feathers. With protection, has increased greatly during 20th century, expanding breeding range far to the south along Atlantic Coast.</p>	<p>Climate Endangered</p>
 <p>Piping Plover <i>Charadrius melodus</i></p>	<p>Threatened or endangered. Almost gone from Great Lakes as a breeder, and has declined elsewhere. Increased human activity on beaches affects Great Lakes and Atlantic Coast birds. Irregular water releases from dams often flood out nesting attempts on rivers in the interior.</p>	<p>Climate Endangered</p>
 <p>American Oystercatcher <i>Haematopus palliatus</i></p>	<p>Numbers declined seriously in 19th century, then recovered well in 20th century. Despite disturbance in beach habitats, the species currently is doing fairly well, often nesting on dredge spoil islands.</p>	<p>Climate Endangered</p>
 <p>American Woodcock <i>Scolopax minor</i></p>	<p>Probably declining in eastern United States, may be increasing in parts of Canada as coniferous forests are cut and grow up to thickets. Still reasonably common overall.</p>	<p>Climate Threatened</p>
 <p>Bank Swallow <i>Riparia riparia</i></p>	<p>Local populations vary with availability of good colony sites. Loss of such sites may be contributing to long-term declines in overall numbers.</p>	<p>Climate Endangered</p>

 <p><i>Black Skimmer</i> <i>Rynchops niger</i></p>	<p>In late 19th century, eggs were harvested commercially, and adults were killed for their feathers, leading to a reduction of Atlantic Coast populations; good recovery of numbers since. Still very sensitive to disturbance in nesting colonies. Range expanding in west.</p>	<p>Climate Endangered</p>
 <p><i>Black-crowned Night Heron</i> <i>Nycticorax nycticorax</i></p>	<p>Populations have probably declined in 20th century owing to habitat loss and, in mid-century, effects of DDT and other persistent pesticides. Following the banning of DDT, many local populations have increased in recent years. Water pollution is still a problem in some areas, but overall population probably stable or increasing.</p>	<p>Climate Endangered</p>
 <p><i>Common Tern</i> <i>Sterna hirundo</i></p>	<p>Northeastern populations probably much lower than they were historically. Numbers reduced by plume hunters in late 1800s, increased again with protection early in 20th century, then declined again as populations of predatory large gulls increased in that area. Coastal Common Terns are more and more concentrated in a few well-protected colonies. Some inland populations are declining as well.</p>	<p>Climate Threatened</p>
 <p><i>Northern Saw-whet Owl</i> <i>Aegolius acadicus</i></p>	<p>Probably some declines in numbers with loss of habitat, but still widespread and fairly common.</p>	<p>Climate Endangered</p>
 <p><i>Least Tern</i> <i>Sternula antillarum</i></p>	<p>Several populations are endangered. On coasts, nesting areas often disturbed by beach-goers. On inland rivers, fluctuating water levels (from releases from major dams) often flood out nesting sites on sandbars.</p>	<p>Climate Endangered</p>
 <p><i>Saltmarsh Sparrow</i> <i>Ammodramus caudacuta</i></p>	<p>Undoubtedly has declined in many regions with loss of coastal marsh habitat.</p>	<p>Climate Endangered</p>

 <p><i>Red Knot</i> <i>Calidris canutus</i></p>	<p>Once far more numerous in North America, but huge numbers were shot on migration in late 1800s. Some populations have declined sharply since the 1960s. The subspecies that migrates from southern Argentina to the Canadian Arctic in spring relies on stopover habitat along Delaware Bay, where the knots fatten up on the superabundant eggs of horseshoe crabs before they continue north to the Arctic. Overharvesting of horseshoe crabs along the central Atlantic Coast has led to a sharp reduction in this food source for migratory shorebirds, and Red Knots seem to have been hit hard by this.</p>	<p>Climate Endangered</p>
 <p><i>Short-eared Owl</i> <i>Asio flammeus</i></p>	<p>Has disappeared from many southern areas where it formerly nested. Loss of habitat is probably the main cause.</p>	<p>Climate Endangered</p>
 <p><i>Wood Duck</i> <i>Aix sponsa</i></p>	<p>Early in 20th century, species was thought to be threatened with extinction. Main cause of decline probably loss of nest sites due to cutting of large trees, combined with hunting pressure. Legal protection and provision of nest boxes helped recovery; many thousands of nest boxes now occupied by Wood Ducks in U.S. and southern Canada. In recent years, apparently has been expanding range in north and west.</p>	<p>Climate Threatened</p>