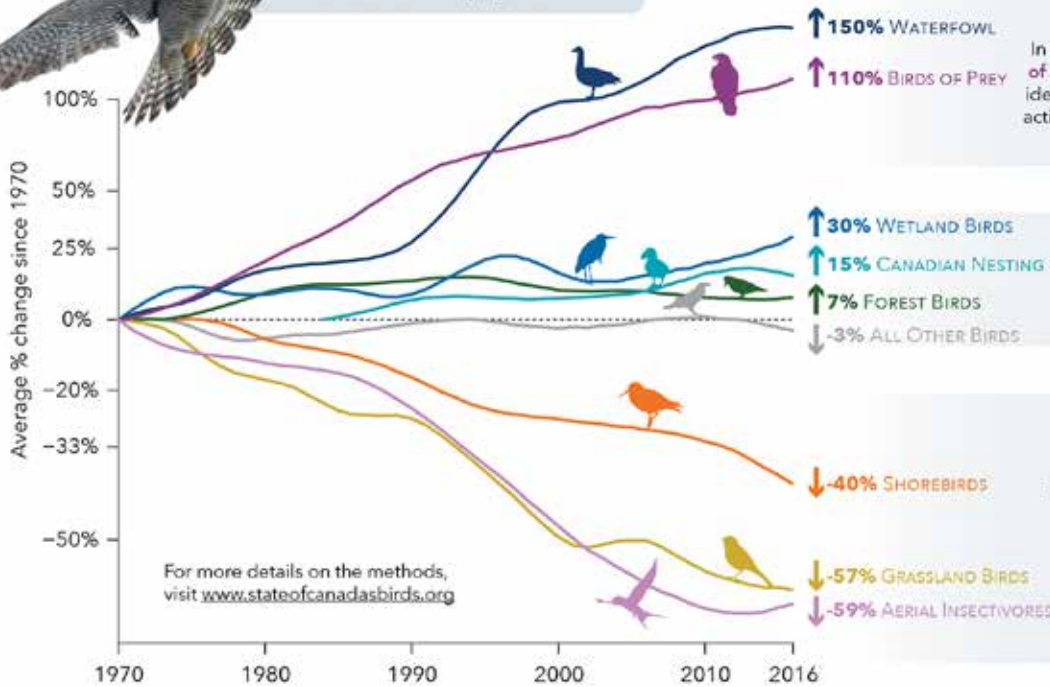


THE STATE OF CANADA'S BIRDS

Average status of Canadian bird populations



RECOVERING

Ongoing, informed conservation is working

In the last century, many species of waterfowl and birds of prey were on the brink of extinction. The causes were identified and addressed by banning the pesticide DDT, actively managing hunting, and protecting and restoring important habitat.

LITTLE TO MODERATE CHANGE

These lines show little to moderate change, but they are complex and are composed of both increasing and decreasing species.

RAPIDLY DECLINING

Urgent conservation action is needed

Canada has lost 40-60% of shorebird, grassland bird, and aerial insectivore populations. In the last decade, 80% of bird species newly assessed as threatened or endangered in Canada have been aerial insectivores or grassland birds. Another 10 shorebird species are priority candidates for assessment. Coastal land conservation, sustainable agricultural practices, and effective climate action in Canada and abroad can bring these birds back from the brink.

Shorebirds, grassland birds, and aerial insectivores are in steep decline.



Millions of hectares of wetlands and surrounding lands have been saved, allowing waterfowl populations to rebound.



Photo credits (from left to right): Peregrine Falcon, Upland Sandpiper, Bobolink, Bank and Tree Swallows, and Snow Geese by Jacques Bouvier.

State of Canada's Birds report shows just how much your help matters

BY STEVEN PRICE

“Why did I have so few goldfinches at my feeder last winter?” “I usually see two nuthatch species, but have only seen one lately.” “Wow, I’ve never seen more blackbirds than I’ve been seeing these days!”

If you’re like me, you frequently hear from family, friends, and neighbours that they’ve noticed fewer or more of a given bird in their area. And they want to know if their story represents a trend. But as a wise friend of mine says, the plural of “anecdote” is not “data.” So what is really happening with bird

populations – over the long term and across the whole country?

Some revealing answers came in the *State of Canada's Birds 2019* report. Birds Canada and fellow conservation organizations, in partnership with federal, provincial, and territorial governments, reviewed the largest and most comprehensive dataset of bird numbers ever assembled in Canada. And volunteers like you contributed most of these data by participating in Citizen Science programs, notably the North American Breeding

Bird Survey.

As a graph from the report (see above) shows, some bird groups are recovering compared to their numbers in the 1970s, while others are in serious trouble. Shorebirds, grassland birds, and “aerial insectivores” – our swifts, swallows, nighthawks, whippoorwills, and flycatchers – are trending drastically downward. On the cheerier side, populations of many birds of prey and waterfowl species are steadily increasing.

This report foreshadowed other

CANADIANS ARE MONITORING THE STATE OF CANADA'S BIRDS

Birds are excellent **indicators** of the health of our water, air, and land, and we have been monitoring most bird species since the 1970s.



Volunteers are critical to monitoring the state of Canada's birds. 66% of the species trends in this report came from programs that rely on skilled volunteer citizen scientists. These programs, and the dedicated people who contribute to them, are the backbones of bird conservation. You can be a volunteer too – see our website for more information.

Professional biologists coordinate large-scale volunteer programs, and analyze the data. They also monitor challenging species. These partnership-based monitoring programs include waterfowl, Arctic-breeding shorebird, and seabird surveys.



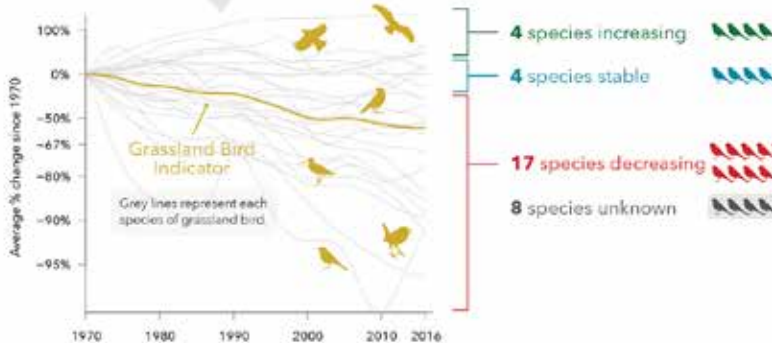
- 1 Using the monitoring data, we calculate each species' population trajectory over time.
- 2 Then we re-scale each species' trajectory to represent the % change since 1970.
- 3 We use the average of all the species' lines to create our indicators. For example, the **grassland bird indicator** is composed of all bird species that are typically found in grasslands.



24% of Canada's bird species are not yet well monitored. We have limited information for many Arctic-nesting birds, pelagic seabirds, sea ducks, nocturnal owls, and cryptic or very rare birds. Investments in new programs and new technologies will help us track birds better.



Increases and decreases are scaled equally. We scaled the vertical axis this way so that positive and negative changes are equal on the appropriate scale (logarithmic). For example, it takes a 100% increase to recover from a 50% decline, so those two points are equal distance from 0.



recent news stories you may have heard: that in absolute terms, we've lost some three billion birds in North America since 1970; that climate change threatens two-thirds of our bird species if we don't significantly alter our course; and that neonicotinoid pesticides hamper songbirds fattening up for migration and delay their southbound departure. Your Citizen Science data helped in two of these reports, and the Motus Wildlife Tracking Network, which Birds Canada operates, was central to the third.

Understanding how Canada's bird populations are faring is not possible without your help. Moreover, your contributions are essential for conserving birds in decline.

Over the past 60 years, Birds

Canada has been working with you to advance understanding, appreciation, and conservation of Canada's wild birds – taking action to address declines while keeping common birds common. With your help, we've helped to track Species at Risk like the Red Knot, steward habitat for birds like the Piping Plover, and control invasive predators wiping out seabirds like the Ancient Murrelet. Such conservation action is paying off!

Birds of prey have largely recovered in number and range, thanks to mid-20th-Century bans on pesticides like DDT and the curtailing of rampant shooting. Conservation groups have aided these recoveries – for example, Birds Canada played a role in supporting and monitoring Bald Eagles as

they made a comeback in the Great Lakes region. Most duck species have recovered well due to wetland protection and habitat management.

Success for birds of prey and waterfowl species gives me hope for grassland birds, shorebirds, and aerial insectivores. But we must tackle their plight as vigorously as we did raptors and waterfowl.

Read on to see the sound work you support and engage in to help conserve the birds we all love. And once again, thank you for all you do for birds. Join us (as a volunteer, member, partner), or continue your support to help tackle the urgent problems birds are facing today. Let's make sure the next report tells the story of how we came together and improved the state of Canada's birds.

How your support is helping Canada's birds

BY ELLEN JAKUBOWSKI

As a Birds Canada volunteer, donor, or partner, you're part of a team thousands of people strong that's committed to bird research and conservation priorities. Here are just a few examples from across the country of how we've been supporting the recovery of groups like waterfowl and wetland birds, and are coming to the aid of our most threatened bird species, including aerial insectivores, grassland birds, shorebirds, and seabirds.

Please note that this is not a complete summary. There are too many examples to do justice to here. We look forward to telling you about more of them in the future!

Answering key questions to conserve waterbirds

Volunteers contribute observations to Birds Canada's Marsh Monitoring Program and Canadian Lakes Loon Survey, which researchers use in studies that inform conservation action. For instance, researchers with the Long Point Waterfowl and Wetlands Research Program, a program of Birds Canada, use data from these monitoring programs and others to guide improved wetland and lake conservation and management. In the Great Lakes region, we have been researching how wildlife is impacted following efforts to control a non-native invasive plant, *Phragmites*. The results are shedding light on how conservation partners can improve the quality of marshes for at-risk breeding waterbirds, like Least Bitterns and Black Terns.

Cultivating swallow stewardship on farms in the Maritimes

Landowners throughout Nova Scotia and New Brunswick are supporting the successful nesting of Barn, Cliff, and Tree swallows through careful stewardship of nesting habitat, such as barns, and through the installation of nest boxes. Birds Canada staff support these efforts by helping landowners



Phragmites Photo: Birds Canada



Tree Swallow/Hirondelle bicolor Photo: Ron Ridout

identify swallows and their nests, advising them on how to avoid damaging or disturbing nests, and encouraging them to maintain high-quality foraging habitat. We also present landowners with Swallow-friendly Property signs to thank them for their efforts and help spread the stewardship message to neighbours and friends.

Preserving habitat for Threatened Chimney Swifts

Birds Canada coordinates volunteer monitoring and stewardship efforts to protect more than 55 Chimney Swift roosting and nesting sites in Ontario and the Maritimes. Together, these valuable sites host thousands of swifts per night for part of the year. "SwiftWatch" volunteers make a real difference for these birds on the ground. For example, after learning

collared Longspur and Baird's Sparrow. Now we are collaborating with partners and landowners to explore approaches for keeping the last remnants of this vanishing ecosystem alive. This includes working towards a grassland plan to conserve Species at Risk in key areas, continuing to monitor these at-risk species, and more.

Mapping breeding habitat in Saskatchewan

In collaboration with partners, Birds Canada delivers breeding bird atlas projects across Canada. Each of these projects mobilizes hundreds of Citizen Scientists to conduct surveys of the birds that breed in a particular region. The results serve as a valuable conservation decision-making tool, a resource for researchers, and much more. We are currently approaching the fourth out of five data collection seasons for the first comprehensive Saskatchewan Breeding Bird Atlas. This will provide important information about the distribution and relative abundance of breeding birds, from Species at Risk like the Sprague's Pipit to more common birds like the Clay-colored Sparrow. Future editions of the Saskatchewan Atlas can then be compared to these initial results to tell the story of how breeding bird populations are changing over the long term.

Encouraging Curlew-friendly farming practices in British Columbia

Farmers in the Prince George area are supporting the successful nesting of grassland birds such as Long-billed Curlews through stewardship of their hay fields. Birds Canada staff are enhancing these efforts by training farmers on how to identify and report on Species at Risk. With these skills, farmers can gather information to improve farmland stewardship practices. These landowners are also facilitating our curlew tracking study. This study will help us understand the threats these birds may face throughout their life cycle, and give us the tools we need to guide conservation efforts in Canada and the U.S.

Supporting key discoveries about migratory shorebirds

Birds Canada's Motus Wildlife Tracking System combines traditional radio-tracking technology with the newest and tiniest radio-tags, which can be safely



Chestnut-collared Longspur/Plectrophane à ventre noir Photo: Dan Arndt



Chimney Swifts/Martinets ramoneurs Photo: Roger Hangarter

from a dedicated SwiftWatch volunteer that its aging chimney is an important roosting and nesting habitat for Chimney Swifts, the community at Northside United Church in Seaforth, Ontario changed its plans. Instead of tearing the chimney down, they are repairing it so it can continue benefitting this Species at Risk.

Working with landowners in Manitoba to conserve native grasslands

Birds Canada has been working with landowners on native prairie towards maintaining some of the last remaining populations of grassland-dependent birds. Conducting bird surveys on privately owned lands and community pasture allowed us to identify which areas are needed by Species at Risk like the Chestnut-

fitted onto birds. Research using Motus can reveal what individual birds are doing, where, and when. This detailed information has important implications for bird conservation. Two hundred and eighty Motus projects have been completed or are underway, some focused on at-risk migratory shorebirds in the Western Hemisphere. For example, Motus research confirmed the critical importance of horseshoe crab eggs in Delaware Bay, New Jersey to the survival and successful migration of the Arctic-nesting Red Knot. This information is now informing crab harvest management at this site.



Red Knot/Bécasseau maubèche Photo: Delaina LeBlanc

Looking out for Western Sandpipers and important places across Canada

The Important Bird and Biodiversity Areas (IBA) program is an international conservation initiative of Birdlife International, co-led in Canada by Birds Canada. More than 6200 people volunteer at IBAs across the country to monitor bird populations, steward habitat, and much more. One of Canada's almost 600 IBAs is the Fraser Estuary IBA in British Columbia – a critically important piece of bird habitat along the Pacific Flyway. The majority of the world's population of Western Sandpipers depend on the Roberts Bank mudflats within the IBA as a source of food to fuel their annual migration. Unfortunately, this site is under threat from proposed industrial development. That's why Birds Canada is working with Nature Canada, BC Nature, and the local community to defend the Estuary. Our actions include advocating for increased protection of shorebird habitats in particular, and for stronger environmental governance to preserve the integrity of the entire ecosystem.



Roberts Bank Photo: James Casey

Pinpointing key threats to seabirds

Birds Canada is collaborating with multiple researchers and agencies to combine information gained through research and monitoring activities at nesting colonies on Canada's East Coast and reveal which factors pose the greatest threat to seabirds. For example, this work is providing a detailed picture of the at-sea distribution of murre, storm-petrel, and other birds, which could guide action to mitigate the impacts of oil spills, accidental bycatch in fisheries gear, and marine traffic on these species. It's also identifying which spots are most important for seabirds, which could build support for the creation of Marine Protected Areas.



Murres/Guillemots Photo: Laura Tranquilla

Protecting seabirds from invasive predators in British Columbia

In areas where raccoons and rats are invasive, these mammals can pose a severe threat to native species of nesting seabirds that have not evolved a natural defense against them. Birds Canada has joined with partners on Haida Gwaii to remove these predatory mammals from islands that seabirds depend on for nesting sites. We're also working with First Nations on BC's Central Coast to determine where seabirds are potentially at risk from invasive mammals. In future, we'll also be collaborating with federal and provincial governments on large-scale efforts to eradicate invasive seabird predators from islands in the recently-established Scott Islands Marine National Wildlife Area.

Empowering more people to help birds

The Citizen Science, education, and outreach initiatives of Birds Canada reach people from coast to coast, providing new knowledge and enriching experiences that help them develop their interest in birds. This includes the nearly 60,000 volunteers that contribute to over 30 Citizen Science and stewardship programs, such as Project FeederWatch, eBird Canada, and the IBA Caretaker program. Two other noteworthy examples are the Christmas Bird Count and Christmas Bird Count for Kids (CBC4Kids), which Birds Canada coordinates in Canada. More than 14,000 birders in Canada recently participated in the 120th Christmas Bird Count, adding to a valuable long-term dataset on winter bird populations. Meanwhile, the CBC4Kids, which gives young people the opportunity to practice birding and Citizen Science skills at events across the country, just celebrated its 10th anniversary in Canada. These programs bring together birders of all skill levels to share in the joy of birding – an experience that can ignite a lifelong passion for birds and conservation.

Thank you to all of the volunteers, donors, partners, and sponsors who make this work possible!

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Tufted Puffin/Macareux huppé Photo: Greg McClelland



White-breasted Nuthatch/Sittelle à poitrine blanche
Photo: Lise Balthazar



CBC4Kids/RON junior Photo: Grant Davis