

# **Bird Conservation**

2020







# Acknowledgments



Find Your 4-H Wings encourages 4-H'ers to learn about and protect native birds and bats. This unique program would not be possible without the commitment of **TC Energy**, a North American energy infrastructure company that has supported 4-H for over a decade. For more information about TC Energy, please visit **tcenergy.com/sustainability**.





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# Dear 4-H members, leaders, and families,

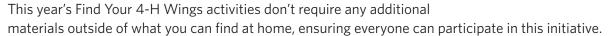
Thank you for joining us for year six of Find Your 4-H Wings! This club outreach initiative, generously supported by TC Energy, has encouraged hundreds of 4-H clubs and thousands of 4-H'ers like you across Canada to get active outdoors and to learn about our winged friends since it began in 2014!

In 2020, we're exploring all the opportunities to practice the conservation of our friends in flight! Birds of all species require specific things, and when their habitats are not conserved, they are put at risk. Looking back at our winged friends from previous years of Find Your 4-H Wings, while also focusing on conservation, this resource looks to explore what 4-H'ers can do to make a difference, and learn about birds they may encounter in their own communities.

In this reference and activity book, we provide information about bird conservation efforts and a variety of interactive activities for youth.

#### This year's objectives include:

- Learning about bird conservation efforts
- Identifying ways you can support birds and their habitats
- Sharing lessons with your community and helping people to understand the importance of conservation efforts for birds in your region



To build upon your learning and exploring with this activity book, check out these past Find Your 4-H Wings Activity Books, available for download at **4-h-canada.ca/findyour4hwings**:

- Birds 101 (2015)
- Bird Identification (2016)
- Bats (2017)
- Loons (2018)
- Owls (2019)



We hope you enjoy this opportunity to Find Your 4-H Wings. When it comes to learning about our winged friends, it is important to learn how we can protect them for years to come!

-The 4-H Canada Team





# Why Bird Conservation?



Seeing a robin hop along a lawn in the spring, or a fiery red cardinal in the winter, or hearing the haunting call of a loon during a summer campfire, or the hoot of an owl on an evening walk in the fall, all of these special moments require a healthy environment for our feathered friends to live in. Unfortunately, bird populations across Canada are declining. To protect birds and the spaces birds need to live, we practice something called **conservation**.

Conservation is a way to protect all species, including birds, and their habitats from being damaged. Some of the goals of conservation are to stop bird populations from decreasing, keeping bird habitats healthy, and providing new opportunities for all bird species to thrive!

Remember that birds are also part of a larger ecosystem, so if birds aren't healthy, it means the rest of the environment isn't healthy either. Bird conservation is important because it not only helps birds but because it helps all the other species in the same habitat.

# TALK ABOUT IT!

What does conservation mean to you?

Why do you think this is important?

## Did you know?

- Birds play an important role in pollination. There are over 900 bird species worldwide that help to continue the circle of life in plants.
- Birds play an important role in seed dispersal and help to allow trees and plants to grow in many places.
- Birds play an important role in pest control. Birds eat many insects that can be harmful to crops and vegetation.
- Healthy bird communities are a good indicator of the overall health of a community.



Photo credit: Kevin Cole from Pacific Coast, USA / CC BY

We want to live in communities where birds and their habitats are conserved, and we hope this resource helps you do just that.

#### Keep in mind:

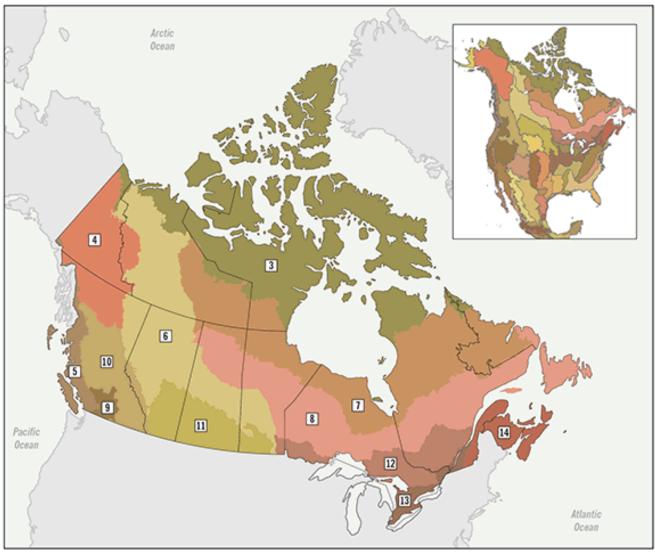
- 1. Different bird species live in different areas and require different conservation efforts
- **2.** Birds that migrate may require different conservation efforts in different places where they go in the winter versus where they go in the summer
- **3.** Some birds live mostly on land while other birds live mostly in the water. These birds will require different habitat conservation efforts.



#### Different parts of Canada have different kinds of birds and conservation needs, so let's find yours!

## Figure 1 - (anadian Bird (onservation Region Map

2013 Fall Report of the Commissioner of the Environment and Sustainable Development, Migratory Birds



Conservation Regions 1 and 2 are in Alaska (United States)

- 3 Arctic Plains and Mountains (includes 3 sub-regions)
- Morthwestern Interior Forest
- 5 Northern Pacific Rainforest
- 6 Boreal Taiga Plains
- Taiga Shield and Hudson Plains (includes 4 sub-regions)
- Boreal Softwood Shield (includes 4 sub-regions)

- Great Basin
- 10 Northern Rockies
- Prairie Potholes
- Boreal Hardwood Transition (includes 2 sub-regions)
- Lower Great Lakes/St. Lawrence Plain (includes 2 sub-regions)
- Atlantic Northern Forest (includes 4 sub-regions)

# LOOK IT UP!

Do you know what Bird Conservation Region you live in? Look at the map and find out! Each region is home to different birds and may require a different conservation plan.

## Your Bird Focus



When you've found your specific region, you're ready to learn about birds that can be found in your area and are in need of conservation efforts. Check out the key species for your Bird Conservation Region on the interactive map found at **nabci.net/foundation-for-conservation/bird-conservation-regions-of-canada**.

Click on your region for information and some of the key species found in that area. Please note that this isn't an exhaustive list of all bird species (either at risk or not) in your region, meaning you can expand your research as much as you'd like.

## Things to consider when learning about species in your area:

- What makes your region unique from other regions?
- Do you have any species in your region that aren't found anywhere else?
- Use the free ebooks available from Nature Canada to find key species for your area mentioned on the interactive map. Write the list down where everyone can see it - these species in your region that are the most in need of our conservation efforts.





# DID YOU KNOW?

The Bird Conservation Regions are different parts of Canada with similar bird communities, habitats, and conservation issues. These regions have been mapped for the United States and Mexico too! There are 12 different regions in Canada – each with its own mix of bird species. These regional plans are mapped and updated every three years.

# LOOK IT UP!

You can access Nature Canada's free bird ebooks at:

naturecanada.ca/discovernature/about-our-birds/birde-books



## The Basic Bird Needs



As you can tell from the Bird Conservation Region map, birds live in different areas because they need different things to be their happiest and healthiest. Some birds have evolved to live on the coast, others do well in grasslands, and others prefer mixed forests. That said, there are some basic elements that all birds need.

## No matter where you live in (anada, the birds in your community need:

#### Food



Photo credit: Sheila Sund from Salem, USA / CC BY

#### **Clean water**



Photo credit: Berit from Redhill/ Surrey, UK / CC BY

#### **Space for nests**



Photo credit: Sardaka / CC BY-SA

# **Space to live**(for food, mating, materials for nests, and privacy and space from human activity)



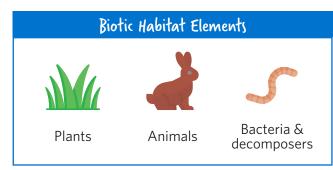
Photo credit: Rhododendrites / CC

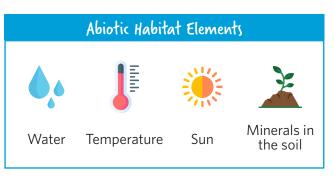
Conservation efforts focus on protecting birds and their natural habitats. So while some birds may be able to find food from human garbage bins, or build nests on window sills, or seem comfortable with spaces where there is a lot of human activity, we ideally want to protect natural spaces for birds to find their natural food sources, and live in habitats that aren't overly influenced by humans. These things will lead to healthy bird populations in any of the Bird Conservation Regions in Canada.

When we think about healthy habitats for birds, there are two categories we can break any ecosystem into **biotic**, or *living* elements, and **abiotic**, or *non-living* elements.

# TALK ABOUT IT!

What basic things do you need to survive? What things make you happy when you have them or add stress to your life when you don't have them? How does this compare to how birds might be affected by changes in their basic needs?





When any of these elements change from what birds are used to it can throw a healthy habitat out of balance and harm bird populations.

## **Ecosystem Risks**



When we think about the basic things birds need, we also need to be aware of how these things might be damaged or put at risk. Across Canada, bird populations are decreasing for a variety of reasons. Currently, 50 bird species in Canada are listed as Endangered or Threatened. If we don't work to conserve our bird populations and habitats, we may lose certain bird species forever.

## What ecosystem risks are birds facing in Canada?

## Here is a list of just some of the ways birds are impacted.

- Nesting sites being damaged or disturbed
- Habitat loss in Canada, specifically, birds at risk are ones that need access to undeveloped shorelines and undeveloped grasslands
- Less access to food, specifically flying insects
- Plastics in the environment
- Substances introduced to the environment (e.g. pesticides, oil spills, rodent poison, etc.)
- Climate change impacting conditions such as egg incubation, food availability, weather patterns that change migration habits

Any one of these risks could damage bird populations, but many bird species are facing multiple risks at the same time. Conservation efforts work to minimize or eliminate these risks, so that birds aren't exposed to them, and are more likely to succeed and live healthier lives.



# TALK ABOUT IT!

Consider brainstorming a list with your club or at home first.

What risks do you think birds in your region are facing?

## DO ITI

How might one of these risks affect birds in your region?

Pick one of the risks that interests you the most. Search online for the risk you picked and its impact on birds, and see what you find.

- What happens when nesting sites are damaged?
- What happens when insects aren't available?
- What happens when there are bits of plastic in their ecosystem?

Understanding the risk and its impact allows us to be effective in our conservation efforts.

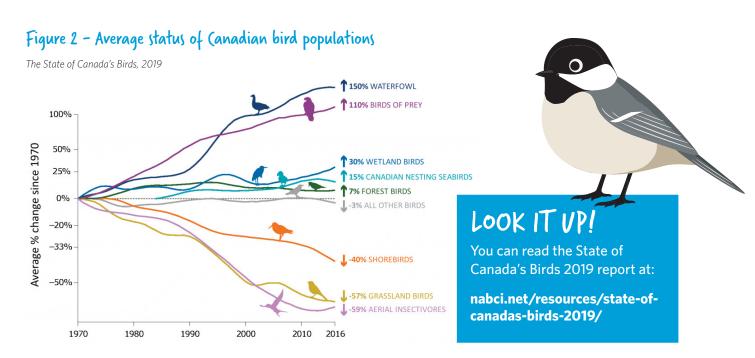


## The changing health of Canada's Bird Populations

The Canadian government and wildlife conservation groups are concerned about our bird populations. They worked together and issued a report in 2019 called *the State of Canada's Birds*. They tracked 400 species of birds and looked at population trends over nearly 50 years to find some new conclusions about the risks Canada's bird populations are facing.

## Here are some of the unfortunate conclusions:

- Bird species that depend on native grasslands have **decreased by 87 percent**.
- In our grassland ecosystems, we have lost an **estimated 300 million birds** since 1970.
- Migratory shorebirds have decreased by 40 percent.
- Long-distance migratory shorebirds have **declined by 55 percent**.
- Aerial insectivore birds have decreased by 59 percent.
- 55 of 58 seabirds that use Canadian waters are ranked as special concern, and **20 species are at risk** of extinction.



It's clear that to conserve our bird populations and habitats, we need to start now.

# Simple Steps to Conservation



Environmental conservation or protecting a species can sound like a massive undertaking. Where can you possibly begin? Well, the good thing is that there are lots of ways – most of them quite easy – for us to help our feathered friends! And even better, what's good for birds is also good for us!

## (heck out some of these simple conservation steps to get started:

### Learn about birds!

One of the best ways to protect birds is to learn about them! Check out the *Find Your 4-H Winged Friends* activity on page 21 to start spotting (responsibly) and learning about the birds in your community. Once you know about them, you're more likely to make conservation efforts!



## Be respectful and observe from a distance

Don't disturb nests, fledglings or adult birds, or disturb areas where threatened birds live. That means being considerate and giving extra thought when visiting bird habitats, as well as respecting the birds that choose to live with us around our homes and neighbourhoods.

## Participate in citizen science programs

Become a bird scientist (or ornithologist) with a variety of citizen science programs. Whether it's tracking birds and reporting sightings or helping to identify wildlife webcam photos, anyone can make real scientific research contributions! Check out the *Citizen Science* activity on page 31 for easy and accessible opportunities.

## **Report sightings of rare species**

Once you get to know the bird species in your area, you'll notice if there is an uncommon 'visitor'. If you identify a species that is rare or unusual to see in your area, contact your provincial or territorial Conservation Data Centre. Check out the *Let's Talk to an Expert* activity on page 32 to learn more about what local experts do when rare species are sighted, and how you can help!

## Flick the switch and turn off your lights

Light pollution can impact nocturnal bird species when hunting or migrating. Remember turn off outdoor building lights, or indoor lights that can be seen from a window at night. You'll also save energy! Check out the *Light Up Tally* activity on page 26 for ways to reduce light pollution in your area.

# LOOK IT UP!

CDCs serve as the source for reliable and up to date scientific information for the plants, animals and ecological communities within their respective jurisdiction. (Source: NatureServe Canada)

You can learn about your provincial or territorial CDC at

natureserve.org/natureservenetwork/canada/about-ourcdcs

# Simple Steps to Conservation



## Remove plastics and other contaminants from nature

We all know not to litter, but with declining populations, birds are showing us that our environment is polluted. By working to keep our environment clean, we create healthier ecosystems for birds (and us!). Check out the *Conservation Clean Up* activity on page 24 for ways you can reduce plastics, litter, and other hazards to birds in your local area.

## **Keep cats from roaming**

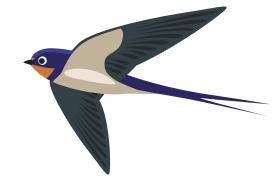
Cats, while cute, are still very effective predators. By keeping cats and wildlife apart, we can save the lives of tens of millions of birds each year. Check out the *Kitty Cat Count* activity on page 27 to see how many feline predators birds in your community are up against.

#### Make windows safe for birds

The reflection from windows can look like a clear blue sky to a bird in flight. By making the windows on our homes, skyscrapers, and businesses more visible to birds, we can stop collisions and save the lives of millions of birds each year. Check out the *Window Pain* activity on page 25 for ways to improve the visibility of windows in your home and community.

## **Protect and improve bird habitats**

Birds are losing their homes. When we conserve bird habitats and manage human activity more sustainably, we can have a major positive impact on bird populations. Check out the *Home Tweet Home* or *Habitat Paradise* activity on pages 28 and 29 to build a birdhouse or bird sanctuary and increase the available habitats for birds in your area.



## Be aware of invasive species in your area

When invasive species arrive in an area, they can harm bird populations that aren't used to dealing with them. Invasive species can prey on eggs or baby birds, or eat food usually eaten by native bird populations. By knowing which invasive species are in your area, you can help to reduce their populations and stop their spread.

## Reduce waste and choose bird-friendly products

By reducing food waste, buying from local and sustainably run farms, and choosing products like bird-friendly coffee, range-fed beef, and certified, sustainable seafood, we can make the world better for birds and for us.

## **Regional Examples**



Each Bird Conservation Region has different conservation efforts to protect and save species found in that area. **Below are some of these examples of species in different regions across Canada**, but also feel free to research other species in your region that are at risk and see what conservation efforts you can help with! Remember to refer to the Bird Conservation Region map on page 6 to identify your region.

## **Yellow Rail**

## Region 8 and 12

The Yellow Rail is a small, reclusive bird that nests in wetland marsh grasses. These are the key threats facing the Yellow Rail population in Canada:

**Habitat Loss:** Wetlands continue to be drained for urban development and agriculture. The Yellow Rail has not benefited from wetlands restoration for waterfowl, as it prefers shallow marshes rather than open waters.

**Invasive species:** Invasive, non-native plants are a threat because they change the vegetation composition



Photo credit: Dominic Sherony / CC BY-SA

of wetlands and marshlands making the habitat less suitable for Yellow Rails. Also, the drastic increase of geese populations has meant overgrazing in Yellow Rail habitats.

## **Keys to Conservation**

- The government's conservation plan is protecting the quality and size of Yellow Rail breeding and migratory habitats. What is your community or province doing to protect wetland areas?
- It is important to make people aware of the needs of this species, so promoting the importance of conservation can be a great way to encourage the protection and proper management of breeding and wintering ground habitats.



## **Maritime Swallows**

### Region 13 and 14

Bank, Cliff, Tree and Barn swallows are four species of swallow that are found in the Maritimes, and their populations are declining. Most concerning is the bank swallow, which has had its population in the region decrease by 98 percent! These are the key threats facing swallow populations:

**Habitat Loss:** While there isn't as much known about swallows' migration habits and habitats, researchers are looking at the loss of habitat for swallows when they migrate outside of Canada to their wintering grounds.



Photo credit: Alan Vernon / CC BY

**Loss of Food and Pesticides:** We wouldn't normally think of more flying insects being a good thing, but this is what swallows eat and need to survive. There has been a significant decrease in flying insects due to pesticide use, meaning swallows have less food to eat. Chemical compounds found in some pesticides can accumulate in the bodies of adult birds and their young, affecting health and reproduction.

## **Keys to Conservation**

- Consider building swallow boxes to support habitat building in the region.
- Provide and maintain habitats in migration destinations, but also in Canada. Each swallow species has different preferences like riverbanks and old wooden barns. Look for ways to protect these habitats in your community.
- Decreasing pesticide use, where possible, to allow greater numbers of flying insects to survive and feed
  the swallow population. This will also reduce the accumulation of chemical compounds from pesticide
  residue in adult birds.



## **Regional Examples**



## **Barn Owls**

## Region 5 and 13

Most of Canada's Barn Owl population of 250 to 1,000 adult owls lives in the Lower Fraser Valley in B.C. They are a threatened species because of their declining numbers. The greatest threats are:

**Habitat Loss:** Barn owls love old cottonwood trees but have grown fond of decrepit wooden barns as well. As these barns are often torn down and replaced with modern glass-and-concrete structures, owls have fewer places to rear their young.



Photo credit: Andrew Mercer (baldwhiteguy.co.nz) / CC BY-SA

**Poison:** When rats eat poison from a bait box, they have about a week before they die, a deliberate lag to prevent them from figuring out that the boxes contain lethal material. But it's during that week-long lag that rats can be eaten by and poison owls. In the last study between 2005 and 2011, 75 percent of owls tested by Environment Canada have traces of rat poison in their livers.

**Urban Dangers:** As owls are forced into more urban settings their hunting landscape is more fragmented and dangerous. As they fly low, they are often hit by cars as they cross the roads and highways between grass patches.

## **Keys to Conservation**

The ironic thing is, by preserving Barn Owl habitats or building them a nesting box in a barn, they will naturally control the rodents that can be a nuisance to farmers without the need for poisons.

#### If you live in the Fraser Valley, consider how you can help:

- Preserve and create new habitats
- Build nesting boxes for in a barn
- End the use of rat poisons on your farm
- Encourage the government to continue with studies and limitations on rat poisons. As of 2013, all rat poisons must be placed in tamper-resistant bait stations and liquid and treated grains are banned. This is important as even animals that don't eat rats, such as deer, have tested positive for poison.

# LOOK IT UP!

Learn more about owls with the Find Your 4-H Wings Owls Activity Book

4-h-canada.ca/findyour4hwings

# LOOK IT UP!

Read about a Canadian Owl Hero! Dick Clegg, a retired veterinarian in B.C. has installed and maintains over 150 barn owl nests.

pressreader.com/canada/ canadian-wildlife/20180102/ 281642485554158



## **American Black Duck**

## Region 7

While waterfowl have been increasing in numbers, the American Black Duck is still at risk. There are currently only half as many as there were in the 1950s:

**Habitat Competition:** American Black Ducks look similar to Mallards, and unfortunately, they compete for the same habitats. This also leads to crossbreeding between the species.

**Habitat Loss:** The increase of agricultural and industrialized areas has led to the loss of breeding populations.



Photo credit: Dick Daniels (carolinabirds.org) / CC BY-SA

## **Keys to Conservation**

- Keep our wetlands clean! If these ducks are having a hard time competing for space, making sure the space they do have is clear of plastics and other litter is key. Take a wetland walk and clean up any garbage you find.
- Working with landowners is key to promote conservation and understanding of the American Black Duck. Protecting wetlands and maintaining buffer zones between developed land and natural habitat is important.



### **Canada Warbler**

## Region 6

This brightly coloured bird is found mainly in mixed deciduous-coniferous forests and 85% of their breeding habitat is found in Canada – so it is our responsibility to protect them as they live! Unfortunately, their population is currently decreasing by roughly 5% each year.

**Habitat Loss:** While there isn't as much known about warblers' migration habits and habitats, researchers are looking at the loss of habitat for warblers when they migrate outside of Canada to their wintering grounds.



Photo credit: Matt MacGillivray from Toronto, Canada / CC BY

**Predation and Injury:** songbirds are at risk of being preyed upon by cats and being injured by window collisions. These deaths and injuries impact the population and make it hard for it to rebound.

## **Keys to Conservation**

- Consider building bird boxes to support habitat building in the region.
- By buying bird-friendly products such as shade-grown, fair trade organic coffee, you will be helping to preserve the habitat Canada Warblers use on migration and during their non-breeding season.
- Make windows visible to migrating birds. This can be done with solar blinds or taut netting during the day options that won't obstruct your view! At night, turn off building lights that attract birds, or close blinds and drapes so the light does not escape.
- Cats are estimated to kill between 100 and 350 million birds in Canada each year and can impact the Canada Warbler, which flies through suburban and urban areas of Canada on its migrations.



## **Burrowing Owls**

## Region 11

For the only ground-dwelling owl, many threats have led to a decline in the Burrowing Owl population. These threats include:

**Habitat Loss:** Burrowing Owls use burrows that have been excavated and abandoned by badgers, ground squirrels and prairie dogs. Since many of these burrowing mammals are considered "pests" they are often exterminated, and this affects the overall number of available burrows for the Burrowing Owl to find shelter and nest.



Photo credit: William H. Majoros / CC BY-SA

**Habitat Loss:** The grassland habitats are being lost and fragmented as they are converted to croplands or urban areas.

**Poison:** The use of chemical pesticides to control grasshoppers and other insects has an impact on the food source for the owls.<sup>iii</sup>

## **Keys to Conservation**

- Provide and maintain areas of short, sparse vegetation in prairie landscapes
- Maintain populations of prey species and burrowing animals which owls are dependent upon
- Encourage the reduction of pesticide, rodenticide, and noise pollution during the breeding season
- Increase public awareness and education of the species and its habitat requirements

# LOOK IT UP!

Read more about a project at the Calgary Zoo to help grow the Burrowing Owl population.

calgaryzoo.com/why-wematter/conservation-programs



## **Brewer's Sparrow**

## Region 9 and 10

This plain bird with a beautiful song requires large habitats of open brushlands including sagebrush, plains, alpine meadows, and valleys with low shrubbery.

**Habitat Loss:** The sagebrush habitat is decreasing due to agricultural and urban development, leaving less space for the sparrow to live. Burning and clearing of sage for range improvement reduces their habitat even further.



Photo credit: VJAnderson / CC BY-SA

#### **Loss of Food and Pesticides:** We wouldn't normally

think of more flying insects being a good thing, but this is what these sparrows eat and need to survive. Heavy agricultural grazing may also reduce the number of flying insects. There has been a significant decrease in flying insects due to pesticide use, meaning sparrows have less food to eat. Chemical compounds found in some pesticides can accumulate in the bodies of adult birds and their young, affecting health and reproduction.

## **Keys to Conservation**

- Landowners are encouraged to avoid further removal of sagebrush for residential, commercial, and agricultural development. Ideally, we work to restore sagebrush to areas that have been cleared in the past.
- See if there is a sagebrush replanting initiative in your area!
- Monitor and reduce the use of pesticides.
- Avoid heavy grazing in sagebrush areas.
- Protect known nest sites from human disturbance.

## Conservation Success Stories



We are focusing on bird conservation not only because it is necessary to protect bird species across Canada, but also because it works!

## Here are some examples of conservation efforts in action and the amazing impacts they've had!

This lets us know that **conservation efforts are important and worth it** – when we understand the problem, make bird conservation a priority, and take action together, we see results!



Almost all 60 or so **Piping Plover** nesting beaches in Nova Scotia, New Brunswick and Ontario have volunteer monitors. This means they are watched and protected, reducing the rates of human disturbance to nesting sites. There is also advocacy for conservation efforts to protect their unique coastal beach habitats.<sup>IV</sup>



In the Prairies, more than 16,000 hectares of native grassland is being protected with the help of Birds Canada and 62 landowners, to help conserve some of the last populations of the 12 primary birds only found on the prairies, like the **Chestnut-collared Longspur** and Sprague's Pipit. This involves low intensity "conservation grazing" of community pastures outside protected areas. vi

# LOOK IT UP!

Search for success stories like these in your area!

Due to conservation efforts at a national level, Canada has seen a 150% increase in waterfowl and a 110% increase in birds of prey. These are general numbers, and some specific species are still at risk, but these conservation efforts of protecting wetlands have helped geese and duck populations. Also, banning the use of DDT has led to rebounding eagle, osprey, and falcon populations.



Over 800 **Eastern Loggerhead Shrikes** have been released since 2003 through coordinated captive breeding and release programs at Scheck Nature Reserve and Carden Alvar in Central Ontario.<sup>v</sup>



In Southern Ontario, farmers, conservation groups, and government have worked together to develop bird-friendly haying and grazing practices across 15,000 hectares of high-value habitat for birds like the **Eastern Meadowlark** and Bobolink.<sup>vii</sup>



## Find Your Feathered Friends!

Let's get to know the birds in our communities!

## How does bird watching work?

It's simple. All you need to do is stop, look, and listen.

- **1.** Birds can blend into their surroundings very well, so be patient and look carefully.
- 2. 2. Start by looking at the sky, and then move down the horizon.
- **3.** Look for birds on roofs and in trees and bushes
- **4.** Watch for movements out of the corner of your eye.
- **5.** Tune out normal noises like wind and cars. Do you hear birds singing?

Once you've successfully spotted birds, use one or more of these free field guide resources to start identifying them:

- eBird Canada Website: ebird.org/canada/home
- Merlin Bird ID App: merlin.allaboutbirds.org
- Nature Canada bird ebooks: naturecanada.ca/discover-nature/about-our-birds/bird-e-books

#### What it's all about

You will learn to identify birds using your eyes AND your ears. You will be able to share your knowledge with others and describe what a bird looks or sounds like.

When identifying birds, it is often better to get an overall impression of the bird rather than trying to concentrate on one particular feature. However, the questions below can help you narrow your search! Once you have taken note of some of the characteristics of your mystery bird, use your birding ebooks to identify the species!

Try bringing this questionnaire with you on your first few sightings to help with your bird identification process. Alternatively, you can download one of the many bird identification apps on your phone and use it in the field to help you identify the birds you see.

## Do it!

What you need to bring along for birdwatching:

- Bird identification field guide
- Find Your 4-H Wings Bird Passport (available at 4-h-canada.ca/findyour4hwings)

#### What size is the bird?

- It is good to use basic size differences to separate species. Create a list of examples from common bird species that you can easily picture in your mind, starting smallest to largest. For example, hummingbird, sparrow, robin, pigeon, crow, eagle.
- This will make it easier to compare the bird's size to another bird you know. Is it bigger, smaller, or around the same size as one of the common birds you are already familiar with?





## What shape is the bird's body?

- Come up with simple words to describe the bird's shape! For example: plump, round, slender, stocky, pointy.
- Visual learners can use your field guide to match descriptive words with the overall look of a bird. For example, Doves and Whitethroated Sparrows are good examples of plump birds, while Herons and Catbirds tend to look slender.
- The size of a bird's tail is another good descriptor to use. Examples of long-tail birds include Magpies and Tanagers. Short-tailed birds include Ducks and Warblers.

## What shape is the bird's bill?

- Short and narrow? (Examples: Chickadee, Warbler)
- Short and stout? (Examples: Sparrow, Finch)
- Long and sharp-pointed? (Examples: Woodpecker, Shorebird)
- Strong hook at the tip? (Examples: Hawk, Owl)

# What are the markings or colours on the bird?

- Overall body colour?
- Wing bars or not?
- Eye rings or stripes?
- Crown patch, throat patch, wing patch, rump patch, or cheek patch?
- Stripes or spots on the breast?
- Crest?

# What is its flight pattern? How does it fly?

#### Examples:

- Finches have a steep, roller-coaster flight pattern
- Woodpeckers fly in a pattern that has slow rises and falls
- Hawks soar holding their wings out to the side

# TIP: Watch your bird fly, then try to match its flight pattern to one of the examples listed in your field quides.

If you have already identified a bird, but haven't seen it fly, it's still a good idea to look up its flight pattern. That way, if you see it fly in the future, but aren't close enough for a good look, you could still identify it based on its flight pattern.

## Where do you see the bird?

- Is it by the water? What kind of water?
   (Examples: lake, creek, ocean)
- Is it in the woods? Are they dense or open woods?
- Is it out in open fields?
- Is it in your backyard, in a hedge, or foraging on the ground?
- Is it in the city?

## What is the bird doing?

- Is it feeding, flying, or perching?
- Is it in alone or in a flock?
- Is it on the ground, in the water, in a bush or tree, or clinging to the bark of a tree?

## **Activities**

Find Your Feathered Friends



- Is it at a bird feeder? If yes, what is it eating (Examples: seeds, suet, fruit)?
- Is it eating "on the wing"? (Example: swooping at bugs in the air)

#### What sounds does the bird make?

- Does it sing a pretty song repeatedly?
- Is it quiet, making no sounds at all?
- Does it only make noise when frightened?
- Does it make a high-pitched crying sound?

TIP: There are lots of mobile applications and online resources dedicated to helping to identify bird songs and sounds. (heck them out!

## What time of day is it?

-Different bird species can be active at different times of the day. (Example: owls are nocturnal and tend to start coming out to hunt at sunset)

#### What season is it?

Since some birds migrate, you may see different types of birds at different times of the year. During fall or spring, there is a chance of seeing migrant birds that are just passing through on their way to summer or winter homes.



140003

Motes



## **Conservation Clean Up!**

We've talked about the impact of pollution on bird habitats, and this is something you can change! Make a difference in your community by helping to restore and rejuvenate local waterways. Marine birds are particularly at risk from plastics and other garbage left behind. Identify a lakefront, shoreline, river or stream that is important to your community and plan to dedicate a few hours to clean it up.

**Identify a waterway** in need of your time and effort. Consider talking to a local watershed group or conservation office. They might be able to help you identify a space in need of attention!



Photo credit: Tyros.andi / CC BY-SA

**Plan to go clean up as a club.** Do you need more help? Invite family, friends and neighbours and make it a community event! Spread the impact, and encourage more people to become aware of bird conservation efforts.

**Prepare supplies.** You will need trash bags and gloves. As a group, discuss what else might be needed. Good ideas might include:

- **1.** What to wear? Flip flops or rubber boots? Favourite white shorts or splash pants you can get dirty?
- **2.** What's the weather forecast? Should we wear sunscreen? Take bug spray?
- **3.** Water? In a reusable water bottle of course!

**Discuss what will happen** to the trash that is collected. Will recyclables picked up be recycled? Where will the trash bag and the recyclables be brought?

**How will you celebrate your hard work?** Maybe with a BBQ or pizza?

#### Discussion

- Were you surprised at how much garbage was picked up?
- What kinds of trash were the most common?
- Where do you think the trash came from?
- Have any of you ever littered? Will you litter again?
- We cleaned up things this time; who will clean up next time?

# DID YOU KNOW?

Unfortunately, 80 to 85 percent of Arctic Fulmars in Canada have been found to have ingested plastic. This is just one bird species, but it represents just how much of an impact plastics have on marine birds. If we can collect the plastics and garbage before they enter our waterways, we keep them cleaner, and protect bird species!



## **Window Pain**

As birds are in flight, they are constantly looking and mapping their flight path. When they see what looks like more blue sky or a tree, they assume it is. Unfortunately, our shiny, reflective windows deceive a lot of birds, which leads to collisions for millions of birds. Over 25 million birds fatally collide with windows in Canada every year. You can help to change this!

This is an activity you can do along with the other observational activities like *Kitty Cat Count* and *Light Up Tally*.



Before you head out, learn more about the importance of dealing with window glare from FLAP at **flap.org/connect**. For 25 years, FLAP Canada has poured its efforts into protecting birds from the life-threatening dangers of human-built environments. Consider reaching

out to volunteer with them, or to ask them for information about doing a window assessment.

Walk around your home, where your club meets, or your community. Note how many windows you see that reflect the sky, or trees – it will likely be a lot! These all pose a danger to birds. Self-assess your home or workplace for opportunities to improve bird-window safety.

- Homeowner self-assessment: birdsafe.ca/homeowner-self-assessment
- Business self-assessment: birdsafe.ca/business-self-assessment
- Download the FLAP app to help your assessment: **flapapp.ca**

Make all windows visible to birds. By providing birds with visual cues or markers alerting them to the presence of glass, we can reduce bird collisions. Follow these directions to decrease the danger of window glare: **birdsafe.ca/homes-safe-for-birds** 

Report bird collisions you find here: **birdmapper.org/app** 



# TALK ABOUT IT!

What do you want to do about these dangers?

If it's your own homes and spaces, consider what actions you can take individually. If you're also looking at businesses, schools, and office buildings, consider how you could share your knowledge of the importance of bird conservation with them, and encourage them to take steps to reduce the danger of their windows.



## **Light Up Tally**

Many birds use lights to navigate or are active in low light conditions. When artificial light sources interfere with a bird's ability to migrate or hunt, their populations will be impacted.

This is an activity you can do along with the other observational activities like *Window Pain* and *Kitty Cat Count*.

- **1.** Take an evening walk and point out all lights that are on or you can see through windows.
- **2.** How many of these are lights are for the public (e.g. street lights, traffic lights) and can't be turned off?
- **3.** How many of these are lights could be shut off (e.g. porch lights, business lights, home lights)?

The Audubon Society has a program called *Lights Out*, an effort to protect birds.

## Here are some things you could look into and try to do:

- Turn off exterior decorative lighting
- Turn off pot lights and floodlights
- Substitute strobe lighting wherever possible
- Reduce atrium lighting wherever possible
- Turn off interior lighting especially on higher stories of buildings
- Substitute task and area lighting for workers staying late or pull window coverings down
- Down-shield exterior lighting to eliminate horizontal glare and all light directed upward
- Install automatic motion sensors and controls for lights wherever possible
- When converting to new lighting assess the quality and quantity of light needed, avoiding over-lighting with newer, brighter technology<sup>viii</sup>

# LOOK IT UP!

Read this article about the impact of artificial light sources and their impact on migratory birds:

audubon.org/news/we-finallyknow-how-bright-lightsaffect-birds-flying-night





## **Kitty Cat Count**

As wonderful as they are, cats have a huge impact on wildlife populations, particularly birds. We want to keep our furry friends safe, while also protecting our winged friends and native bird populations.

This is an activity you can do along with the other observational activities like Window Pain and Light Up Tally.

- Do this is activity alone and compare numbers with your fellow club members or friends
- When you are around your home and neighbourhood, observe how many cats you see wandering around.
- Are they pets? Are they feral?
- Keep track of how many you see over a period of time.

When you meet with your fellow members or friends again, share the number of cats observed and talk about what you learned.

- How many dead birds do these cats represent?
- How can people do you know work to limit the impact of any of their cats on the local bird populations?
- How could you share your knowledge with neighbours who let their cats roam? What is the community doing to address cat predation of birds?



Photo credit: Johnmumbles / CC BY-SA

# DID YOU KNOW?

Cats are estimated to kill between 100 and 350 million birds in Canada each year.

Each cat can kill 100-300 animals a year. The more time they spend outside, the more opportunity they have to prey upon birds.

If cats are feral, they are likely to kill even more animals, but even more concerning, they are likely to be unfixed and continue to increase the feral cat population, leading to poor quality of life for their kittens, but also an increasing threat to birds.

# LOOK IT UP!

Check out Cats and Birds – an organization that works to educate people about the importance of limiting cats' exposure to wildlife and increasing the care and safety of our feline friends. They have educational resources available too!

catsandbirds.ca/educatorsgrades-4-to-6/



### **Home Tweet Home**

We've looked at how important habitats are for Canada's birds, and birdhouses or nest boxes can be a great way to introduce more habitat spaces to your community! Here's some useful information and tips to help you build your own Home Tweet Home for some feathered friends!

There isn't one birdhouse or nest box design that will meet the needs of all birds. Find out which birds you can build a nest box for in your area with NestWatch's Right Bird, Right House tool at **nestwatch.org/learn/all-about-birdhouses/right-bird-right-house/**.

# IMPORTANT: Make sure you have proper supervision for building the birdhouses and using the necessary tools.

Painted appropriately with safe colours and non-toxic paints, a painted birdhouse can be attractive to birds. A brightly coloured, highly visible house, however, may not attract tenants if more suitable nesting sites are available. By choosing paints, colours, and designs carefully, you can create the perfect Home Tweet Home.

## Consider the following when it comes to decorating your birdhouse:ix

- Use water-based, latex paint and always avoid lead-based or creosote paints that may be toxic to birds. Consider trying alternative, eco-friendly or naturally-derived paints, or opt for natural or organic stains rather than paints.
- Avoid painting or staining the inside of the birdhouse, or the edge of the entrance hole. Growing birds may peck at surfaces and could ingest paint chips or small chips of paint could get into hatchlings' delicate eyes.
- Allow the paint to dry thoroughly for several days before mounting the house for birds to use. This will allow potentially toxic odours to disappear before birds investigate the house and will keep those odours from attracting nearby predators.
- When cleaning the birdhouse at the end of each breeding season, check for peeling paint, chips, or fading. Repaint or reseal the house as necessary to keep the paint job in a good, safe condition.



Consider involving a local bird expert to help you find effective locations for your birdhouses. You could turn it into an event, where friends, parents, and community members can join for the birdhouse hanging as you walk around your community and find the best spots!



## **Habitat Paradise**

By participating in Find Your 4-H Wings, you have learned that different birds have different kinds of habitat needs and while many organizations work to protect bird habitats, we are all responsible to address bird habitat degradation and destruction.

## What can you do to help?

## A lot! You can even build a bird sanctuary in your own backyard!

This is a big activity, but with a little research into bird-friendly plants and shrubs, and some careful planning, you can build a habitat in which birds can thrive, complete with edible plants, insect-attracting flowers, water for bathing and drinking, and plenty of cover for safety.

Once your habitat has been built, you will have a lovely natural space that will attract a variety of birds. Maintain it well and you should see birds all year long! Consider working with a gardening club to develop a community garden together!

## What you need

- An outdoor space where you can create a bird habitat (If you don't know of a suitable space to use, try asking a local community hall or school)
- Shovels
- Work gloves
- Bird-friendly plants, shrubs, and trees (Try asking a local greenhouse, nursery, or gardener about native plants to use)
- Bird feeders
- Birdbaths

#### What to do

- **1.** Plan out the design of the habitat as a group with fellow 4-H members, leaders, or friends. All you need to think about when building your bird sanctuary are four basic elements: food, water, shelter, and places to raise young.
- **2.** Start with a pen and paper, and use the suggestions below to brainstorm ideas for your bird sanctuary that cover all four basic elements of food, water, shelter, and places to raise young.
- **3.** Next, draw out the design for your bird sanctuary.

You can find examples of designs and helpful hints and tips online, or even ask a local gardener or arborist for advice.

Be sure not to fight the natural space you're working with. Use the unique elements of the space to your advantage!

Keep in mind that any of the suggestions below can be incorporated into your own yard too!



#### Food

- Consider planting shrubs and trees that produce seeds, fruits, and nuts throughout the year.
- For hummingbirds and butterflies, consider nectarproducing plants like flowers.
- Ask a local greenhouse, nursery, or gardener about suggestions for native plants to use.
- Add a bird feeder to a good, safe spot. And be sure to avoid placing the bird feeder close to windows, which can cause birds to collide with the glass!

#### Shelter

- Birds are vigilant animals. Always on the lookout, they tend to stick to the cover of trees, bushes, and thick grass and only go out into the open when necessary – and even then for very short periods.
- Shelter will be very important in making your bird sanctuary a comfortable and safe place for birds to frequent.
- Consider planting native evergreen trees or dense shrubs to provide year-round cover from weather and predators. Deciduous trees provide nice nesting sites. Rocks, logs, and mulch piles offer good cover for small animals like reptiles and insects, which birds like to eat.
- Try placing a dead or decaying stump in your space to act as a great source of both food and shelter for many creatures. Your old Christmas tree can become a good addition to the habitat, providing shelter during the cold months before you compost it in the summer.

#### Water

Consider offering several sources of water, such as:

- A pedestal fountain
- A shallow water dish at ground level
- A small pond with varying depths for both drinking and bathing.
- You can even simply attach a plastic container to a post.
- You may find dragonflies, frogs, and other aquatic life moving in. This is a great thing because biodiversity is the name of the game!
- Be sure to check and change the water regularly to keep it fresh. Still water can become unhygienic for both birds and people.

## Places to raise young

- Planting trees and shrubs at a variety of heights will encourage birds to nest in your habitat.
- Roaming cats are one of the biggest threats to bird.
   Avoid making the habitat a cat-friendly place.
- Be sure to welcome birds with functional nest boxes, which you can build on your own, or buy from most greenhouse and tree nurseries.
- Provide nesting material in the form of twigs, leaves, and sticks.

## Maintaining your bird habitat

To maintain a successful habitat, you will need to regularly refill feeders and change water baths. However, other than that, your ecosystem should be free to function and grow on its own.

Don't worry about cleaning up the space too much. There's a reason natural forests tend to have a lot of debris. Many animals thrive in decaying roots and stumps, and they can be a source of nesting material, food, and shelter for birds.

Avoid the use of pesticides in your bird habitat, and at home too; insects are a large part of many birds' diets and they will thank you for it!



## Citizen Science

Everyone has an opportunity to make an impact, and you don't need a lab coat to become a scientist! Check out these awesome ways to participate in scientific research that will help support bird populations and conservation efforts in your area.

(heck out these citizen science projects to try out and explore.

#### **Zooniverse**

The Zooniverse is the world's largest and most popular platform for people-powered research. This research is made possible by volunteers – more than a million people around the world who come together to assist professional researchers. Their goal is to enable research that would not be possible, or practical, otherwise.



There are currently several different nature-focused projects that deal with birds. Check them out here: **zooniverse.org/projects?discipline=nature&page=1&status=live** 

## **Birds Canada**

They are the voice for Canada's birds! They work to conserve wild birds through sound science, on-the-ground actions, innovative partnerships, public engagement, and science-based advocacy – and they need your help! Thousands of caring members and volunteer Citizen Scientists track bird observations which are used to identify significant bird population changes and help direct conservation planning.



Check out the ways you can help based on your province: birdscanada.org/you-can-help/citizen-science

Share your bird feeder observations here: birdscanada.org/you-can-help/project-feederwatch

## **North American Bird Conservation Initiative (NABCI)**

NABCI is devoted to all birds and their habitats – striving to ensure their survival and to protect their habitat throughout their life cycles. Check out their list of various projects and organizations that you can help with to support bird status reporting across the country!



nabci.net/foundation-for-conservation/bird-status-reporting



## Let's Talk to an Expert!

Naturalists are both knowledgeable and passionate about nature. Many naturalists have dedicated their lives to ensuring that we adapt to the environment and don't force wildlife to adapt to us, and this includes studying and conserving birds. You can learn a lot from these people, and they are often very happy to share their knowledge with you.

# Identify a naturalist in your community. Some places to look include:

- Provincial park staff
- Parks Canada staff
- Local watershed organizations
- Local naturalist or conservation clubs
- Local museums
- Local hunting clubs or bird watching clubs
- Nature Canada's website naturecanada.ca
- Nature Conservancy of Canada's website natureconservancy.ca/en/where-we-work
- College and university conservation programs
- Local science teachers

You never know who a bird enthusiast might be until you ask! Once you've identified someone, invite them to meet with you or your club to explain what they do, where they work, and what they know about bird conservation efforts in your region. Maybe they can help you plan or lead a conservation activity!

#### Discussion

- Before you meet them What types of questions will you ask?
- What species are at risk in my area?
- What can we do to protect these birds?
- What conservation efforts are simple and easy for us to do?
- What conservation efforts are working?
- After you meet them What was the most interesting thing you learned from the naturalist?

# DID YOU KNOW?

Nature Canada is the oldest national nature conservation charity in Canada. Over the past 75 years, Nature Canada has helped protect over 63 million acres of parks and wildlife areas in Canada and countless species that depend on this habitat. Today, Nature Canada represents a network comprised of over 45,000 members and supporters, and more than 350 nature organizations across the country.

Many of these are small groups with tremendous knowledge about nature. There may even be a club in your area with tons of knowledge about local birds!

Want help finding experts in your area? Reach out to Nature Canada to see if there is a naturalist in your area!

naturecanada.ca







# **Keep Soaring!**

# Looking for even more Find Your 4-H Wings activities?

Check out these previous years of Activity Books, which are available at 4-h-canada.ca/findyour4hwings

Birds 101 (2015)

Bird Identification (2016)

Bats (2017)

Loons (2018)

Owls (2019)





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Learn To Do By Doing