



Volume 33 Number 1

Editor: Helen Trefry

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### **Highlights and Low Lights of BBO** by Chair Geoff Holroyd

What a year 2020 has become! BBO started the year with 3 staff delivering our in-school BirdSmart education program and completing reports and grant applications. The Board worked hard on plans to replace our aging and unin-sulated lab with a two story education center and approved to have three staff continue our many research, education and monitoring programs throughout the Beaverhill Natural Area. We had set the dates for our annual Big Birding Breakfast and Steaks & Saw-whet Supper, and had advertised the Young Ornithologists' Workshop widely. I chaired a steering committee of a dozen organizations and government representatives to recreate the Snow Goose Festival, planning for 4,000 people to attend over the weekend of 25-26 April. Then COVID-19 reared its ugly presence, all schools closed – so our BirdSmart program came to a halt, and all public events were put on hold.

Like everyone, we have had to adapt our plans to this new norm we find ourselves in. Our staff have recreated our BirdSmart program through online webinars and the initial responses of children, parents and teachers has been very positive. We are now offering daily online talks about conservation topics that link in with the Alberta curriculum. We made the difficult decision to not run the banding program for migratory monitoring and announced the temporary closure of the bird observatory to the public. All public events are cancelled until further notice to avoid any chance of exposing our staff to the virus. Thankfully, plans to replace our lab building continue. Volunteer John Scott has volunteered to work with architects and MacLellan Construction to build our new education center this summer. The two staff will conduct limited research projects and stay in our two bunkhouses, one each. While we will not be banding for a while yet, the BBO has many research topics that can be tackled with the data that we have collected over the last 36 years. Staff will be analyzing these data from the safety of their homes for much of their work time.

Spring has been late arriving and the cold temperatures and regular snowfalls have made self-isolating easier for me and I suspect many other people. Warm temperatures are predicted for mid-April and I encourage you to enjoy the arrival of birds from your home and in your neighbourhood while practicing social distancing, or more correctly physical distancing.

Please follow our latest updates on Facebook, Instagram and Twitter and receive our special bulletins through our membership. If you are not yet a life member, visit our [website](#) to join: it only costs \$10 for a life membership to keep in touch. While we are going ahead with building a new education center we are still short on funds to complete the interior. We need about \$30,000 for all the interior fixings such as the expanded kitchen space, the electrical fixtures, window coverings, banding table, chairs, desks, etc. We need a little more funding to complete the solar power system / cell tower / Wi-Fi / MOTUS system. Please consider [Donating to BBO](#) despite these tough times. Between provincial cuts and Covid ramifications to funding, we need your help now more than ever.

Thank you for your ongoing support. Think Globally, Act Local

## BirdSmart Education Program

by Stephanie Thunberg and Sara Pearce Meijerink, BBO biologists

During the winter months, The BBO's **BirdSmart Education Program** travels across the province of Alberta, providing in-classroom presentations to students about birds, conservation, climate change and more! We provide presentations to students as young as Prekindergarten, up to Grade 12, all tailored to match the Alberta curriculum, and even offer adult and seniors presentations. With a live owl attending every talk, our message on the importance of conservation is more impactful, as we link the conservation issues back to the bird that is visiting their classroom, helping students to fully understand the severity of the situations and inspire individual action. By tailoring our presentations towards student audiences, we aim to make an impact on a generational level, helping to build a more environmentally conscious and knowledgeable community.

This winter's BirdSmart Program began November 1, 2019 and between then and March 14, 2020, we reached approximately 4,513 students and 1,342 adults, through our programming on the topics of birds, conservation and climate change. We also attended for the third year in row, the Oil King's Hockey Hooky event, reaching an additional 9,212 students and 2,000 adults! Once again, Sara, our head biologist, wowed hockey fans on the big screen with three short presentations, featuring Ray the Great Gray Owl, Vinnie the Peregrine Falcon and Rickie the Northern Saw-whet Owl. Our BirdSmart Program served not only the schools in Edmonton, but also Spruce Grove, Fort Saskatchewan, Leduc, Calgary, Cochrane, Drayton Valley, Hinton, Evansburg, Millet, Ardrossan and many other rural communities across the province. BirdSmart even expanded its outreach across international borders! Our chair Geoff Holroyd provided three presentations to university students, professors and bird-watchers in Puerto Vallarta, Mexico, much to their and his delight!



As of March 15, 2020, our in-classroom programming came to an end with the shutting down of Alberta schools due to the COVID-19 pandemic. While we all adjust to this new norm of physical-distancing, we have all had to come up with different ways to continue our work and daily lives, and the BirdSmart Program continues to adapt as well! As of April 9<sup>th</sup>, **our programming has gone digital with FREE online educational webinars!** Throughout April and May, BirdSmart is offering our educational programming online to any and all who wish to learn. Just visit our [website](#) to see upcoming programs and register for your place as spots are limited!

The BirdSmart Program is also accepting presentation bookings for next winter 2020/2021. If you are interested in booking a talk by the BBO staff with a live owl for your school or event please contact [education@beaverhill-birds.com](mailto:education@beaverhill-birds.com). Thanks to Stephanie Thunberg (pictured above) and Karambar Singh for their hard work on the education program over the winter. They will be finishing up with BBO at the end of April and May respectively.

Photo credit: Catherine Guthro



Photo credit: Gerald Romanchuk

### **Impact of Climate Change on Mountain Bluebirds** by Karambir Singh, BBO biologist

Mountain Bluebirds are a medium size, short-distance migrant found in western North America. Their arrival often indicates the beginning of spring in Alberta. In early spring, bluebirds migrate from their wintering grounds in the southwestern United States and central Mexico to their northern breeding grounds that extend from Alaska to western Canada and United States. In their breeding range, they occupy grassland habitat and often eat beetles, grasshoppers, and caterpillars while nesting in human-made bird boxes or cavities in trees left behind by woodpeckers.

Over the last 58 years, bluebird spring arrival dates in central Alberta, have advanced significantly in response to climate change. This was demonstrated in a study led by Myrna Pearman of the Ellis Bird Farm. Bird migration is stimulated by time of the year, local weather, changes in day length, and temperature, according to Dr. Geoff Holroyd, a co-author of the study and chair of Beaverhill Bird Observatory. Between 1961 and 2018, the first arrival date of Mountain Bluebirds in central Alberta has advanced by 19 days, meaning in the last 58 years, Mountain Bluebirds have been arriving earlier (0.33 days per year), in response to the increasing temperature and declining snow cover. The mean temperature in March has increased by 2.7 °C in past 58 years, while the snow cover decreased by 3.6 cm. “Bluebirds are coming back earlier in response to early availability of arthropods (insects) caused by increasing temperatures and declining snow cover,” Holroyd said in a personal phone interview. This, however, is not necessarily good for the bluebirds. Extreme weather fluctuations are common in Alberta in early spring and April is one of the snowiest months of the year. Holroyd also indicated that “if the birds are coming back earlier, they are

at risk of suffering from cold weather in April. They may also face starvation due to limited access to their food supply caused by deep snow cover on the ground.” As a result, the advancing migration, may jeopardize the Mountain Bluebird population in Alberta.

According to Holroyd, Mountains Bluebird could be a good indicator of what is happening to other species, particularly other short-distance migrants. As these migrants often arrive in early spring, they are more vulnerable to extreme weather events compared to long-distance migrants which tend to arrive later in June.

### **Purple Martin Houses for BBO** by Rose Scott

John Scott, a dedicated BBO volunteer, has been busy this winter building some new homes for some of our feathered friends. Two new Purple Martin houses are ready to be installed at Beaverhill Lake. Each house has 12 compartments and is based on the Bob Buskas’ North Star design. BBO thanks John for all the detailed work that went into these boxes!





## Beaverhill Bird Observatory Proposed New 2020 Education Center!



BBO plans to replace our aging lab with a new two story Education Center this summer! Our banding lab will be significantly larger allowing us to host more visitors inside and everyone will have a warm and comfortable working space! The contractors can work within the COVID guidelines since the public will not be allowed on site and indeed, this is a perfect year to go ahead with this project with the site closed to the visitors.

We look forward to the day when we can invite you to celebrate the opening of our new center. In the interim, please consider [Donating to the Building](#). While we have all the funds to build the basic structure, we are still short for the interior finishing. Every donation will help us to complete this exciting new project. We have been fund raising for a long time to make this happen but it has only been through generous donations by individuals and in particular in memory of Mary Weir that we can begin to see this dream become a reality, so THANK YOU.



## 2019 Update for Alberta's Nocturnal Owl Survey

by Lisa Takats Priestley

The Alberta Nocturnal Owl Survey has been running for 18 years. The survey is now coordinated by STRIX Ecological Consulting and Beaverhill Bird Observatory. We had 190 volunteers survey 96 owl survey routes across Alberta. Boreal and Saw-whet Owl numbers were high, but large owl numbers were average for the survey. Due to cold weather and deep snow conditions, owls were breeding later in the spring, and many volunteers reported hearing more owls in round two of surveys. Although Edmonton, Calgary, Red Deer, and Peace River have high numbers of volunteers, Alberta still needs more routes covered in the north and in the prairies. If you would like to participate in 2021 please contact Lisa Priestley E-mail: [lisa@strixeco.ca](mailto:lisa@strixeco.ca) or phone: 780-662-4909. Surveys are run twice between March 20 and May 5. Please provide a general area you would like to survey, and a mailing address. Survey packages are mailed in February. **BBO Note: Due to COVID-19 concerns we are not recommending further surveys in 2020.**

Non-duplicate detection rates (owls/station×10) during the 2019 Alberta Nocturnal Owl Survey (STRIX Ecological and Beaverhill Bird Observatory 2019).								
YEAR								
Species	2012	2013	2014	2015	2016	2017	2018	2019
Boreal Owl	0.51	0.3	0.41	0.41	0.39	0.44	0.26	0.38
Barred Owl	0.25	0.16	0.18	0.21	0.21	0.20	0.23	0.21
Great Gray Owl	0.14	0.07	0.10	0.11	0.12	0.09	0.10	0.14
Great Horned Owl	1.99	1.64	1.85	2.12	2.06	2.04	1.86	1.95
Long-eared Owl	0.16	0.30	0.32	0.29	0.26	0.29	0.25	0.28
Northern Pygmy Owl	0	0	0	0	0.01	0	0.02	0.01
Northern Saw-whet Owl	2.83	1.35	1.75	2.02	3.01	1.67	1.42	2.56
Short-eared Owl	0.02	0	0	0.01	0	0	0.01	0
Number of Routes	99	100	98	98	99	98	97	96
Number of Volunteers	190	185	192	186	190	192	187	190

## Stories of the BBO Mammals

by Sara Pearce Meijerink, BBO Head Biologist

When people think of the Beaverhill Bird Observatory (BBO), many of us think about birds. After all, “birds” is part of our name. Yet the BBO is more than just a bird research station... We study and research all sort of animals. From our interns who monitor the butterflies and bat populations, to our trail cameras that monitor our mammals, the BBO has a lot of non-bird stories to share. So here are some stories you might not have heard of, regarding some of the mammals staff have befriended over the years.

Our most famous mammal friends are of course **Stella and Gilbert, the northern-flying squirrels**. During the autumn owl season, you are almost always guaranteed to see Stella and Gilbert in the evenings, as



they visit our feeders for a quick meal. With their dusky brown fur, black racing stripe on the side, white belly and large black eyes, these cuties are always a welcomed visitor! Stella, is the most bold and friendly of the pair and is great for posing for photographs and getting a good close look at, if you move slowly. Gilbert, on the other hand, is a lot more shy and timid, and will scurry up a tree upon being sighted. The reason Gilbert is so nervous is because he has been caught one-too-many-times in our owl nets, so we can't blame him from wanting some extra space after being man-handled as our biologists carefully extract him!

**Frank the porcupine**, used to also be a frequent visitor to the feeders during the owl season. If you came out to the BBO 4+ years ago, you would have most likely encountered Frank one evening. A friendly, quiet and patient porcupine, Frank would visit our bird feeders nightly and eat all the sunflower seeds that fell from the feeder. He was great to watch, photograph and was a comfort to our staff working during the night. One evening a couple of years ago, our staff noticed that Frank wasn't doing so well. He had mucus running down his nose and his breathing seemed laboured. After



consulting with WildNorth Wildlife Rehab, it was hypothesized that Frank was suffering from pneumonia and should be brought in for treatment. So BBO staff stepped up to the challenge to try and catch him. What is the standardized method for catching a Porcupine you might ask? Why, a Rubbermaid and a broom! Over the course of the next couple of nights the staff tried to catch Frank, and in the process learned that A) porcupines can run fast when they want to! And B) there is more than just one “Frank” in



the natural area! So unfortunately, not only were they not able to catch Frank, but in the process, proceeded to scare many of our resident porcupines and to this day, we rarely see a porcupine near our buildings, though we do observe them throughout the natural area.

There have been two **red squirrels** that have found themselves in the Beaverhill Natural Area over the years, **Pete The First and Pete Point Two**. Being more of a coniferous mammal, both Petes ended up living by our lab buildings, enjoying the abundance of food provided by our feeders and the conifer trees located by our clearing. Unfortunately, both Petes had the same idea to make their nests in our solar power battery box... which is of course a HUGE fire hazard. So Pete The First and Pete Point Two had to be relocated to another forested area for everyone's safety.



**Martha the Moose**, is a classic visitor, whom frequents the BBO annually and usually spends a week or two, grazing on the vegetation to the west of the lab building, keeping visitors and staff company while they occupy the throne/outhouse. Martha is quiet, calm and keeps her distance, but doesn't mind people getting a look at her from time to time.

Lastly, our newest resident as of 2019, was **Steve the Skunk**. Steve decided that a great place to hide out and pass some time was under the BBO front porch, much to the horror of the staff. Over the course of the summer Steve would occasionally make his appearance on nearby trails or we would see his fur poking out from between the porch boards, which was slightly concerning. Eventually we discovered that Steve, was actually a mother skunk to 3 puffy little baby skunks! Thankfully, once the young were mobile enough, Steve and her family left the buildings to make their homes elsewhere and BBO staff were able to tighten up the fencing around the porch edges so hopefully we won't have any more surprise visitors living under our feet!

The BBO is home to so many animals. Other mammals include; white-tail deer, mule deer, coyotes, foxes, badgers, weasels, ground squirrels, pocket gophers, mice, and voles. There are of course many species of insects, amphibians (chorus frogs, wood frogs and tiger salamanders), reptiles (plains garter snakes), fish in Lister Lake, and of course many birds! At the BBO we appreciate all wildlife that we are fortunate enough to share the Beaverhill Natural Area with and we hope you too, the next time you visit, appreciate the diversity found here.





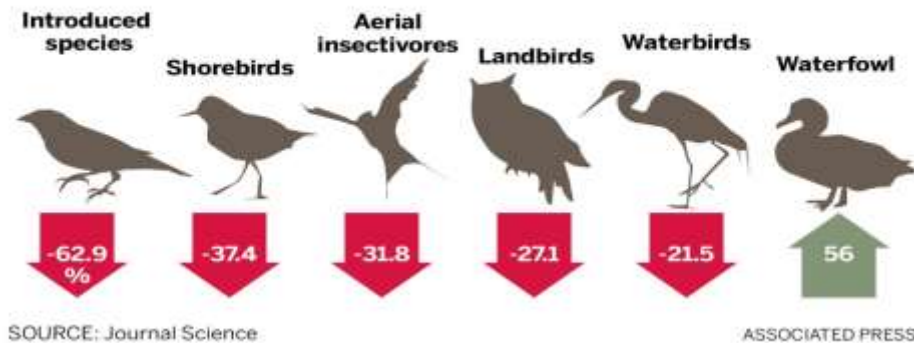
## Is ‘Crisis’ Too Strong a Word to Describe the State of Birds in North America?

by Thea Carpenter, BBO Director at Large

Whether or not you consider yourself an avid birder, you may have noticed that 2019 was a big year for bird news, but not the encouraging kind. With publication of the North American Bird Conservation Initiative’s ‘The State of Canada’s Birds’ report for 2019<sup>1</sup> we learned that, in Canada, shorebirds, grassland birds, and aerial insectivores have declined by approximately 40-60% since the 1970s. This was shortly followed by a research article, ‘Decline of the North American avifauna’<sup>2</sup>, that estimates a net loss of 3 billion birds in North America since the 1970s. That’s nearly one third (29%) of the birds we had on the continent only 50 years ago. The article, written by some of North America’s leading bird researchers and published in the high-profile journal *Science*, brought unprecedented attention to a trend that many birders have been concerned about for years.

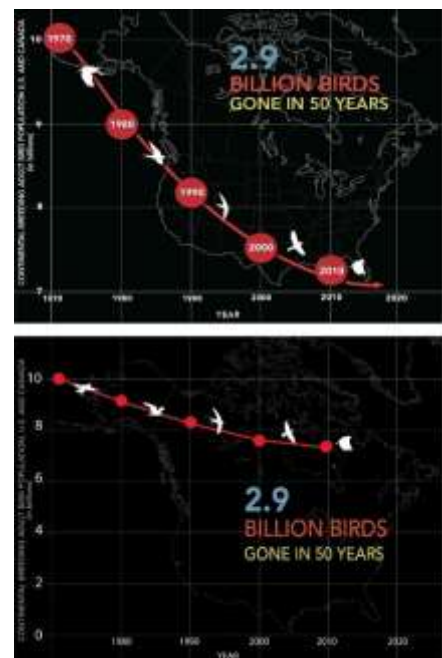
### BIRD NUMBERS ON THE DECLINE ACROSS NORTH AMERICA

A newly released comprehensive study estimates a 29 percent loss in overall wild bird counts since the 1970s.



<https://www.centralmaine.com/2020/03/11/dana-wilde-bird-numbers-declining-throughout-north-america/>

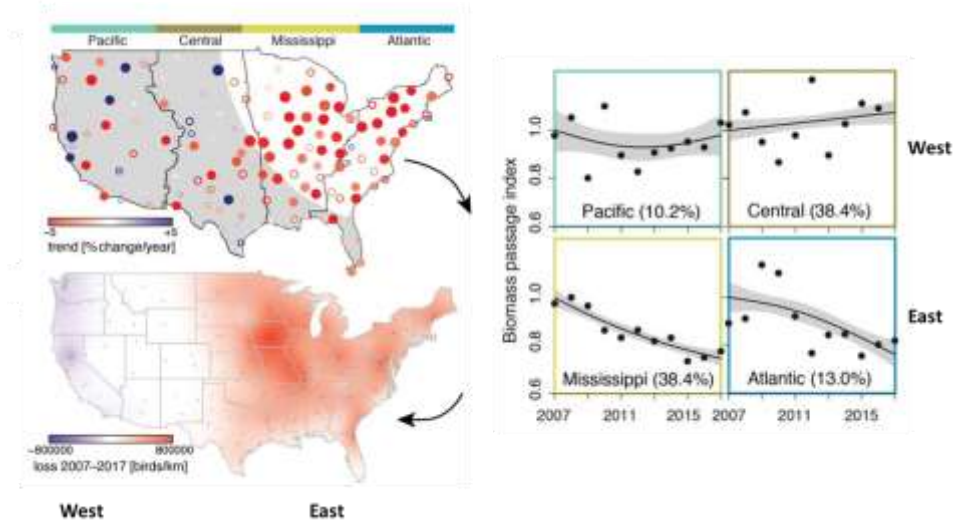
Widespread media coverage includes articles such as, “Bye-Bye Birdies: Almost 3 Billion Birds Disappeared from North America’s Skies in Less Than 50 years” (Forbes) and “The Crisis for Birds is a Crisis for Us All” (The New York Times). And, of course, with so much media attention comes media criticism. Opinion papers including, “There Is No Impending Bird Apocalypse” (Slate.com) outline skepticism of the science, suggesting that the article shows a skewed picture. Scrutiny of the article suggests that authors may have presented trends in a way that may make them appear more severe than they are. For example, by focusing on only a portion of the trend, shown here in the figure on the top right, rather than depicting the full range of values (bottom right), the declines appear more drastic. Critics also suggest the authors inflated the trends by rounding the predicted value of 2.9 billion (with a 95% confidence range of 2.7-3.1) to 3 billion and including non-native species in the data, which account for ~15% of the total declines. They further conclude that by





unique approach. The authors separately examined if the amount (biomass) of migrating birds detected by radar data has changed over time to provide an independent measure of population trends. Results of this alternative approach also showed declining trends. Authors estimated 13% declines in the total number of migrating birds in only 10 years.

### 3. The greatest declines are occurring on the eastern side of North America



These figures depict the trends in the total amount of birds migrating across the United States using radar monitoring data from 2007-2010. In the left figure, red represents declining numbers and blue represents increasing numbers. Although trends in the west (Pacific and Central Flyways) are not clear, there are strong declining trends in the Mississippi and Atlantic flyways, indicating that we have fewer birds migrating through this area than we used to.

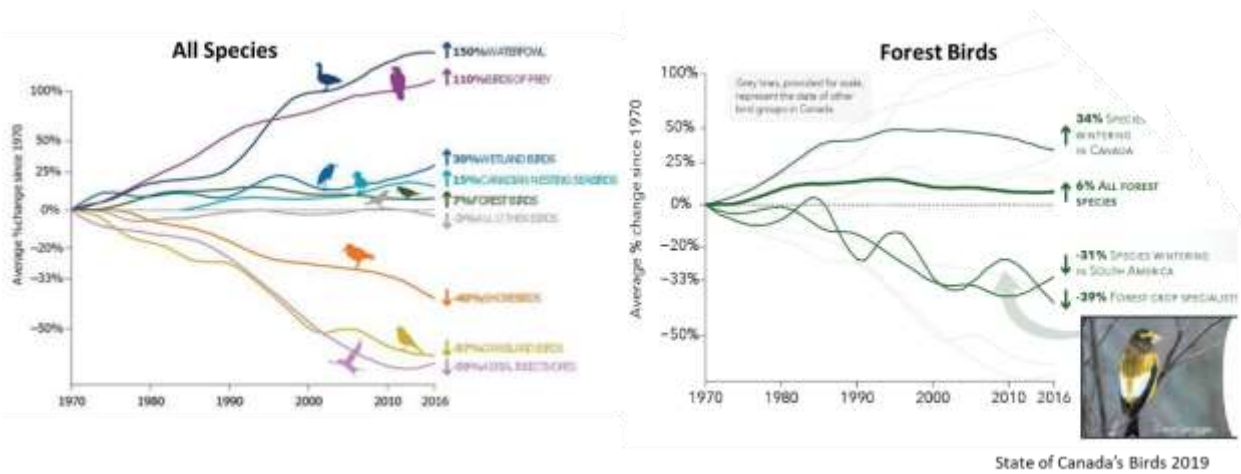
One of the neat things about compiling information at such large scales, is that new trends emerge, often leading to more questions. Whether these differences are due to increased bird mortality as individuals migrate through eastern flyways, poor overwintering conditions for the species that use these flyways, or are perhaps driven by differences driven by changing climate conditions, remains unanswered but points to important new areas for future research.

### 4. There are important differences between some of the declining species and the increasing species

Species groups showing the greatest increases tend to be raptors and waterfowl, as seen in the figure on the left. Both these groups have previously faced significant declines due to overhunting (waterfowl) or the well-known impacts of DDT (raptors). Current increases suggest they may be benefitting from long-term conservation efforts including careful monitoring and harvest regulation. It is also not surprising that waterfowl show such large increases when many species in this group benefit from increasing availability of grains along with the expansion of human agricultural landscapes. Although it is great to see species doing well, we can't assume that this balances out the declines we see in other species or that other species will easily bounce back without the necessity for drastic intervention.

If we focus on just the forest bird species, which show a modest increase of ~6% overall, we can see large variation even within groups. Specialized species (that have very particular habitat preferences) and migratory species seem to be showing the greatest declines. This is concerning because it suggests that the

types of birds we find in different communities might also be changing, potentially leading to completely new community compositions, not just fewer numbers overall.



### Are we in crisis?

So, is calling the current avian population declines a crisis over-reaching? When I consider the key findings outlined in these reports, it seems clear to me that a strong, focused message is warranted. But then again, I'm just a birder so maybe I'm biased.

### Resources

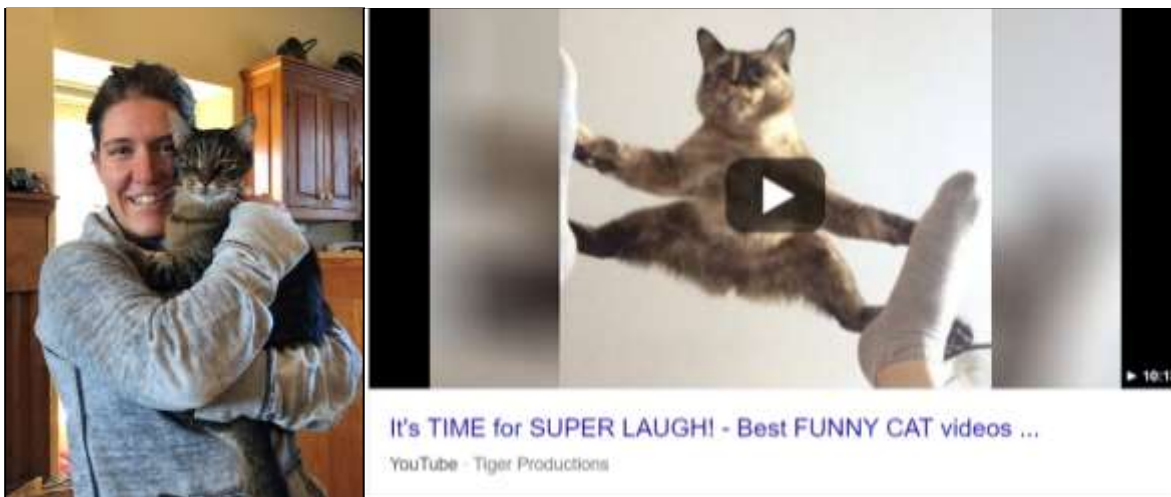
- <sup>1</sup>North American Bird Conservation Initiative Canada. 2019. The State of Canada's Birds, 2019. Environment and Climate Change Canada, Ottawa, Canada. 12 pages. <http://nabci.net/resources/state-of-canadas-birds-2019/>
- <sup>2</sup>Rosenburg, K.V., A.M. Dokter, P.J. Balancher, J.R. Sauer, A.C. Smith, P.A. Smith, J.C. Stanton, A. Panjabi, L. Helft, M. Parr, P.P. Mara. 2019. Decline of the North American avifauna. *Science*: Vol. 366, Issue 6461, pp. 120-124. <https://www.birds.cornell.edu/home/wp-content/uploads/2019/09/DECLINE-OF-NORTH-AMERICAN-AVIFAUNA-SCIENCE-2019.pdf>



# Save the birds, and the cats!

by Emily Upham-Mills, BBO Director at Large

Cats are often important members of our families and provide us with endless joy, cuddles, and hilarious internet videos. It can sometimes be hard to remember that they are also adept predators. Or maybe we know, but don't connect it to the ecology of the world around us. For example, I grew up on a farm in eastern Ontario and we used the terms "barn cat" and "mouser" to describe the cats people owned to live outside and help control the local mouse populations. I never considered the actual impact cats could have on populations of local wildlife, especially not migratory birds. However, studies show that free-ranging domestic cats are the **largest source of human-related mortality to birds in Canada**<sup>1</sup>. Domestic cats kill an estimated **100 million - 350 million birds** annually<sup>2</sup>, which is greater than avian mortality due to collisions with buildings or transportation, electrocution by powerlines, and habitat loss due to agriculture or forestry<sup>1</sup>. Pet cats have also been found to kill more native wildlife than native predators within a 100m radius of their home based on a recent study of over 900 cats in 6 countries<sup>3</sup>.



*The author with her family cat Winston in Ontario and an internet cat video compilation.*

Allowing cats to roam free outdoors poses a significant threat to native wildlife. Letting your pet cat outside can also result in threats to cats, such as traffic, other cats and animals, toxins, disease and parasites, getting lost, and much more. Fortunately, there are many options to keep both cats and birds safe!

**1. Make your cat an indoor cat.** It is easy to train kittens for this lifestyle, but adult cats can also be re-trained. The website [Cats and Birds](#)<sup>5</sup> contains many resources for making the transition to an indoor cat and how to keep them stimulated.

**2. Build a catio.** A catio is a patio for your cat. Let your cat get fresh air and stimulation without putting it or any native wildlife at risk by building an outdoor enclosure.

**3. Take your cat on a leash walk.** This option allows you and your pet to go on an outdoor adventure together while keeping them and native wildlife safe. Find information on how to leash train your cat here: <https://catsandbirds.ca/research/leash-training-2/>.

**4. Hunting deterrents to be worn by cats.** Accessories such as belled collars, auditory deterrents and colourful collars can be worn by a domestic cat to warn prey and therefore decrease predation. These accessories are not 100% effective, but they can help cut down the number of kills. For example, one study found a 3- to 19- fold decrease in bird kills when the cats wore a brightly coloured collar cover<sup>4</sup>.

**5. Help decrease the number of stray and feral cats.** Feral cats likely have an even larger impact on bird mortality in North America<sup>5</sup>. When domestic cats roam, they can end up reproducing with other cats, resulting in a feral cat population. Make sure your pet is spayed or neutered in case they do end up outside. And if you are considering getting a pet cat, go for adoption from a Humane Society or SPCA.

There are many more options to help stop bird deaths by cats. See the list of resources at the end of this article for more details on each of the referenced studies and websites. If you are worried about your local mouse populations, and don't know what to do when you have moved your cat indoors, have no fear! Let the local owl population help you out with that – they are the best “mousers” around.

## Resources

<sup>1</sup> Calvert, A. M., C. A. Bishop, R. D. Elliot, E. A. Krebs, T. M. Kydd, C. S. Machtans, and G. J. Robertson. 2013. A synthesis of human-related avian mortality in Canada. *Avian Conservation and Ecology* 8(2): 11. <http://dx.doi.org/10.5751/ACE-00581-080211>

<sup>2</sup> Blancher, P. 2013. Estimated number of birds killed by house cats (*Felis catus*) in Canada. *Avian Conservation and Ecology* 8(2): 3. <http://dx.doi.org/10.5751/ACE-00557-080203>

<sup>3</sup> Kays, R., R. R. Dunn, A.W. Parsons, B. McDonald, T. Perkins, S.A. Powers, L. Shell, J. L. McDonald, H. Cole, H. Kikillus, L. Woods, H. Tindle and P. Roetman. The small home ranges and large local ecological impacts of pet cats. *Animal Conservation*. ISSN 1367-9430.

<sup>4</sup> Willson, S.K., I.A. Okunlola, and J.A. Novak. 2015. Birds be safe: Can a novel cat collar reduce avian mortality by domestic cats (*Felis catus*)? *Global Ecology and Conservation* 3: 359-366.

<sup>5</sup> Loss, S.R, T. Will, and P.P. Marra. 2013. The impact of free-ranging domestic cats on wildlife of the United States. *Nature Communications* 4:1396. DOI: 10.1038/ncomms2380.

<sup>6</sup> Nature Canada. 2020. [website] Cats and Birds – Keep Cats Safe and Save Bird Lives. Available at: [www.catsandbirds.ca](http://www.catsandbirds.ca).

## Acknowledgement of Donors

BBO is very thankful for the many private donors who included us in their charitable donations in 2019. Here is a list of everyone who donated \$50 and more. We also thank those who donated less, but space does not allow a list of others. Your contributions are greatly appreciated, nevertheless. Our apologies for any errors or omissions.

<p><b>Organizations &gt;\$1000</b>          Alberta Community Environment Action Grant Program          Alberta Conservation Association          Alberta Gaming and Liquor and Cannabis Commission          Birds Canada's Great Canadian Birdathon          Edmonton Community Foundation's EMPEO Fund          Edmonton Nature Club          Nature Canada's Charles Labatiuk Nature Endowment Fund          Serving Communities Internship Program          TD Friends of the Environment</p>	<p><b>Donors &gt;\$1000</b>          Anonymous in memory of Mary Hughes Weir          Andra Bismanis          Gary Dodd          Carole Dodd          Dr. Geoff Holroyd          Lynn and Robert Holroyd          Dale Paton          Phil and Helen</p>	
<p><b>Companies and Organizations &gt;\$500 - \$999</b>          Clean Harbors (Ryley)          Wild Bird General Store</p>	<p><b>Donors &gt;\$500 - \$999</b>          Patrick Chan          Leslie Duncan          Douglas Hube          Kent and Dan Hunter Fund</p>	<p>Bill and Natalia Labatiuk          Lynn Maki          Bill Paulsen          Kate Read          Ed Wasyliw          Pamela Webb</p>
<p><b>Companies and Organizations &gt;\$500 - \$499</b>          Busy Bee - Tofield          Fuse Consulting          Kent and Dana Hunter Fund          Lakeland College Biology Club          Spencer Environmental Consultants, LLC.          University of Alberta Biology Club          Wildlife Stewardship Society of Camrose          TELUS</p>	<p><b>Donors &gt;\$50 - \$499</b>          Anonymous          Steve Anderson          Peter Balagus          Michael Bradstreet          Fred de Boer          Ian Brusselers          Glen Bowe          Emesa Dukai-Branscome          Stephanie Christensen          Kathleen Daintith          Cory Dickinson          Vivek Dibrel          Loney Dickson          Lynne Dickson          Judy Fairweather          Brent Flesher          Stella Gillespie          Joanne Gorda          John Holroyd          Leslie Holroyd          Douglas Hube          Sarah Hudson          Janice Hurlburt          Dr. Glen Hvenegaard          Norm Jackson</p>	<p>Linda Kershaw          Peter Kershaw          Joan and Janos Kovaks          Carole Brooke Martens          Gerald McKeating          Alora Nelson          Nick Nguyen          Stan Nordstrom          Francois Noel          Wayne Oakes          Dr. Michael Ocana          Inger Paulsen          Dr. Ron Ramsey          Bill Reynolds          Robert Sabulka          Alfred Scott          Paula Siwik          Don Thacker          Rebecca Warren          Will Warren          Tony Vesseur          Cheryl Vesseur          Janis Vos          Olga Yanishewski          Shirley Zylstra</p>

