Environment and Climate Change Canada
Environnement et Changement climatique Canada

TRENDS IN CANADA'S BIRD POPULATIONS

CANADIAN ENVIRONMENTAL SUSTAINABILITY INDICATORS

Canada

Suggested citation for this document: Environment and Climate Change Canada (2019) Canadian Environmental Sustainability Indicators: Trends in Canada's bird populations. Consulted on *Month day, year*. Available at: www.canada.ca/en/environment-climate-change/services/environmental-indicators/trends-bird-populations.html.

Cat. No.: En4-144/88-2019E-PDF
ISBN: 978-0-660-33273-4

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CANADIAN ENVIRONMENTAL SUSTAINABILITY INDICATORS

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December 2019

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Trends in Canada's bird populations

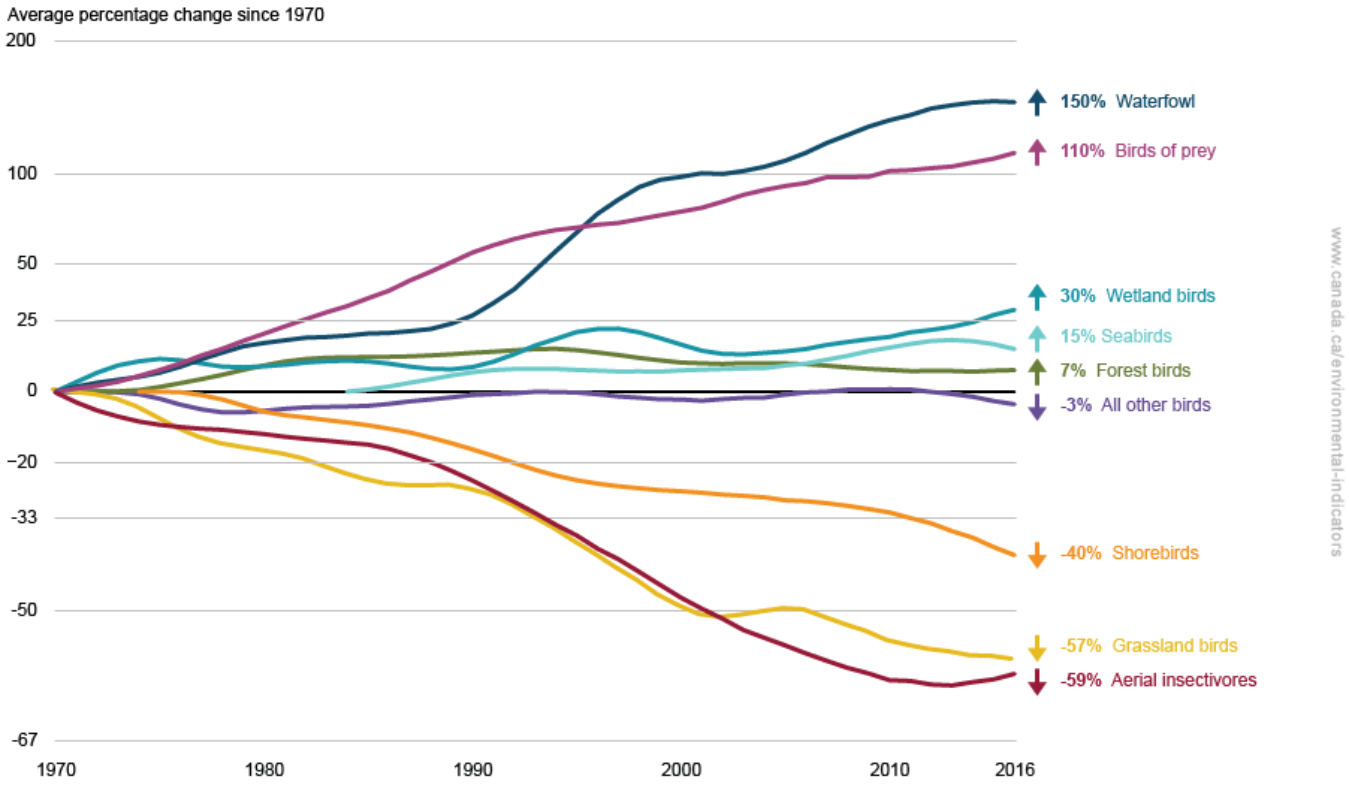
Birds are sensitive to environmental changes, such as habitat loss and pollution, and can be used as an indicator of ecosystem health. While bird populations fluctuate naturally, rapid declines can signal the need for urgent conservation action. The indicator tracks the average population trends of various groups of native Canadian bird species.

Key results

From 1970 to 2016, the trends in bird species groups varied:

- waterfowl and birds of prey increased by 150% and 110%, respectively
- shorebirds, grassland birds and aerial insectivores decreased by 40%, 57% and 59%, respectively
- wetland birds, seabirds, forest birds and all other birds showed little to moderate change

Figure 1. Trends in bird populations by species group, Canada, 1970 to 2016



Data for Figure 1

Note: This analysis is based on 342 species for which adequate monitoring data were available. Of the 342 species, 17 species are included in more than 1 species group based on their feeding or habitat requirements. For example, species grouped in the aerial insectivores feeding behaviour category may also be included in the habitat grouping forest birds. Data for shorebirds and seabirds were available beginning in 1974 and 1984, respectively.
Source: North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019.

Since 1970, 3 groups (shorebirds, grassland birds and aerial insectivores) have showed large declines. Indeed, aerial insectivores along with grassland birds represent the majority (80%) of birds recently assessed as endangered or threatened in Canada.[1] Aerial insectivores, such as swallows, are birds that feed by catching insects in the air. This group has declined more rapidly (59% decrease) than any other group. Canadian

[1] North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019. Retrieved on August 27, 2019.

grasslands have lost 57% of bird populations, or 300 million birds since 1970. Grassland birds that depend solely on native grasslands for breeding and wintering declined by 87%, while those that can tolerate planted crops and grasses declined by 39%. Canadian shorebird populations have declined by 40%, with long-distance migrants declining more steeply (52% decrease) than short-distance migrants (23% decrease).[2]

Bird populations fluctuate naturally in response to ecological conditions, but negative changes in bird populations reflect the overall effect of many different factors. Some of these factors include habitat loss and disturbance, pollution, agricultural impacts, climate change, invasive species, unsustainable hunting and declines in insects, as well as other sources of direct mortality, such as collisions with windows and cat predation. These factors act both here in Canada and internationally, in countries where Canadian birds migrate and spend the winter.

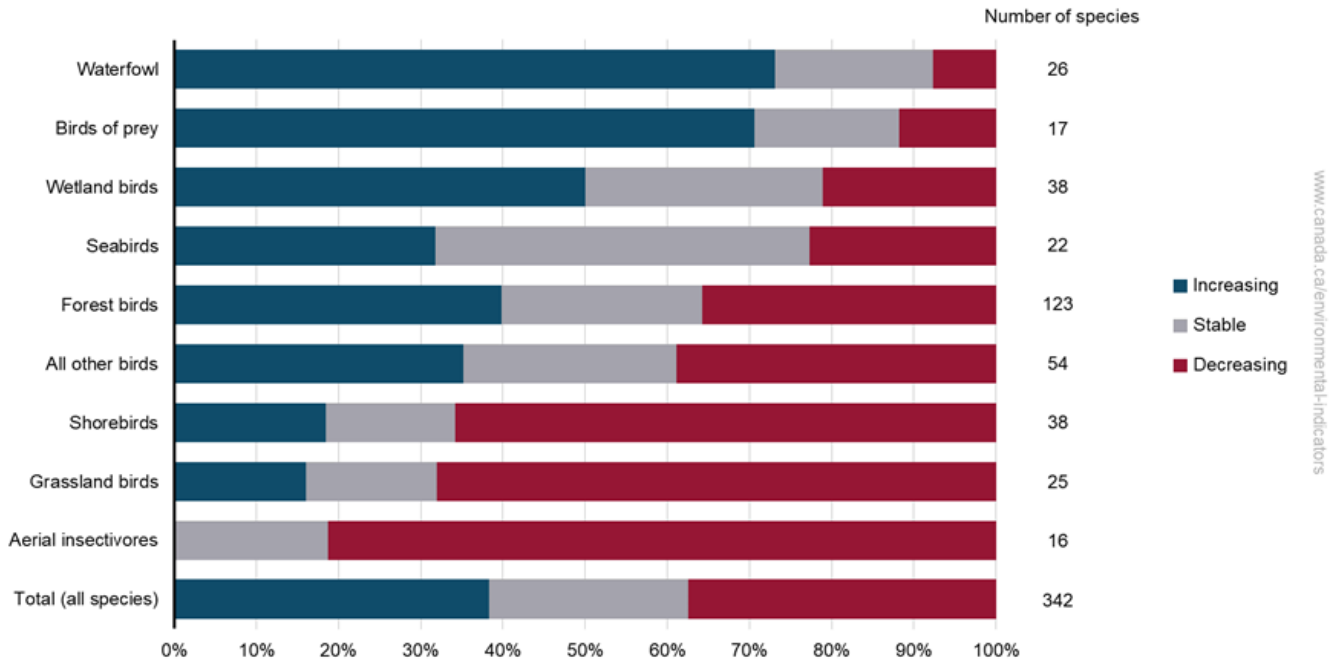
Waterfowl and birds of prey are the only 2 groups that show large increases relative to 1970. Both groups are recovering from historically low numbers. Waterfowl populations have increased by 150% due to wetland habitat protection and restoration, careful hunting management and increased waste grain in agricultural areas. The birds of prey group has increased by 110%, thanks in part to the creation of endangered species legislation and policies banning the use of the chemical pesticide dichlorodiphenyltrichloroethane (DDT).

Each species group includes both decreasing and increasing species. Changes in bird populations can also be viewed as the percentage of species whose populations are increasing, decreasing or showing little to moderate change.

From 1970 to 2016, of the 342 bird species with adequate monitoring data,

- 38% (131 species) had increasing populations
- 24% (83 species) showed little to moderate change
- 37% (128 species) had decreasing populations

Figure 2. Long-term changes in bird populations by species group, Canada, 1970 to 2016



Data for Figure 2

Note: This analysis is based on 342 species for which adequate monitoring data were available. Of the 342 species, 17 species are included in more than 1 species group based on their feeding or habitat requirements. For example, species grouped in the aerial insectivores feeding behaviour category may also be included in the habitat grouping forest birds. A stable status indicates little to moderate change in population

[2] North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019. Retrieved on August 27, 2019.

status between 1970 and 2016, with the exception of shorebirds and seabirds where data were available beginning in 1974 and 1984, respectively.
Source: North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019 Supplementary data.

Waterfowl and birds of prey are the 2 species groups with the greatest proportion of species increasing (73% and 71%, respectively). Aerial insectivores, grassland birds and shorebirds are the 3 species groups with the greatest proportion of species decreasing (81%, 68% and 66%, respectively).

About the indicator

What the indicator measures

The indicator reports population trends of Canada's native bird species from 1970 to 2016. Bird species are categorized into species groups based on their feeding or habitat requirements.

Why this indicator is important

Birds are important to Canadians. Birds provide ecological benefits by controlling insect and rodent populations, dispersing seeds, pollinating plants and playing other key roles in the functioning of ecosystems. These ecosystem services contribute to our economy and our well-being. Bird watching is a popular activity and millions of Canadians feed birds in their backyards. Waterfowl hunting contributes to tourism, provides food and maintains traditions.

Because birds are sensitive to environmental changes, they can be used as an indicator of ecosystem health and the state of biodiversity. Since most bird species are also easily detected and observed, many long-term monitoring programs exist; they provide data on population change dating back to the 1970s (or, in some cases, even earlier). Tracking the status of Canada's birds can help to identify the impacts of these changes, and can also help to set priorities, evaluate management actions and track the recovery of species at risk.

Related indicators

The Population status of Canada's migratory birds indicator provides a snapshot of the general state of birds in Canada that are listed in the *Migratory Birds Convention Act*.

The Status of wild species indicator reports extinction risks across a broad set of species and can reveal early signs of trouble before species reach a critical condition.

The Changes in the status of wildlife species at risk indicator tracks changes in the status of species at risk assessed by the Committee on the Status of Endangered Wildlife in Canada.

The Species at risk population trends indicator shows whether population and distribution trends of species at risk that are listed under the *Species at Risk Act* are consistent with recovery or management objectives.

The Global trends in bird species survival indicator provides a measure of the aggregated extinction risk over time and is an indication of the changing status of global bird biodiversity.

Data sources and methods

Data sources

The indicator is based on data from different monitoring programs that use a range of methods designed to survey different bird species and/or types of habitat. The indicator presents the best available estimate of population trends across species groups of native bird species occurring in Canada from 1970 to 2016.

More information

Many monitoring programs are designed by biologists, but enlist the help of volunteers in data collection. Some volunteer programs, like the North American Breeding Bird Survey, nocturnal owl surveys and marsh monitoring surveys take place during the breeding season. Other programs monitor birds during migration (for example, the Canadian Migration Monitoring Network and shorebird migration surveys) or in winter (Christmas Bird Count and Project FeederWatch). Checklist programs like eBird and Étude des populations d'oiseaux du Québec (in French only) encourage birders to record their observations every time they go birding. Other programs, such as surveys of breeding waterfowl, Arctic shorebirds and colonial seabirds, are conducted entirely by biologists.

Environment and Climate Change Canada's Canadian Wildlife Service collates the data from many of these monitoring programs, in collaboration with Bird Canada, Ducks Unlimited Canada and Nature Canada. The results are reported in the State of Canada's Birds 2019 report.

Species are classified into taxonomic or ecological groups with similar habitat or feeding requirements. The groups of birds used in this indicator are drawn from the State of Canada's Birds 2019 report.

Methods

The most appropriate data source for each species was selected from the available monitoring programs. To be comparable among species and data sources, each species population trend was modelled as a proportional change from the base year of 1970 to create a species index. These were then combined into a single composite index for each species group. The overall, long-term trends for each species group were determined based on the change in the final year relative to 1970.

More information

Distribution of native bird species

The State of Canada's Birds 2019 report considered 449 species of birds that are native to North America and that regularly occurred in Canada in 1970. Of the 449 species, sufficient population data were available to calculate the trends for 342 species from 1970 to 2016.

Approximately 24% of Canada's bird species are not yet well monitored. Species that have been excluded from the indicator include those that are difficult to survey (for example, Arctic-nesting birds, sea ducks and cryptic birds) or for which surveys have only recently been developed and do not yet have long-term trend information (for example, nocturnal owls and pelagic seabirds).[3]

Calculating the indicator

Annual population indices, relative to a base year of 1970, were first calculated for each species. Next, composite annual indices across species were calculated for each species group to represent an estimate of the average percentage change across species within each group. The method uses a Bayesian hierarchical model[4] to generate an estimate of the average population status across all species in the species group, while accounting for the varying precision of each species' population estimates. Species were only included if they occurred regularly in Canada in 1970 and had adequate data (that is, a long-term monitoring program that provided annual estimates of population status for 20 or more years).

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[3] North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019. Retrieved on August 27, 2019.

[4] Sauer JR and Link WA (2011) Analysis of the North American Breeding Bird Survey Using Hierarchical Models. The Auk 128:87 to 98. Retrieved on August 27, 2019.

For species with missing data in years at the start or end of the time series, it was assumed that the population did not change during the missing years. Years with missing annual indices (such as for many shorebird species with no data prior to 1974) were given values equal to the first year with data (in other words, a conservative assumption of no overall change). The estimated variance was also increased, so that the imputed data for these species would have very little influence on the species group for those years for which data were missing.[5]

Each index by species group was then plotted on a percentage change axis to reflect changes in species' populations since the base year 1970. The scale was adjusted (non-linear scaling) so that negative percent changes would be visually comparable to the corresponding positive change required to return the index to its original value (population status in 1970). For example, a species group that decreased by 50% (reduced to half its original level) must then increase by 100% (or double) to return to the same population status as in 1970 (zero net change).

Averaging across species gives an overall estimate of a group's population status, but species vary within groups. For example, a stable trend may result from a group of species with small changes, or it may reflect a group of species with large but balanced increases and decreases. For this reason, individual species' trends were assigned to 3 status categories (increasing, stable [little to moderate change] or decreasing) to provide further detail on the overall population trends of the species group.

For the long-term changes in bird populations (stacked bar charts), bird species whose populations increased by more than 33% over the 47-year period from 1970 to 2016 were considered to be increasing, whereas species whose populations declined by more than 25% were considered to be decreasing. These thresholds are chosen because the percentage change values are not symmetrical above and below zero. Specifically, a 33% increase is required for a population to recover from a 25% decrease. Species that experienced smaller increases or decreases in their populations during the period were assigned to the stable (little to moderate change) category. These thresholds were used to reduce the influence of natural population fluctuations and data uncertainties on the categorizations.

For further details on the methodology used in calculating the indicator, please refer to the Supplementary methods of the State of Canada's Birds 2019 report.

Recent changes

The previous iteration of the indicator reported trends in Canada's migratory bird populations by wintering area. The current indicator was revised to report trends in bird populations by species group for all native bird species occurring in Canada.

Caveats and limitations

Population estimates contain some uncertainty and results should be interpreted with this in mind.

For some bird species, a best estimate of their population status was imprecise and/or based on a small proportion of the Canadian population. This is often the case for species that breed in isolated northern regions. Species with insufficient data to estimate indices were excluded, including those that were either difficult to survey (such as those that breed in remote areas or are very rare) or species for which surveys had only recently been developed and did not yet have long-term trend information (such as many owls and pelagic seabirds).

Species that expanded their ranges into Canada after 1970 were also excluded because of their influence on the composite index. For these 9 species, the estimates of the percentage change in population size since 1970 were extremely large, because their Canadian populations in 1970 were approximately 0. Because the composite index is the average of the percentage change values across species, these extremely large values, if included, would overwhelm the influence of the other bird species within the group.[6]

[5] North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019 Supplementary methods. Retrieved on August 27, 2019.

[6] North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019 Supplementary methods. Retrieved on August 27, 2019.

Resources

References

North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019. Retrieved on August 27, 2019.

North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019 Supplementary methods. Retrieved on August 27, 2019.

Sauer JR and Link WA (2011) Analysis of the North American Breeding Bird Survey Using Hierarchical Models. The Auk 128:87 to 98. Retrieved on August 27, 2019.

Related information

Bird conservation partnerships

Migratory birds

Status of Birds in Canada 2019

Annex

Annex A. Data tables for the figures presented in this document

Table A.1. Data for Figure 1. Trends in bird populations by species group, Canada, 1970 to 2016

Year	Waterfowl (percentage change from 1970)	Birds of prey (percentage change from 1970)	Wetland birds (percentage change from 1970)	Seabirds (percentage change from 1970)	Forest birds (percentage change from 1970)	All other birds (percentage change from 1970)	Shorebirds (percentage change from 1970)	Grassland birds (percentage change from 1970)	Aerial insectivores (percentage change from 1970)
1970	0	0	0	n/a	0	0	n/a	0	0
1971	1.7	0.9	3.1	n/a	0.2	0	n/a	-0.7	-3.3
1972	3	1.9	6.2	n/a	0.1	0	n/a	-1.2	-5.6
1973	3.9	3.5	8.7	n/a	0.1	-0.1	n/a	-2.6	-7.6
1974	4.8	4.9	10.3	n/a	0.6	-0.8	0	-4.9	-9.0
1975	6.3	7.2	10.9	n/a	1.5	-2.2	0.2	-8.1	-9.9
1976	8.5	9.5	10.5	n/a	2.8	-4.0	-0.2	-11.3	-10.4
1977	10.9	12.2	9.3	n/a	4.1	-5.5	-1.0	-13.7	-11.1
1978	13.3	14.8	8.3	n/a	5.6	-6.2	-2.4	-15.4	-11.5
1979	15.3	17.3	8.2	n/a	7.1	-6.2	-4.2	-16.6	-11.8
1980	16.8	19.8	8.4	n/a	8.7	-5.8	-5.9	-17.2	-12.6
1981	17.9	23.0	9.1	n/a	10.0	-5.1	-7.0	-18.1	-13.3
1982	18.4	25.6	9.8	n/a	11.0	-4.8	-7.7	-19.4	-13.9
1983	19.0	28.5	10.1	n/a	11.5	-4.7	-8.4	-21.2	-14.2
1984	19.5	31.0	10.3	0	11.6	-4.5	-9.2	-23.2	-14.8
1985	20.0	34.2	10.2	0.8	11.8	-4.4	-9.9	-24.7	-15.5
1986	20.8	37.7	9.3	1.6	11.7	-3.8	-10.9	-25.8	-16.7
1987	21.3	42.1	8.5	2.8	11.9	-3.1	-12.1	-26.0	-18.2
1988	22.1	46.3	7.8	4.1	12.3	-2.3	-13.5	-26.2	-20.0
1989	24.1	50.7	7.3	5.5	12.6	-1.8	-15.0	-26.1	-22.1
1990	28.1	55.8	8.2	6.4	13.2	-1.2	-16.5	-26.5	-24.5
1991	32.6	59.3	10.2	7.1	13.7	-0.7	-18.4	-28.4	-27.0
1992	39	62.5	12.8	7.6	14.1	-0.3	-20.1	-30.5	-29.6
1993	46.4	64.4	15.5	7.6	14.5	-0.1	-21.9	-32.8	-31.9
1994	55.9	66.7	18.1	7.5	14.4	-0.2	-23.3	-35.4	-34.2
1995	65.8	68.8	20.6	7.3	14.0	-0.3	-24.4	-38.1	-36.7
1996	75.4	70.6	22.3	6.9	13.5	-0.9	-25.3	-40.5	-38.9
1997	84.1	70.6	22.1	6.9	12.3	-1.6	-25.8	-42.9	-41.1
1998	90.2	73.7	20.5	6.5	11.4	-2.0	-26.3	-45.3	-43.5
1999	94.8	75.4	18.3	6.6	10.4	-2.2	-26.7	-47.7	-45.7
2000	98.3	76.8	15.9	7.0	9.8	-2.5	-26.9	-49.4	-47.9
2001	100.0	79.9	13.7	7.1	9.4	-2.3	-27.3	-51.0	-49.7

Year	Waterfowl (percentage change from 1970)	Birds of prey (percentage change from 1970)	Wetland birds (percentage change from 1970)	Seabirds (percentage change from 1970)	Forest birds (percentage change from 1970)	All other birds (percentage change from 1970)	Shorebirds (percentage change from 1970)	Grassland birds (percentage change from 1970)	Aerial insectivores (percentage change from 1970)
2002	100.7	83.0	12.7	7.3	9.2	-2.3	-27.6	-51.2	-51.5
2003	102.3	86.7	12.4	7.8	9.3	-1.9	-28.1	-50.9	-52.7
2004	105.1	89.3	13.2	8.1	9.5	-1.4	-28.4	-50.4	-54.1
2005	108.6	92.3	13.7	8.7	9.6	-0.9	-28.8	-49.8	-55.3
2006	113.9	94.2	14.5	9.6	9.2	-0.5	-29.1	-50.1	-56.4
2007	119.8	96.1	15.8	10.8	8.8	0.1	-29.8	-51.1	-57.4
2008	125.2	97.6	16.9	12.2	8.1	0.5	-30.2	-52.3	-58.6
2009	131.2	99.1	18.0	13.9	7.7	0.8	-30.8	-53.6	-59.1
2010	136.5	99.9	19.0	15.0	7.1	0.6	-31.6	-54.8	-59.8
2011	140.8	102.6	20.3	16.4	6.8	0.7	-32.9	-55.5	-60.3
2012	144.2	103.0	21.8	17.4	6.6	0	-34.1	-56.1	-60.2
2013	148.1	104.7	23.2	17.6	6.5	-0.7	-35.4	-56.4	-60.4
2014	149.7	105.0	25.0	17.0	6.5	-1.6	-37.1	-56.8	-60.3
2015	151.0	108.4	27.1	16.1	6.9	-2.4	-38.8	-57.0	-59.9
2016	151.2	113.6	29.5	14.5	7.2	-3.4	-40.4	-57.3	-58.8

Note: n/a = not available. This analysis is based on 342 species for which adequate monitoring data were available. Of the 342 species, 17 species are included in more than 1 species group based on their feeding or habitat requirements. For example, species grouped in the aerial insectivores feeding behaviour category may also be included in the habitat grouping forest birds. Data for shorebirds and seabirds were available beginning in 1974 and 1984, respectively.
Source: North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019.

Table A.2. Data for Figure 2. Long-term changes in bird populations by species group, Canada, 1970 to 2016

Species group	Status	Species	Species count
Waterfowl	Increasing	Blue-winged Teal, Bufflehead, Cackling Goose, Canada Goose, Canvasback, Common Goldeneye, Common Merganser, Gadwall, Greater White-fronted Goose, Green-winged Teal, Hooded Merganser, Northern Shoveler, Redhead, Ring-necked Duck, Ross's Goose, Ruddy Duck, Snow Goose, Trumpeter Swan, Wood Duck	19
Waterfowl	Stable	American Black Duck, American Wigeon, Lesser Scaup, Mallard, Tundra Swan	5
Waterfowl	Decreasing	Brant, Northern Pintail	2
Waterfowl	Data deficient	Barrow's Goldeneye, Black Scoter, Cinnamon Teal, Common Eider, Eurasian Wigeon, Greater Scaup, Harlequin Duck, King Eider, Long-tailed Duck, Red-breasted Merganser, Surf Scoter, White-winged Scoter	12
Birds of prey	Increasing	Bald Eagle, Broad-winged Hawk, Cooper's Hawk, Ferruginous Hawk,[A] Merlin, Osprey, Peregrine Falcon, Prairie Falcon,[A] Red-shouldered Hawk, Red-tailed Hawk, Swainson's Hawk,[A] Turkey Vulture	12
Birds of prey	Stable	Golden Eagle, Northern Goshawk, Rough-legged Hawk	3
Birds of prey	Decreasing	American Kestrel,[A] Northern Harrier[A]	2

Species group	Status	Species	Species count
Birds of prey	Data deficient	Gyrfalcon, Mississippi Kite, Sharp-shinned Hawk	3
Wetland birds	Increasing	American Coot, American White Pelican, Bonaparte's Gull, California Gull, Caspian Tern, Common Loon, Iceland Gull,[A] Marsh Wren, Nelson's Sparrow, Pacific Loon, Pied-billed Grebe, Red-necked Grebe, Red-throated Loon, Ring-billed Gull, Sandhill Crane, Virginia Rail, Western Grebe, Whooping Crane, Yellow-headed Blackbird	19
Wetland birds	Stable	American Dipper, Black-crowned Night-Heron, Common Yellowthroat, Eared Grebe, Great Blue Heron, Horned Grebe, Least Bittern, Red-winged Blackbird, Sedge Wren, Sora, Swamp Sparrow	11
Wetland birds	Decreasing	American Bittern, Belted Kingfisher, Black Tern, Common Gallinule, Franklin's Gull, Green Heron, Mew Gull, Yellow-billed Loon	8
Wetland birds	Data deficient	Arctic Tern,[A] Brown Pelican, Cattle Egret, Clark's Grebe, Common Tern,[A] Forster's Tern, Glossy Ibis, King Rail, Little Blue Heron, Little Gull, Long-tailed Jaeger,[A] Parasitic Jaeger,[A] Pomarine Jaeger,[A] Sabine's Gull,[A] Snowy Egret, White-faced Ibis, Yellow Rail	17
Seabirds	Increasing	Ancient Murrelet, Atlantic Puffin, Black Guillemot, Double-crested Cormorant, Iceland Gull,[A] Northern Gannet, Razorbill	7
Seabirds	Stable	Cassin's Auklet, Common Murre, Glaucous-winged Gull, Great Cormorant, Northern Fulmar, Pelagic Cormorant, Pigeon Guillemot, Rhinoceros Auklet, Thick-billed Murre, Tufted Puffin	10
Seabirds	Decreasing	Black-legged Kittiwake, Great Black-backed Gull, Herring Gull, Leach's Storm-Petrel, Roseate Tern	5
Seabirds	Data deficient	Arctic Tern,[A] Black-footed Albatross, Black-headed Gull, Brandt's Cormorant, Buller's Shearwater, Common Tern,[A] Cory's Shearwater, Dovekie, Flesh-footed Shearwater, Fork-tailed Storm-Petrel, Glaucous Gull, Great Shearwater, Great Skua, Heermann's Gull, Horned Puffin, Ivory Gull, Laughing Gull, Laysan Albatross, Lesser Black-backed Gull, Long-tailed Jaeger,[A] Manx Shearwater, Mottled Petrel, Murphy's Petrel, Parakeet Auklet, Parasitic Jaeger,[A] Pink-footed Shearwater, Pomarine Jaeger,[A] Ross's Gull, Sabine's Gull,[A] Scripps's Murrelet, Short-tailed Albatross, Short-tailed Shearwater, Sooty Shearwater, South Polar Skua, Western Gull, Wilson's Storm-Petrel	36
Forest birds	Increasing	American Three-toed Woodpecker, Barred Owl, Bay-breasted Warbler, Black-backed Woodpecker, Blackburnian Warbler, Black-capped Chickadee, Black-headed Grosbeak, Black-throated Blue Warbler, Blue-headed Vireo, Brown Creeper, Calliope Hummingbird, Cape May Warbler, Clark's Nutcracker, Dusky Flycatcher, Fox Sparrow, Golden-crowned Kinglet, Golden-winged Warbler, Great Gray Owl, Hairy Woodpecker, Hammond's Flycatcher, Hutton's Vireo, Magnolia Warbler, Mountain Chickadee, Northern Cardinal, Northern Parula, Northern Pygmy-Owl, Northern Saw-whet Owl, Northern Waterthrush, Orange-crowned Warbler, Pacific-slope Flycatcher, Palm Warbler, Philadelphia Vireo, Pileated Woodpecker, Pine Warbler, Red Crossbill, Red-breasted Nuthatch, Red-breasted Sapsucker, Red-eyed Vireo, Red-naped Sapsucker, Ruby-throated Hummingbird, Spruce Grouse, Steller's Jay, Warbling Vireo, Western Bluebird, Western Tanager, White-breasted Nuthatch, Yellow-bellied Flycatcher, Yellow-rumped Warbler, Yellow-throated Vireo	49

Species group	Status	Species	Species count
Forest birds	Stable	Alder Flycatcher, American Redstart, Black-and-white Warbler, Black-throated Gray Warbler, Black-throated Green Warbler, Boreal Chickadee, Cassin's Vireo, Dark-eyed Junco, Downy Woodpecker, Dusky Grouse, Great Horned Owl, Greater Yellowlegs,[A] Hermit Thrush, MacGillivray's Warbler, Nashville Warbler, Ovenbird, Pacific Wren, Pygmy Nuthatch, Rose-breasted Grosbeak, Ruffed Grouse, Solitary Sandpiper,[A] Swainson's Thrush, Townsend's Solitaire, Townsend's Warbler, Varied Thrush, Veery, Wilson's Warbler, Winter Wren, Yellow-bellied Sapsucker, Yellow-billed Cuckoo	30
Forest birds	Decreasing	American Goldfinch, Band-tailed Pigeon, Bewick's Wren, Bicknell's Thrush, Black-billed Cuckoo, Blackpoll Warbler, Bohemian Waxwing, Canada Jay, Canada Warbler, Cassin's Finch, Cerulean Warbler, Chestnut-backed Chickadee, Chestnut-sided Warbler, Connecticut Warbler, Eastern Kingbird, Eastern Whip-poor-will,[A] Eastern Wood-Pewee,[A] Evening Grosbeak, Gray-cheeked Thrush, Great Crested Flycatcher, Least Flycatcher, Lesser Yellowlegs,[A] Lewis's Woodpecker, Long-eared Owl, Mourning Warbler, Northern Flicker, Northern Hawk Owl, Olive-sided Flycatcher,[A] Pine Grosbeak, Pine Siskin, Purple Finch, Red-headed Woodpecker, Ruby-crowned Kinglet, Rufous Hummingbird, Rusty Blackbird, Scarlet Tanager, Sooty Grouse, Tennessee Warbler, Vaux's Swift,[A] Western Wood-Pewee,[A] White-throated Sparrow, White-winged Crossbill, Willow Flycatcher, Wood Thrush	44
Forest birds	Data deficient	Acadian Flycatcher, Boreal Owl, Cordilleran Flycatcher, Eastern Screech-Owl, Flammulated Owl, Hooded Warbler, Louisiana Waterthrush, Marbled Murrelet, Prothonotary Warbler, Spotted Owl, Tufted Titmouse, Western Screech-Owl, White-headed Woodpecker, Williamson's Sapsucker	14
All other birds	Increasing	Black-chinned Hummingbird, Blue Jay, Bullock's Oriole, Common Raven, Eastern Bluebird, Golden-crowned Sparrow, Gray-crowned Rosy-Finch, Hoary Redpoll, House Finch, Indigo Bunting, Lark Sparrow, Lazuli Bunting, Lincoln's Sparrow, Mourning Dove, Northwestern Crow, Orchard Oriole, Say's Phoebe, Smith's Longspur, Spotted Towhee	19
All other birds	Stable	American Crow, American Robin, Brewer's Sparrow, Canyon Wren, Cedar Waxwing, Gray Catbird, House Wren, Mountain Bluebird, Northern Mockingbird, Northern Shrike, Rock Wren, Snowy Owl, Yellow Warbler, Yellow-breasted Chat	14
All other birds	Decreasing	American Pipit, American Tree Sparrow, Baltimore Oriole, Black-billed Magpie, Brewer's Blackbird, Brown Thrasher, Brown-headed Cowbird, Chipping Sparrow, Clay-colored Sparrow, Common Grackle, Common Redpoll, Eastern Phoebe, Eastern Towhee, Field Sparrow, Harris's Sparrow, Lapland Longspur, Snow Bunting, Song Sparrow, White-crowned Sparrow, White-tailed Ptarmigan, Willow Ptarmigan	21
All other birds	Data deficient	Bluethroat, California Scrub-Jay, Eastern Yellow Wagtail, Gray Flycatcher, Gray-headed Chickadee, Kirtland's Warbler, Northern Wheatear, Prairie Warbler, Rock Ptarmigan, Sage Thrasher, White-eyed Vireo, Worm-eating Warbler	12
Shorebirds	Increasing	American Avocet, Baird's Sandpiper, Black Oystercatcher, Rock Sandpiper, Upland Sandpiper,[A] White-rumped Sandpiper, Wilson's Phalarope	7

Species group	Status	Species	Species count
Shorebirds	Stable	Greater Yellowlegs,[A] Least Sandpiper, Semipalmated Plover, Solitary Sandpiper,[A] Surfbird, Wilson's Snipe	6
Shorebirds	Decreasing	American Golden-Plover, American Woodcock, Black Turnstone, Black-bellied Plover, Dunlin, Hudsonian Godwit, Killdeer, Lesser Yellowlegs[A] Long-billed Curlew,[A] Long-billed Dowitcher, Marbled Godwit, Pectoral Sandpiper, Piping Plover, Purple Sandpiper, Red Knot, Ruddy Turnstone, Sanderling, Semipalmated Sandpiper, Short-billed Dowitcher, Spotted Sandpiper, Stilt Sandpiper, Wandering Tattler, Western Sandpiper, Whimbrel, Willet[A]	25
Shorebirds	Data deficient	American Oystercatcher, Buff-breasted Sandpiper, Common Ringed Plover, Eskimo Curlew,[A] Mountain Plover,[A] Pacific Golden-Plover, Red Phalarope, Red-necked Phalarope, Ruff, Sharp-tailed Sandpiper, Snowy Plover	11
Grassland birds	Increasing	Ferruginous Hawk,[A] Prairie Falcon,[A] Swainson's Hawk,[A] Upland Sandpiper[A]	4
Grassland birds	Stable	Grasshopper Sparrow, Long-billed Curlew,[A] Sharp-tailed Grouse, Western Kingbird	4
Grassland birds	Decreasing	American Kestrel,[A] Baird's Sparrow, Bobolink, Chestnut-collared Longspur, Eastern Meadowlark, Horned Lark, Lark Bunting, Le Conte's Sparrow, Loggerhead Shrike, McCown's Longspur, Northern Harrier,[A] Savannah Sparrow, Short-eared Owl, Sprague's Pipit, Vesper Sparrow, Western Meadowlark, Willet[A]	17
Grassland birds	Data deficient	Barn Owl, Burrowing Owl, Dickcissel, Eskimo Curlew,[A] Greater Sage-Grouse, Henslow's Sparrow, Mountain Plover,[A] Northern Bobwhite	8
Aerial insectivores	Increasing	n/a	0
Aerial insectivores	Stable	Common Poorwill, Purple Martin, Violet-green Swallow	3
Aerial insectivores	Decreasing	Bank Swallow, Barn Swallow, Black Swift, Chimney Swift, Cliff Swallow, Common Nighthawk, Eastern Whip-poor-will,[A] Eastern Wood-Pewee,[A] Northern Rough-winged Swallow, Olive-sided Flycatcher,[A] Tree Swallow, Vaux's Swift,[A] Western Wood-Pewee[A]	13
Aerial insectivores	Data deficient	Chuck-will's-widow, White-throated Swift	2
Total[B]	Increasing	Species listed above within each species group	131
Total[B]	Stable	Species listed above within each species group	83
Total[B]	Decreasing	Species listed above within each species group	128
Total[B]	Data deficient	Species listed above within each species group	107
Total[B]	Total	Species listed above within each species group	449

Note: [A] Indicates a species that is listed in more than 1 species group. [B] The total is the sum of all individual species. n/a = not applicable. This analysis is based on 342 species for which adequate monitoring data were available. Of the 342 species, 17 species are included in more than 1 species group based on their feeding or habitat requirements. For example, species grouped in the aerial insectivores feeding behaviour category may also be included in the habitat grouping forest birds. A stable status indicates little to moderate change in population status between 1970 and 2016, with the exception of shorebirds and seabirds where data were available beginning in 1974 and 1984, respectively.
Source: North American Bird Conservation Initiative Canada (2019) State of Canada's Birds 2019 Supplementary data.

Additional information can be obtained at:

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