



Audubon Bird Count 1900 – 2020

Data Link: <http://netapp.audubon.org/cbcobservation/historical/resultsbycount.aspx>

Species to investigate

Introduction/Background

From Dec. 14th through Jan. 5th of each year, thousands of volunteers throughout the Americas brave snow, wind, or rain, and take part in the annual **Audubon Bird Count**. The data collected by observers over the past century have allowed Audubon researchers, conservation biologists, wildlife agencies, and other interested individuals to study the status of bird populations across North America. It has provided a picture of how the continent's bird populations have changed in time and space over the past hundred years. Audubon's [2014 Climate Change Report](#) is a comprehensive, first-of-its kind study that predicts how climate change could affect the ranges of 588 North American birds. Of the bird species studied, more than half are likely to be in trouble. Models indicate that 314 species will lose more than 50% of their current climatic range by 2080.

Directions

1. Go to the Audubon *Christmas Bird Count* page annotated in the Data Link above.
2. Pull down the Historical tab.



3. Select Results by Species.

1: Species 2: Year Range 3: Country/Region 4: View/Export

Step1: Selected Species

Enter Common or Scientific Name

Selected Species				
#	Common Name	Scientific Name	#	Common Name
No Records				

4. Type in the species you are studying. It will take a few seconds to load the species and, for some, there will be a number of subspecies. Simply select the primary species for your research.

1: Species 2: Year Range 3: Country/Region 4: View/Export

Step1: Selected Species

Enter Common or Scientific Name

Selected Species				
#	Common Name	Scientific Name	#	Common Name
<input checked="" type="checkbox"/>	American Robin	Turdus migratorius	<input checked="" type="checkbox"/>	American Robin
<input type="checkbox"/>	American Robin (migratorius Group)	Turdus migratorius [migratorius Group]		
<input type="checkbox"/>	American Robin (nigrideus)	Turdus migratorius nigrideus		

5. Select the Year Range (from 1900 to 2016).

1: Species 2: Year Range 3: Country/Region 4: View/Export

Step2: Selected Year Range

Start Year: 1: 1900 End Year: []

Count	Year
7	1906
6	1905
5	1904
4	1903
3	1902
2	1901
1	1900

1: Species 2: Year Range 3: Country/Region 4: View/Export

Step2: Selected Year Range

Start Year: 1: 1900 End Year: 117: 2016

Count	Year
117	2016
116	2015
115	2014
114	2013
113	2012
112	2011
111	2010

6. Under the Country/Region tab, pull down and select the United States, click on 4 and select Michigan.

1: Species 2: Year Range 3: Country/Region 4: View/Export

Step3: Select country and/or region, or enter circle code.

Country: United States Circle Code: []

#	Code	Name	#	Code	Name
<input type="checkbox"/>	US	ENTIRE United States	Selected regions/circles		
<input type="checkbox"/>	US-AK	Alaska	No Records		
<input type="checkbox"/>	US-AL	Alabama			
<input type="checkbox"/>	US-AR	Arkansas			
<input type="checkbox"/>	US-AZ	Arizona			
<input type="checkbox"/>	US-CA	California			
<input type="checkbox"/>	US-CO	Colorado			

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1: Species 2: Year Range 3: Country/Region 4: View/Export

Step3: Select country and/or region, or enter circle code.

Country: United States Circle Code: []

#	Code	Name	#	Code	Name
<input type="checkbox"/>	US-MD	Maryland	Selected regions/circles		
<input type="checkbox"/>	US-ME	Maine	[x] US-MI Michigan		
<input checked="" type="checkbox"/>	US-MI	Michigan			
<input type="checkbox"/>	US-MN	Minnesota			
<input type="checkbox"/>	US-MO	Missouri			
<input type="checkbox"/>	US-MS	Mississippi			
<input type="checkbox"/>	US-MT	Montana			

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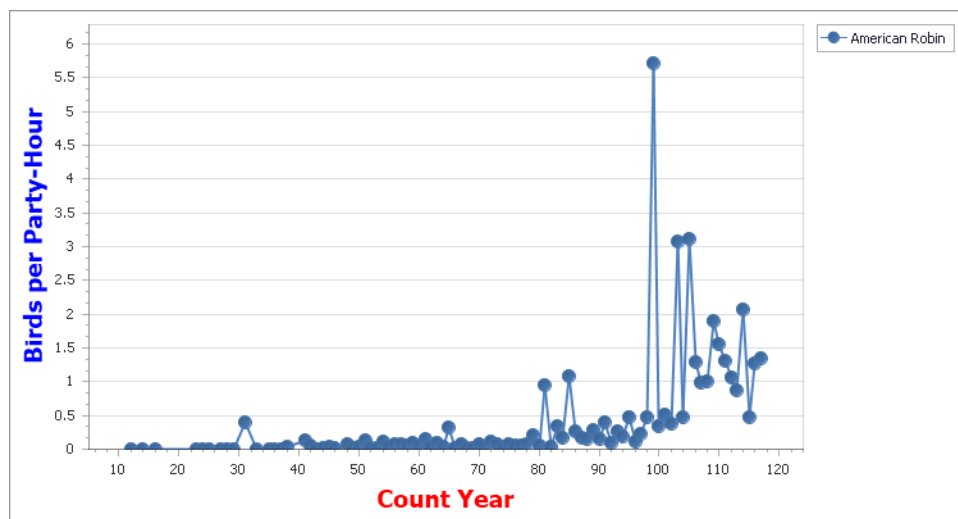
7. Finally, click on View/Export and select View.

1: Species2: Year Range3: Country/Region4: View/Export

Include Graph with Query Results
[View](#) or Export to: [PDF](#) | [Excel](#) | [Word](#) | [CSV](#)

You can also export the results as an Excel file; instructions for using the data in that format is available on <https://kamscmr.com/kamsc-big-data-2018.html>.

8. Scroll down the page and the graph will show **Count Year** vs. **Birds per Party-Hour**. You will need to define these axes as a part of your presentation at the end of the day.



9. You can combine species and graph them together by returning to the Species tab.
10. Identify trend lines by determining, with your partners, the general tendencies illustrated for each species.

Questions

1. Which species, if any, are increasing in numbers over the last 117 years of the **Audubon Bird Count**? Which species, if any, are decreasing?
2. How can you explain these trends for each species?
3. Do these trends show global climate change? Why or why not?
4. Are there any outliers within your data? How can you explain why they occur?

5. How confident are you that the data represents what's "really happening"? What additional information would you need to confirm your theory or theories?
6. Are there other data you would like to see?
7. What can you conclude from your research?

References

<http://www.audubon.org/conservation/history-christmas-bird-count>
<http://netapp.audubon.org/cbcobservation/historical/resultsbycount.aspx>

Species to investigate:

Carolina Wren
American Robin
House Sparrow
Pine Siskin
Northern Cardinal
Northern Goshawk
Bald Eagle
Northern Bobwhite
Ring-necked Pheasant
Red-tailed Hawk
Ruffed Grouse
American Kestrel
Downy Woodpecker
Pileated Woodpecker
Goldfinch
European Starling
Blue Jay
American Crow
Wild Turkey
Turkey Vulture
Cooper's Hawk
Mourning Dove
Snowy Owl