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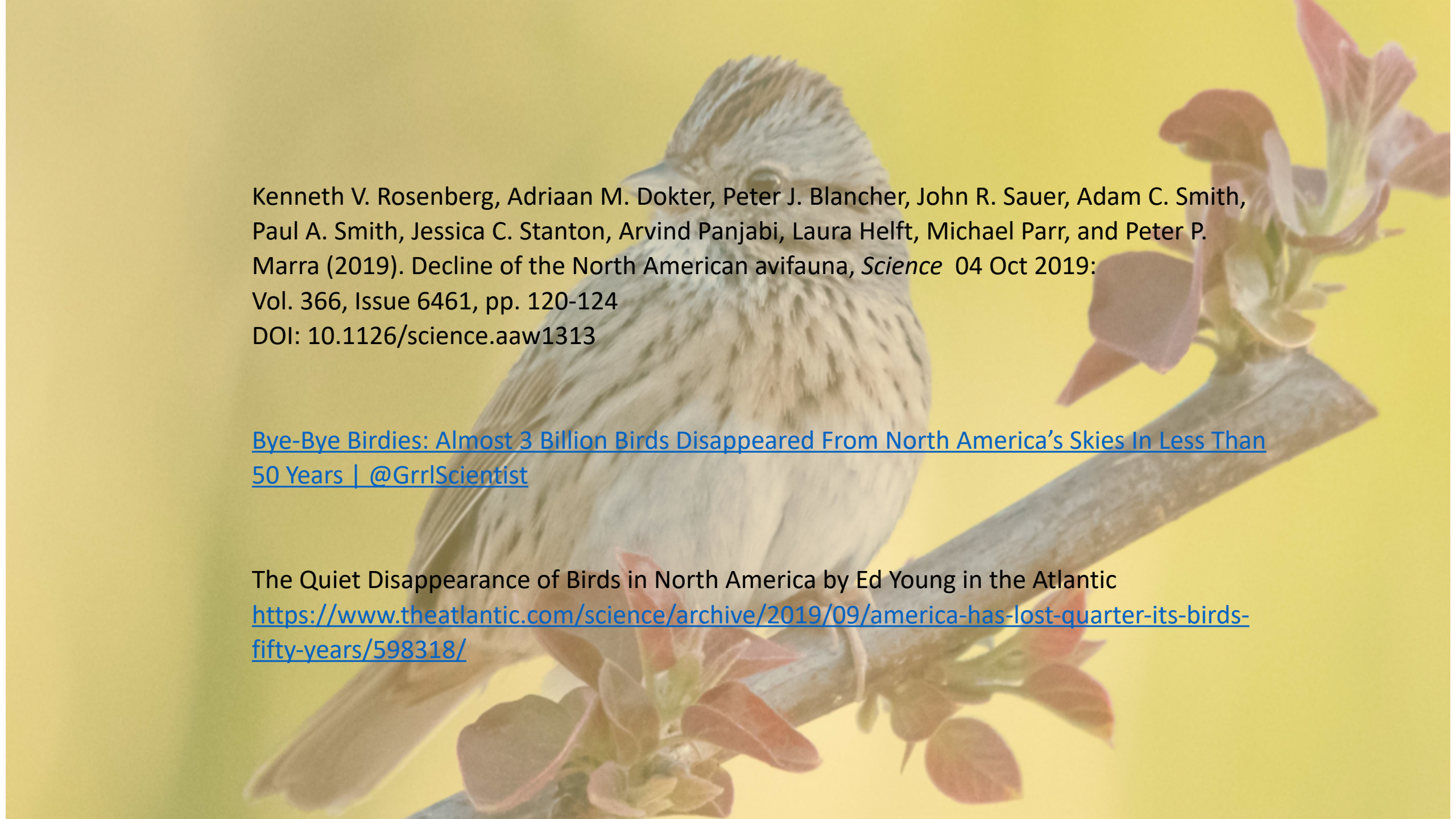
America's Disappearing Birds

Nigella Hillgarth

A small, streaked bird is perched on a branch with pink flowers. The background is a soft, yellowish-green gradient. The text is overlaid on the left side of the image.

Paper Science in 2019
really brought the plight of
North America's birds to
light

3 billion birds - 29% gone
in 48 years -
Combining Citizen science
and other data
Twelve data bases plus
radar data

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Kenneth V. Rosenberg, Adriaan M. Dokter, Peter J. Blancher, John R. Sauer, Adam C. Smith, Paul A. Smith, Jessica C. Stanton, Arvind Panjabi, Laura Helft, Michael Parr, and Peter P. Marra (2019). Decline of the North American avifauna, *Science* 04 Oct 2019: Vol. 366, Issue 6461, pp. 120-124
DOI: 10.1126/science.aaw1313

[Bye-Bye Birdies: Almost 3 Billion Birds Disappeared From North America's Skies In Less Than 50 Years | @GrrlScientist](#)

The Quiet Disappearance of Birds in North America by Ed Young in the Atlantic
<https://www.theatlantic.com/science/archive/2019/09/america-has-lost-quarter-its-birds-fifty-years/598318/>







Credit Julie Gelfat



Credit Julie Gelfat







Credit; Darren Swim





Credit MINETTE LAYNE



Credit ALAN VERNON



Credit TIM SACKTON

A small brown and white sparrow-like bird is perched on a branch with pink flowers. The background is a soft yellow. The bird is facing left and looking slightly towards the camera.

Why Birds are Disappearing:

1. Habitat Loss and Disturbance
2. Climate Change
3. Pollution
4. Collisions
5. Cats and other invasive species



Habitat Loss

A small brown and white streaked bird is perched on a branch with pink flowers. The background is a solid yellow color. The text is overlaid on the bird's body.

Pollution

Pesticides

Oil spills

PCBs/heavy metals

Air pollution

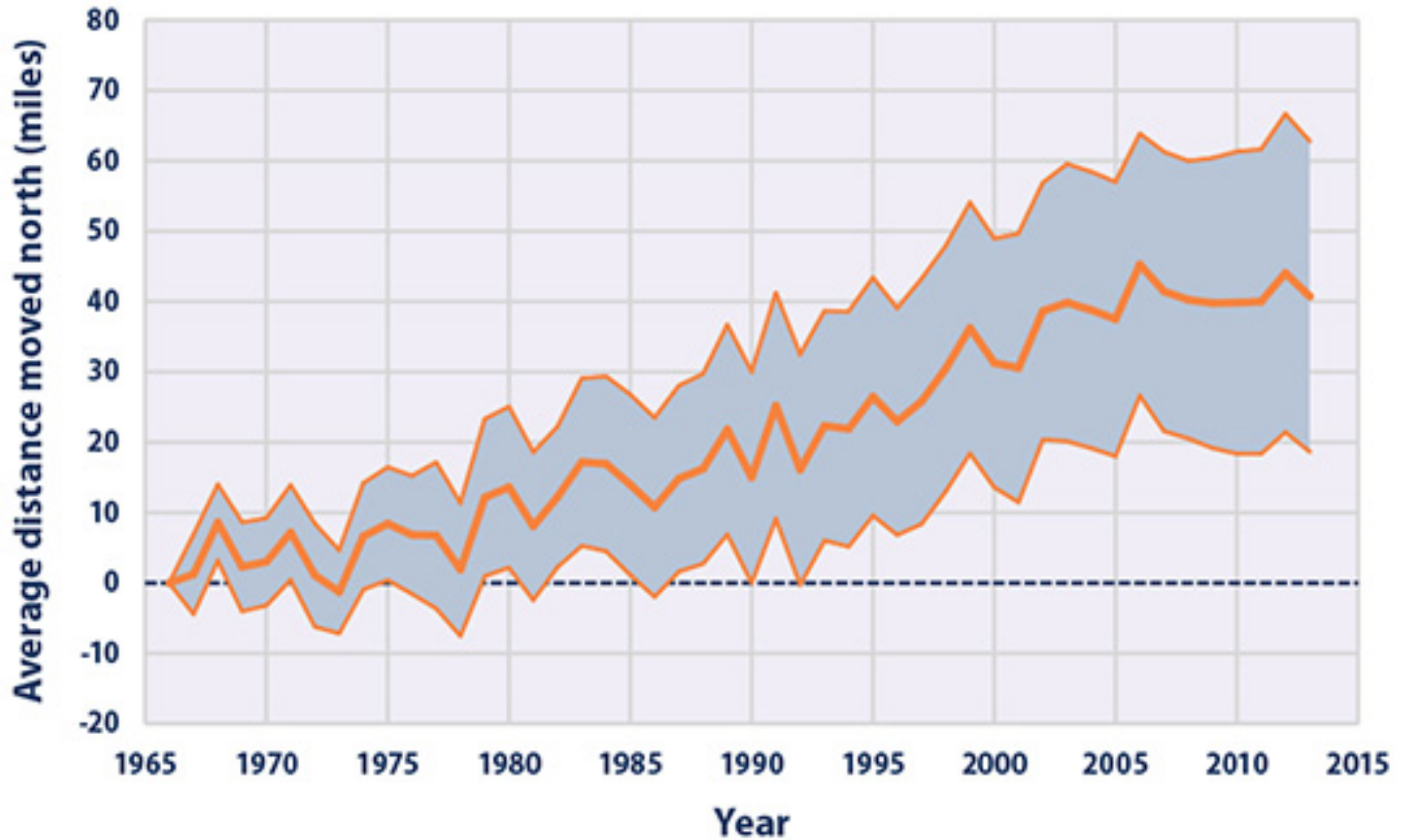
Light Pollution



A small, brown and white streaked bird is perched on a branch with pink flowers. The background is a soft, yellowish-green gradient. The text "Climate change impacts" is overlaid on the image.

Climate change impacts

Change in Latitude of Bird Center of Abundance, 1966–2013



Credit: Mass Audubon



Birds Are Trying To Adapt To
Climate Change — But Is It
Too Little, Too Late?

For example: Breeding
earlier
Becoming smaller



A small brown and white striped bird is perched on a branch with pink flowers. The background is a soft, light green and yellow gradient.

Birds most impacted by future climate change

Birds with limited ranges and specialized habitats that will be most impacted by rising temperatures and sea-level rise

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Audubon's 2019 report: [Survival by Degrees: 389 Species on the Brink](#)

<https://www.audubon.org/climate/survivalbydegrees>

The Audubon Bird and Climate visualizer:

<https://www.audubon.org/climate/survivalbydegrees/state/us/ca>

More information for California: <https://ca.audubon.org/conservation/conservation/global-warming>







Credit: Alexandre Légaré



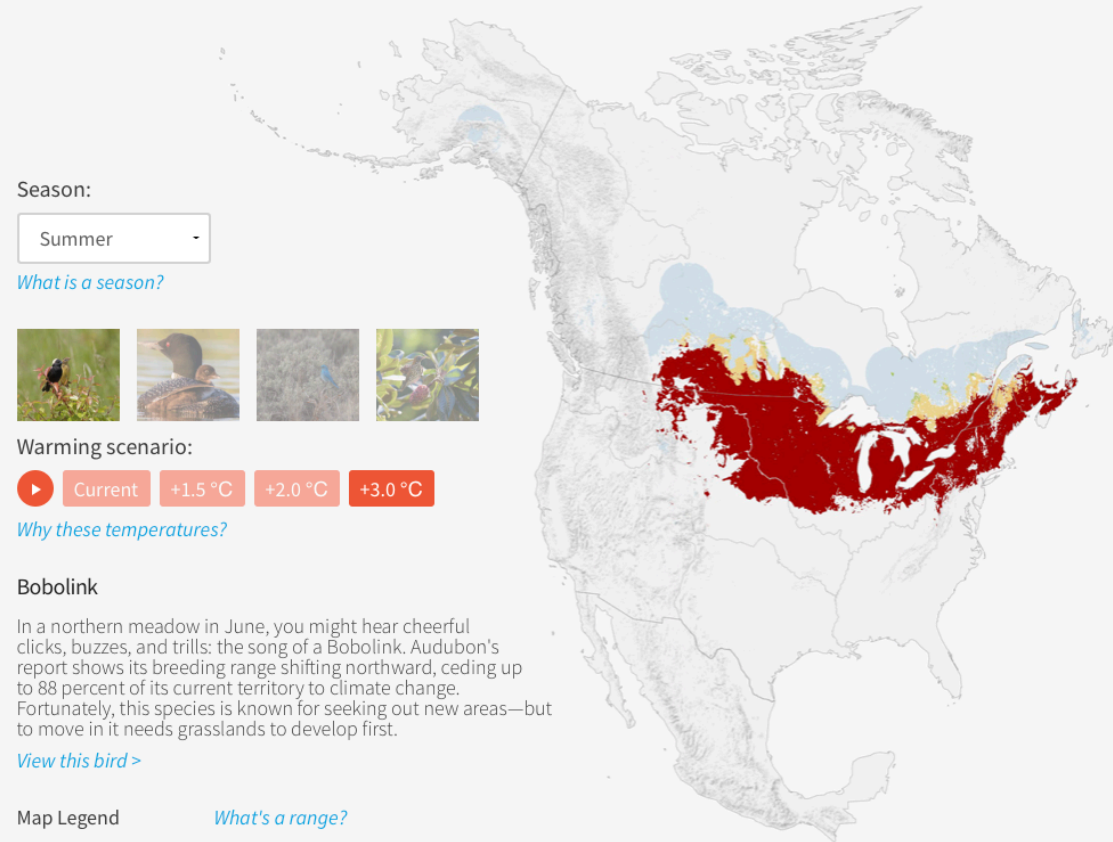


Credit: Creative Commons

As the climate changes, so will the places birds need.

Audubon scientists took advantage of 140 million observations, recorded by birders and scientists, to describe where 604 North American bird species live today—an area known as their “range.” They then used the latest climate models to project how each species’s range will shift as climate change and other human impacts advance across the continent.

The results are clear: Birds will be forced to relocate to find favorable homes. **And they may not survive.**







How Climate Change Will Reshape the Range of the Allen's Hummingbird

Audubon's scientists have used 140 million bird observations and sophisticated climate models to project how climate change will affect this bird's range in the future.

Zoom in to see how this species's current range will shift, expand, and contract under increased global temperatures.

Warming scenario:

- Current
- +1.5 °C
- +2.0 °C
- +3.0 °C

[Why these temperatures?](#)

Season:

- Winter

[What is a season?](#)

Back to origin

Overall species vulnerability status:

High

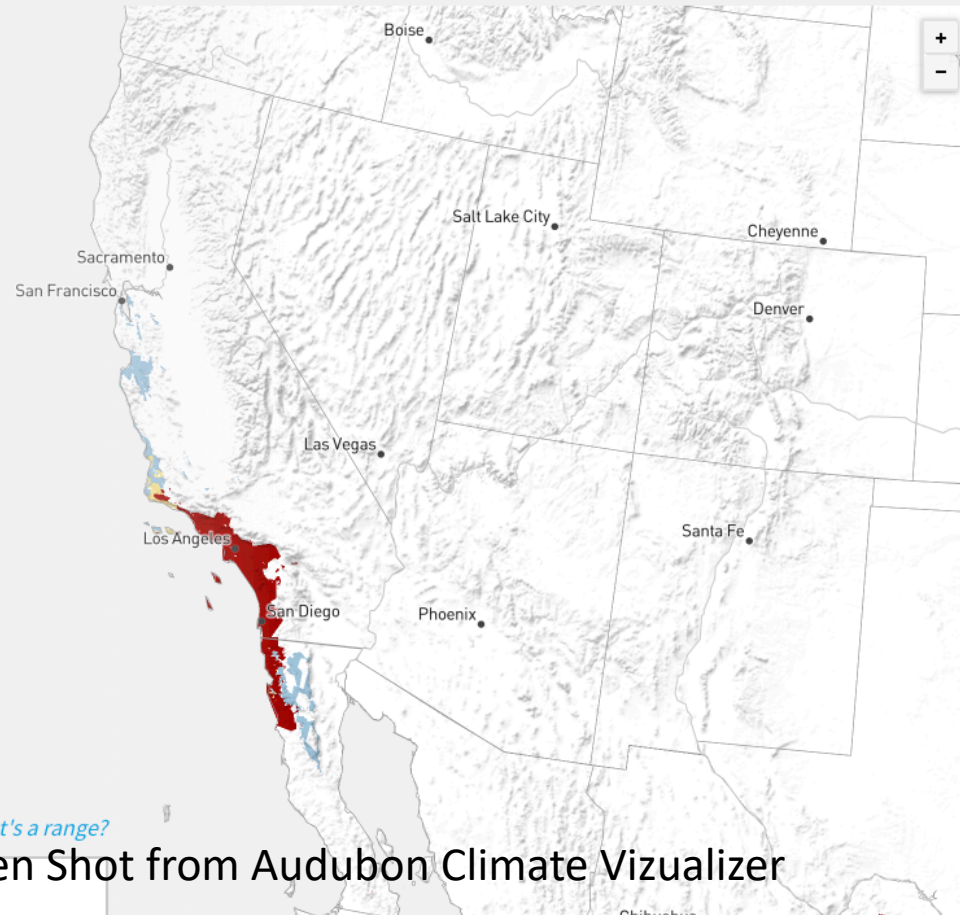
- 42% range gained
- 6% range maintained
- 94% range lost

Map Legend

[What's a range?](#)

- Range gained

Screen Shot from Audubon Climate Vizualizer



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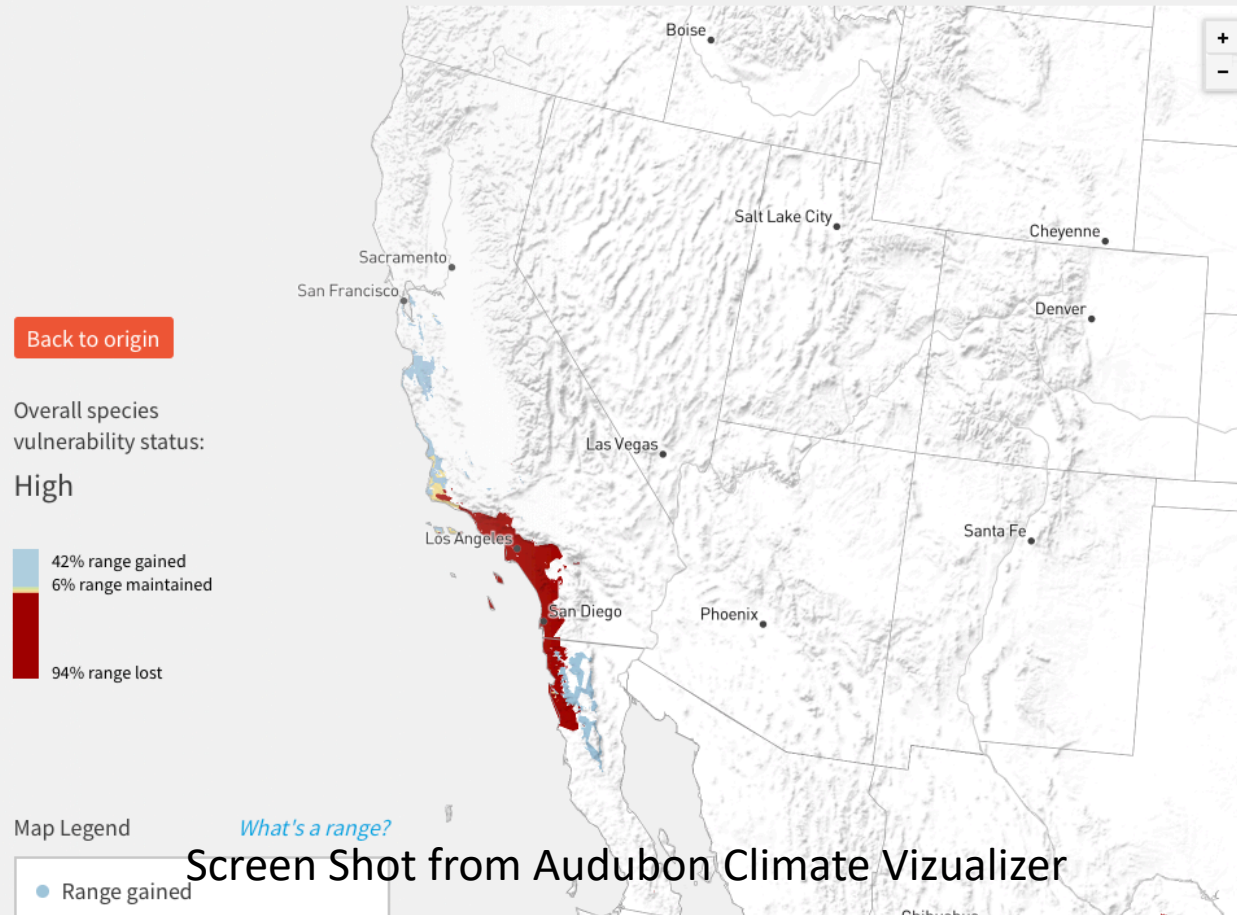
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Screen Shot from Audubon Climate Vizualizer



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Warming scenario:

- Current
- +1.5 °C
- +2.0 °C
- +3.0 °C

[Why these temperatures?](#)

Season:

- Winter

[What is a season?](#)

[Back to origin](#)

Overall species vulnerability status:

High

- 29% range gained
- 24% range maintained
- 76% range lost

Map Legend

[What's a range?](#)

- Range gained
- Improving



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- Improving








Credit BROCKEN INAGLORY





A small, brown and white streaked bird, possibly a sparrow or finch, is perched on a wooden branch. The bird has a brown cap and a white breast with brown streaks. The branch is adorned with several pink flowers and green leaves. The background is a soft, out-of-focus green and yellow.

Invasive Species



A small, brown and white streaked bird is perched on a wooden branch. The bird has a brown cap and a white breast with brown streaks. It is looking towards the left. The branch is adorned with several pink flowers and green leaves. The background is a soft, out-of-focus green and yellow.

Collisions



Credit Susan Spear/Cornell Lab



Credit Justin Mikulka

A small, brown and white streaked bird is perched on a wooden branch. The bird is facing left and has a slightly ruffled crest. The branch is adorned with several pink flowers and green leaves. The background is a soft, out-of-focus green and yellow gradient.

CAN BIRDS RECOVER?

Learning from the past















Credit Lukasz Lukasik

Solutions

A small brown and white bird is perched on a branch with pink flowers. The background is a soft, yellowish-green gradient.

Indoor Cats

Stop Collisions and Minimize Light Pollution

Bird Friendly Yards

Encouraging change in Agricultural Practise

Encouraging and Supporting Reserves/habitat

Supporting Good Environmental Law such as

The Migratory Bird Treaty Act



Credit: American Bird Conservancy

<https://abcbirds.org/program/cats-indoors/cats-and-birds/>



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American Bird Conservancy



Credit: DICKDaniels



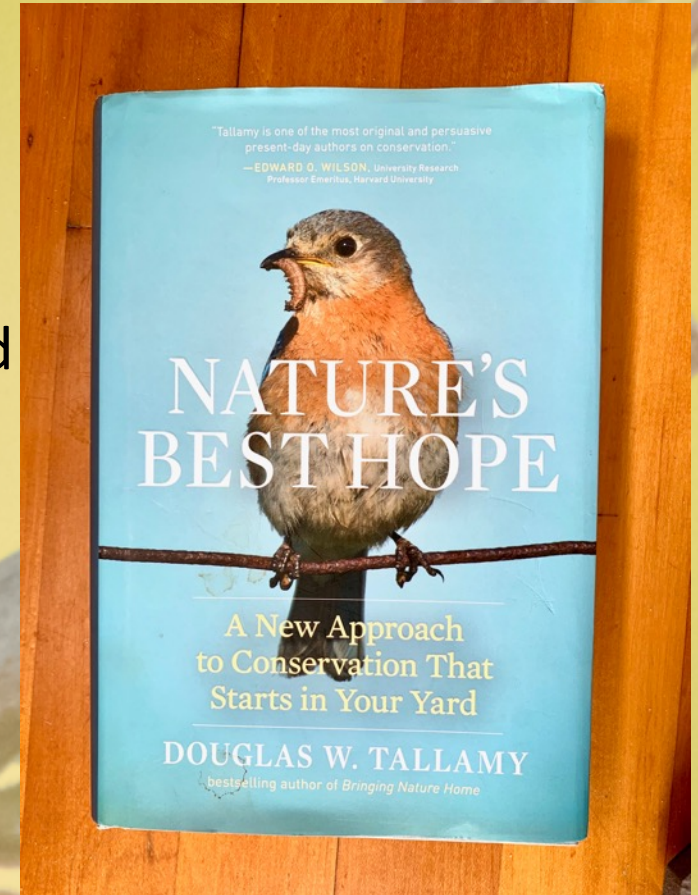





Bird-friendly Yards

Two useful books:

Bringing Nature Home by Douglas W. Tallamy and his latest book:





The Migratory Bird Treaty Act

<https://www.economist.com/united-states/2020/02/22/companies-can-now-get-away-with-killing-americas-birds>

**Companies can now get away with killing
America's birds**

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What you can do to help birds

Keep your cats indoors

Prevent birds colliding with your windows

Make your yard bird friendly

Advocate for bird protection

Support local and national bird organizations

