

# Who will come to your bird feeder in 2075?

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The distribution of birds in the United States today will probably look very different in 60 years as a result of climate, land use and land cover changes.

A new U.S. Geological Survey study predicts where 50 [bird species](#) will breed, feed and live in the conterminous U.S. by 2075. While some types of birds, like the Baird's sparrow, will likely lose a significant amount of their current U.S. range, other ranges could nearly double. Human activity will drive many of these shifts. The study was published today in the journal *PLOS ONE*.

"Habitat loss is a strong predictor of bird extinction at local and regional scales," said Terry Sohl, a USGS scientist and the author of the report. "Shifts in species' ranges over the next several decades will be more dramatic for some bird species than others."

Climate change will cause average temperatures to change by three degrees to seven degrees Fahrenheit by 2075, depending upon scenario and location within the conterminous U.S. Temperature increases will drive breeding ranges for many species to the north. Precipitation will increase in some regions and decline in others, resulting in substantial impacts on local and regional habitat.

Habitats for birds currently breeding in the far southern U.S., such as the desert-dwelling Gambel's quail and cactus wren, will expand greatly by 2075 in the conterminous U.S. as a warming climate moves the overall range to the north. The chestnut-collared longspur, sharp-tailed grouse

and gray partridge could all lose over 25 percent of their suitable [breeding range](#) in the northern U.S. as climate becomes more suitable in Canada for these species. The Baird's sparrow may lose almost all of its current U.S. range.

Landscape changes resulting largely from human activity, including land use and land cover changes, will also significantly affect future U.S. bird distributions. The effects of landscape change will be more scattered, with very high loss of habitat at local and regional scales.

"Changing landscape patterns such as deforestation and urban growth are likely to have at least as large of an impact on future bird ranges as [climate change](#) for many species," Sohl said.

The new study used climate and landscape data to create and compare U.S. distribution maps of 50 bird species in 2001 and 2075. The maps for each species are available [online](#).

The species that will either gain or lose more than 20 percent of their conterminous U.S. ranges as compared to 2001 are:

- Gambel's quail: 61.8 percent gain
- Cactus wren: 54.1 percent gain
- Scissor-tailed flycatcher: 46.4 percent gain
- Gray vireo: 44.9 percent gain
- Painted bunting: 38.5 percent gain
- Anna's hummingbird: 27.2 percent gain
- Black-capped chickadee: 21 percent loss
- Ferruginous hawk: 21.2 percent loss
- Sora: 22.8 percent loss
- Northern harrier: 24.7 percent loss
- Bobolink: 24.9 percent loss
- Short-eared owl: 26.2 percent loss

- Vesper sparrow: 26.4 percent loss
- Savannah sparrow: 27.2 percent loss
- Sedge wren: 29 percent loss
- Gray partridge: 35.6 percent loss
- Sharp-tailed grouse: 44.8 percent loss
- Chestnut-collared longspur: 54.1 percent loss
- Baird's sparrow: 90.8 percent loss

**More information:** *PLOS ONE*,  
[dx.plos.org/10.1371/journal.pone.0112251](https://doi.org/10.1371/journal.pone.0112251)

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