

Singing sexy back: How sparrows adapted to COVID-19 shutdown

24 September 2020



A male white-crowned sparrow sings to protect his territory and attract mates in San Francisco

As the streets of San Francisco emptied out in the first months of the pandemic, the city's male birds began singing more softly and improving their vocal range, making them "sexier" to females, according to a new study published Thursday.

The paper adds to a growing body of research describing how animals—from whales to coyotes to the white-crowned sparrow studied here—have adapted their behaviors to COVID-19 shutdowns that forced humans to retreat to their homes, a phenomenon dubbed the "anthropause."

"When the city was loud, they were singing really loudly," Elizabeth Derryberry, a behavioral ecologist at the University of Tennessee, who led the study published in *Science*, told AFP.

But as traffic ground to a halt following a statewide shelter-in-place order in spring, [noise levels](#) fell by 50 percent, she said.

The number of vehicles on the Golden Gate Bridge collapsed to 1954 levels, the researchers found.

They compared birdsong data they had collected from previous years to recordings made at the same sites from April to May 2020, finding the sparrows were now singing far more quietly, and were able to hit much lower notes, which in turn expanded their range and enhanced their overall performance.

Imagine going to a party at a friend's house: at the start of the night you speak at a normal volume, but as the place fills up you have to raise your voice to be heard.

"When you're shouting at a [cocktail party](#), your voice is not at its best," said Derryberry, adding that it was similar for birds.

As noise pollution decreased, "their songs also sounded better, they sounded sexier," she said.

"They were better competitors, and they sounded like better mates to females."



A new paper adds to a growing body of research describing how animals—from whales to coyotes to the white-crowned sparrow (seen here)—have adapted their

behaviors to the Covid-19 shutdowns

The scientists were surprised by just how far the volume of their songs had dropped—almost a third.

Graphic on a study of birdsong in San Francisco during the lockdown period earlier this year.

White-crowned sparrow

Status: **least concern**
Zonotrichia leucophrys
 Range: North America



- Resident
- Breeding
- Passage
- Non-breeding



Population	Feeding	Breeding	Habitat
Common and stable over a large range	Mostly seeds, insects, spiders. Forages on ground	Males defend territories by singing	Scrub, thicket, forest edges, gardens

AFP Source: [Birdlife International/animaldiversity.org/audobon.com/Science](https://www.birdlifeinternational.org/animaldiversity.org/audobon.com/Science)

The authors said their research showed just how quickly birds can adapt to changing environments, and suggest that finding long-term solutions to curbing noise pollution might lead to other positive outcomes like higher species diversity.

More information: E.P. Derryberry et al., "Singing in a silent spring: Birds respond to a half-century soundscape reversion during the COVID-19 shutdown," *Science* (2020).

[science.sciencemag.org/cgi/doi ... 1126/science.abd5777](https://science.sciencemag.org/cgi/doi/10.1126/science.abd5777)

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Species factfile on the white-capped sparrows.

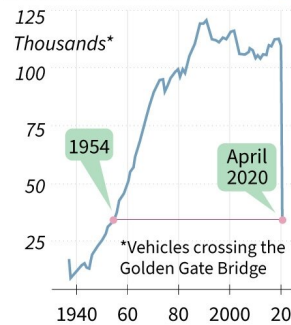
But despite this, the sparrows' trills could still be heard from twice as far away compared to before the shutdown, tying in with anecdotal reports of birdsongs becoming more conspicuous to humans.

Singing through the lockdown

Study finds that reduced noise during lockdown led to improved quality of birdsong among San Francisco's population of white-crowned sparrows

Quiet streets

Number of vehicles dropped to level not seen since 1954



How they changed their song

Drop in vocal amplitude

- Singing less loudly

Reduction in minimum frequencies

- Reaching lower notes

The changes amount to an improvement in the quality of the performance, according to researchers

Study: E.P. Derryberry et al, *Science*, September 24

AFP Source: [Birdlife International/animaldiversity.org/audobon.com/Science](https://www.birdlifeinternational.org/animaldiversity.org/audobon.com/Science)

APA citation: Singing sexy back: How sparrows adapted to COVID-19 shutdown (2020, September 24)
retrieved 27 November 2020 from <https://phys.org/news/2020-09-sexy-sparrows-covid-shutdown.html>

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