

# Sparrows change their tune to be heard in noisy cities

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Sparrows in San Francisco's Presidio district changed their tune to soar above the increasing cacophony of car horns and engine rumbles, details new George Mason University research in the April edition of *Animal Behaviour*.

The study, "Birdsongs Keep Pace with City Life: Changes in Song Over Time in an Urban [Songbird](#) Affects Communication," compares birdsongs from as far back as 1969 to today. The researchers also detail how San Francisco's streets have grown noisier based on studies from 1974 and 2008.

The study shows a strong link between the change in song and the change

in noise, says David Luther, term assistant professor of [biology](#) at Mason. It is also the first study to track the songs over time and the responses of birds to historical and current songs.

Just as we raise our [voices](#) to be heard when a car speeds past, birds making their homes near busy intersections have to tweet a little louder, Luther says. But it's more than just whistling the same tune and turning up the volume. Most birds stopped singing some old songs because those ditties couldn't cut through the racket.

Luther and his co-author, Elizabeth Derryberry of Tulane University, studied the male white-crowned sparrow.

"It's the really low hum where almost all of this human-made noise is — in this very low bandwidth. The birds can often sing at the top end of that low bandwidth," says Luther, "and if there's no traffic around, that's just fine. But if they're singing and there is noise, the lowest portion of that song gets lost, and the birds can't hear it."

So the birds changed their tune. [Sparrows](#) in the Presidio used to sing in three distinct dialects when famed ornithologist Luis Baptista made his recordings in 1969. When Luther worked with Baptista some 30 years later, those song stylings had dropped to two, with one higher-range dialect clearly on the way to be the only song in town.

"One dialect had basically taken over the city," says Luther, adding that it is officially called the "San Francisco dialect."

To do the study, the researchers found territories of 20 sparrows in the Presidio where there's lots of traffic, especially in the morning rush hour when the birds do most of their singing. They set up an iPod speaker, shuffled the sparrow songs from 1969 and 2005 and waited for a reaction.

"The [birds](#) responded much more strongly to the current song than to the historic song," says Luther, adding that male sparrows flew toward the speaker while chirping a "get out of here" song. "The (current) songs are more of a threat."

The researchers will next look at how the songs affect female sparrows.

Provided by George Mason University

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