

Timely change for tweeters' tune: Study looks at what makes flycatchers change their song length

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Do birds change their tune in response to urban noise? It depends on the bird species, according to Dr. Alejandro Ariel Ríos-Chelén from the Universidad Nacional Autónoma de México and colleagues. Their work shows that while some birds do adapt their songs in noisy conditions by means of frequency changes, others like the vermilion flycatchers adapt their song by means of changes in song lengths.

The work is published online in Springer's journal, [Behavioral Ecology and Sociobiology](#).

Birds use their songs during social interactions to attract females and repel intruders. Factors affecting [acoustic communication](#), such as urban noise, may therefore impair breeding success. Research to date has shown that several songbird (or oscine) species like robins, nightingales and [blackbirds](#), adapt their song in response to noise. This is done in order to improve acoustic communication in noisy conditions. However, little work has been done on the more tropical sister group of the oscines, the sub-oscines, which includes the vermilion flycatcher.

Rios-Chelén and team investigated whether male vermilion flycatchers adapted their song under noisy conditions in the same way as their less tropical sister group. They recorded the songs of 29 territorial vermilion flycatcher males in different parks and urban areas of Mexico City. They registered [noise levels](#) at different moments of both the pre-dawn

and dawn chorus, measured song length, and counted the total number of elements in the birds' song to assess song versatility.

They found that males occupying territories with relatively high noise levels produced longer songs, whereas males in quieter places sang both long and short songs. Males also showed song plasticity as they sang less versatile songs later in the morning when noise level was higher, but time of day seemed to play a more important role in driving this shift than did noise levels.

The authors conclude, "While these results show that time of day has an effect on individual song versatility, we cannot discard an influence of noise... this study supports the idea that sub-oscine adaptation to noise is different in degree and mode to that taking place among oscines, suggesting heterogeneity in the capacity of [bird species](#) to colonize and survive in the urban environment."

More information: Ríos-Chelén AA et al (2012). Dealing with urban noise: vermillion flycatchers sing longer songs in noisier territories. *Behavioral Ecology and Sociobiology*; [DOI 10.1007/s00265-012-1434-0](https://doi.org/10.1007/s00265-012-1434-0)

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