

Female birds may have lost desire to sing due to predation

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Female Superb Fairy Wren (*Malurus cyaneus*), Swifts Creek, Victoria. Credit: Wikipedia

(Phys.org)—A trio of biologists has conducted a study of one kind of song bird and their results suggest that the females of the species may have lost the desire to sing out of fear it would lead predators to their nest. In their paper published in the journal *Biology Letters*, Sonia Kleindorfer and Christine Evans, with Flinders University in Australia, and Katharina Mahr with the Konrad Lorenz Institute for Ethology in Austria, describe their study of superb fairy wrens in their native habitat and what they observed.

Much study has been conducted regarding male songbirds, the researchers note, but little research has been done to better understand singing in female birds. Traditionally, the thinking has been that males sing to attract the females, thus females have little to no reason to sing. But, as the group also note, a prior study by an international team of researchers back in 2013 showed that approximately 71 percent of female songbirds sing—they just don't do it in the same ways or for the same reasons.

In this new effort, the researchers sought to learn more about why female superb fairy wrens sing and when, and if it causes problems for them, such as attracting predators. They set up monitoring stations near 72 nesting sites in the wilds of Australia, home to the birds, and recorded their activities over a two year period.

In studying the behavior of both the males and females, the researchers found that the females generally only sang in response to singing from their mate—the birds are monogamous. Males announced their presence when returning to the nest from foraging, the [females](#) replied with the

same song, though it was muted. The back and forth sing-song between mated pairs was more prominent, the researchers noted, during nest building. To find out if the female returning the call put her eggs or chicks at risk, the team set up some artificial nests with quail eggs in them and played female songs from them, varying the number of calls per hour. Predators ate the eggs 40 percent of the time when the song rate was set at 20 songs per hour, but only did so 20 percent of the time when it was set at 6 calls per hour, showing that such calling did indeed put the offspring at risk.

These findings, the researchers propose, suggest that it might be possible that evolution, rather than selecting for male songbird singing, has actually been selecting against female singing.

More information: Female in-nest chatter song increases predation, Published 13 January 2016. [DOI: 10.1098/rsbl.2015.0513](https://doi.org/10.1098/rsbl.2015.0513) , [rsbl.royalsocietypublishing.org ... ontent/12/1/20150513](http://rsbl.royalsocietypublishing.org/...ontent/12/1/20150513)

Abstract

Female song is an ancestral trait in songbirds, yet extant females generally sing less than males. Here, we examine sex differences in the predation cost of singing behaviour. The superb fairy-wren (*Malurus cyaneus*) is a Southern Hemisphere songbird; males and females provision the brood and produce solo song year-round. Both sexes had higher song rate during the fertile period and lower song rate during incubation and chick feeding. Females were more likely than males to sing close to or inside the nest. For this reason, female but not male song rate predicted egg and nestling predation. This study identifies a high fitness cost of song when a parent bird attends offspring inside a nest and explains gender differences in singing when there are gender differences in parental care.

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