

Birds may attract mates with “scary movie” effect

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Using a horror film to bring your date closer is a classic move in the teenage playbook. Now, a study of Australian birds finds that other animals may use the same “scary movie effect” to attract female attention, by piggybacking their mating song onto the calls of predators.

Male splendid fairy-wrens, small birds from Australia, sing a special song each time they hear the call of one of their predators, the butcherbirds. New research has found that this seemingly dangerous behavior may actually serve as a call to potential mates – a flirtation using fear.



A pair of splendid fairy-wrens on their territory in South Australia. (Credit: Mitchell Walters/U. Chicago)

“Females do, in fact, become especially attentive after hearing butcherbird calls,” said Emma Greig of Cornell University at Ithaca, N.Y., one of the researchers. “It seems that male fairy-wrens may be singing when they know they will have an attentive audience, and, based on the response of females, this strategy may actually work!”

Published in the research journal *Behavioral Ecology*, the study involved playing sound clips to splendid fairy wrens at a conservation center in Southern Australia.

After years of studying these birds and their close relatives, the superb fairy-wrens, researchers had noticed the unique, consistent pairing of butcherbird calls with a unique call known as Type II song. “The male begins his Type II call immediately after the butcherbird begins to call, so they’re basically right on top of each other,” said University of Chicago researcher Stephen Pruett-Jones, a member. “It sounds like a duet.”

But theories varied as to why fairy-wrens would risk attracting a predator by singing. Was it an alarm call to other fairy-wrens in the area? A display of their bravery and physical fitness to attract mates? Or an effective means of capturing the attention of any females around?

Greig played different combinations of songs from her iPod to male and female fairy-wrens in their natural habitat: the territorial Type I song, as well as the Type II song with and without the preceding predator call. The experiments found that females were most attentive – as measured by looking in the direction of the call and responding with their own song – when the butcherbird-preceded Type II song was played.

“The most exciting possibility is that Type II songs have a sexual function, and that females are more easily stimulated by, or receptive to, displays after being alerted by a predator, such that the male’s song is especially attractive,” Greig said.

The results suggest that males use the predator call as an “alerting signal,” Pruett-Jones said, similar to how humans might capture another person’s attention by starting their sentence with “Hey!” For the females, the signal may carry information about the location of potential mates in

neighboring territories, and potentially may nudge them towards mating, Greig said.

Splendid fairy-wrens are interesting to scientists studying evolution and mating patterns due to their unique social structure, said Pruett-Jones. While the birds are socially monogamous, forming male-female pairs that last their entire lives, they are sexually promiscuous, mating predominantly with birds outside of their home pair.

Ongoing research is measuring the physical attributes and genetics of male splendid fairy-wrens and their offspring to see if there is a connection between Type II singing and mating success. So far, no link has been found between the behavior and physical health, the investigators said, suggesting Type II songs aren't a self-imposed handicap to make males look more fit and attractive to females.

All males "gave Type II songs with equal frequency, which suggests that singing after a predator vocalizes may not be as costly a behavior as you might imagine," Greig said. "Contrary to what you might expect, singing after a predator call may actually be quite safe: the male fairy-wrens know where the predator is, and he also knows that the predator isn't actively hunting at that moment, but is instead singing its heart out."

Greig is also currently testing how common the "scary movie effect" is beyond the splendid and superb fairy-wrens. While only two other birds, fairy gerygones and white-throated magpie jays, are thought to demonstrate similar predator-elicited display, the researchers believe it may be present and undetected in other species as well.