

Mating rivalry among furred and feathered: Variety is spice of life

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Birds do it. Bees do it. Fish, lobsters, frogs and lizards do it, too. But when it comes to securing a mate in the animal world, variety is literally the spice of life.

A group of scientists from Simon Fraser University, Concordia University and Dalhousie University has found flexibility in [mating](#) rituals is the key to reproductive success when males outnumber females.

The research team pored through hundreds of investigations on mating trends in mammals, insects, fish, crustaceans, amphibians and reptiles.

"We found there's significant flexibility in [mating behavior](#) and customs across many species," says study co-author James W. A. Grant, professor in the Department of Biology at Concordia University.

During mating periods, as males compete for females, courtship behavior can morph from fighting to desperate searching when males are outnumbered.

"We tend to think that more males lead to more fighting, but after a point, fighting with every male around gets too tiring and risky because of the increased chances of injury. More importantly, having their potential mate stolen away by a more attentive suitor," says lead author Laura K. Weir, a Concordia graduate (BSC, ecology, 2001) and a postdoctoral fellow at Simon Fraser University.

In the battle to reproduce, the element of surprise was found to be a weapon of choice for males surrounded by dominant peers. "Males may forgo displays of conspicuous courtship and attempt to gain some reproductive success in other ways," says coauthor Jeffrey A. Hutchings, a biology professor at Dalhousie University.

Males also favour mate-guarding over traditional courtship rites during mate shortages – bad news for females hoping to be wooed by multiple suitors.

"Males guard females until they are ready to mate in order to ensure some degree of [reproductive success](#) by preventing sperm competition from subsequent males," says Grant, noting males tailor sperm expenditure according to how many competitors they face.

Males are also more likely to stick around – regardless of the level of interest from females – when mates are scarce. "However, if females are abundant and encounters are frequent, [males](#) may abandon [females](#) who are not receptive to find one who is ready to mate," says Grant.

More information: The paper, "The Influence of Operational Sex Ratio on the Intensity of Competition for Mates," published in *The American Naturalist*, was coauthored by Laura K. Weir, Simon Fraser University, James W. A. Grant of Concordia University and Jeffrey A. Hutchings of Dalhousie University. myweb.dal.ca/jhutch/publicatio..._weir_etal_amnat.pdf

Provided by Concordia University

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