

Momma's boys exist in bird families too

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Zebra finches

Momma's boys may not be solely confined to human families. Instead, a new study suggests birds have the same prejudices.

Scientists have discovered that zebra finch mothers favor their sons over their daughters, so male chicks end up getting fed more than their sisters do. But fathers don't appear to be as biased.

The end result is that male chicks get more food than females.

"If a female has paired up with a particularly sexy male, it's in her interests to make sure her sons are well cared for, because the odds are that they'll grow up to be just as successful as their dad. So her [genes](#) are more likely to be passed to the next generation," explains Dr. Ian Hartley from Lancaster University, co-author of the study.

But the findings suggest that zebra [finches](#) know which chicks are male and which are female. This is surprising because, until now, researchers thought parents can't tell the difference between [males and females](#) until they get their adult plumage.

"We don't know how they know, but it could be that because they can see [ultraviolet light](#), they can see things in their chicks that we can't. Or maybe male

and female chicks make different calls when they beg for food," says Hartley.

While it might seem surprising that zebra finch mothers should favor their sons, Hartley and his colleagues say that what's more surprising is that the evidence for this has, until now, eluded researchers.

The whole area of conflict over how much care each parent puts into raising its young is a hot topic in [evolutionary biology](#) right now, with the theory predicting that each parent will invest differently.

"Females put a lot of energy into producing and incubating eggs; the males don't. But males put their energies into attracting or defending females. These different costs of reproduction - and the need to save some energy for future breeding attempts - have knock-on effects to how the mother and father invest in their offspring," explains Hartley.

There's also tension between parents and their offspring. When parents arrive at a nest with food, chicks use loud and elaborate begging displays to try to manipulate their parents' decisions as to who gets fed. But parents are wise to this. It's hard work bringing food back for chicks, so parents have to apply rules for who gets fed to prevent particularly greedy individuals from monopolising their efforts.

Bias towards gender

"Instead of a nice image of happy families, it's more realistic to think of a nest as a battleground," says Hartley. "There's conflict between parents, between parents and offspring, and on top of this, there's competition for food between siblings."

Previous research has found that parents generally prefer to feed larger chicks, and those that beg hardest. And although researchers have demonstrated that male and female parents prefer to feed different types of chicks, teasing out any kind of bias towards gender isn't straightforward.

Scientists have focussed on birds, "because it's much easier to measure and analyse parental care in birds than it is in, say, mammals," explains Hartley.

To find out if the evidence backs up the theory, he and other colleagues from Lancaster designed an experiment that let them compare parents' feeding patterns with begging behavior in broods with chicks of different sizes and ages. This meant they could discount any effects of size or age. In total, they analysed in detail video images of around 9000 'feeding events' at 28 [zebra finch](#) nests.

Unsurprisingly, the researchers found that the more chicks beg, the more likely they are to be fed more by their parents. But as begging gets louder and more intense, they found that the sex of both [chicks](#) and parents determines who gets fed the most: female zebra finches provide more food for sons as their begging intensifies, but fathers feed both sons and daughters equal amounts of food.

Hartley says there are plenty of questions that are still unanswered, like: how do parents work out the sex of their offspring, and do these rules apply to other birds?

"It would also be interesting to find out the long-term consequences of parentally biased favouritism in these birds," he says.

The study is published in *Behavioral Ecology and Sociobiology*.

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