

Older males come out on top in battle of the breeding mosquitofish

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Mosquitofish (female). Credit: Public Domain

It turns out age is no barrier when it comes to reproducing—well, at least for one type of fish.

A new study by researchers at The Australian National University (ANU) examined the impact of aging on the ability of male mosquitofish to reproduce.

Lead author, ANU Ph.D. candidate Upama Aich, says while there's been plenty of studies done on the impact of aging on female reproduction, the evidence is much less clear for [males](#).

"We also wanted to look at [mating history](#) and what part that played," Ms Aich said.

"So we compared four groups: older males and younger males, who were either virgins or non-virgins."

"Surprisingly, the older males had the best fertility, and produced the most offspring, irrespective of their mating history," co-author Professor Michael Jennions added.

Older, virgin males produced the most sperm of any group.

According to Ms Aich this shows the general pattern of male reproductive decline in many animals, including humans, could have more to do with mating history than age.

The researchers say mosquitofish were the perfect animal for this kind of study.

"They happen to be easy to track down, as well as being extremely effective breeders," Ms Aich said.

"They also produce live offspring, like humans, rather than laying eggs.

"The females mate with lots of different males, so there is [sperm competition](#) after mating. We were able to study what happened when the [sperm](#) was put into that competitive scenario."

The study is published in *Proceedings of the Royal Society B*.

More information: Upama Aich et al, Male age alone predicts paternity success under sperm competition when effects of age and past mating effort are experimentally separated, *Proceedings of the Royal*

Society B: Biological Sciences (2021). [DOI: 10.1098/rspb.2021.0979](https://doi.org/10.1098/rspb.2021.0979)

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