

Male squid unfazed by costly sex

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Credit: Julian Finn, Museum Victoria

Sex is costly. It can be time consuming, energetically demanding, and resource depleting. So, it makes sense to choose your mates wisely.

Being choosy, however, might not always be for the best, at least not when it comes to sperm allocation in male bottletail squid, according to new research from Monash University.

In the animal world, [females](#) are generally regarded as the more choosy sex, but as lead researcher Amy Hooper explains, [males](#) can have a lot to gain from being choosy too.

"In bottletail squid, sex is particularly costly for males," Ms Hooper said.

"First, males transfer large ejaculates to females during [mating](#) and, as a result, rapidly become sperm depleted, which limits the amount of times that males can mate during their short lives. Second, smaller females carry far fewer eggs than larger females, and are also more likely to actually just eat the sperm they are given instead of using it to fertilise the eggs.

"So males have a lot to lose from poor investment decisions."

To their surprise, the researchers found that males did not preferentially mate with larger females.

"Evidence suggest that males of some other animal species can be highly strategic about who they mate with. They preferentially mate with higher quality females or even give them more sperm," explains Associate Professor Bob Wong, senior author on the paper.

"So in cases like the bottletail squid, we might have expected males to invest in the larger females since they will give the males more offspring. But these results show it's not always that simple."

During her honours thesis research, Ms Hooper carried out an experiment in which males were mated with two females one after the other, either a large then a small, or a small then a large.

"We wanted to see how males might allocate sperm to higher quality females after they've already mated. But even when heavily [sperm](#) depleted, males were just as eager to mate with any female presented to him, even if she was of much lower quality," Ms Hooper said.

These results, published in *Animal Behaviour*, show that even when

mating is very costly, social environment may be more important in determining mating strategy.

"If females are sparsely distributed in the wild, and males have no way of telling when their next mating opportunity may present itself, benefits of taking advantage of every mating opportunity may override the costs, however large, of making poor mating decisions."

Provided by Monash University

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