Why the best things come to those who wait

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Pushing to the front of the queue is not the best ploy for males who want to propagate their genes according to scientists from the University of Exeter.

Dr David Hodgson and Dr David Hosken from the University of Exeter's School of Biosciences studied female mating with multiple males, especially species who mate with more than one partner in rapid succession, and discovered why the last male in line is most likely to impregnate the female.

Many insect species but also mammals such as ground squirrels and even primates, including our close relative the chimpanzee, are 'polyandrous', which means that they mate with multiple partners. Previous studies have shown that the last male is most likely to be successful, and have put forward a number of theories to explain this.

This new research, published in the *Journal of Theoretical Biology*, shows how the last male can gain an advantage by 'parasitising' his mate's previous partners' seminal fluid. By taking advantage of the more 'sperm friendly' environment created by those who have gone before, he can 'fast-track' his sperm to the front of the race to the egg.

'The presence of seminal fluid makes the female body a more 'sperm-friendly' place,' said David Hodgson of the University of Exeter. 'When the first male mates with the female, his sperm are released into a fairly hostile environment. But, by the time the last male mates, the presence of extra seminal fluid can assist the journey of his sperm to the egg.'

Source: University of Exeter

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