

Variety is the spice of life: too many males, too little time...

April 23 2008

Female Australian painted dragon lizards are polyandrous, that is, they mate with as many males as they can safely get access to. This promiscuous behaviour is often found in species where male quality is dubious and there are high levels of infertility in the male population. Female painted dragons possess the remarkable ability to store sperm inside their reproductive tract that remain viable for a considerable amount of time, so that the sperm of different males actually compete with each other to fertilise her eggs.

Male painted dragons are highly distinctive and brightly coloured and what is particularly fascinating about them is that they occur in two different colours - red or yellow-headed. From an evolutionary perspective this seems intuitively puzzling as usually natural selection does an excellent job of removing inferior versions of an organism out of the ensuing population, ensuring its ultimate demise. With painted dragon lizard males however, both versions persist in the population, suggesting that each type of male somehow manages to acquire a mate and successfully reproduce equally well.

Mo Healey, Tobias Uller and Mats Olsson of Wollongong University, carried out female choice experiments on single males of different colours, and discovered that females did not preferentially associate with either coloured male. However, when females were allowed to choose between pairs of males of the same versus different colours, they preferred to associate with male pairs that were polymorphic, i.e., one red and one yellow male. The level of individual recognition in this

species is unknown and often when males and females assess each other in the wild it is initially from a distance, meaning that visual cues are very important.

Healey et al. propose that by mating with one yellow and then one red male (or vice versa), female painted dragons are making sure that they are in fact mating with two different males and not the same male twice. This preference could therefore contribute to the maintenance of both male types within the population.

Source: Wiley

Citation: Variety is the spice of life: too many males, too little time... (2008, April 23) retrieved 10 April 2024 from <https://phys.org/news/2008-04-variety-spice-life-males.html>

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