**Battle of the sexes: may the best fly win in reproduction**

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Males and females often have differing reproductive strategies to increase their individual fitness, which can result in sexual conflict. Males usually increase their fitness by mating multiply, while repeated mating comes at a high cost to females. Polyandrous females can receive indirect benefits of multiple mating by increasing the fitness of their offspring through additive and non-additive genetic effects, such as good genes or compatible genes. These benefits are acquired through mechanisms of sexual selection which can act at many levels: behavioural through female mate choice, or postmating through sperm competition and cryptic female choice. To tease apart the antagonistic relationship between males and females in sexual reproduction, males from *D. melanogaster* isolines were ranked for their quality using a variety of fitness traits. The performance of high and low quality males were then tested for their fertilization success independently (cryptic female choice), in the presence of competition (sperm competition), and via female mate choice. These different aspects of sexual selection at both pre- and postmating levels were examined to determine how they contribute to overall male mating success, providing insight into how populations evolve in response to sexual selection.