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Title:	Mating with large males decreases the immune defence of females in <i>Drosophila melanogaster</i>
Authors:	Imroze, K. (/jspui/browse?type=author&value=Imroze%2C+K) Prasad, N.G. (/jspui/browse?type=author&value=Prasad%2C+N.G.)
Keywords:	Bacteria (microorganisms) <i>Drosophila melanogaster</i> <i>Melanogaster</i> <i>Serratia marcescens</i> , animal
Issue Date:	2011
Publisher:	Indian Academy of Sciences
Citation:	Journal of Genetics, 90 (3), pp. 427-434
Abstract:	Mating has been widely reported to be a costly event for females. Studies indicate that female cost of mating in terms of fecundity and survivorship can be affected by their mates, leading to antagonistic coevolution between the sexes. However, as of now, there is no evidence that the female cost of mating in terms of immune defence is affected by their mates. We assess the effect of different sized males on antibacterial immune defence and reproductive fitness of their mates. We used a large outbred population of <i>Drosophila melanogaster</i> as the host and <i>Serratia marcescens</i> as the pathogen. We generated three different male phenotypes: small, medium and large, by manipulating larval densities. Compared to females mating with small males, those mating with large males had higher bacterial loads and lower fecundity. There was no significant effect of male phenotype on the fraction of females mated or copulation duration (an indicator of ejaculate investment). Thus, our study is the first clear demonstration that male phenotype can affect the cost of mating to females in terms of their antibacterial immune defence. Mating with large males imposes an additional cost of mating to females in terms of reduced immune defence. The observed results are very likely due to qualitative/quantitative differences in the ejaculates of the three different types of males. If the phenotypic variation that we observed in males in our study is mirrored by genetic variation, then, it can potentially lead to antagonistic coevolution of the sexes over immune defence.
URI:	https://link.springer.com/article/10.1007/s12041-011-0105-7 (https://link.springer.com/article/10.1007/s12041-011-0105-7)
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