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Title:	Genetic basis for traits in populations evolving under increased levels of sexual conflict
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Keywords:	Genetic populations sexual conflict
Issue Date:	Apr-2022
Publisher:	IISER Mohali
Abstract:	Sexual selection drives the evolution of sexually-advantageous traits in both the sexes. However, in species with promiscuous mating systems such as <i>Drosophila melanogaster</i> , traits conferring fitness benefits on one sex often come at a cost of fitness of the opposite sex. Interlocus conflict arising out of such sexual antagonism can manifest as mate harm ability of males, which is thought to be a pleiotropic consequence of male competitive ability, while resistance to mate harm is thought to evolve in response to this selection pressure in females. On the other hand, intralocus sexual conflict is a consequence of sex-specific fitness optima for traits that are common to both males and females like spontaneous locomotor activity. We set up reciprocal crosses between lab-established M (male-biased sex ratio; stronger sexual selection) and F (female-biased sex ratio; weaker sexual selection) populations to examine the genetic background of traits evolving under increased levels of sexual conflict. Contrary to earlier results, our experiments did not show consistent statistically significant differences between M and F populations. We discuss these surprising findings in the context of genetic drift in long-term (>280 generations) experimental evolution projects, as well as the effects of relaxation of selection pressure on costly sexual traits.
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