Title:	Investigating Phenotypic Plasticity of Male Reproductive Investment using D. Melanogaster
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Abstract:	n promiscuous species, females mate multiple times which gives rise to post copulatory sexual selection (PCSS). The prediction of sperm competition theory is that males should tailor their ejaculate investment to suit the perceived level of sperm competition in their environment. Numerous studies have shown that changing the socio-sexual environment prior to mating results in plastic responses in male reproductive investment. Here, I investigated whether Drosophila melanogaster males can plastically modulate their reproductive investment in response to varying numbers of early life competitors and whether such responses are sensitive to the identity of competitors. I modulated the identity of competitors by either deriving males from populations evolving under male-biased or female-biased sex ratio, or by deriving competitor males with small or large body sizes. My results suggest that male reproductive investment, in the course of copulation duration and sperm defense ability, increases in response to the presence of competitor males in early life. However, I found no evidence to suggest that the magnitude of this increase is sensitive to the exact number or the identity of competitor males.
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