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Title:	Male-Male Competition Causes Parasite-Mediated Sexual Selection for Local Adaptation
Authors:	Narasimhan, A. (/jspui/browse?type=author&value=Narasimhan%2C+A.)
Keywords:	Condition dependence Adaptation Evolutionary rescue Parasitism
Issue Date:	2020
Publisher:	University of Chicago Press
Citation:	American Naturalist, 196(3), pp.344-354.
Abstract:	Sexual selection has been suggested to accelerate local adaptation and promote evolutionary rescue through several ecological and genetic mechanisms. Condition-dependent sexual selection has mainly been studied in laboratory settings, while data from natural populations are lacking. One ecological factor that can cause condition-dependent sexual selection is parasitism. Here, we quantified ectoparasite load (Arrenurus water mites) in a natural population of the common bluetail damselfly (Ischnura elegans) over 15 years. We quantified the strength of sexual selection against parasite load in both sexes and experimentally investigated the mechanisms behind such selection. Then we investigated how parasite resistance and tolerance changed over time to understand how they might influence population density. Parasites reduced mating success in both sexes, and sexual selection was stronger in males than in females. Experiments show that male-male competition is a strong force causing precopulatory sexual selection against parasite load. Although parasite resistance and male parasite tolerance increased over time, suggestive of increasing local adaptation against parasites, no signal of evolutionary rescue could be found. We suggest that condition-dependent sexual selection facilitates local adaptation against parasites and discuss its effects in evolutionary rescue.
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