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Title:	Effect of diet on mate choice in populations of tribolium castaneum
Authors:	Panyam, Soumya. (/jspui/browse?type=author&value=Panyam%2C+Soumya.)
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Abstract:	Adaptation to novel environments can lead to reproductive isolation, one of the hallmarks of divergent evolution. This project aimed to investigate mechanisms of reproductive isolation in populations of Tribolium castaneum, adapted to novel diets. Founding populations from an out-bred line on wheat were used to set up adapted lines in corn, sorghum and finger millet. Earlier results on mate choice in the corn and sorghum adapted lines revealed assortative mating patterns between the adapted populations and the ancestral population. To address whether this pattern was due to reproductive isolation or plastic responses to exposure to novel environment, I assayed mate choice in individuals reared in corn or sorghum for only one generation, and found that mating was random between these populations. I also found random mating between the finger millet adapted lines and the ancestral line. My results indicated that behavioural pre-zygotic isolation had occurred in the adapted lines on corn and sorghum but not in the finger millet adapted lines. This suggests that the mechanisms of adaptation and reproductive isolation are different in different environments.
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