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| Title: | No apparent evidence of reproduction-immunity trade-off in <i>Drosophila melanogaster</i> |
| Authors: | Bansal, Nitin (/jspui/browse?type=author&value=Bansal%2C+Nitin) |
| Issue Date: | 10-Oct-2019 |
| Abstract: | <p>A trade-off between organismal traits competing for shared resources is a fundamental assumption of the life-history theories. Investment into reproduction vs. immunity has been a topic of much discussion in the literature (Lawniczak et al., 2006). Reproduction-immunity trade-offs are considered to be condition dependent (McKean and Nunney, 2001) with an overarching hormonal control (Lazzaro et al., 2017). The ubiquity of such trade-off has been questioned too (Fedorka et al., 2007). In this study we describe the evolution of the correlation between reproduction and immunity, using replicate <i>Drosophila melanogaster</i> populations having a common ancestor. The study is unique because of its use of lab adapted, outbred populations harbouring substantial genetic variation. We measured immunocompetence of virgin and mated flies of both sexes; immunocompetence being defined as the survivorship post infection with a live pathogen. Two Gram-positive (<i>Enterococcus faecalis</i> and <i>Staphylococcus succinus</i>) and two Gram-negative (<i>Pseudomonas entomophila</i> and <i>Providencia rettgeri</i>) bacteria were used as pathogens. We did not find any evidence of trade-offs. The results indicate that, for either sex, mating improves post-infection survivorship of flies, irrespective of the pathogen used. This study adds to the work done previously on the ancestors of the present populations (Gupta et al., 2013)</p> |
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