



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Publications of IISER Mohali (/jspui/handle/123456789/4)
/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/4734>


Title:	No major cost of evolved survivorship in <i>Drosophila melanogaster</i> populations coevolving with <i>Pseudomonas entomophila</i>
Authors:	Ahlawat, Neetika (/jspui/browse?type=author&value=Ahlawat%2C+Neetika) Maggu, Komal (/jspui/browse?type=author&value=Maggu%2C+Komal) Jigisha (/jspui/browse?type=author&value=Jigisha) Arun, Manas Geeta (/jspui/browse?type=author&value=Arun%2C+Manas+Geeta) Meena, Abhishek (/jspui/browse?type=author&value=Meena%2C+Abhishek) Agarwala, Amisha (/jspui/browse?type=author&value=Agarwala%2C+Amisha) Prasad, Nagaraj Guru (/jspui/browse?type=author&value=Prasad%2C+Nagaraj+Guru)
Keywords:	<i>Drosophila melanogaster</i> <i>Pseudomonas entomophila</i>
Issue Date:	2022
Publisher:	The Royal Society
Citation:	Proceedings of the Royal Society B: Biological Sciences, 289(1974), 2- 11.
Abstract:	Rapid exaggeration of host and pathogen traits via arms race dynamics is one possible outcome of host–pathogen coevolution. However, the exaggerated traits are expected to incur costs in terms of resource investment in other life-history traits. The current study investigated the costs associated with evolved traits in a host–pathogen coevolution system. We used the <i>Drosophila melanogaster</i> (host)– <i>Pseudomonas entomophila</i> (pathogen) system to experimentally derive two selection regimes, one where the host and pathogen both coevolved, and the other, where only the host evolved against a non-evolving pathogen. After 17 generations of selection, we found that hosts from both selected populations had better post-infection survivorship than controls. Even though the coevolving populations tended to have better survivorship post-infection, we found no clear evidence that the two selection regimes were significantly different from each other. There was weak evidence for the coevolving pathogens being more virulent than the ancestral pathogen. We found no major cost of increased post-infection survivorship. The costs were not different between the coevolving hosts and the hosts evolving against a non-evolving pathogen. We found no evolved costs in the coevolving pathogens. Thus, our results suggest that increased host immunity and pathogen virulence may not be costly.
Description:	Only IISERM authors are available in the record.
URI:	https://doi.org/10.1098/rspb.2022.0532 (https://doi.org/10.1098/rspb.2022.0532) http://hdl.handle.net/123456789/4734 (http://hdl.handle.net/123456789/4734)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format
Need To Add...Full Text_PDF. (/jspui/bitstream/123456789/4734/1/Need%20To%20Add%e2%80%a6Full%20Text_PDF.)		15.36 kB	Unknown

[View/Open \(/jspui/\)](#)

Show full item record (</jspui/handle/123456789/4734?mode=full>)

 (</jspui/handle/123456789/4734/statistics>)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.