



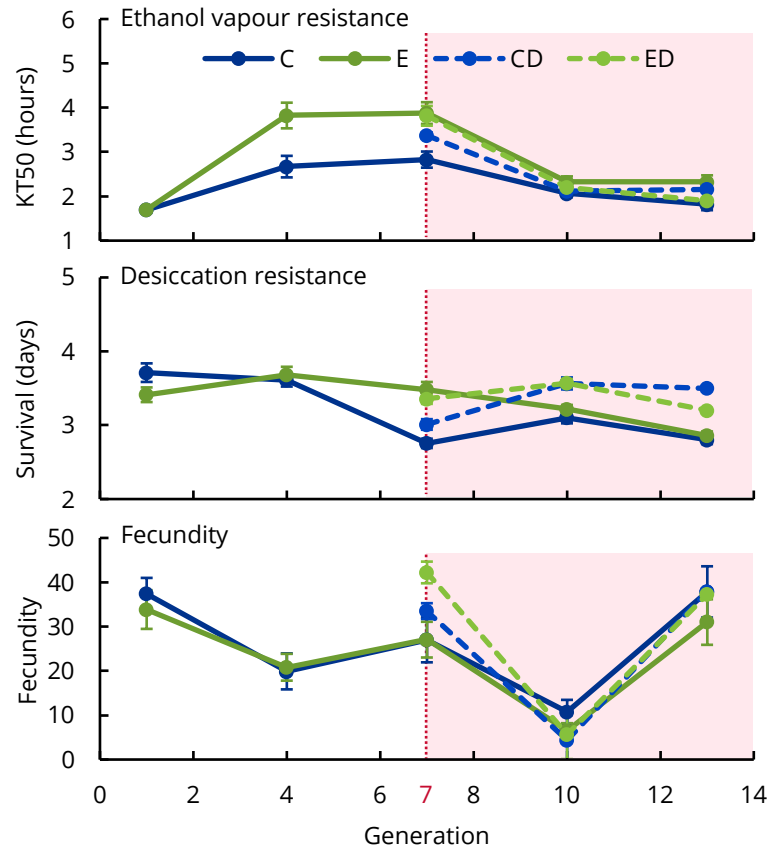
Short-term adaptation does not alter the evolutionary fate of populations in the Mediterranean fruit fly

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Ceratitis capitata adapt to ethanol vapour stress with no trade-off in fecundity.

Historical selection for ethanol vapour resistance did not affect development of desiccation resistance.



Background

Genetic history plays a major role in the way species respond to novel conditions¹.

We determined the role of historical contingency on adaptation in the Mediterranean fruit fly, *Ceratitis capitata* (Wiedemann), by using a two-step experimental evolution approach.

Approach

Generation 1 to 6: Ethanol vapour selection (E) or control (C) (n=5 populations).

Generation 7 to 13: Ethanol vapour selection ceased. E and C populations split into two groups and desiccation selection applied to half of them (ED, CD; n=5 populations).

Ethanol vapour resistance, desiccation resistance and fecundity recorded in generations 1, 4, 7, 10 and 13.

Reference

¹ Plucain, J. et al. (2016). BMC Evolutionary Biology **16**, 86.