Figure S2  Initial quantitative trait variance components and responses to selection for the simulations plotted against the number of migrants per generation and subpopulation ($Nm$, in log_{10}). The scenario refers to a subdivided population with $n=10$ subpopulations, number of migrants per generation and subpopulation ($Nm$) either $<0.5$ or $>0.5$, mutation rate $u=0.00001$ and strength of stabilising selection $\omega^2=25$. Results are based on 2,000 simulations varying the subpopulation size ($N$) randomly between 100 and 1000, and the migration rate ($m$) between 0.0001 and 0.1. $V_W$: Within-subpopulation genetic variance; $V_B$: Between-subpopulation genetic variance; $V_T$: Total genetic variance; $R_{10}$: response to selection until generation 10; $R_{10-100}$: response from generations 10 to 100; $R_T$: total response until generation 100.

The figure shows that whereas the short-term response ($R_{10}$) increases monotonically with $Nm$, the late response ($R_{10-100}$) increases with $Nm$ for log($Nm$) $= -0.3$ ($Nm < ~0.5$), and decreases thereafter. This indicates that, when subpopulations are considerably isolated from one another ($Nm < ~0.5$, corresponding to an expected $F_{ST} > ~1/3$), $V_W$ is very low and $V_B$ rather high, and late and total response increase with $Nm$, due to the slow but continuous increase of $V_W$ at the expense of $V_B$. For higher levels of migration ($Nm > ~0.5$; corresponding to $F_{ST} < ~1/3$), $V_W$ increases substantially with migration, implying an increase in the short-term response, but $V_B$ and $V_T$ decline consistently, implying a decline in late response.