



Figure S6 Invasion probability of A_1 as a function of the continental frequency of B_1 . Panels are for varying migration and recombination rates. Invasion probabilities are shown conditional on initial occurrence of A_1 on background B_1 (blue), on background B_2 (red), and as a weighted average across the two backgrounds (black). Solid curves show exact numerical solutions to the branching process, whereas thick dashed curves show the analytical approximations valid for weak evolutionary forces and a slightly supercritical branching process (see section 3 of File S1, and Eqs. 7–9 in File S5). In all panels, $a = 0.02$ and $b = 0.04$. The migration rate m increases from left to right, taking values of $m = 0.022$ in panels (A), (D), (G), $m = 0.03$ in panels (B), (E), (H), and $m = 0.038$ in panels (C), (F), and (I). The recombination rate increases from top to bottom, taking values of $r = 0.005$ in panels (A)–(C), $r = 0.01$ in panels (D)–(F), and $r = 0.02$ in panels (G)–(I). Arrows indicate where the optimal q_c is non-zero.