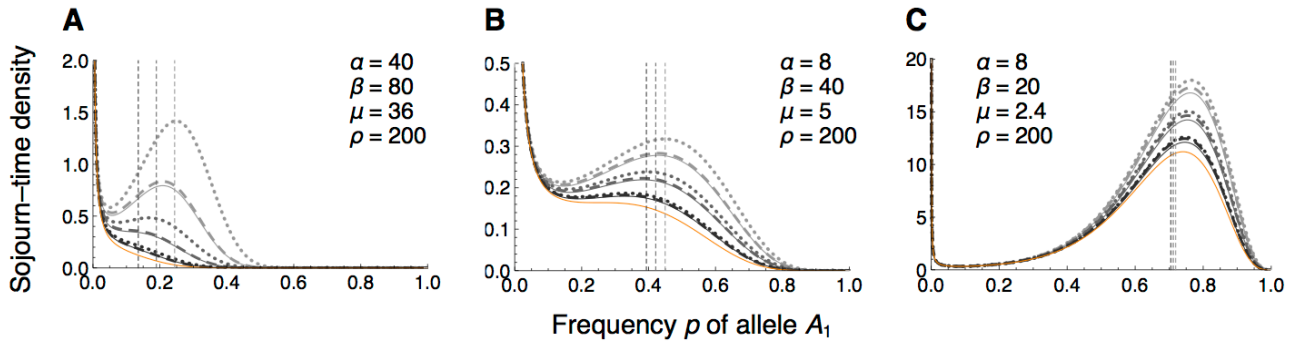

Figure S10 Diffusion approximation to the sojourn-time density of A_1 under quasi-linkage equilibrium for a polymorphic continent. Comparison of the sojourn-time density (STD) $t_{2,\mathrm{QLE}}(p;p_0)$ (thin curves, Eq. 7b) to the approximation valid for small p_0, $\tilde{t}_{2,\mathrm{QLE}}(p;p_0)$ (dashed curves, analogous to Eq. 109 in File S1) and the one based on the additional assumption of $\rho \gg 0$, $\tilde{t}_{2,\mathrm{QLE},\rho\gg 0}(p;p_0)$ (dotted curves, Eq. 119b) assuming a polymorphic continent. The continental frequency q_c of B_1 increases from light to dark grey, taking values of 0.2, 0.5, and 0.8. The STD for the one-locus model, $\tilde{t}_{2,\mathrm{OLM}}(p;p_0)$, is shown in orange as a reference. Vertical lines give the deterministic frequency $\hat{p}_+$ of A_1 at the respective fully-polymorphic equilibrium (computed in File S7). (A) Strong evolutionary forces relative to genetic drift. (B) Strong asymmetry in selection coefficients, and moderate migration. (C) Recombination ten times stronger than selection at locus B. In all panels, $p_0 = 0.005$, which corresponds to an island population of size $N = 100$ and a single initial copy of A_1. Panels (A), (B) and (C) correspond to Figures 5C, 5D and 5E for a monomorphic continent ($q_c = 0$), respectively.