



Figure S2: Expected inter-coalescent time intervals for 10 lineages sampled in the current day on the background of a derived neutral allele with frequency f in the population. The colored dots give means of T_k from our simulations using stochastic trajectories. The solid lines show the expected coalescent times under our approximation $\mathbb{E}[T_k] = 2Nf / \binom{k}{2}$. Note the good agreement except for $k = 2$. Presumably our approximation over estimates this time as it fails to acknowledge that the allele is derived, and hence is decreasing in frequency backward in time.