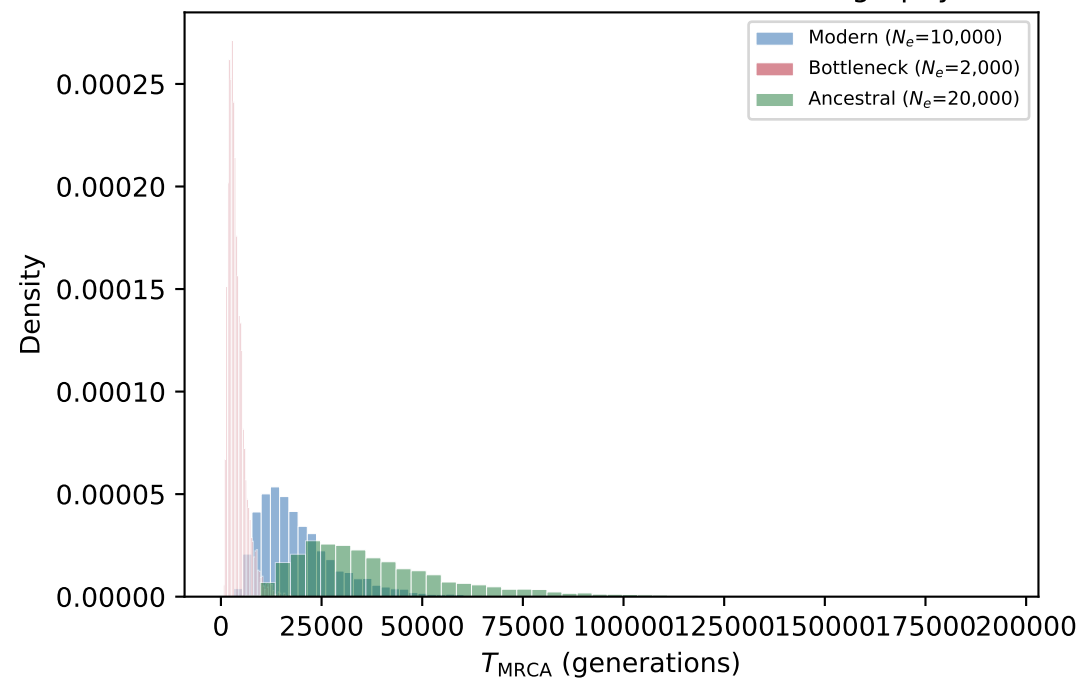
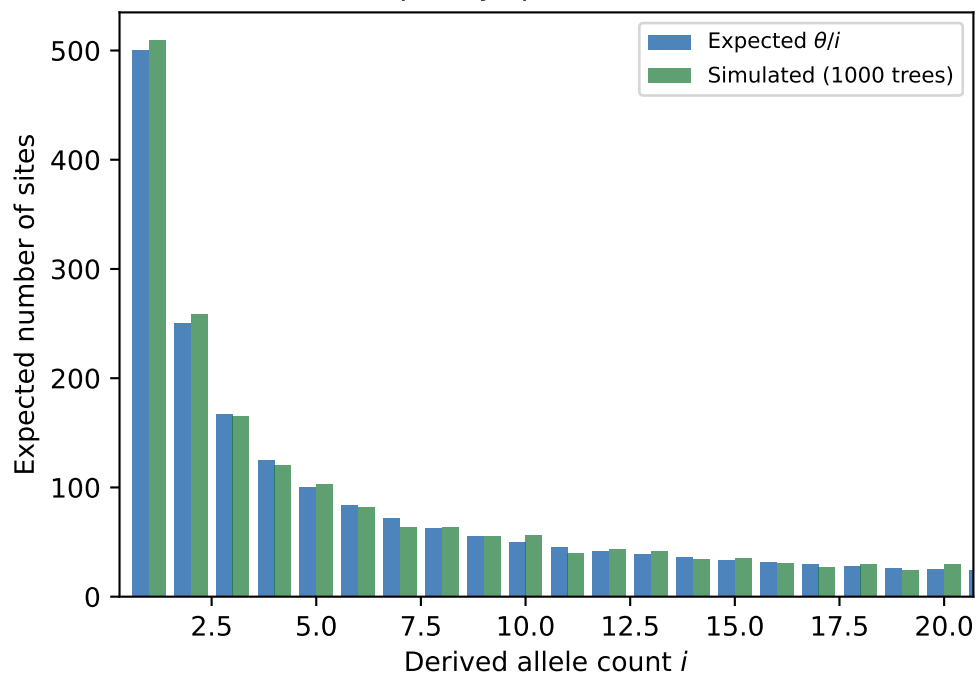


# Demo: Coalescent Simulation with Human-like Parameters

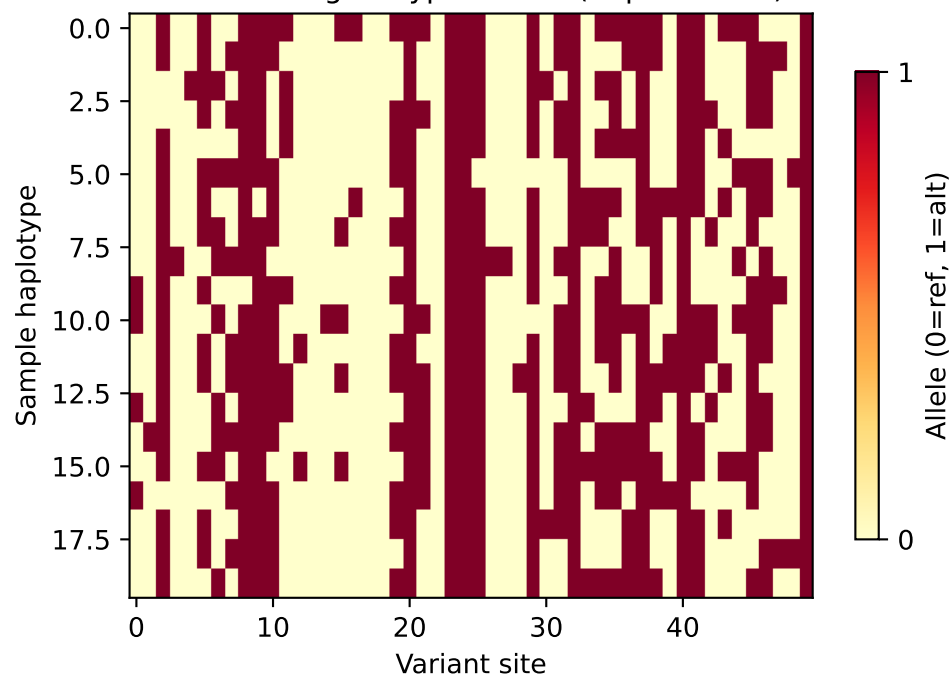
## A. TMRCA under Out-of-Africa-like demography



## B. Site frequency spectrum ( $n=40$ , 1 Mb)



## C. VCF-like genotype matrix (haploid view)



## D. Fenwick tree: $O(\log n)$ scaling

