

**Table S9** The ratio  $\bar{t}_{QLE}/\bar{t}_{OLM}$  as in Table S5, but for  $p_0 = 0.005$  instead of  $p_0 = 1/(2N)$ .

$r$	$m$	$N_e = 10^4$														
		$N_e = 100$					$N_e = 10^3$					$N_e = 10^4$				
		$q_c = 0$	$q_c = 0.2$	$q_c = 0.5$	$q_c = 0.8$	$q_c = 0$	$q_c = 0.2$	$q_c = 0.5$	$q_c = 0.8$	$q_c = 0$	$q_c = 0.2$	$q_c = 0.5$	$q_c = 0.8$			
0.05	0.006	3.887	2.738	1.763	1.228	$1.340 \times 10^6$	$4.191 \times 10^4$	463.139	9.790	$2.964 \times 10^{180}$	$3.124 \times 10^{165}$	$9.765 \times 10^{145}$	$1.828 \times 10^{129}$			
0.05	0.012	2.563	1.897	1.386	1.116	$3.451 \times 10^{10}$	$6.511 \times 10^8$	$7.330 \times 10^6$	$2.672 \times 10^5$	$1.095 \times 10^{94}$	$4.148 \times 10^{76}$	$6.376 \times 10^{56}$	$1.011 \times 10^{42}$			
0.05	0.018	1.679	1.407	1.187	1.059	$2.634 \times 10^4$	$1.542 \times 10^3$	141.905	49.620	$2.614 \times 10^{38}$	$1.786 \times 10^{25}$	$7.849 \times 10^{12}$	$1.006 \times 10^6$			
0.05	0.024	1.335	1.224	1.111	1.037	351.786	190.096	126.558	103.788	NA	NA	NA	NA			
0.10	0.006	2.183	1.815	1.418	1.140	$3.971 \times 10^3$	601.729	44.963	4.276	$1.858 \times 10^{155}$	$1.269 \times 10^{147}$	$7.351 \times 10^{135}$	$4.574 \times 10^{125}$			
0.10	0.012	1.580	1.403	1.209	1.071	$4.768 \times 10^7$	$8.447 \times 10^6$	$9.010 \times 10^5$	$1.386 \times 10^5$	$1.199 \times 10^{65}$	$2.641 \times 10^{57}$	$2.866 \times 10^{47}$	$1.083 \times 10^{39}$			
0.10	0.018	1.256	1.189	1.104	1.037	280.052	142.014	67.583	42.921	$4.907 \times 10^{16}$	$7.793 \times 10^{12}$	$1.521 \times 10^8$	$8.927 \times 10^4$			
0.10	0.024	1.131	1.109	1.064	1.024	133.739	125.264	110.775	100.350	NA	NA	NA	NA			
0.20	0.006	1.519	1.386	1.218	1.079	91.196	34.687	8.664	2.321	$8.305 \times 10^{138}$	$5.399 \times 10^{134}$	$5.247 \times 10^{128}$	$1.014 \times 10^{123}$			
0.20	0.012	1.247	1.188	1.108	1.040	$1.423 \times 10^6$	$6.775 \times 10^5$	$2.333 \times 10^5$	$8.711 \times 10^4$	$3.099 \times 10^{49}$	$1.498 \times 10^{46}$	$2.439 \times 10^{41}$	$8.426 \times 10^{36}$			
0.20	0.018	1.112	1.091	1.055	1.021	71.310	60.791	47.766	39.139	$3.490 \times 10^8$	$2.761 \times 10^7$	$5.223 \times 10^5$	$1.997 \times 10^4$			
0.20	0.024	1.059	1.054	1.035	1.014	109.131	107.834	102.913	98.013	NA	NA	NA	NA			

Here,  $\bar{t}_{QLE}$  is the mean absorption time assuming quasi-linkage equilibrium (QLE), and  $\bar{t}_{OLM}$  the one for the one-locus model (no linkage). Parameters are  $a = 0.02$  and  $b = 0.04$ . NA denotes cases where  $\bar{t}_{OLM}$  is numerically indistinguishable from 0 and hence the ratio  $\bar{t}_{QLE}/\bar{t}_{OLM}$  not defined.