



**Figure S2:** Allele frequency,  $p'(\tau)$ , and population size,  $N'(\tau)$ , at generation  $\tau$  before fixation during a selective sweep from *de novo* mutations in evolutionary rescue (blue;  $d = 0.05$ ) and in a population of roughly constant size (red;  $d = 0$ ). The thick solid curves are analytic approximations (Equation 5), using  $p_0 = p_{0|\text{rescue}}^{\text{DNM}}$  (Equation 17) as the initial frequency and  $p_f$  (Equation 3) as the final allele frequency. The thin curves are 100 replicate simulations where a sweep (and population recovery) was observed. The stars show the predicted time to fixation (Equation 4). The arrows show the mean time to fixation observed in simulations.