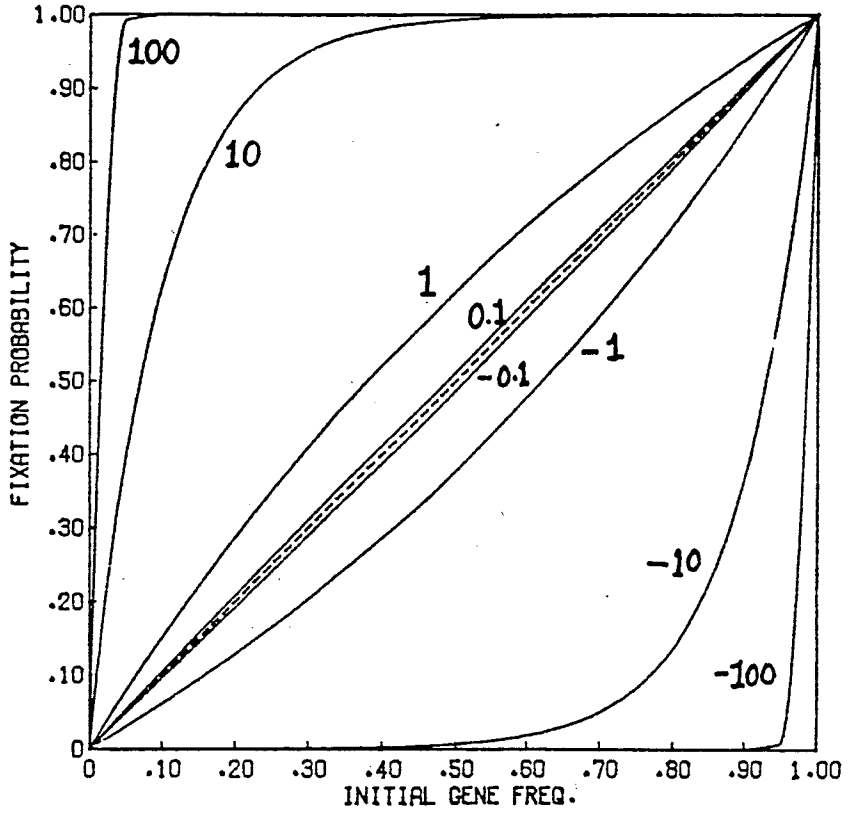
Figure VII-3. Probability of fixation of an allele with multiplicative fitnesses. Results from the diffusion approximation for various values of 4Ns and p. The value of 4Ns is given next to each curve.

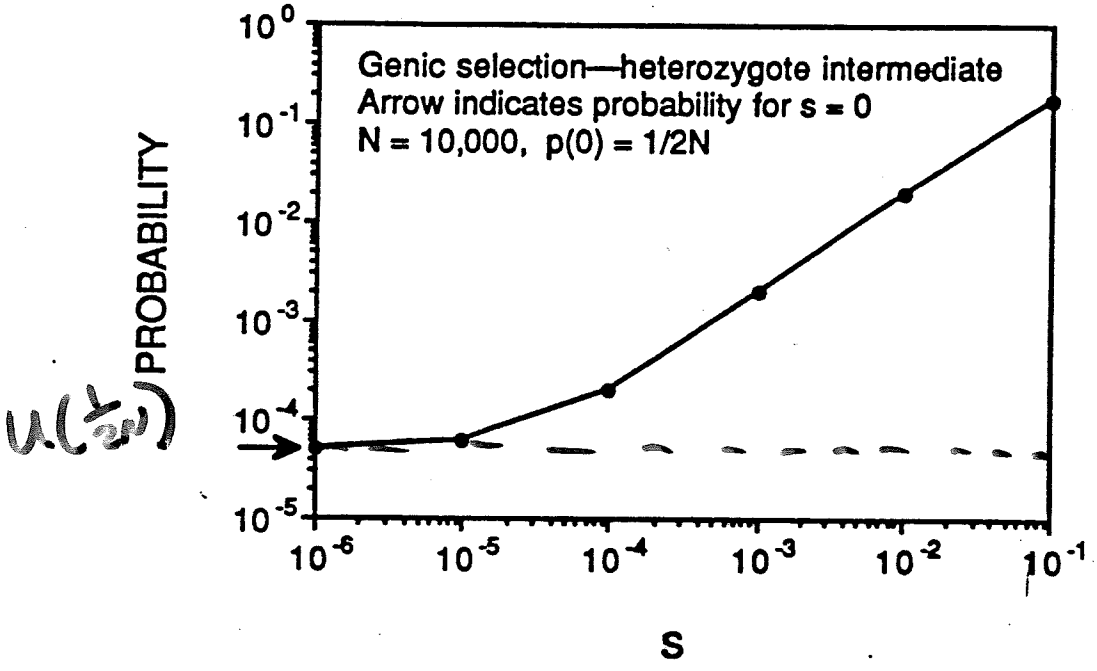


u(p)

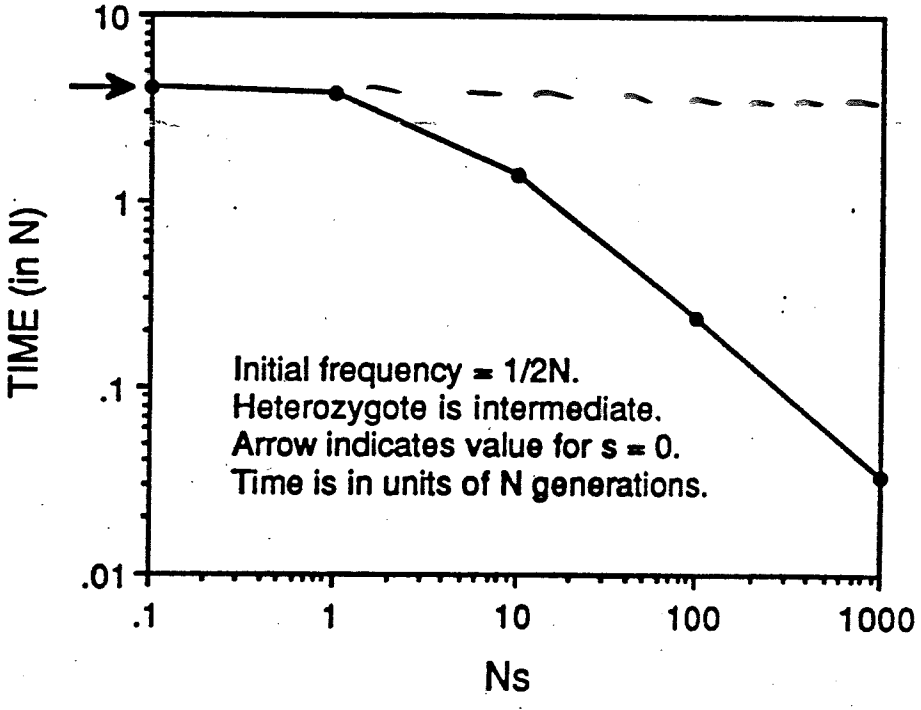
p

$$u\left(\frac{1}{2N}\right) = \frac{1 - e^{-2s}}{1 - e^{-4Ns}}$$

PROBABILITY OF FIXATION



MEAN FIXATION TIME



PURE DRIFT: NO SELECTION, MUTATION, OR MIGRATION

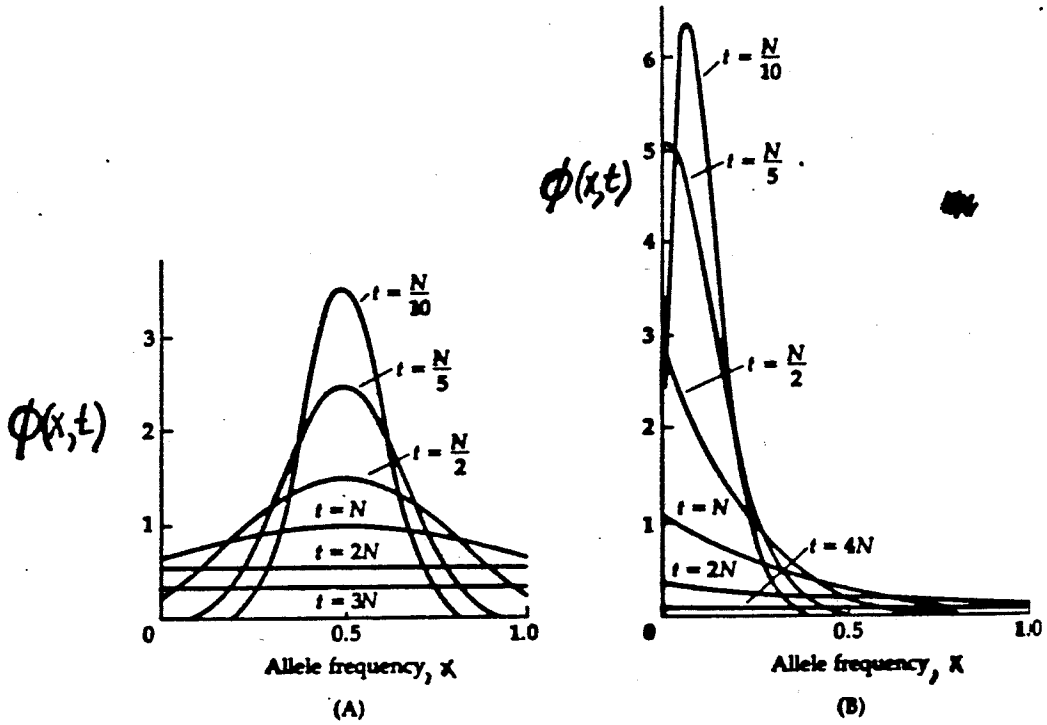


FIGURE 4. Theoretical results of random genetic drift. (A) Initial allele frequency = .5; (B) Initial allele frequency = .1. The area under each curve is equal to the proportion of populations in which fixation or loss has not yet occurred. The curves are the distributions of allele frequencies in those unfixed populations. (From Kimura, 1955.)

Figure VII-5a. Equilibrium distribution of gene frequencies under mutation and genetic drift. In this case $4N_e u = 4N_e v$, and the value of $4N_e u$ is shown next to each curve.

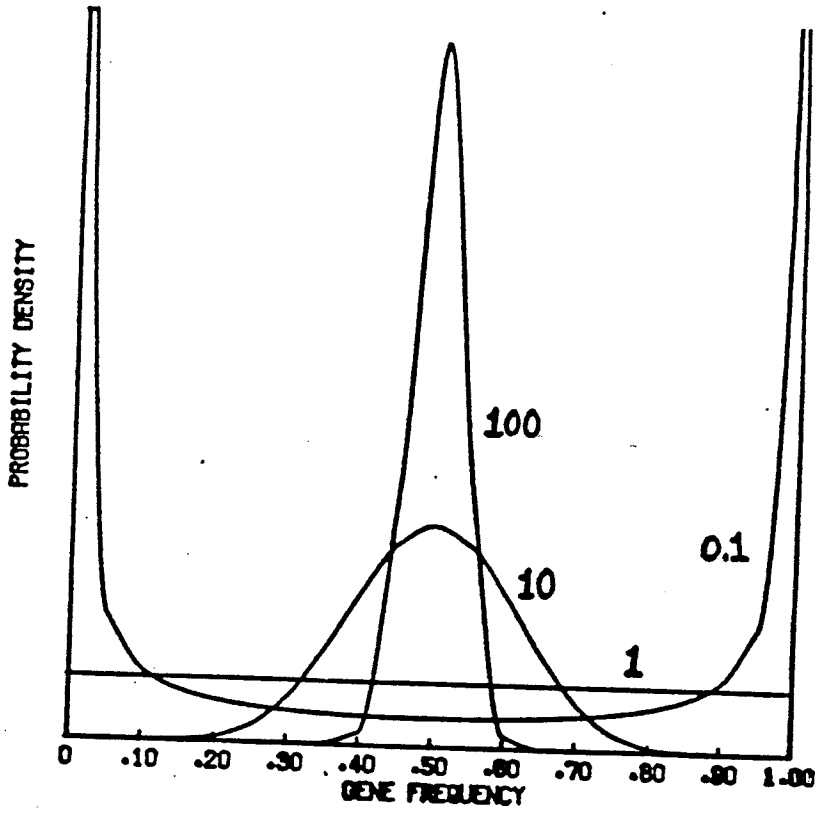


Figure VII-5b. Equilibrium distribution of gene frequencies under mutation and genetic drift. In this case $4N_e v = 3(4N_e u)$. The value of $4N_e u$ is shown next to each curve.

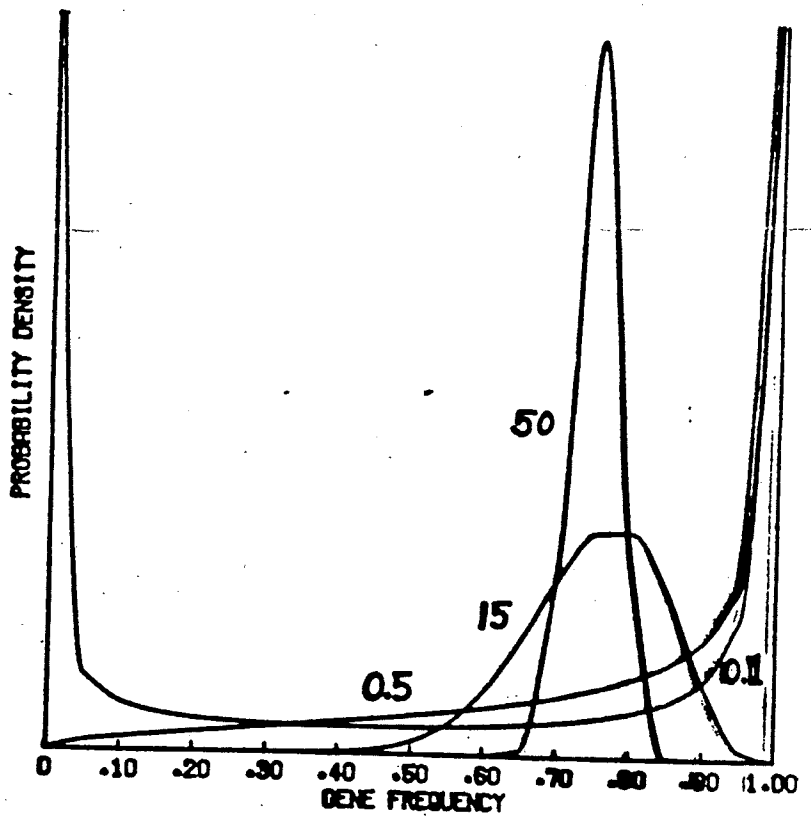


Figure VII-7. Equilibrium distribution of gene frequencies in a case of mutation with one allele deleterious, in a finite population. Explanation is in text.

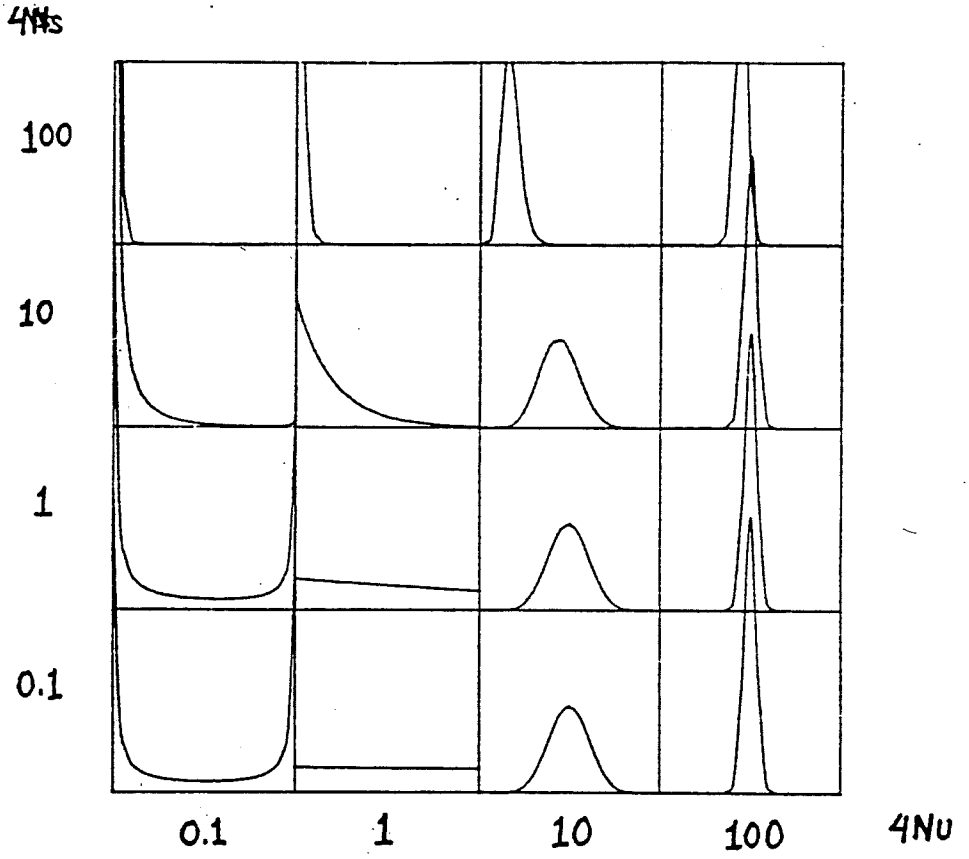


Figure VII-8. Equilibrium distribution of gene frequencies at an overdominant locus in a finite population with mutation present. Explanation is in text.