



**FIGURE 28.21.** The probability that a gene will leave no descendants,  $Q$ , increases toward 1 if its average fitness is not greater than 1 ( $\bar{k} = 0.8, 1$ ). If the fitness is greater than 1, then the probability of loss converges to a value less than 1. For fitness  $\bar{k} = 1.2$ ,  $Q$  tends to 0.68, so that there is a 32% chance that the gene leaves some descendants.