FIGURE 19.33. Selection on large numbers of genes generates only modest fitness variation. For example, selection $s = 1\%$ on alleles at frequency $p = 10\%$ at each of $n = 10,000$ diploid loci would give a total variance in fitness of $2n s^2 p q = 0.18$. More than 98% of individuals have between 1900 and 2100 deleterious alleles and hence have fitness within a range 0.37–2.7 relative to the population mean (shaded region). (Left) The distribution of numbers of deleterious alleles per individual. (Right) How fitness declines with the number of deleterious alleles, assuming multiplicative effects; the average individual is assigned a fitness of 1.