



FIGURE 15.13. A single individual is likely to pass on only a small part of his genome to future generations. The figure shows a simulation of a single genome, with map length 35.7 Morgans (as for humans) for 50 generations. By then, the single ancestor has 4.3×10^{14} pedigree descendants. (In a real population, there would be far fewer than this, because of matings between relatives; see Fig. 15.12.) Only 91 of this enormous number of descendants inherit any genetic material, 40 of which are represented here by the 40 lines, with the ancestral material in *red*. On average, each block of ancestral material is 2.2 cM long. Only five blocks survive anywhere in the population, making up 0.3% of the ancestor's genome.