



**FIGURE 15.11.** In a sexual population, different parts of the genome have different ancestry. This example shows a small region from five genomes (labeled A, B, C, D, and E). In the *leftmost section*, A and B share a common ancestor 2000 generations back; D and E share an ancestor 1000 generations back, and lineage (D, E) traces back to a shared ancestor with C 2000 generations into the past. The whole sample shares a common ancestor at 5000 generations. The genome C descended from an ancestral genome that underwent a recombination event 500 generations back; thus, the section to the *right* of position ① in the genetic map has a slightly different ancestry: C is more closely related to A and B than to D or E. Moving to the *right*, the next event is a recombination event at ② in the genetic map, which occurred 3000 generations back in the ancestor of D, E. This event did not change the qualitative relationships, but now the five genomes share a common ancestor 8000 generations into the past. Finally, moving to the *rightmost section*, a recombination event at 1000 generations makes B more closely related to C than to A.