



FIGURE 15.10. All the genes within a species descend from a single ancestral lineage, which traces back into the distant past. Thus, the rate at which two species diverge over time is equal to the rate at which their two ancestral lineages accumulate mutations. The *shaded area* shows two species, which descend from a single ancestral species (*left*), and the *solid lines* show the ancestry of all the genes presently in the two species. Mutations are indicated by *red crosses*.