



FIGURE 13.28. Overall sequence divergence can be measured from the melting temperature of double-stranded DNA. (A) These curves show the proportion of DNA that has melted into single strands as a function of temperature. As the divergence between the two strands increases, they melt at a lower temperature, and the curves shift to the left. The rightmost pair of curves shows DNA where both strands come from starlings or from mockingbirds. The next pair shows hybrid duplexes between species of starlings and mockingbirds, respectively. The curves to the left are for molecules with one strand of mockingbird or starling DNA and more distantly related groups. (B) The phylogeny derived from these data. The vertical scale shows the temperature at which half the DNA melts and the divergence time estimated from this temperature, assuming a molecular clock.

13.28A,B, modified from Sibley C.G. et al., *Sci. Am.* **254**: 82–93, © 1986 Scientific American