**Chapter 5**

*Chapter Summary*

Beginning as much as 600,000 years ago, earlier hominins gave way to more modern-looking hominin species. With a mean cranial capacity exceeding 1,220 cc, the brain size of these premodern humans falls well within the modern human range. One premodern human, the Neandertal, is the best known of these. Present in large numbers in Europe and southwest Asia, Neandertals were successful and intelligent hominins. There is evidence they cared for their sick, buried their dead, and may have been the first hominins to produce art. The preponderance of evidence suggests Neandertals were physically specialized to life in Ice Age Europe.

Anatomically modern *Homo sapiens* first appear in the fossil record between just after 300,000 and before 200,000 years ago. Middle Stone Age sites in Africa bear the first tantalizing glimpses of behaviorally modern humans. By around 100,000 years ago, the first groups of anatomically modern humans to leave Africa had reached Southwest Asia. These and subsequent groups encountered premodern *Homo sapiens* and possibly even *Homo erectus* as they migrated across Asia and eventually into western Europe. Theories of Neandertal extinction suggest they were out competed by the more intelligent anatomically modern humans. The stone tools left behind by modern *Homo sapiens* indicate a more sophisticated technology and greater intelligence. Recent DNA analyses indicate Neandertal–human interaction was not characterized entirely by conflict. Modern human populations outside of Africa carry the genetic evidence of gene flow or interbreeding with Neandertals and Denisovans.