

Topics in Human Evolution

Today, many disciplines inform the study of human evolution. Among these are embryology, comparative anatomy, geology, climate history, human and primate paleontology (fossil finds), and more recently, DNA analysis. While giving all of these some consideration, we'll delve most deeply into human paleontology and genetics.

We'll employ embryology and comparative anatomy to understand our relationship with other life forms. To do so, we'll read and discuss selections from Neil Shubin's book, *Your Inner Fish*, provided in our class reading packet. Shubin, a professor of human anatomy, writes, "The best way to teach students the nerves in the human head is to show them the state of affairs in sharks. The easiest road map to their limbs lies in fish. Reptiles are a real help with the structure of the brain. The reason is that the bodies of these creatures are often simpler versions of ours."

On human paleontology, we'll view PowerPoint images of direct evidence (bones, teeth and even footprints), as well as reconstructions of types of "hominins" (species on the road to present-day humans) that have existed over the course of nearly 7 million years of human evolution. We'll discuss these evolutionary changes in the context of changing climate and other environmental pressures. We'll also explore migration patterns and their role in both preserving and diversifying the human species. The Wood book (below) will give you a succinct review of this material.

Today, our understanding of human evolution is increasingly informed by DNA of living populations and of archaic remains. DNA analysis provides insight into the very mechanics of how evolution occurs – information that Darwin himself was unaware of! To guide us in this area, I will present a basic overview of DNA, as well as review some of the genetic "events" that appear to have been critical to our evolutionary trajectory. The Wells book (see below) provides good information in this domain, and our reading packet includes articles pertaining to human genetics.

Texts for course (last one is fully optional):

The Journey of Man, A Genetic Odyssey, Spencer Wells: 2017 (available in paperback).

Human Evolution: A Very Short Introduction, Bernard Wood: 2005 (available in paperback).

Optional: *Masters of the Planet*, Ian Tattersall: 2012 (available in paperback).

Leader: Peggy de Wolf's background is in biological anthropology and sociology (MA, and PhD, respectively) with much of her career on the sociology faculty of Virginia Tech.

Mondays: 1:00 to 3:00 p.m., 6 weeks: February 26 through April 2.

Location: Presbyterian Church of Lawrenceville