

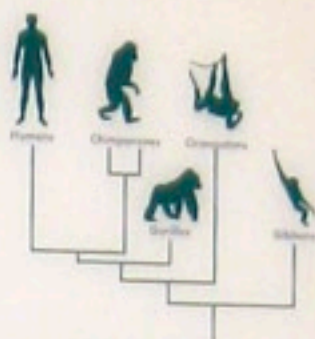
Humans & Chimpanzees

Understanding Our Family Tree



Bonobo

This is a small, endangered chimpanzee known as the bonobo or pygmy chimpanzee. For purposes of this text, humans share a close evolutionary relationship with bonobos.



Phylogeny of Humans and Apes

This phylogeny or tree of evolutionary relationships shows that humans and chimpanzees share a close common ancestor not shared with other apes.



Common Chimpanzee

The common chimpanzee, *Pan troglodytes*, is the larger of two chimpanzee species that are the closest living relatives of humans.

Where did we come from?

For insight into human origins and evolution, scientists look to our close relatives in the family Hominidae—the great apes. While the common ancestry of apes and humans is well established, the position of humans within the Hominidae had long been a focal point of debate. Recently, new technologies for extracting and analyzing DNA have put that debate to rest. Chimpanzees are, without a doubt, our closest living relatives.

What genes tell us

Groundbreaking genetic research analyzing multiple DNA data sets, led by Harvard's Maryellen Ruvolo, documented overwhelming evidence that humans and chimpanzees share a closer evolutionary kinship to each other than either does to gorillas. Additional genetic mapping studies of the human and chimpanzee genomes have revealed that they are about 98.6% identical. Humans and chimpanzees differ not so much in terms of **which** genes we carry, but because of **how** those genes are expressed.

Similarities in behavior

Decades of research on the behavior and ecology of wild chimpanzees by Harvard's Richard Wrangham and others demonstrate a close evolutionary relationship with humans. Chimpanzees and humans have an ability to make and use tools and communicate symbolically, and both exhibit a rich repertoire of cultural behaviors. Behaviors that chimpanzees and humans share—such as the propensity to wage war against one's own kind—offer insights into the evolution of human social behavior.