

PLANET OF THE APES

While humans are the only ones still alive today, there were once many different **hominin** (formerly called hominid) species living in our world. In the same biological family as the other Great Apes (chimpanzees, gorillas, orangutans), hominins split off several million years ago. One of the earliest groups of hominins, the **Australopithecines**, may have been hairy and short (around 3 feet tall), but they were **bipedal** (walking on two legs) and eventually developed the use of stone tools. Around two million years ago, Australopithecines began to decline and a new species in the genus *Homo* (meaning “Man”) became dominant. While experts continue to debate which species was the first to deserve this title (*Homo Habilis* might not make the cut after all), ***Homo Erectus***, whose name means “Upright Man,” was the most important. Not only did they have bigger brains that allowed them to develop more advanced technology, but *Homo Erectus* was the first hominin to migrate out of Africa, spreading through large parts of Asia and Europe.

NEANDERTHAL NEIGHBORS

Following Erectus, two other important Hominins emerged around 200,000 years ago. **Neanderthals** (*Homo Neanderthalensis*) emerged first, spreading into the Middle East and soon becoming dominant in Europe. Humans (*Homo Sapiens* meaning “Wise Man”) appeared around 200,000 years ago in East Africa, and began spreading around the world about 60,000 years ago. Compared to humans, with whom they shared 99.7% of their DNA, Neanderthals were shorter but much stockier, and had large brains that gave them the intelligence to survive even in colder Northern climates. For thousands of years, Humans shared the world with these human-like neighbors, and the last to die out, the Neanderthals, only became extinct 40,000 years ago. In fact, while still controversial and debated, some experts believe DNA evidence may suggest a small amount of interbreeding between humans and Neanderthals, which would mean that some humans may have a bit of Neanderthal DNA!

HOMO SAPIENS ARE AWESOME

Homo Sapiens had a few clear advantages that gave it an edge over other hominins. Human brains, in addition to being large in general, had especially large frontal regions, the area of the brain responsible for conscious, reflective thought, giving them the intelligence that would enable them to outsurvive the others. Another major advantage was the fact that humans, unlike other species, possessed vocal chords and a separate mouth cavity with a tongue, which made it possible to make the wide variety of sounds that would make up **human language**. Being able to express complicated information clearly and quickly was of enormous value for survival and organization, allowing for coordinated hunts and the passing of knowledge from generation to generation.

OUT OF AFRICA

The most widely accepted model for how humans came to populate the world is called the **Recent African Origin** model (RAO).

According to the most current research, a small group of humans migrated from East Africa to Southern Arabia around 70,000 years ago, continuing into India, and from there went in different directions to populate the rest of Eurasia and beyond. While some scholars believe another group of humans left Africa earlier, crossing from North Africa into the Middle East (as the “Migration of Early Humans” map suggests), modern genetic evidence (as seen on the “Human Migration and Mitochondrial DNA” map) seems to suggest that these earlier migrants must have died out, because only the humans that crossed later by the Southern Route went on to become the ancestors of modern populations.

ICE AGE + HUMAN MIGRATION

Around 2.6 million years ago, our earth entered an **Ice Age**, and believe it or not, since we still have ice sheets covering the poles, we are technically still in an ice age right now, though we are currently living through a warm “interglacial” period. Ice ages go through cycles of warmer and cooler temperatures, where the polar ice sheets and mountain glaciers grow or shrink, that can last for thousands of years at a time. Around 20,000 years ago, the earth entered a “**Glacial Period**,” during which the polar ice sheets expanded, with glaciers, mountains of ice, covered what is today Northern Europe, Canada, and Greenland. For humans, this climate shift presented challenges, but it also created opportunities. With more of the earth’s water frozen in the form of glaciers, the ocean levels around the world dropped by around 300 feet, exposing land that had previously been underwater, and connecting landmasses that had previously been divided. The “Migrations of Early Humans” map shows how much more expansive the land was at that time. This enabled humans to reach Australia and, eventually, North and South America.

TOOLS OF THE STONE AGE

Tool use did not begin with humans, but can be found among even the earliest hominin species. The primary material used for creating tools was stone, which is why the earliest period in human history is known as the **Paleolithic**, meaning "Old Stone Age." While Australopithecines used simple choppers, *Homo Erectus* developed more advanced hand axes used for food preparation and protection. And they were also the first to harness the power of fire. However, humans developed even more sophisticated tools that surpassed those of other hominins, such as obsidian knives, spear throwers, and eventually, the bow and arrow, making them superior hunters. One of the most important inventions was the **eyed needle**. Made from animal bone, this innovation made it possible to sew together different fabrics to create complex layered clothing, including boots, hats, and gloves, that kept people more thoroughly protected from the harsh cold climate.

HUNGRY HUNGRY HUMANS

During the Paleolithic era, people lived by **hunting and gathering**, also known as **foraging**. They scavenged meat killed by other predators and hunted wild animals. In fact, humans were such a successful hunters of big game mammals that most of them went extinct. Mammoths and the woolly rhinoceros disappeared from Europe, giant kangaroos from Australia, and mammoths, mastodons, and horses from the Americas. To be fair, climate may have also played an important role. However, the bulk of their diet probably consisted of gathering wild-growing edible plants such as berries and nuts. Because this lifestyle meant that people had to frequently travel in search of food sources, humans could not settle in the same place for extended periods of time. This type of lifestyle is called **nomadic**, meaning moving from place to place. It was not until the **Neolithic Revolution**, only about 12,000 years ago, that humans first began to rely on farming and herding as an alternative way of producing food. Today, there are only a few scattered hunter-gatherer communities left in the world.

WE'RE WITH THE BAND

Although it is hard to know for certain how Paleolithic people lived, there is much we can learn from both archaeological discoveries and anthropological studies of the few hunter-gatherer societies that still exist today. Humans typically lived in small **bands**, or groups, of about 30 or 40 people. Because their communities were so small, and because they were always on the move, there were no real opportunities for different social levels to develop, so everyone was pretty much equal. Social equality may have extended even further to gender equality. Since both men and women played important roles in providing food for the band, there was no need for one gender to be seen as superior. Also, while we might assume that these nomads lived a harsh life, some scholars believe that, because of their lifestyle and diet, Paleolithic hunter-gatherers were healthier and spent less time working than the earliest farmers who came later. However, other scholars point to evidence of frequent violence between bands in the form of raids to show that life was far from perfect.

THE CIRCLE OF LIFE + THE COLORS OF THE WIND

From the study of burials, archaeologists conclude that early humans, and even Neanderthals, had some kind of spiritual or religious beliefs. Bodies buried with care, surrounded by flowers and ornaments, suggests at least that they wanted to honor the memory of their deceased loved ones, and perhaps that they believed they were preparing them for a new life beyond the grave. While we know virtually nothing about their religious practice, many scholars think that the early humans practiced some kind of animistic faith. **Animism** refers to religious beliefs that focus on the spirits or forces that exist in all things. The song "Colors of the Wind" from the Disney movie *Pocahontas* makes reference to animistic beliefs in the line "I know every rock and tree and creature has a life, has a spirit, has a name." Based on what is known about animistic practice in general, scholars assume that communities would have had a religious leader, called a **shaman**, who would conduct rituals and communicate with the spirit world. In another connection to Disney, the character of Rafiki in *The Lion King* was intended to represent an animistic shaman.

EXPRESS YOURSELF

Humans are an incredibly creative species, and early Paleolithic people's displayed this creativity in many ways. Two significant examples are Venus figurines and Cave paintings. **Venus figurines** refer to small sculptures of women depicted with exaggerated sexual features. Most scholars believe the figures reflect a deep interest in fertility, and may have been used as part of a fertility ritual believed to help people to conceive children. Cave paintings often depict animals, especially large game such as Mammoth, bison, and reindeer. However, the paintings are usually found deep in the dark parts caves away from where people would have lived, so they do not seem to be only for decoration. Like the Venus figurines, scholars theorize that the cave art may have also been used for ritual purposes. Shamans may have created the images as a form of magic to ensure a successful hunt of the animals they painted.