



## Neanderthal: About the Exhibition

Neanderthals have long been stereotyped as primitive creatures, a stereotype that has been perpetuated in art and literature. But with new scientific discoveries and technological advances, we are discovering that this extinct species is much more like us than we previously thought.

This major exhibition deconstructs long-held misconceptions and introduces a more accurate portrait of this human species from the genus *Homo*. Neanderthals lived throughout Europe and Asia for 300,000 years before mysteriously disappearing 30,000 years ago. This exhibition about them is divided into the three sections described below, allowing visitors to meet the real Neanderthals: great hunters, stoneworkers, masters of fire, and our social and empathetic human cousins.

### The Changing World of Neanderthals

For more than 300,000 years, Neanderthals lived in a range of environments across Europe and in Southwestern and Central Asia, from hardwood forests to grasslands, and from tundra to frozen deserts. They thrived in often extreme climates that alternated between ice ages and warmer temperatures, and they coexisted with dangerous animals.

After Neanderthal remains were first unearthed by archaeologists in the 1800s, artists produced reconstructions of scientific findings. These paintings imagine both the idyllic settings and hostile natural environments of our distant cousins. As visitors gaze at the ever-changing landscapes, they will note the inconsistent portrayal of Neanderthals, which reflects the often-contradictory scientific theories of the day.

Although stereotyped as cave dwellers, Neanderthals mainly created open-air shelters. Guests can look at a recreation of a dig space that features designated areas for specific activities, such as fashioning stone tools or cooking over the hearth. Far from meeting primitive brutes, visitors will be shown the advanced tool- and weapon-making capabilities of Neanderthals, proof of how this species thrived under extreme conditions.

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This section also features the Canadian legacy of Dr. Henri-Marc Ami (1858–1931), who established the Canadian School of Prehistory in France and shipped home a vast number of artifacts including a large cave bear, now held by the Canadian Museum of Nature.

## Neanderthals Unearthed

Neanderthals' physique reflects almost 300,000 years of evolution. Excavated remains were first identified in 1856 as a separate species and were incorrectly likened to apes before being classified as an inferior race. This stereotype was perpetuated in art as 19th century scientists commissioned visual artists to render creative interpretations that painted the Neanderthal as a brute.

Influenced by colonial rule, scientists used the pseudo-science of phrenology — studies of the size and shape of skulls — to develop a false hierarchy that dehumanized Neanderthals. Much of the species' brain was devoted to the five senses and control of the body, leading some scientists to believe that this left little room for abstract thinking. Yet science shows that the Neanderthal brain's two main language centres were well developed. And aside from demonstrating intelligence, these prehistoric people showed an aptitude for culture and society. They collected beautiful stones and shells, used pigments to express themselves, wore jewellery and buried their dead.

Neanderthals possessed a receding forehead and lacked a chin like some of their ancestors. Neanderthals also had unique features like short, stocky bodies with strong skeletons and powerful muscles, but like modern humans, they had a large brain and small molars.

More than 160 years' research on fossilized Neanderthal remains and artifacts continues to shape our understanding of their social dynamics and artistic expression, and their potential for complex thought.

## Decoding Neanderthals

New discoveries and enhanced scientific tools, including DNA testing, have vastly expanded our knowledge of prehistoric species. We can now learn a great deal from a single tooth, and what we are discovering is revealing the very roots of human existence. Neanderthal dental plaque and fossilized excrement produce unique genetic signatures, allowing scientists to identify whose environment the Neanderthals might have shared, the foods they ate, and even the types of germs they may have hosted.

DNA reveals that Neanderthals and *Homo sapiens* (modern humans) share a common ancestor. As Neanderthals developed in Europe and Asia, *Homo sapiens* evolved in Africa before a small group met up again in the Middle East. Remnants of these encounters are found in modern humans of non-African descent, who

carry 1 to 4% Neanderthal DNA. *Homo sapiens* burials in Israel have been found with items used by both species, attesting to the sharing of physical space, culture and knowledge.

Today's artists have embraced decades of research to develop their own interpretations of these meetings. Visitors will see examples of artists' renderings: some imagine wars, massacres and kidnappings, while others present convivial imaginings with exchanges of technologies and skills, or even interbreeding.

There are many hypotheses explaining why Neanderthals disappeared, ranging from too much competition to lack of intelligence. Out of the original five hominid species that existed at the same time as Neanderthals did, we are the only ones remaining. Exploring the reasons behind Neanderthals' disappearance raises existential questions about why we have survived and what the future has in store for humanity.