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### **RESEARCH ARTICLE**

**Neanderthals and Separate Ancestry: A Comprehensive Creationist Response** 

by Donny Budinsky

#### Introduction

Few discoveries have stirred as much debate in the origins controversy as the Neanderthals. From the moment their bones were unearthed in the Neander Valley in Germany in 1856, Neanderthals have stood at the crossroads of science and worldview. Evolutionary scientists have long claimed Neanderthals represent a sub-human, ape-to-man transitional form—evidence that mankind slowly emerged from a primate ancestor (Haile-Selassie et al., 2016; Schwartz & Tattersall, 2015). In contrast, the Biblical creation model sees Neanderthals as fully human—descendants of Adam, Eve, and Noah—who were simply one of many post-Flood people groups (Carter, 2009a, 2010, 2019).

Yet a significant challenge persists: **Why do Neanderthals appear genetically distinct?** Their genomes carry unique markers, and in phylogenetic trees they sometimes appear apart from modern humans (Sánchez-Quinto & Lalueza-Fox, 2015; Trinkaus, 2018). This article engages those objections directly, while presenting a new hypothesis that draws on recent discoveries in mutational biology.

### **Historical Context: Misrepresentation of Neanderthals**

When Neanderthals were first studied in the 1800s, they were portrayed as brutish, stooped, and subhuman. Popular illustrations cast them as primitive "cavemen" only a step above apes (Natural History Museum, 2015). This interpretation persisted for decades, reinforcing evolutionary ideas of progressive human development.

Modern research, however, has overturned these caricatures. Nearly 500 Neanderthal skeletons have been discovered, and the evidence is clear: Neanderthals were robust, intelligent humans (Hendry, 2018). They buried their dead, made tools, used fire, created art, and likely had speech capacity. In fact, their cranial capacity was on average slightly larger than modern humans (What did Neanderthals look like?, n.d.). In every meaningful sense, Neanderthals were people—our people.

# The Genetics Challenge

Despite cultural and archaeological evidence of their humanity, critics argue that genetics undermines the creationist position. Whole-genome sequencing of Neanderthals reveals:

- Distinct clustering: In phylogenetic trees, Neanderthals often group separately from modern humans (Sánchez-Quinto & Lalueza-Fox, 2015).
- Higher mutation load: Evidence suggests Neanderthals carried more deleterious mutations than many modern populations (Trinkaus, 2018).
- Unique markers: Certain variants appear common in Neanderthals but rare or absent in modern humans (Carter, 2009a, 2009b; Carter et al., 2018).

From an evolutionary perspective, these findings confirm that Neanderthals diverged hundreds of thousands of years ago from a common ancestor with modern humans. From a Biblical

perspective, however, Neanderthals must be descendants of Noah's family. How then can we account for the differences?

### Morphology, Ancestry, and Misconceptions about Adam and Eve

A common objection raised by critics of young-earth creation is the assumption that Adam and Eve (and humanity in general before the Flood) must have looked exactly like the average modern human today. This assumption is unwarranted. It is entirely reasonable to recognize that the earliest humans may have had morphological differences when compared to extant populations. Indeed, the biblical text does not tell us what Adam, Eve, or Noah looked like, and there is no reason to expect them to conform to the precise cranial morphology of 21st-century humans. Their appearance may have been closer to what paleoanthropologists describe as the *Heidelbergensis* phenotype (Wood, 2014).

If pre-Flood humans lived for hundreds of years, as Scripture indicates, then their morphology and physiology were likely distinct. Longevity, combined with different environmental conditions, would have influenced their development. Modern research on epigenetics confirms that environment exerts profound effects on morphology, with numerous environmental factors capable of inducing significant phenotypic changes (Haile-Selassie et al., 2016). Even many evolutionary scientists admit that Neanderthals were fully human but simply adapted to cold, glacial environments (Hendry, 2018).

It is therefore logical to believe that the genetic variability for robust and gracile human forms was present within Noah and his family—ultimately derived from Adam and Eve. This variation, either expressed directly or latent in their offspring, could explain why some post-Flood populations exhibited more robust morphologies while others appeared more gracile. If Noah's family carried this morphological diversity, then both Neanderthal-like features and modern human features could be traced back to them.

Importantly, Neanderthals were highly inbred. Their genomes contain long stretches of homozygosity—regions where both DNA copies are identical (Sánchez-Quinto & Lalueza-Fox,

2015). This inbreeding does not imply that Noah and his family were homozygous. Rather, it reflects what happens when a small group breaks off from a larger, genetically diverse population. Following the dispersal at Babel, multiple groups migrated outward, each carrying subsets of the available diversity. Isolation, genetic drift, and inbreeding then accentuated certain features, resulting in distinct human variants—classified by evolutionary science as *Homo erectus, Homo heidelbergensis*, Neanderthals, and so-called "modern humans." These represent variations within humanity, not different species.

Subsequent interbreeding among these groups complicates the picture further, producing individuals with a mix of robust and gracile traits. For example, fossils such as "Dragon Man" exhibit a mosaic of features, reflecting gene flow between populations (Schwartz & Tattersall, 2015).

### **Phylogenetics and Founder Effects**

Another common challenge comes from critics who argue that phylogenetic data show Neanderthals as a distinct lineage. Yet this too can be explained by founder effects and population dynamics. A small family breaking off from a larger, heterozygous population could easily result in a lineage with reduced diversity, particularly in mitochondrial DNA. If the founding group carried only one mtDNA sub-lineage, subsequent mutations would be fixed rapidly, creating a distinct mtDNA compartment relative to surrounding populations.

Neanderthals' bi-parentally inherited DNA likewise shows low diversity in diploid chromosomes—consistent with long-term isolation and inbreeding (Sánchez-Quinto & Lalueza-Fox, 2015). When small, isolated populations hypermutate in their early generations and then remain inbred, their genetic distinctiveness is magnified. This explains both their unusual placement in genetic trees and their apparent mutational burden—without requiring them to be anything less than fully human.

As Sánchez-Quinto and Lalueza-Fox (2015) summarize:

"An emerging picture is that Neanderthals had a long-term small population size, lived in small and isolated groups, and probably practised inbreeding at times. Deleterious genetic effects associated with these demographic factors could have played a role in their extinction" (p. 1).

Thus, morphology, phylogenetics, and population genetics all align with the creationist understanding of Neanderthals as true humans, shaped by variation, migration, and environment in the centuries following the Flood.

# Radiation, Hypermutation, and the Mystery of Neanderthal Genetics

The global Flood described in Genesis was a catastrophic geological event. It unleashed enormous tectonic activity, volcanism, and heat. The post-Flood world was unstable and geologically active, with concentrated radioactive materials such as uranium in certain regions (Carter, 2019).

Hypothesis: Neanderthals, as an isolated post-Flood people group, lived in areas with higher natural radiation exposure (e.g., radiation-rich rocks, volcanic deposits, or caves with chemical accumulation). This unique environmental stress could have:

- Increased mutation rates in their germline cells.
- Accelerated the accumulation of genetic errors generation by generation.
- Produced distinct genetic signatures that set them apart in modern analyses.

This idea finds support in modern research on germline hypermutation. Recent studies document families where radiation, chemotherapy, or chemical exposure caused children to inherit up to seven times more mutations than normal (Kaplanis et al., 2022; Jónsson et al., 2017). Environmental stress can, therefore, dramatically accelerate mutational buildup.

Neanderthals could have experienced this naturally. Their isolation, combined with radiation exposure and other harsh post-Flood conditions, would have amplified mutations in their lineage.

To better visualize this hypothesis, we can map out the environmental and genetic sequence that likely shaped Neanderthal populations in the centuries following the Flood. Tracing the catastrophic geological aftermath, the settlement of small and isolated groups in harsh conditions, and the resulting mutational accumulation helps explain how these unique circumstances produced the genetic distinctiveness observed today. This sequence is illustrated in **Figure 1**.

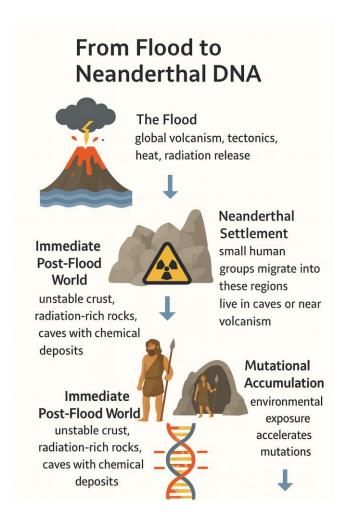


Figure 1. From Flood to Neanderthal DNA.

A conceptual model illustrating how catastrophic post-Flood conditions (global volcanism, unstable crust, radiation-rich rocks, and chemical exposure in caves) may have contributed to accelerated mutation rates in isolated human populations. This framework helps explain the genetic distinctiveness of Neanderthals while affirming their full humanity as descendants of Adam and Eve.

### **Isolation and Genetic Drift**

In addition to environmental mutagens, Neanderthals lived in relatively small, isolated groups. Genetic drift—random changes in small populations—magnifies distinctiveness over time (Carter et al., 2018). With reduced genetic diversity, mutations spread quickly and became fixed in the population.

Thus, Neanderthals' genetics reflect a perfect storm:

- 1. **Isolation** small groups, reduced variation.
- 2. **Environmental mutagens** radiation, cave chemistry, harsh post-Flood climate.
- Accelerated mutation accumulation producing a higher mutational load than surrounding groups.

# **Reframing the Phylogenetic Evidence**

If Neanderthals accumulated more mutations, this explains why they appear "farther away" in DNA-based evolutionary trees. These trees do not necessarily measure ancestry directly; they often measure similarity and mutational differences (Sánchez-Quinto & Lalueza-Fox, 2015). A group accumulating mutations more rapidly will naturally appear distinct.

Rather than suggesting separate ancestry, Neanderthal distinctiveness highlights the impact of **post-Flood conditions** on human populations. It underscores their humanity while explaining their unusual genetic signatures.

# **Implications for Model-Building**

This hypothesis strengthens the Biblical creation model by:

- Providing a mechanism for Neanderthal distinctiveness that is scientifically grounded in modern hypermutation studies.
- Showing that Neanderthals' genetic patterns are fully compatible with descent from Adam and Eve.
- Demonstrating how catastrophic post-Flood conditions could have shaped early human populations in unique ways.

In short, Neanderthals are not a problem for the creation model—they are an opportunity to explore the interplay of genetics, environment, and human history in a Biblical framework.

#### Conclusion

Neanderthals were not evolutionary ancestors, nor a separate species of human. They were intelligent, resourceful, fully human descendants of Noah who lived in a harsh, unstable post-flood world. Their distinct genetics can be explained by isolation, environmental stress, and accelerated mutation rates.

Far from undermining the creation model, Neanderthals highlight the resilience and diversity of humanity after the Flood. By proposing new, testable ideas—like the radiation-rock hypothesis—we refine and strengthen the Biblical framework, showing that it is not only scientifically viable but also dynamic and predictive.

Neanderthals, then, are not an objection to Biblical creation—they are an opportunity for deeper understanding, model building, and reaffirmation that all humans, past and present, descend from the same created ancestors, Adam and Eve.

# **Anticipating Criticisms**

Because the subject of Neanderthals often sparks debate, it is important to anticipate and briefly address several common objections.

#### 1. On Trinkaus (2018) and mutation load:

Critics may note that Trinkaus focused on developmental anomalies rather than direct mutation counts. However, these anomalies are widely recognized as indicators of genetic stress and deleterious load. This interpretation is consistent with the creationist argument that Neanderthals accumulated more harmful mutations.

### 2. On phylogenetic tree placement:

Skeptics may argue that Neanderthals cluster separately in DNA trees because they diverged long ago from modern humans. Yet phylogenetic trees primarily measure mutational distance, not absolute ancestry. Groups exposed to accelerated mutation rates can appear "deeply divergent" even if they share the same recent origin.

#### 3. On the radiation hypothesis:

Some may point out that no direct geological measurements prove Neanderthal caves had elevated radiation. While true, the model is grounded in two solid lines of evidence: (1) the documented post-Flood environment of volcanism and instability, which plausibly increased exposure; and (2) modern studies showing germline hypermutation from environmental stress (Kaplanis et al., 2022; Jónsson et al., 2017). Together, these provide a scientifically reasonable explanatory framework.

#### 4. On morphological variation and species status:

Evolutionary scientists often treat robust vs. gracile differences as evidence of separate species. Yet mechanisms such as founder effects, inbreeding, and adaptation to harsh climates fully account for these differences without redefining humanity. Sánchez-Quinto & Lalueza-Fox (2015) themselves emphasize that Neanderthals lived in small, isolated, inbred groups — exactly the conditions under which such variation would emerge.

By engaging these objections openly, the creationist model shows itself to be not only consistent with the evidence, but also resilient under critical scrutiny.

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