

# Where do you want to go human?

## Question for DNA: Are we humans the winners of evolution?

The findings known so far in the analyzes of human DNA show our existing human population as the winner in the development of the genus Homo. In general, our everyday knowledge seems to be at the end of the list of our genus, including our great...great...ancestors. We, the anatomically modern humans (Homo sapiens), are an end product of the earth's evolutionary history.

A lone winner of the populations in flora and fauna! After the end of the dinosaurs as a result of a comprehensive catastrophe in Earth's history, our mammal species developed successfully. Such geological catastrophes, which led to the new beginning of a settlement, also happened before! According to biological systematics, we humans (Homo sapiens, translated for "understanding, understanding" or "wise, clever, clever, reasonable person") are a species of the genus Homo from the family of great apes, which belongs to the order of primates and therefore to the higher mammals.

**Oh what a shame, things haven't stayed that way since Darwin with today's DNA findings!**

Humans are the only extant species of the genus Homo.

**We homo of the new time!**

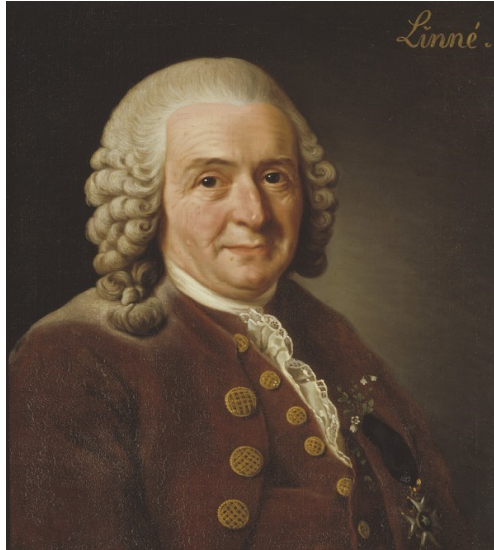
Was it really a comet impact? The new beginning with mammals did not start from "zero". The comet impact did not basically destroy everything. We mammals developed at a high level of geological development. If you take this estimated period of time to date in relation to the orbital period of the solar system in our galaxy, not even one revolution has occurred. Our current time of new knowledge is a blink of an eye in history.

**Homo sapiens**

The species has been fossilized in Africa for around 300,000 years and probably developed there from the species Homo erectus via the evolutionary link known as archaic Homo sapiens.

In Species Plantarum (1753) Linnè used two-part names for the first time. In the 10th edition of Systema Naturæ (1758), Linnaeus consistently applied binary nomenclature to the animal kingdom.

Carl von Linné, subsequently assigned type of the species *Homo sapiens*.



Carl von Linnés/ Alexander Roslin 1775/

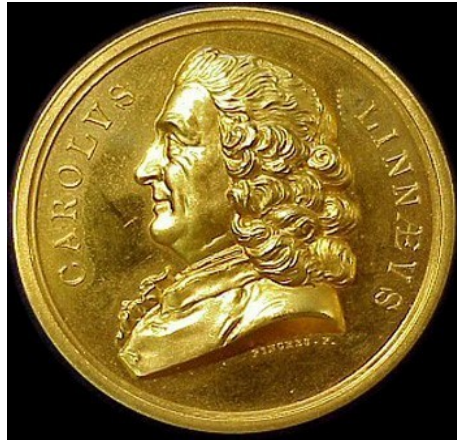
"Although Linnaeus has been called a pioneering ecologist, geobotanist, dendrochronologist, evolutionist, botanical pornographer, sexualist, and much more, his most influential and valuable contributions to biology are undoubtedly the successful introduction of binary nomenclature for plant and animal species, even if this achievement was only an accidental by-product of his enormous encyclopedic activity to provide, in a concise, precise, and practical form, the means for recognizing and understanding their genera and species Species to provide."

– William Thomas Stearn: In: *The Compleat Naturalist: A Life of Linnaeus*. 2004



*Deus Creavit  
Linnaeus Disposuit.*

Anonymous portrait with the "Deus creavit, Linnaeus disposuit" ("God created, Linnaeus ordered") from D. H. Stöver's *Life of the Knight Carl von Linné* (1792).



Medaille Carl von Linnè der Linnean Society of London/ Public Domain/

The name of the genus Homo is derived from the Latin homo ['homo:], German 'human'.

### **Findings of DNA [April 25: World DNA Day]**

On April 25, 1953, Watson and Crick presented their so-called double helix model of the human genetic molecule DNA in the scientific journal "Nature". They also showed that the two connected strands can be separated like a zipper and connected to other elements.

A fundamental question about the origins of life on the early Earth is how the first DNA molecules replicated and evolved more than four billion years ago.

### ***Separation times between Neanderthals, Denisovans and us humans***

It had already been reported in December 2010 that the DNA differences between Neanderthals and Denisovans suggested a final separation of both populations 640,000 years ago and a final separation of their common ancestors from the ancestors of Homo sapiens around 800,000 years ago.

In addition to recording parts of the Neanderthal DNA, we also absorbed parts of the Denisova. This is proven as genetic material in our DNA. This evidence depends very much on the level of development of the possibilities for analyzing these DNA chains.

There was demonstrable gene flow - probably multiple times - between Homo sapiens, the Neanderthals and the Denisovans. There is further, but much younger, fossil evidence for the species from all continents except Antarctica. In 2010, Johannes Krause and Svante Pääbo from the Max Planck Institute for Evolutionary Anthropology in Leipzig succeeded in evaluating the DNA from the mitochondria (mtDNA) of a finger bone using DNA sequencing.

Harald Bartzack [April 25: World DNA Day]

The announcement of the results of this DNA analysis caused a worldwide stir, as the fossil was interpreted as evidence of a previously unknown population of the genus Homo that was close to Neanderthals and anatomically modern humans.

## **Homo future. Where are you?**

Archaeologically, Homo sapiens have been detectable for around 300,000 years.

This means that the decisive development of modern Homo took place at the end of the last revolution of our galaxy with the solar system.

There is no apparent reason for this leap in development in geological time.

As things currently stand, we humans, Homo sapiens, are the sole representative of Homo!

However, compared to the evolution of humans, several species of Homo lived at the same time. At least for a certain amount of time next to each other! That is not the case now.

Certain findings from genetic studies suggest that a small percentage of people have “evolved”.

## **People with gifted abilities**

Giftedness is a person's intellectual talent that is far above average. In the model most commonly used in psychology, an intelligence quotient (IQ) of 130, a value two standard deviations higher than the average, is the decisive criterion. Since intelligence tests are standardized accordingly, around 2.3% of the population are highly gifted according to this definition. There is no consensus in research and teaching about the exact causes of giftedness. A combination of social environment (especially during childhood) and **genetic factors** is considered a likely cause.

## **Are we, Homo sapiens, the winner of human evolution in Earth's history?**

<b>Quo vadis Homo?</b>
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## Attachment

### Homo neanderthalensis

Marked by the discovery as a crippled ancient human, Neanderthals were initially recognized as a subspecies of Homo sapiens. Now this is currently considered outdated. There is now an opinion and “increasing acceptance among paleoanthropologists that Neanderthals are morphologically distinctive,” which is why the terms Homo sapiens and Homo neanderthalensis have become established.

Bartzack, H. \ Neandertaler \ URL <https://nbn-resolving.org/urn:nbn:de:bsz:14-qucosa2-855484>

### Denisovans: Homo xxx

The Denisovans were a population of the genus Homo, which is closely related to the Neanderthals and, like them, is close to the anatomically modern humans (Homo sapiens), but can be genetically differentiated from both species. In the English language specialist literature they are called Denisova hominins or Denisovans for short. In 2010, the finds were expressly not assigned to a new species or a subspecies; In 2011 the fossils were attributed to “a previously unknown species”, but they have not yet been named in accordance with the international rules for zoological nomenclature. Krause, J. and Svante Pääbo from the Max Planck Institute for Evolutionary Anthropology in Leipzig 2010, succeeded in evaluating the DNA from the mitochondria (mtDNA) of a finger bone using DNA sequencing. The announcement of the results of this DNA analysis caused a worldwide stir, as the fossil was interpreted as evidence of a previously unknown population of the genus Homo that was close to Neanderthals and anatomically modern humans.

A few months later, the analysis of DNA from the bone cell nuclei was also published; it confirmed the relative independence of the Denisovan population. Accordingly, in addition to the previously known populations of Neanderthals and Homo floresiensis, a third community of distant relatives of anatomically modern humans (but clearly belonging to the genus Homo) existed at that time. The Denisovan fossils are most closely related to the Neanderthal finds from the Vindija Cave and the Mesmaiskaya Cave. The Denisovan fossils known to date date from the Middle Paleolithic. Their most recent finds are 76,000 to 52,000 years old and come from the Altai Mountains in southern Siberia; Another find, a lower jaw that is around 160,000 years old, was discovered in Tibet.

The existence of this population has so far only been proven with certainty by a few small fossils from the eponymous Denisova Cave (including the bone of a little finger, two rear molars) and the lower jaw from Tibet.

## Hobbit: *Homo floresiensis*

The epithet *floresiensis* refers to the location where the type specimen was found on the Indonesian island of Flores. *Homo floresiensis* therefore means “man from Flores”.

*Homo floresiensis* (“Man of Flores”) is an extinct species of the genus *Homo* that is small in stature compared to *Homo sapiens*. The bone finds discovered in September 2003 on the Indonesian island of Flores and assigned to this species were dated in the first description in 2004 to be around 18,000 years old. From this dating it was deduced that, while the neighboring islands had been populated by anatomically modern humans (*Homo sapiens*) for several thousand years, a second *Homo* species lived on Flores. However, in 2016 a new dating of the finds was published, according to which the bones are no younger than 60,000 years. How closely the relationship of *Homo floresiensis* to other species of the genus *Homo* is is controversial among anthropologists and paleoanthropologists. As early as 2004, *Homo floresiensis* was phylogenetically derived from *Homo erectus* by its discoverers as a so-called island branch.

In addition to the scientific name, the term “Hobbit” is also jokingly used as a nickname, based on Tolkien's small fantasy creatures; the researchers initially used the nickname Flo.

## Forefather: *Homo erectus*

*Homo erectus* is an extinct species of the great ape genus *Homo*. From the Pleistocene populations of Africa attributed to *Homo erectus*, the Neanderthals probably developed in Europe and - parallel to them, but independently of them - the anatomically modern humans (*Homo sapiens*) in Africa. However, the distinction between *Homo erectus* and other species of the genus *Homo* is controversial in expert circles - between so-called lumpers and splinters. In addition, *Homo heidelbergensis* and Neanderthals (in Eurasia) as well as *Homo sapiens* (in Africa) and probably *Homo floresiensis* (in East Asia) developed independently from *Homo erectus*.

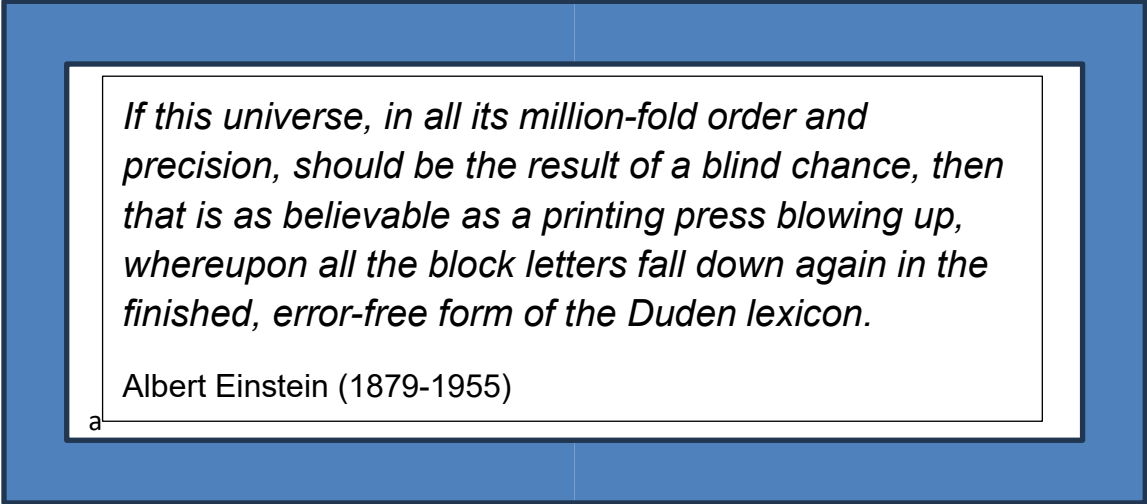
The first fossils of *Homo erectus* were discovered in Asia in the 1890s. For decades, this led paleoanthropologists to conclude that anatomically modern humans evolved in Asia from ape-like ancestors, although Charles Darwin had already suspected in 1871[2] that humans developed in Africa because their closest relatives - chimpanzees and gorillas - are native there. This was only recognized as a likely error after very old hominin fossils discovered in Africa were placed by Louis Leakey in April 1964 as *Homo habilis* at the base of the genus *Homo*.

Fossils from the Pleistocene are assigned to *Homo erectus*, the oldest of which are around two million years old and therefore come from the earliest Early Pleistocene. The species name *erectus* is derived from the Latin *erigere* (“to erect”). *Homo erectus* means “the upright man”.

## ***Catastrophes in Earth's history***

In the history of humanity, increasingly complex social systems have been formed; since the Neolithic Revolution, these have been the so-called civilizations. The development of technology has led to such a comprehensive anthropogenic impact on the Earth's ecosystem that it has been suggested that the current geological era be called the Anthropocene.

Humanity has already exceeded some of the planetary boundaries set for it in the recent past. This development or other scenarios could lead to a collapse of civilization or even the end of humanity.



*If this universe, in all its million-fold order and precision, should be the result of a blind chance, then that is as believable as a printing press blowing up, whereupon all the block letters fall down again in the finished, error-free form of the Duden lexicon.*

Albert Einstein (1879-1955)

Are there geological points of contact for people?

- to Earth from outside the galaxy
- to Earth as it orbits the galactic center
- to Earth through our galactic center
- to the earth as it orbits the sun
- to the earth through its own movements
- by the inhabitants of the earth

These global geological events have been known since approximately the last three revolutions of the solar system with the Milky Way.

545 million years ago: Phanerozoic era with the beginning of visible fossil discoveries

300 million years ago: Upheavals in the flora lead to the creation of hard coal

255 million years ago: Approximately 96% of the animal world went extinct

Harald Bartzack [April 25: World DNA Day]

200 million years ago: Pangea split up (around 250 - 205 million years ago)

65 million years ago: extinction of the dinosaurs (comet impact)

30 million years ago: changes in the flora lead to the creation of brown coal

Another scenario, the negative of the possible developments, would be the emergence of a new human after a geological catastrophe. The history of the earth shows examples of a fundamental new colonization with new flora and fauna. One scenario, the good development, is the further development of Homo sapiens into Homo future.

Not further developed by a new person with a new DNA of their own.

No!

The use of the free potential of our current DNA. At the moment only small proportions of the presumed possible free capacities of the brain are being used. This scenario would be evident in our ongoing development. Either they already live among us or they are emerging.



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### **pictures**

Carl von Linnés/ Alexander Roslin 1775/

Carl von Linné, subsequently assigned type of the species Homo sapiens

Harald Bartzack, Dresden

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