

## Humanity ORIGINATED from AFRICA

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The greatest journey ever undertaken left behind a trail of unanswered questions: How did our species arise and spread around the globe to become the most dominant creature on the planet?

Part of the answer came two decades ago, when scientists stunned the world with the finding, based on genetic research, that all humans alive today can claim as a common ancestor a woman who lived in Africa some 150,000 years ago — dubbed, inevitably, "Eve." But while the notion of an African origin of the human family has grown to be accepted by most scientists, the details of how Eve's ancestors swept out of Africa to populate the rest of the world have remained murky.

There are similar place names found in the Sudan and Asia. Prof. Bator Vamos Toth, an expert on the ancient Tamana culture has found 21 suffixes, and hundreds of place names that link the Nubia-Kush Kingdom of Sudan and Asia. For example, Dr. Vamos Toth has noted that there is a Kar-nak in Egypt earlier formed by the Aunu-Nubian-Kushites and Kar-nak in Central Asia. Other common place names affixes include -bura,-dan, -kara, -tal and -ur. Kar-nak in Egypt goes back to the ancient days of Nubia-Kush.

Now a team of scientists claim that, based on research on the ancient climate, findings in archaeology and a new, clearer genetic picture of how the human family tree has branched over the eons, the ancient itinerary of the human Diaspora can finally be pieced together.

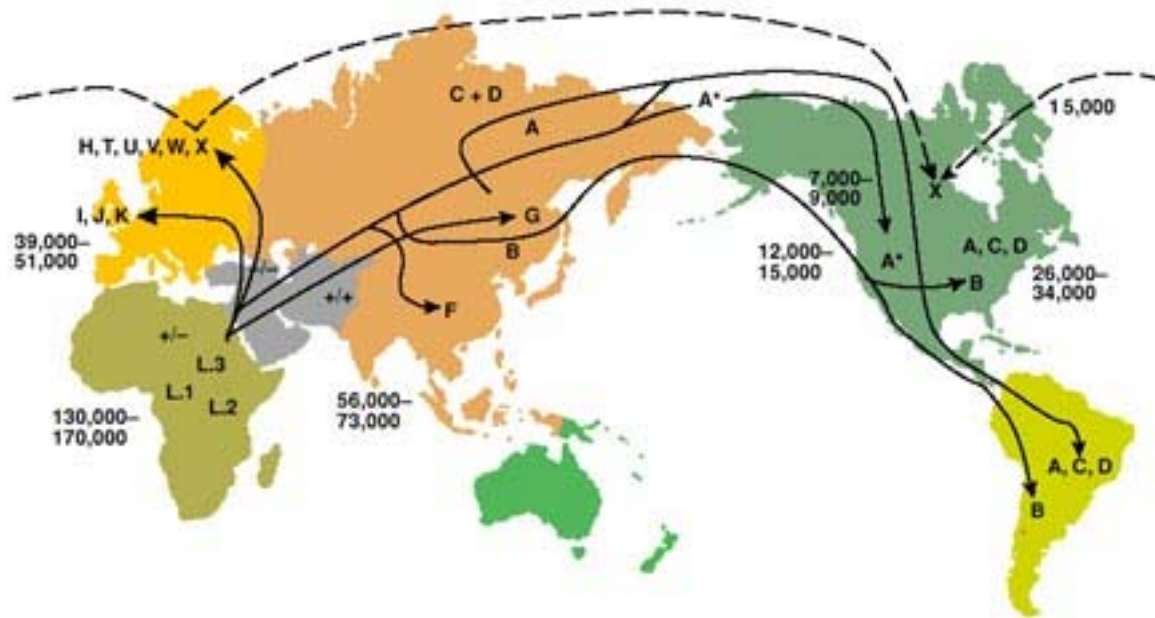
It is an epic story of escape from starvation, glaciers and volcanoes and braving shark-infested waters in flimsy rafts. And like any good tale, it has a surprise ending: Contrary to established thinking, it appears that our human ancestors took a more southerly route out of Africa, travelling east across the Red Sea into what is now Yemen, and then through India and all the way to the far reaches of Australia, before they swung up into Europe.

"There was only one migration out of Africa," says Stephen Oppenheimer of Oxford University, who is a leading proponent of this new synthesis of our species' incredible journey. "They couldn't go north — that was blocked by a desert — so they had to go south."

A crucial cornerstone of Oppenheimer's piecing together of the human itinerary is the recent finding by Huddersfield University geneticist Martin Richards and his colleagues that the world's entire population can be traced back to a family tree that has its roots in Africa and a single branch leading out of the continent and into the rest of the world. Based on analysis of thousands of DNA samples from people worldwide, Richards' research reveals a detailed map of the human family tree and its various branches.

## Human DNA Migration Patterns

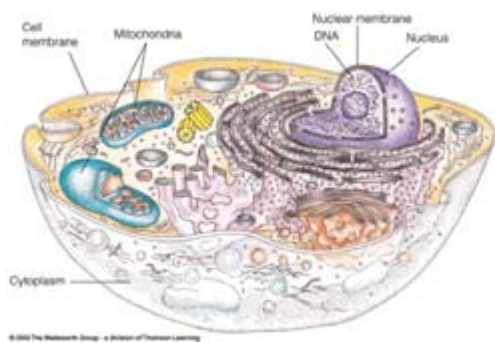
FIGURE 1: Nubia-Africa



This DNA migration pattern map, created from compiled research on DNA populations around the world, demonstrates that the first Humans originated in Africa about 130-170 thousand years ago.

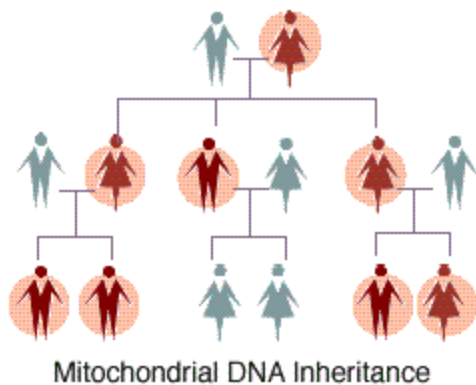
- Groups L.1, L.2, and L.3 exhibit the most conserved DNA patterns.
- Group L.3 populated the rest of the planet during early Human migrations. Northern Europeans
- Groups H, T, U, V, W, and X) and Southern Europeans
- Groups I, J, and K) migrated out of Africa about 39-51 thousand years ago.
- Asian populations migrated out of Africa about 56-73 thousand years ago, and populated the Americas by crossing the Bering Strait in 3 different migrations.
- The first migration into the Americas was about 26-34 thousand years ago, the second was about 12-15 thousand years ago, and the third was about 7-9 thousand years ago.

The data also demonstrates a possible 4th migration the actually took place about 15 thousand years ago when Scandinavian Vikings crossed the Atlantic and mixed with Native Americans that crossed the Bering Strait (haplogroup X).



Cell Structure with mitochondrial DNA

Richards' research extended the work of scientists over the past two decades who have been reconstructing human origins by studying snippets of DNA from tiny cellular structures called mitochondria. Part of every cell in the human body, mitochondria produce the energy needed by all living creatures and, remarkably, possess their own DNA that is completely independent of the principal cellular DNA residing in the nucleus. Known as mitochondrial DNA — or mtDNA — this genetic material has a property that makes it a unique tool for studying human origins: During conception, half the mother's DNA and half the father's DNA merge to create a unique suite of genes that goes into creating a human being. But mtDNA does not undergo this genetic reshuffling; rather, the mitochondria — along with their mtDNA — in a sperm cell wither and die, while the mitochondria present in the egg cell live on intact from generation to generation. Thus everyone carries with them a more-or-less exact copy of the mtDNA from their mother, and their mother's mother, and her mother, and her mother, and so on back through countless generations.



The Mitochondrial DNA

The mitochondrial DNA exists in a little organelle - a little package outside the nucleus of the cell. It's a small bit of DNA, and what's important about it is that you get it from your mother. It is only passed on in the egg, not the sperm. And so mom passes it on to all her kids and every female passes it on to all of her kids. If one can read snippets of unique, variable sequence mitochondrial DNA, one can trace all maternal lineage.

The term "more or less exact" is the key to scientists solving the mystery of human origins. That's because like all DNA, mtDNA is subject to random mutations over the eons. And because these mutations are passed intact to the next generations, they in effect become "tracers" of family branches. If two strands of mtDNA from two different people reveal the same mutation, these people must share the same ancient great-great-great-grandmother from whence this mutation arose. Working from the assumption that genetic mutations occur more or less regularly over time, scientists can compare two samples of mtDNA, noting where they have shared mutations and where they do not share mutations, and resolve the time in prehistory when the peoples' ancestral populations diverged. Using this technique, researcher

Rebecca Cann and her colleagues showed that all humans can be traced back to an ancient mitochondrial "Eve" who lived in Africa perhaps 150,000 years ago.

This "Eve" was by no means the source of all the genes in the world's living population. After all, each person is a reshuffled combination of 30,000 genes from many different ancestors stretching back generations. But each person's mtDNA is a copy from only one direct line of ancestors: their mother's mother's mother's mother, etc. In the same way, the mtDNA from Eve merely acts as a tracer that links all present-day humans to a single population of ancient humans, estimated at 10,000 people or so, who lived in Africa several hundred thousand years ago.

### The Climate Connection

While Richards' genetic research suggests that only one branch of ancient humans migrated out of Africa to give rise to modern populations, research on ancient climate changes helps pinpoint the time when this migration must have occurred, argues Oppenheimer.

Some 80,000 years ago, the world's climate began to cool into a period of glaciations. The polar ice caps reached far down into Europe, lowering sea levels and turning much of Africa into arid desert. This climatic shift occurred roughly at the time when the genetic evidence suggests that the tree of human life sprouted a branch that crossed onto the Arabian Peninsula toward India and Southeast Asia.

Indeed, notes Oppenheimer, human-made tools dating back nearly 75,000 years have been found as far east as Malaysia. From there, our human ancestors pushed across shark-infested waters to Australia, where they left behind stone artefacts dating back 60,000 years.

There were no doubt other human migrations out of Africa before this time.

For example, ancient human remains dating from 100,000 to 120,000 years ago have been unearthed in what is now Israel.

By the time the climatic changes gave rise to the exodus some 80,000 years ago, the migration pathway out of Africa through the Near East was blocked by the Sahara desert, says Oppenheimer, and so the only way out was southward.

It must be kept in mind that the earth was one piece of land that later was divided by the Sea. As such it was not as such a migration out of the land across the sea but a migration or settlement from one area of the selfsame land to another.

Modern humans left the region we now know as Africa in several waves—the first about 1.7 million years ago, another between 800,000 and 400,000 years ago, and a third between 150,000 and 80,000 years ago. However, it was only after the climate shifted again some 50,000 years ago, Australian Aborigines arrived from Africa circa 100,000 years ago

Climatic changes created strong monsoons that turned what was once desert into the lush growth of the so-called "Fertile Crescent" stretching from the Arabian Gulf to Turkey, that humans had the pathway to begin the push into what is now modern-day Europe. The land at that time was populated by another kind of human — Neanderthals — who had migrated from Africa hundreds of thousands of years before in earlier migrations.

While the two species of humans shared the continent for more than 10,000 years, recent studies of DNA drawn from Neanderthal fossils reveal that there was no interbreeding between the two populations that left a trace in the modern world. Indeed, nearly all Europeans — and by extension, many Americans — can trace their ancestors to only four mtDNA lines, which appeared between 10,000 and 50,000 years ago as coming from South Asia and originating from Africa. However the African populations have the most ancient alleles (gene pairs that code for specific traits) and the greatest genetic diversity, which means they are the oldest. Researcher Spencer Wells has stated that a second wave of hominids left Africa around 45,000 years ago, reproduced rapidly, and settled in the Middle East; smaller groups went off to India and China.

Isolated by mountains and the sea for many generations, and exposed to a colder climate and less sunlight than in Africa, the Asian populations became paler over time.

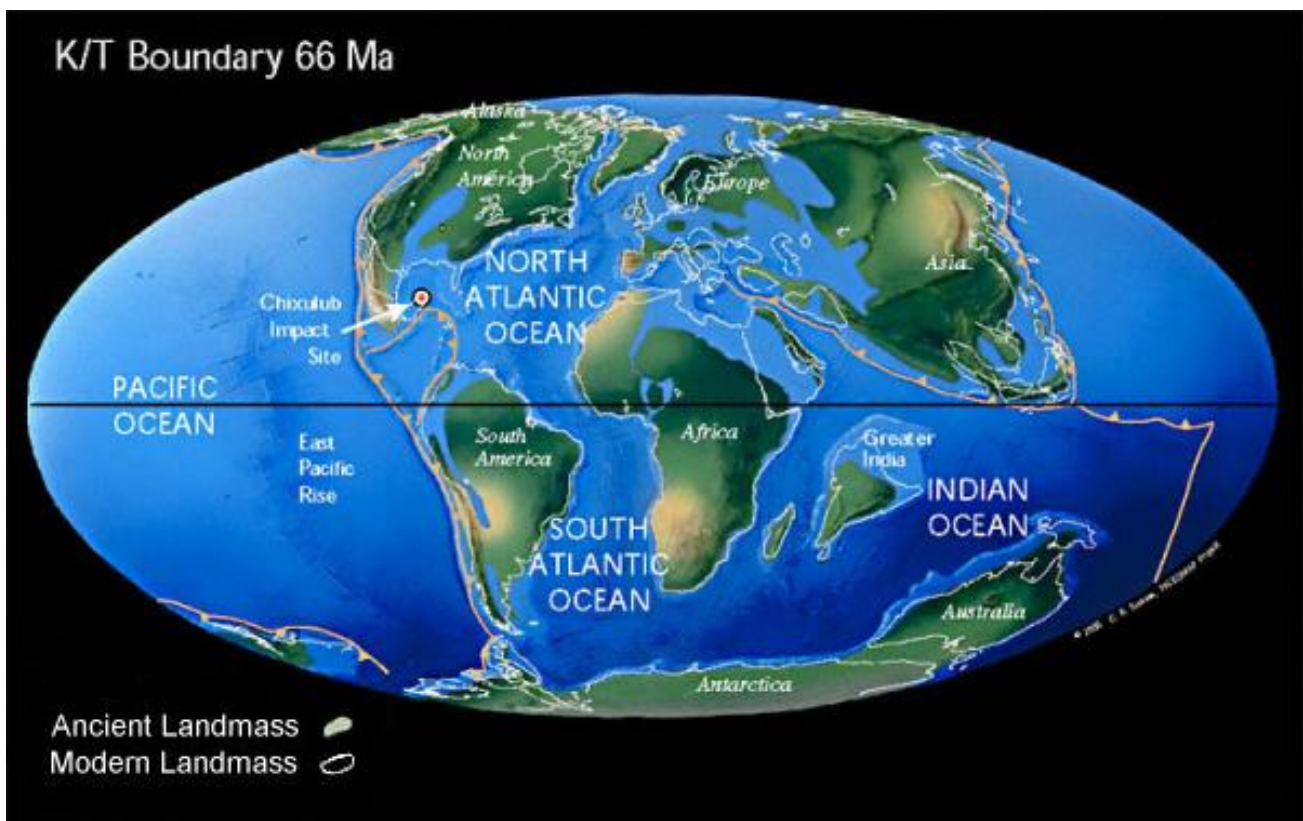
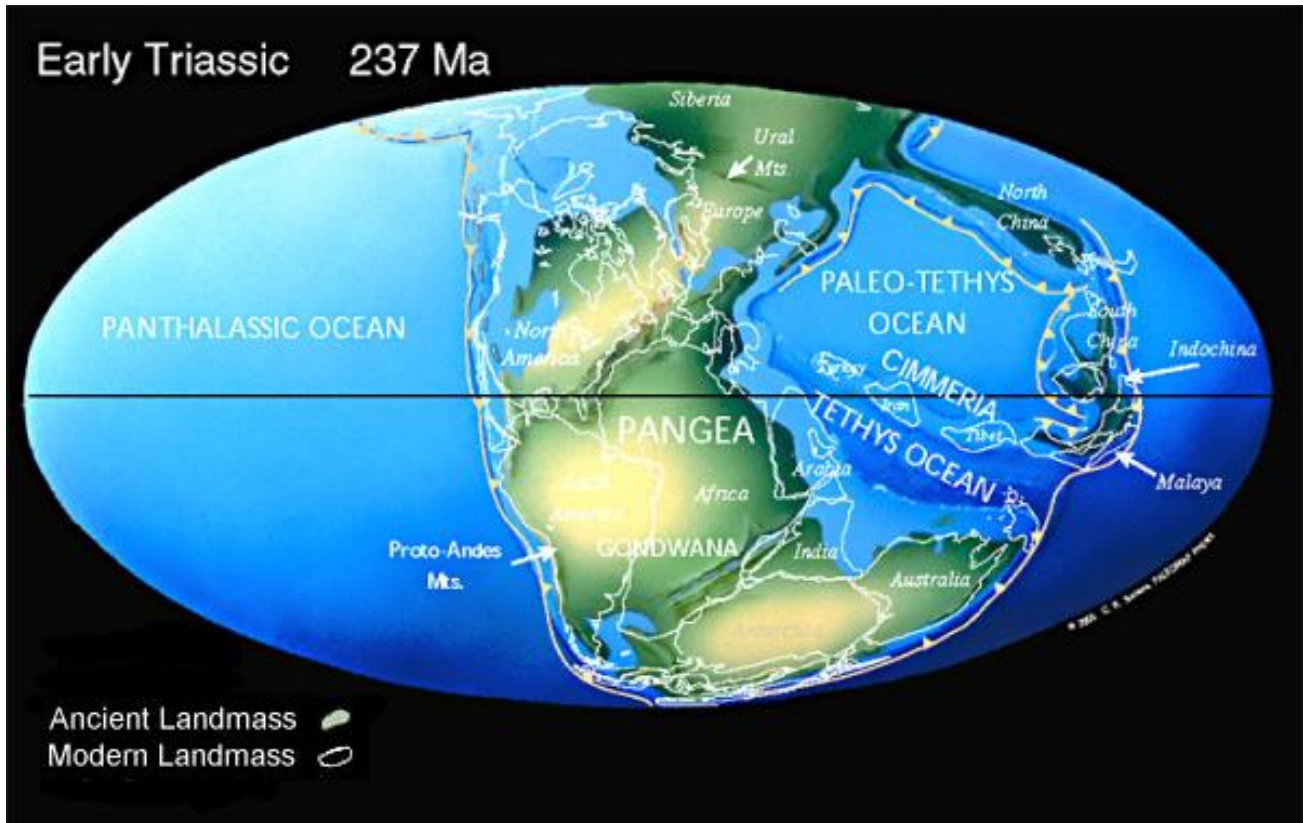
- Around 40,000 years ago, as the grip of the Ice Age loosened and temperatures briefly became warmer, humans moved into Central Asia. Amid the bountiful grassy steppes, they multiplied quickly.
- Around 35,000 years ago, small groups left Central Asia for Europe. Cold temperatures kept them there. Cut off from other groups, these migrants became paler and shorter than their African ancestors.
- From there, around 20,000 years ago, another small group of Central Asians moved farther north, into Siberia and the Arctic Circle. To minimize physical exposure to the extreme cold they developed, over many generations, stout trunks, stubby fingers, and short arms and legs.
- Finally, around 15,000 years ago, as another Ice Age began to wane, one small clan of Arctic dwellers followed the reindeer herd over the Bering Strait land bridge into North America.
- According to the genetic data, says Wells, this initial group may have included as few as two or three men—perhaps 10 to 20 people in all. Also isolated, they too acquired distinct physical characteristics.

Many archaeologists, however, believe that Australia, the Middle East, India, and China were inhabited much earlier. "The dates do not compare well to the order or the geography of the migration patterns revealed by the fossil record," said Brooks. "Y-chromosome data give consistently younger dates than other types of genetic data, such as mitochondrial DNA."

**End Citation of University findings.**

**Further Information of relevance to the essence of this document:**

The formation of the world at the times before and during early migration from Africa:

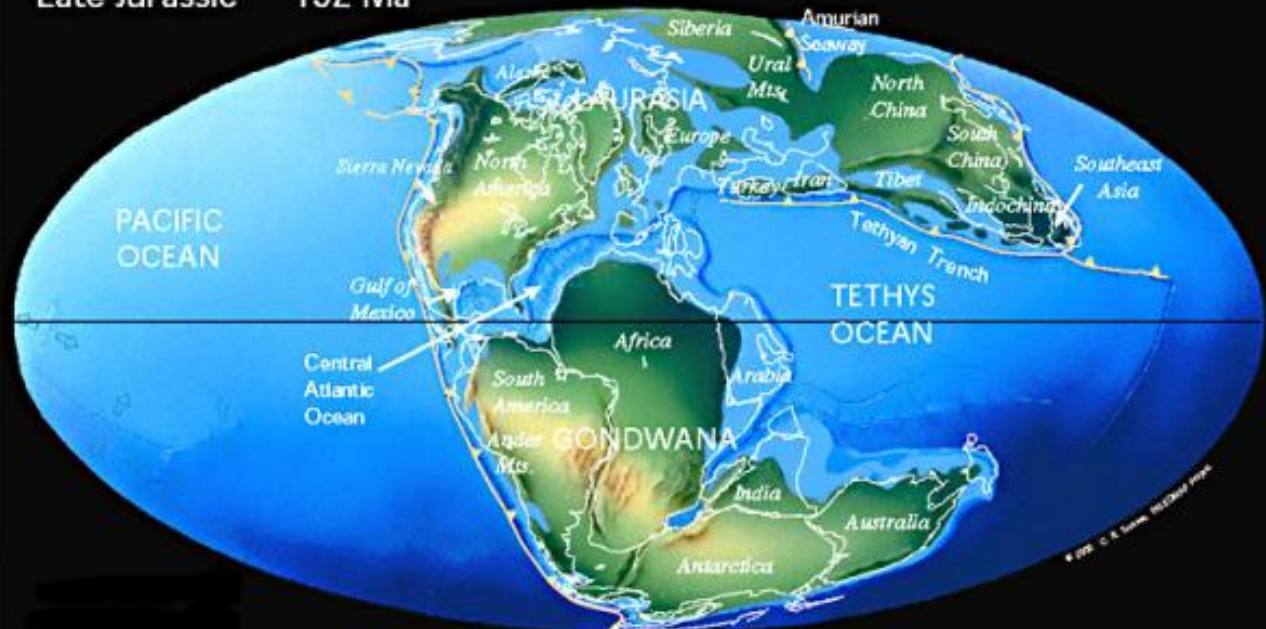


Early Jurassic 195 Ma

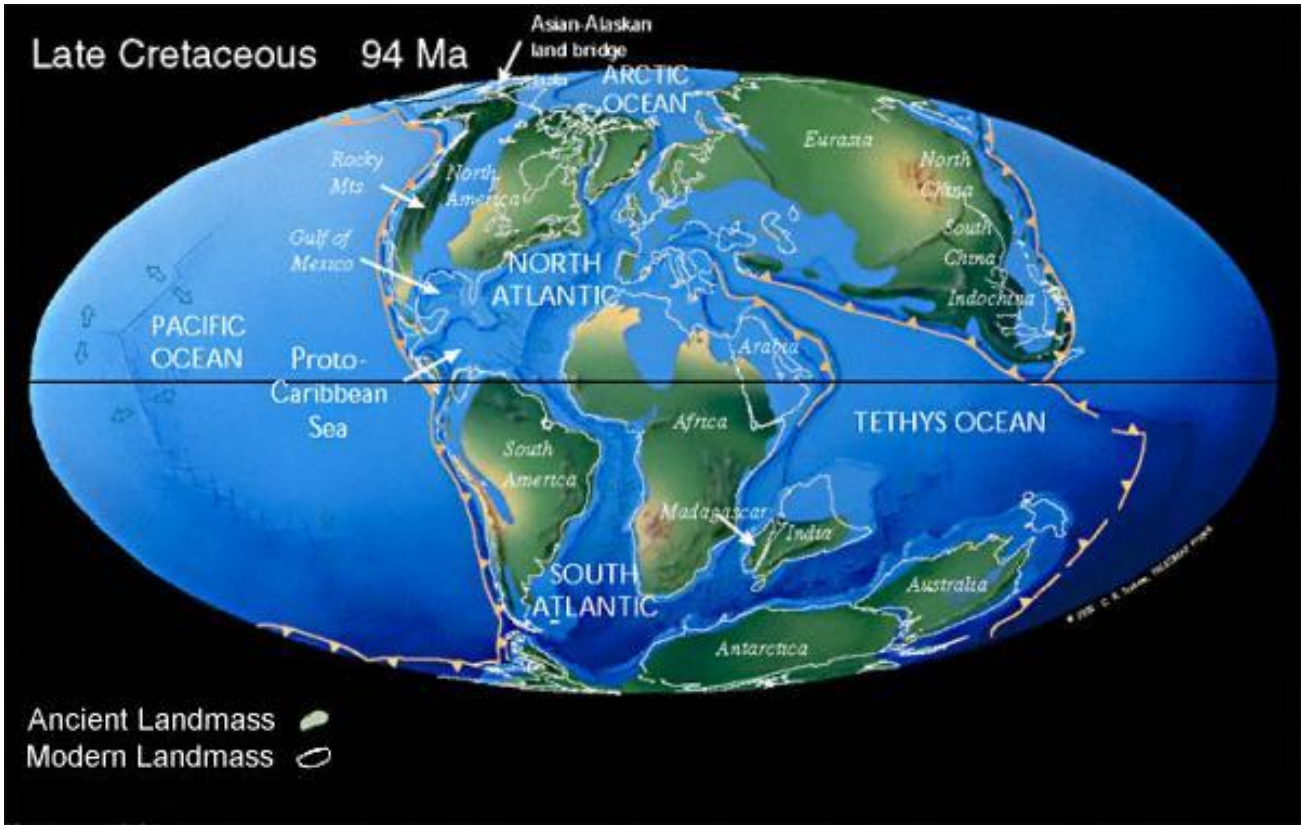


Ancient Landmass   
Modern Landmass 

Late Jurassic 152 Ma



Ancient Landmass   
Modern Landmass 



Today the then World ruled by Nubia is today the Third World. Including China. Middle-East and the rest of “the Americas”.

