

SUPPLEMENTAL MATERIAL

Prehistoric Timeline Defined from an Evolutionary Biology Perspective

Prehistory is a very generalized term that one could use to define events that took place prior to the invention of writing, which describes a very massive period of time. For better comprehension, the history of the earth as a whole is divided into eons, which are divided into eras, which themselves can be divided into periods and furthermore into epochs.

The history of the earth is divided into 4 eons.

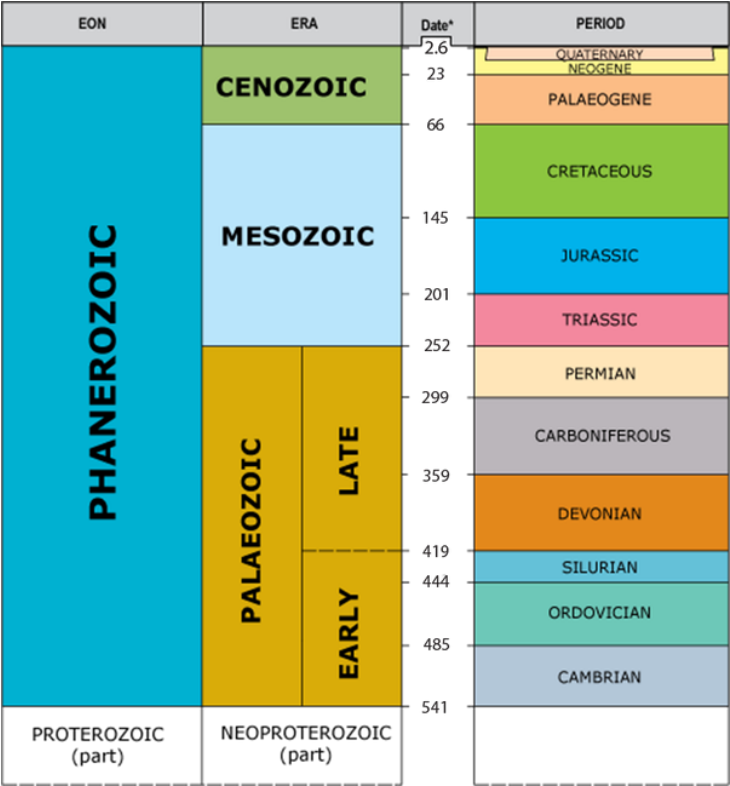
Hadean from the formation of the earth 4.6 billion years ago to 4 billion years ago

Archean: lasted until 2.5 billion years ago, the crust of the earth cooled down and the first single-celled lifeforms started to appear.

Proterozoic from the end of the Archean until 541 million years ago and saw the rise of eukaryotes and even primitive multi-cellular life.

Phanerozoic lasts until this day and is divided into time periods.

These eons are further divided into eras:



Based on The Geologic Time Scale 2012 by F.M. Gradstein, J.G. Ogg, M. Schmitz, and G. Ogg (2012), with additions, image from the British Geological Survey.

The Paleozoic is assumed to have started with the Cambrian Explosion, which saw a massive increase in the diversity of multi-celled lifeforms. The Paleozoic was when there was a rise of arthropods, fish, amphibians, and reptiles (including the ancestors to mammals, the synapsids). Again, each of these periods is further divided into multiple epochs.

The Mesozoic is known as the age of the dinosaurs and well known for its three periods: the Triassic, the Jurassic, and the Cretaceous. The extinction of the non-avian dinosaurs 66 million years ago through a meteor impact signals the end of the Mesozoic and the start of the Cenozoic, the "Age of Mammals."

These groupings are according to paleontologists' distinctions due to their findings and their interpretation/understanding of such findings.