The Geologic Time Scale

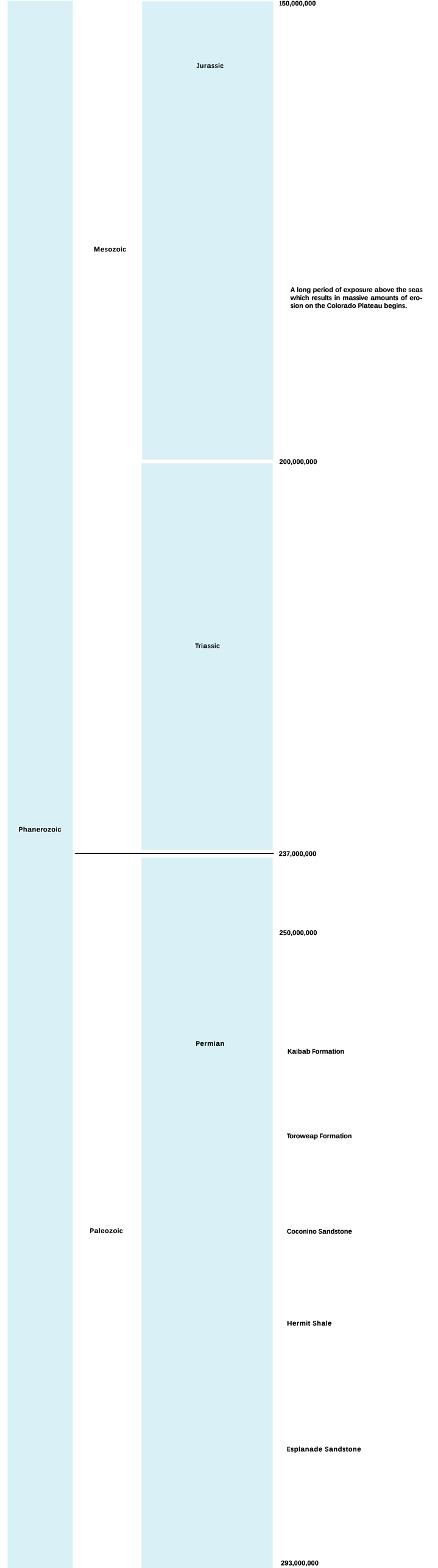
Each page is one meter long and represents 150 million years of time.

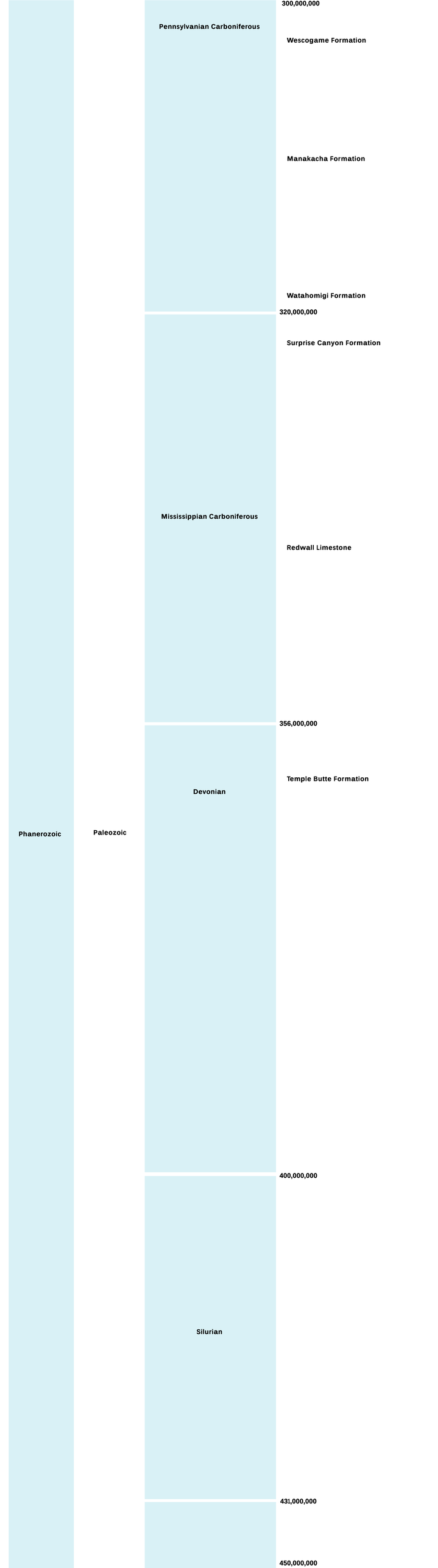
EON	ERA	PERIOD	EPOCH	YEARS AGO
Phanerozoic	Cenozoic	Quaternary	Pleistocene	the Holocene - The period since the last glaciation - 10,000 years, would be represented by .066 . . . milimeters, much too small to be shown on this screen at this scale.
				2,400,000
		Tertiary	Pliocene	
				7,500,000
			Miocene	
				26,000,000
			Oligocene	
				37,000,000
			Eocene	
				54,000,000
			Paleocene	
				67,000,000
	Mesozoic	Cretaceous		
				130,000,000
				150,000,000

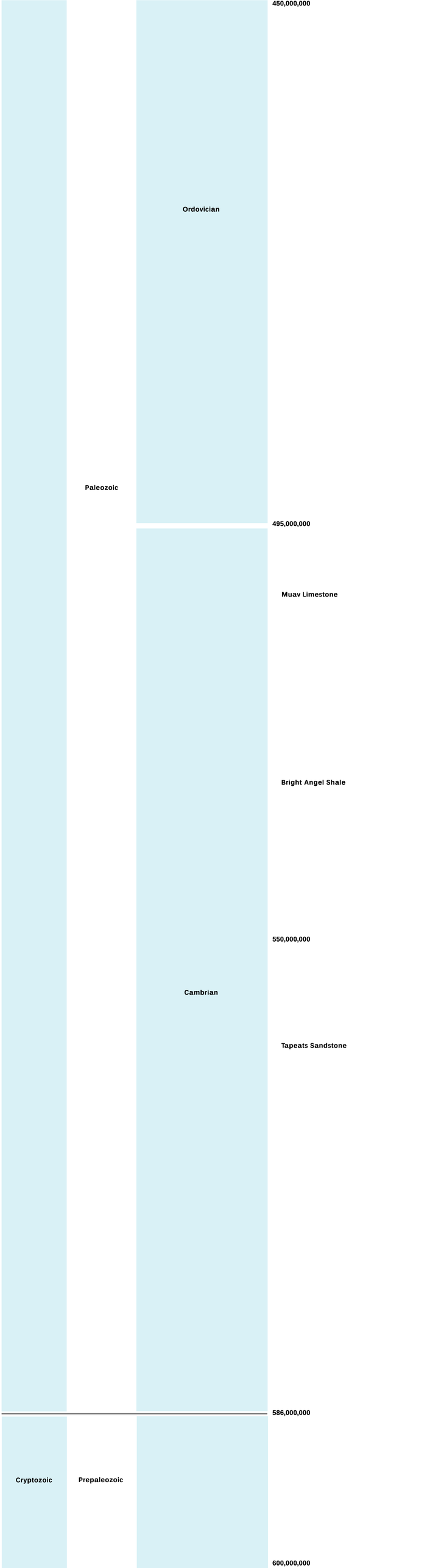
What was Happening then on the Colorado Plateau

Uplift that results in the carving of the Grand Canyon begins.

The Larimide orogeny ends. The Rocky Mountains have been formed to the east of the Coorado Plateau.


150,000,000
Jurassic
Mesozoic
A long period of exposure above the seas which results in massive amounts of erosion on the Colorado Plateau begins.
200,000,000
Triassic
Phanerozoic
237,000,000
250,000,000
Permian
Kaibab Formation
Toroweap Formation
Paleozoic
Coconino Sandstone
Hermit Shale
Esplanade Sandstone
293,000,000


300,000,000
Pennsylvanian Carboniferous
Wescogame Formation
Manakacha Formation
Watahomigi Formation
320,000,000
Surprise Canyon Formation
Mississippian Carboniferous
Redwall Limestone
356,000,000
Temple Butte Formation
Devonian
Phanerozoic
Paleozoic
400,000,000
Silurian
431,000,000
450,000,000


450,000,000
Ordovician
Paleozoic
495,000,000
Muav Limestone
Bright Angel Shale
550,000,000
Cambrian
Tapeats Sandstone
586,000,000
Cryptozoic
Prepaleozoic
600,000,000

600,000,000

650,000,000

Cryptozoic

Prepaleozoic

750,000,000

750,000,000

Sixtymile Formation

Kwagunt Formation

Cryptozoic

Prepaleozoic

Galeros Formation

850,000,000

Nankoweap Formation

Cardenas Lava

750,000,000

750,000,000

Cardenas Lava

Cryptozoic

Prepaleozoic

Dox Formation

1,000,000,000

900,000,000

Shinumo Quartz

Cryptozoic

Prepaleozoic

1,150,000,000

1,150,000,000

Hakatai Shale

Cryptozoic

Prepaleozoic

Bass Limestone

1,300,000,000

1,300,000,000

Cryptozoic

Prepaleozoic

1,450,000,000

1,450,000,000

Cryptozoic

Prepaleozoic

1,600,000,000

1,600,000,000

Cryptozoic

Prepaleozoic

Granite Gorge Metamorphic Suite

These are the oldest rocks found in the Grand Canyon. There is no record of the three billion years or so from the formation of the Earth, some 4.6 billion years ago until this time, 1.7 billion years before the present.

1,750,000,000

1,750,000,000

Cryptozoic

Prepaleozoic

1,900,000,000

1,900,000,000

Cryptozoic

Prepaleozoic

2,050,000,000

2,050,000,000

Cryptozoic

Prepaleozoic

2,200,000,000

2,200,000,000

Cryptozoic

Prepaleozoic

2,350,000,000

2,350,000,000

Cryptozoic **Prepaleozoic**

The oldest rocks which have been identified in the Great Basin are about 2.5 billion years old and are found exposed in the Grouse Creek and Raft River ranges in northwestern Utah near the Nevada Idaho border. Before this time we have no knowledge of the Great Basin as all the earlier rocks and the information they contained appear to have been eroded away or subducted and melted in the interior of the Earth. These ancient rocks are shists, a type of metamorphic rock which is formed from rock that was originally sedimentary in nature. These sedimentary rocks, which originally would have formed beneath the sea must have been buried deep in the Earth and subjected to great amounts of heat and pressure, transforming the ancient limestone into schist.

2,500,000,000

2,500,000,000

Cryptozoic

Prepaleozoic

2,650,000,000

2,650,000,000

Cryptozoic

Prepaleozoic

2,800,000,000

2,800,000,000

Cryptozoic

Prepaleozoic

2,950,000,000

2,950,000,000

Cryptozoic

Prepaleozoic

3,100,000,000

3,100,000,000

Cryptozoic

Prepaleozoic

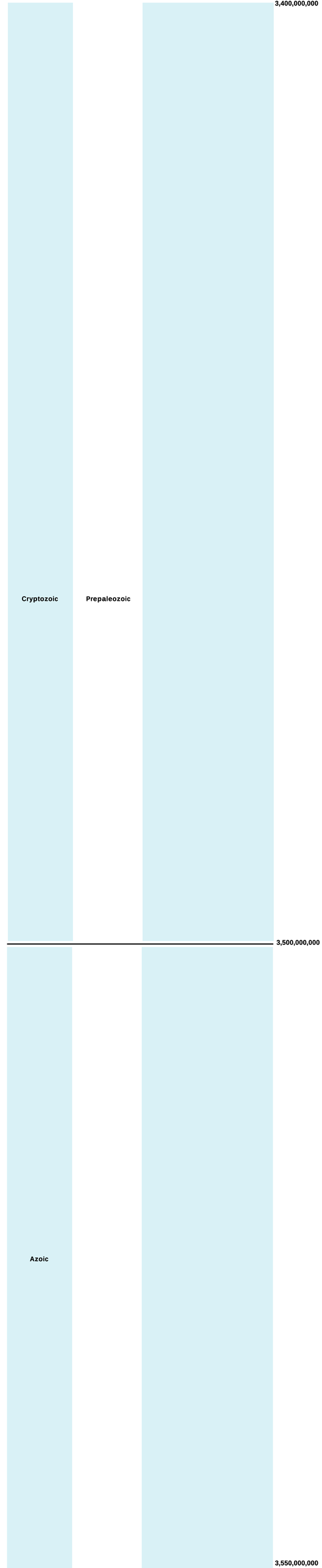
3,250,000,000

3,250,000,000

Cryptozoic

Prepaleozoic

3,400,000,000


3,400,000,000
Cryptozoic
Prepaleozoic
3,500,000,000
Azoic
3,550,000,000

3,550,000,000

Azoic

3,700,000,000

3,700,000,000

Azoic

3,850,000,000

3,850,000,000

Azoic

4,000,000,000

4,000,000,000

Azoic

4,150,000,000

4,150,000,000

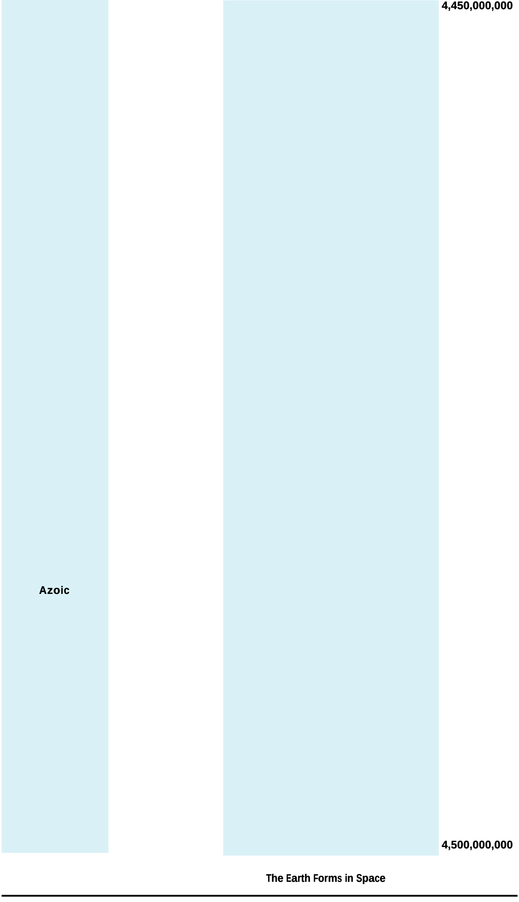
Azoic

4,300,000,000

4,300,000,000

Azoic

4,450,000,000


4,450,000,000
Azoic
4,500,000,000
The Earth Forms in Space