Genesis Creation Story is Scientifically Accurate

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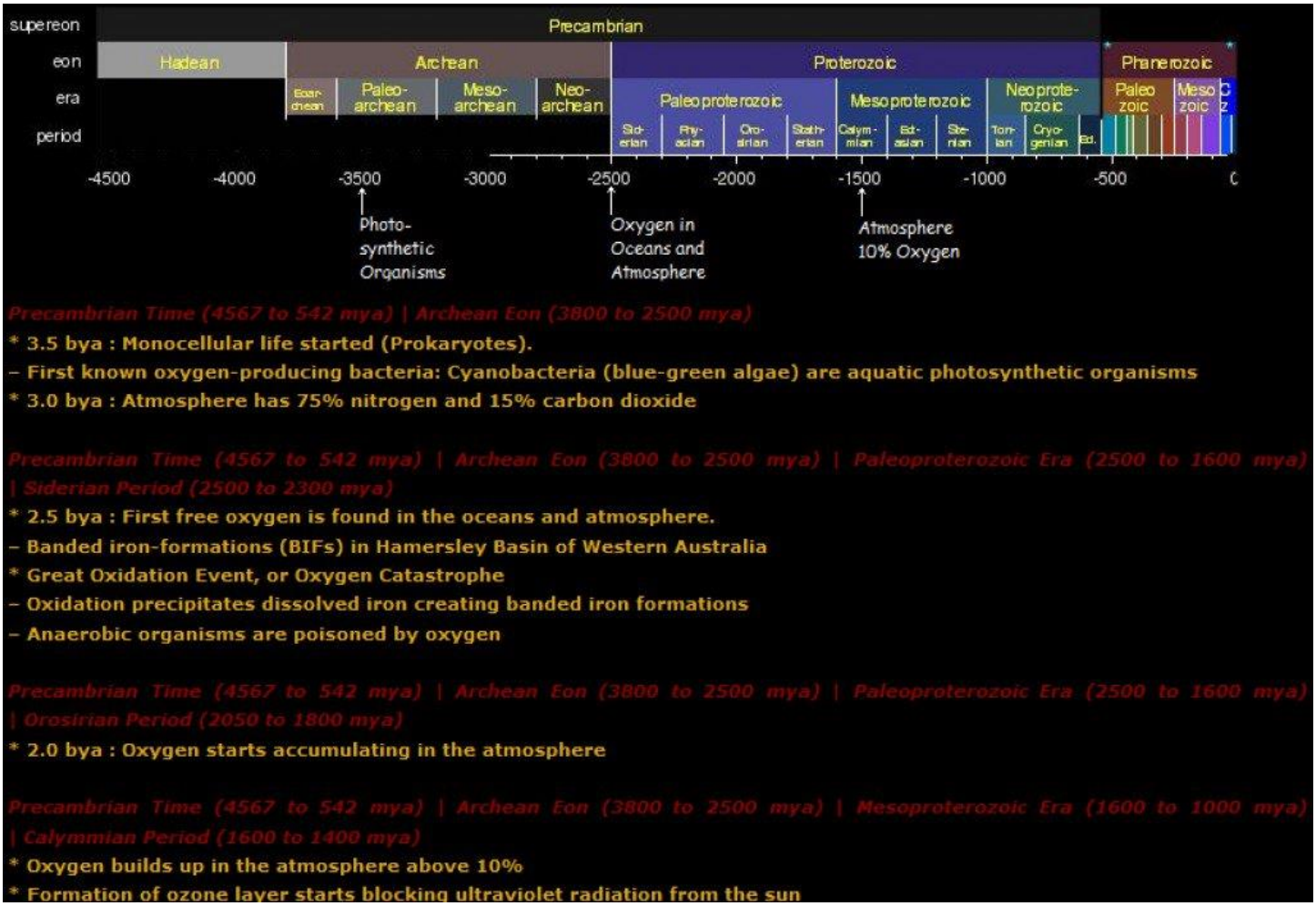
Perspective and Context

Genesis 1 describes only the creation of elements a human would be familiar with: The heavens (night sky – sun/moon/stars), the atmosphere (blue sky), the land, the plants, the animals, and humans of course.

For many centuries this depiction of the earth's creation was the only source available. Because the context of the story is unclear, interpretations of this description depended solely on humanity's best estimations as to what's being described. Many of these centuries-old interpretations are still believed today. However, over the past century or so, and especially in recent decades, science for the first time in human history has really begun to reveal the geological formation of the earth and the biological formation of life, giving us a glimpse of how it all really came together.

With the understanding that it's told on a human level, while keeping in mind the point of view established in the second verse as being 'from the surface', re-reading the Genesis creation story set against the context of our modern scientific understanding reveals incredible insight.

Day 1 - Heavens, Earth, Oceans, Light



Precambrian Time (4567 to 542 mya) | Archean Eon (3800 to 2500 mya)

*** 3.5 bya : Monocellular life started (Prokaryotes).**

– First known oxygen-producing bacteria: Cyanobacteria (blue-green algae) are aquatic photosynthetic organisms

*** 3.0 bya : Atmosphere has 75% nitrogen and 15% carbon dioxide**

Precambrian Time (4567 to 542 mya) | Archean Eon (3800 to 2500 mya) | Paleoproterozoic Era (2500 to 1600 mya) | Siderian Period (2500 to 2300 mya)

*** 2.5 bya : First free oxygen is found in the oceans and atmosphere.**

– Banded iron-formations (BIFs) in Hamersley Basin of Western Australia

*** Great Oxidation Event, or Oxygen Catastrophe**

– Oxidation precipitates dissolved iron creating banded iron formations

– Anaerobic organisms are poisoned by oxygen

Precambrian Time (4567 to 542 mya) | Archean Eon (3800 to 2500 mya) | Paleoproterozoic Era (2500 to 1600 mya) | Orosirian Period (2050 to 1800 mya)

*** 2.0 bya : Oxygen starts accumulating in the atmosphere**

Precambrian Time (4567 to 542 mya) | Archean Eon (3800 to 2500 mya) | Mesoproterozoic Era (1600 to 1000 mya) | Calymmian Period (1600 to 1400 mya)

*** Oxygen builds up in the atmosphere above 10%**

*** Formation of ozone layer starts blocking ultraviolet radiation from the sun**

Genesis 1:1 - In the beginning God created the heaven and the earth.

Verse 1 sums up everything that happened prior to the more detailed account to follow by simply saying God created the heavens and the earth 'in the beginning'. The big bang that kicked off the formation of the 'heavens' is estimated to have happened roughly 13.7 billion years ago, and the earth first began to form about 4.567 billion years ago. So, beyond the first verse, the creation account begins at least 9 billion years along in the process with both the heavens and the earth already in existence.

Genesis 1:2 - And the earth was without form and void, and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

While the original intention of the creation story was obviously not to prove itself accurate or legitimate, the second verse provides just enough detail to locate a starting point in Earth's history.

Verse 2 establishes both the setting (the state of the earth at that time) as well as the point-of-view from which creation is described. The setting is the earth, formless and void, with oceans already in existence, shrouded in darkness. This describes the earth's state around 4 billion years ago during the latter part of the Hadean Eon (4.57 to 3.8 mya). Scientifically, it's certain the oceans existed by the end of the Hadean. Some believe they may have existed as early as 4.2 bya. They formed when the earth's first atmosphere of mainly nitrogen, carbon dioxide, and water vapor blocked out the sun enough to allow the earth's surface to cool and harden. The cooler temperatures then allowed the water vapor to condense, which formed the oceans. So for a time, as the water vapor in the atmosphere condensed and filled the oceans, the earth matched the description given in verse 2.

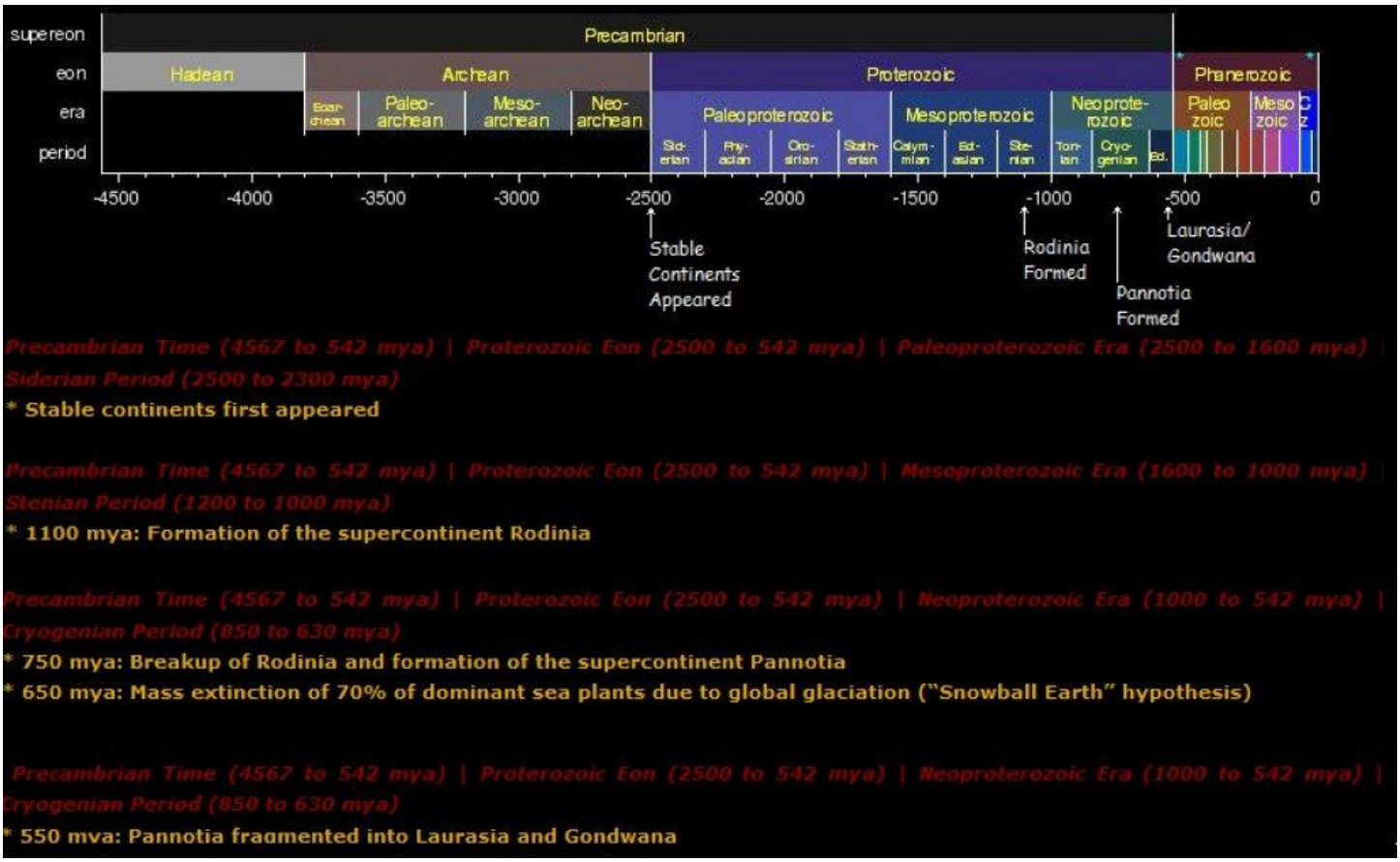
Genesis 1: 3-4 - And God said, "Let there be light"; and there was light. And God saw the light, that it was good; and God divided the light from the darkness. And God called the light Day, and the darkness He called Night.

Eventually, as the water vapor in the atmosphere condensed, the sun began to peak through to the surface for the first time since there was a surface to shine on. From a surface perspective, where before it was dark all the time, now there were both day and night. This was a significant moment in Earth's history as the sun has continued to shine on the surface from that first moment on.

Genesis 1: 5 - And the evening and the morning were the first day.

From this point forward the earth entered a new age of day and night.

Day 2 - Oxygenated Atmosphere



Genesis 1: 6-8 - And God said, "Let there be a firmament in the midst of the waters, and let it divide the waters from the waters." And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament; and it was so. And God called the firmament Heaven. And the evening and the morning were the second day.

The mention of light in verse 5 proves relevant because it's a crucial ingredient for every event to follow. It's necessary not only to establish the earth's water cycle, but also as an ingredient for photosynthesis.

About 300 million years into the Archaen Eon (3.8 to 2.5 bya), single-celled organisms first began to appear in the oceans, or 'midst of the waters'. Among these organisms were oxygen-producing bacteria known as Cyanobacteria, or blue-green algae. These were aquatic photosynthetic organisms, meaning they required both the oceans and sunlight to produce oxygen.

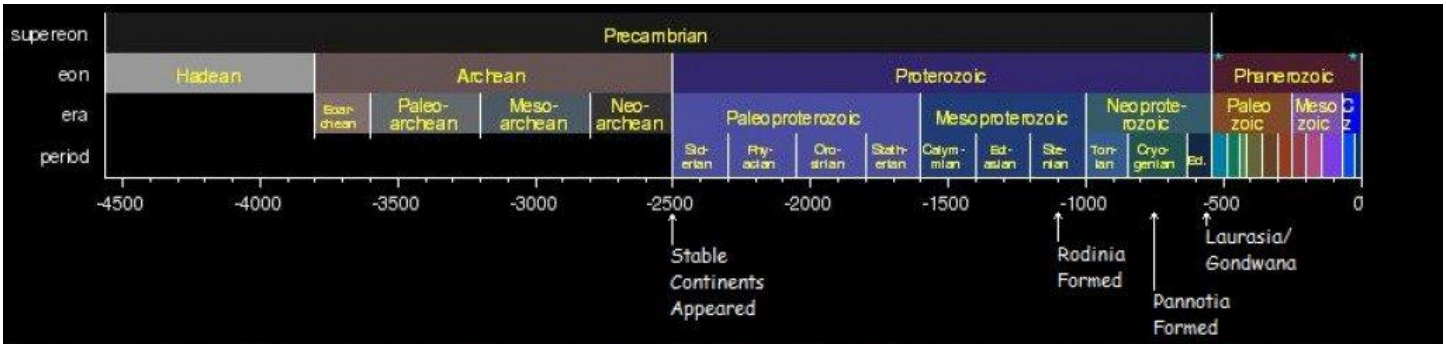
Over the course of a billion years these organisms had become so prolific in the oceans, and had flooded the seas with so much oxygen, that they managed to suffocate all non-oxygen breathing organisms in the sea. This event is referred to as The Great Oxidation Event, or Oxygen Catastrophe (about 2.4bya). Oxygen had also been escaping the seas and working its way into the air. This was the beginning of the Earth's second atmosphere. The same oxygenated atmosphere we know and breathe today. In other words, this was the creation of the atmosphere relevant to humans.

And the evening and the morning were the second day – the age of an Earth with an oxygenated atmosphere and a water cycle.

Day 3 – Land

Genesis 1:9-10 - And God said, "Let the waters under the heaven be gathered together unto one place, and let the dry land appear"; and it was so. And God called the dry land Earth; and the gathering together of the waters called The Seas; and God saw that it was good.

The continents as we know them today began to form around the same time as the Great Oxidation Event, around 2.5 billion years ago at the beginning of the Proterozoic eon (2500 to 542 mya). There was continental crust that formed prior to this, roughly 4 billion years ago, but all that's left of these are 'Cratons', which make up the core that today's continents, the continents relevant to humans, formed around.



Precambrian Time (4567 to 542 mya) | Proterozoic Eon (2500 to 542 mya) | Paleoproterozoic Era (2500 to 1600 mya) | Siderian Period (2500 to 2300 mya)

*** Stable continents first appeared**

Precambrian Time (4567 to 542 mya) | Proterozoic Eon (2500 to 542 mya) | Mesoproterozoic Era (1600 to 1000 mya) | Stenian Period (1200 to 1000 mya)

*** 1100 mya: Formation of the supercontinent Rodinia**

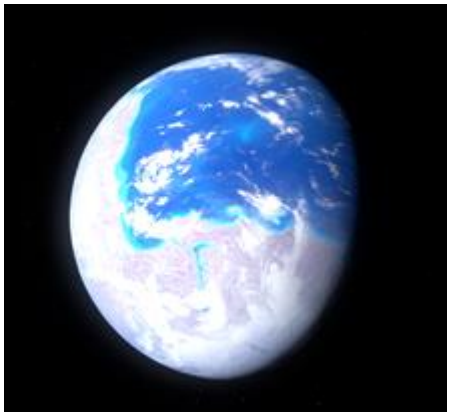
Precambrian Time (4567 to 542 mya) | Proterozoic Eon (2500 to 542 mya) | Neoproterozoic Era (1000 to 542 mya) | Cryogenian Period (850 to 630 mya)

*** 750 mya: Breakup of Rodinia and formation of the supercontinent Pannotia**

*** 650 mya: Mass extinction of 70% of dominant sea plants due to global glaciation ("Snowball Earth" hypothesis)**

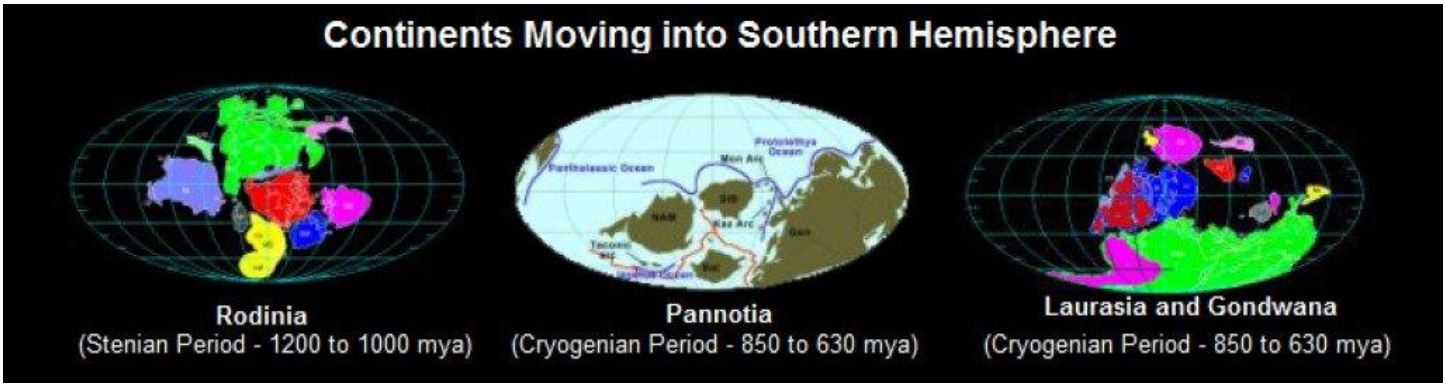
Precambrian Time (4567 to 542 mya) | Proterozoic Eon (2500 to 542 mya) | Neoproterozoic Era (1000 to 542 mya) | Cryogenian Period (850 to 630 mya)

*** 550 mya: Pannotia fragmented into Laurasia and Gondwana**



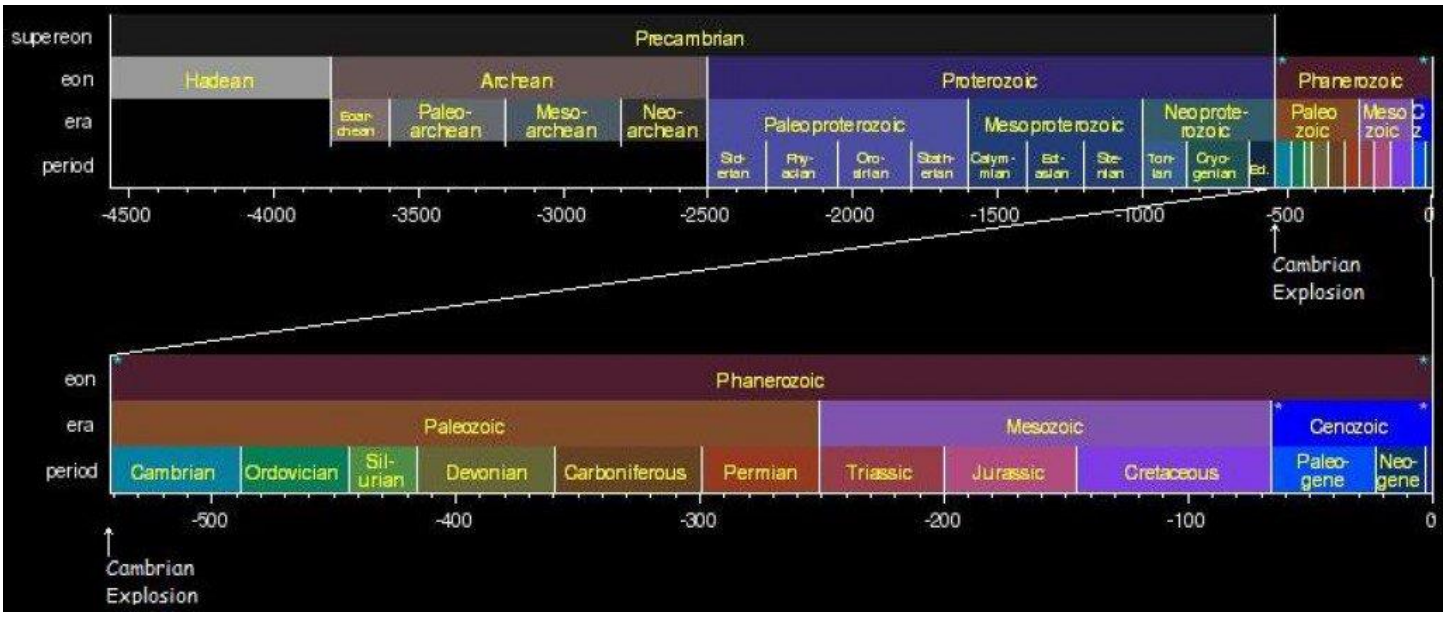
Artist's conception of the supercontinent Rodinia. "Let the waters under the heaven be gathered together unto one place."

The majority of total continental land mass in existence today had formed by 1.1 billion years ago. The land masses were bunched together, which formed a supercontinent known as Rodinia. During this time the continents were positioned around the equator between the Earth's poles much like they are today. About 825 million years later, or 275 million years ago, the continents again were bunched together around the equator between the poles, forming the supercontinent Pangea.



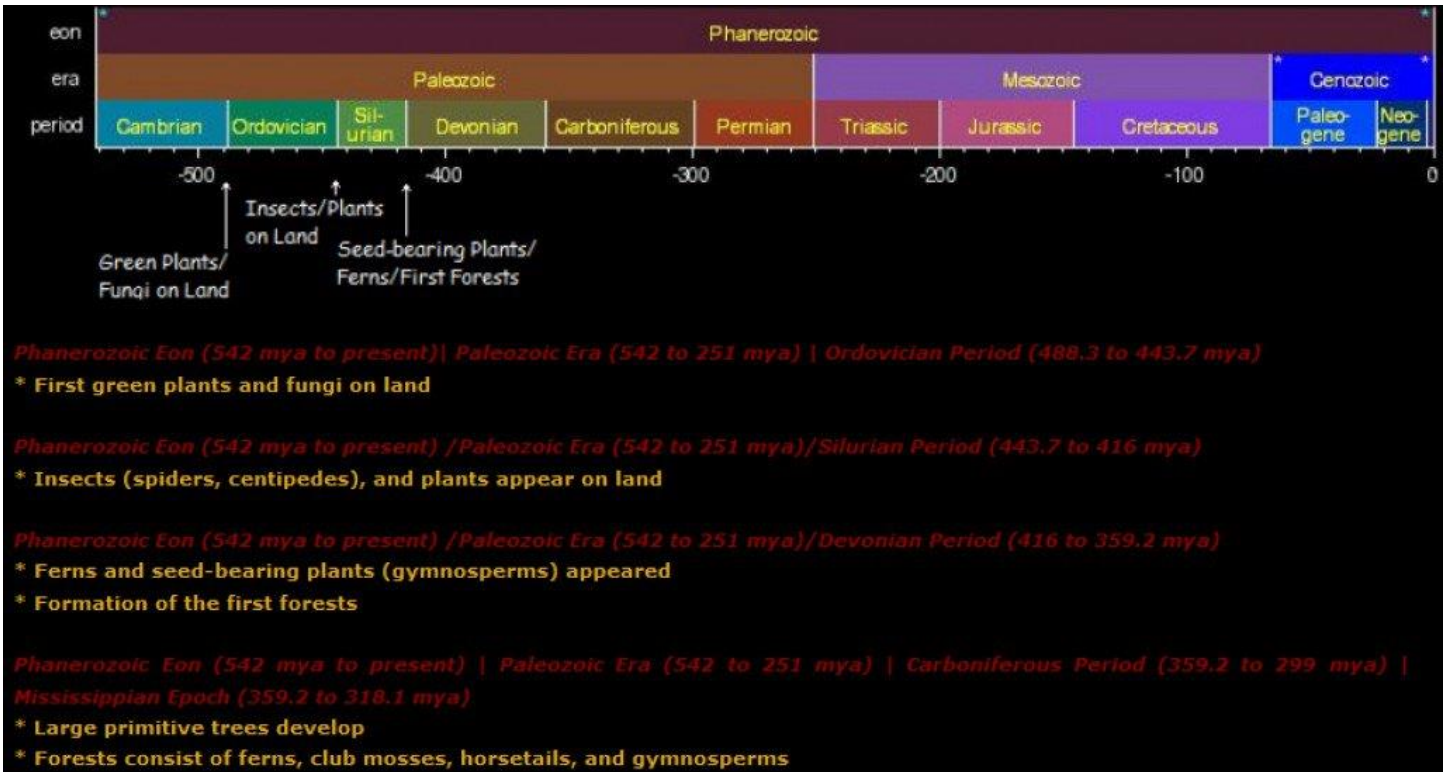
However, in the time between Rodinia and Pangea, all of the Earth's continental land mass drifted all the way down to the South Pole and back. While still positioned underneath the planet, about 650 million years ago, 70% of all single-celled life in the seas died, most likely due to much colder temperatures as they lived on the continental shelves of the drifting land masses. As the continents began to work their way back up north, something remarkable happened...

The Phanerozoic Eon and the Cambrian Explosion



The most extraordinary event to happen during the formation of life on this planet happened somewhere around 542 million years ago as the continents began their trek back north. It is commonly referred to as the Cambrian Explosion, which marks the beginning of the Phanerozoic eon (542 mya to Present). Somewhere in this timeframe, where every form of life that came before was always a single-celled organism, life made a significant evolutionary leap forward as the first multi-celled organisms began to appear. These more complex organisms ultimately proved to be the beginnings of most major plant and animal groups to come.

Day 3 – Plant life



Genesis 1:11-13 - And God said, "Let the earth bring forth vegetation, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself, upon the earth"; and it was so. And the earth brought forth vegetation, and herb yielding seed after his kind, and the tree yielding fruit, whose seed was in itself, after his kind; and God saw that it was good. And the evening and the morning were the third day.

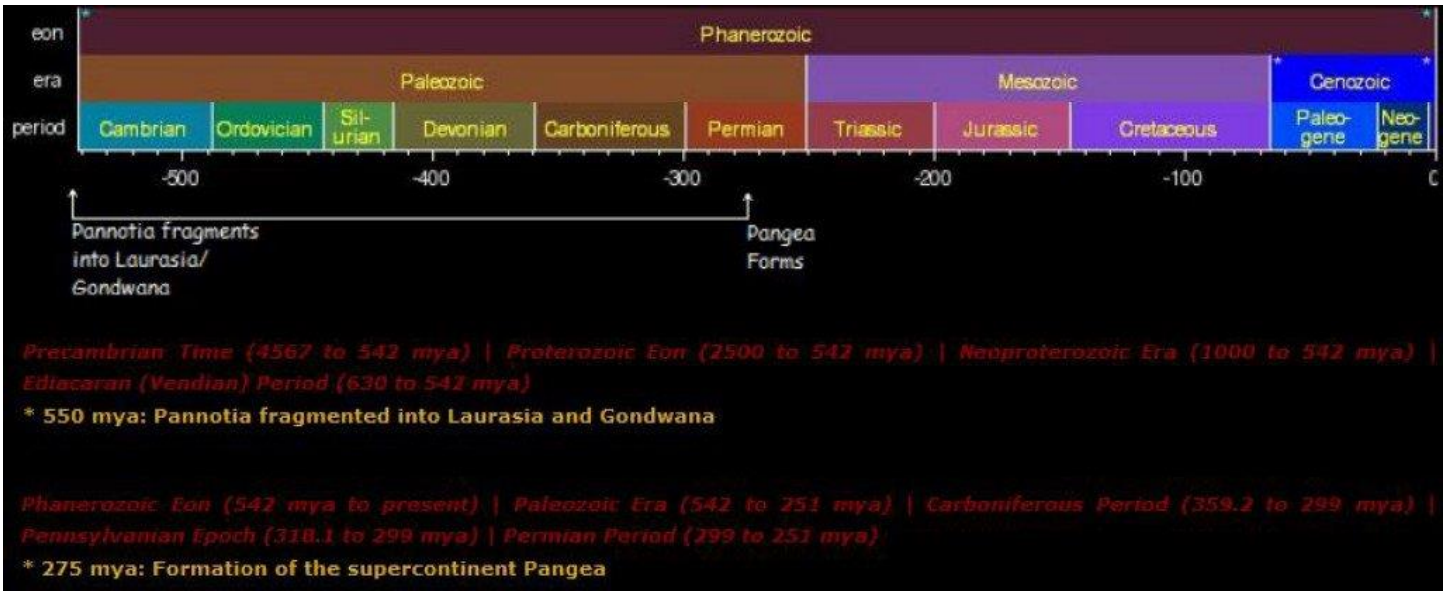
Following the Cambrian Explosion, the first life form to make its way onto land was plant life. They first began to leave the sea and grow on land at some point during the Ordovician Period (488.3 to 443.7 mya), the period immediately following Cambrian, which is where the Cambrian Explosion gets its name. By the end of the Devonian Period (416 to 359.2 mya) the first forests were forming. During the Mississippian Epoch (359.2 to 318.1 mya), the first half of the Carboniferous Period (359.2 to 299 mya), large primitive trees appeared and there were full blown forests consisting of ferns, club mosses, horsetails, and gymnosperms.

For 3 billion years aquatic photosynthetic plant life flooded the seas with oxygen to the point that oxygen began to work its way out of the water and into the air. Plant life uses the suns rays to split hydrogen from oxygen in water molecules. The hydrogen is combined with carbon dioxide forming glucose which is absorbed into the plant's makeup while the oxygen is released as a waste product.

Once plant life emerged on land, now being in direct contact with the atmosphere, the process was greatly sped up. Over time the earth's atmosphere changed from translucent to transparent as it is today as plant life on land continued to thrive. Before, daylight from the surface was the lit up dome of the sky, like a perpetual overcast day. As the atmosphere became more and more transparent, heavenly bodies that could not have been made out before from the surface eventually became visible.

And the evening and the morning were the third day, third age – the age of land with plant life.

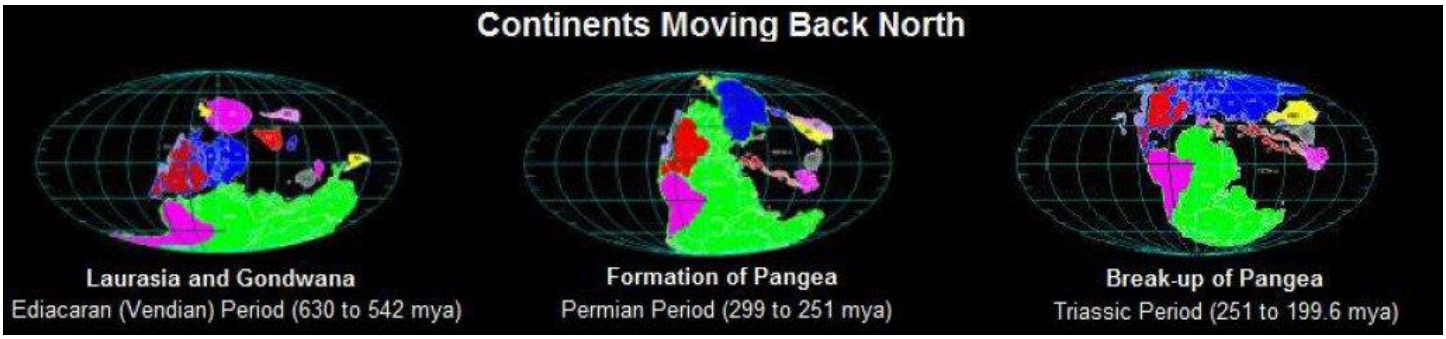
Day 4 - Sun, Moon, and Stars Set in Firmament



Genesis 1: 14-19 - And God said, "Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs and for seasons, and for days and years; and let them be for lights in the firmament of the heaven to give light upon the earth"; and it was so. And God made two great lights: the greater light to rule the day, and the lesser light to rule the night. He made the stars also. And God set them in the firmament of the heaven to give light upon the earth, and to rule over the day and over the night, and to divide the light from the darkness. And God saw that it was good. And the evening and the morning were the fourth day.

Here the 'from the surface' point of view established in verse 2 is important. As stated above, while the Cambrian Explosion was happening in the seas, the continents were just beginning to creep back up north out of the deep southern hemisphere. While the land was underneath the planet the days would have been roughly six months long, followed by six months of night, the moon would be visible about half of each month, and the stars in the night sky would just pivot around the South Pole.

Over the next 300 million years, as plant life made its way onto land and thrived, not only did the sun, moon, and stars become visible as the atmosphere transitioned from translucent to transparent, the continents continued to drift back up to the side of the planet as they are today. From the perspective of someone standing on land, this moving of the continents would literally position the sun, the moon, and the stars in the sky so they could be used for the purposes Genesis stated. They provide light for the day and the night, and they can be used for signs and seasons, and to track days and years. Once the continents moved back up to the equator they've remained there ever since.



Doesn't it say the sun didn't exist until after plant life?

Verse 16 tends to confuse matters for many. It states directly that God made the sun, the moon, and the stars. Because this is stated during the day 4 portion of creation it's read by many to mean the sun, moon, and stars didn't exist until day 4, one day after plant life on land and three days after God defined light as day and dark as night.

However, verse 1 states that God created the heavens "in the beginning". In the age the bible was written, when people spoke of the heavens they were speaking of the heavenly bodies; the sun, the moon, and the stars. When God said "Let there be light" in verse 3, verse 2 makes it clear He was speaking from the perspective of the surface when it says "the Spirit of God moved upon the face of the waters". While the surface has been lit by the sun for roughly 4 billion years, the sun, the moon, and stars have only been visible in the sky for maybe 400-500 million years. Before they were visible, they were not spoken about specifically. Once they were, Genesis simply states a fact, God made these as well and states for what purpose.

The sun, moon, and stars becoming visible and the continents moving to be situated between the poles of the planet proved to be a vitally important development for the animal life to come.

And the evening and the morning were the fourth day, or age. An age of 24 hour days of both sun light and darkness for land inhabitants.

Day 5 - Life From the Sea Through Birds

Genesis 1: 20-23 - And God said, "Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven." And God created great whales and every living creature that moveth, which the waters brought forth abundantly after their kind, and every winged fowl after his kind; and God saw that it was good. And God blessed them, saying, "Be fruitful and multiply, and fill the waters in the seas, and let fowl multiply on the earth." And the evening and the morning were the fifth day.

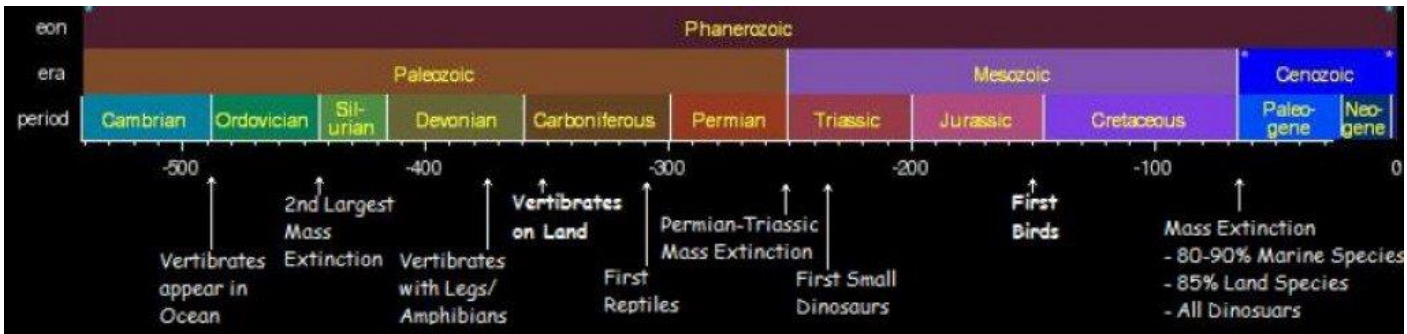
Keeping in mind God's spirit was on the surface, and that the point of view is from the land as evidenced by the sun, moon, and stars being positioned on day 4, it becomes obvious that God's declaration to, "Let the waters bring forth..." means He called life to come from the sea onto the land.

Vertebrates first made their debut on land during the Carboniferous Period (359.2 to 299 mya). By this period there were already forests of plant life on land, including large primitive trees, and the continents were already well across the equator.

Beyond the point of view already established, the real clue here is God's call for birds in the same verses as life from the sea. The assumption has always been that these verses are specifically talking about sea life. Here God calls for 'moving creatures that hath life' and birds. We know birds didn't remain in the sea, so why would we assume everything else did? Only now do we really know better. Birds, along with everything else, did actually originate in the sea.

We're all but certain birds evolved directly from dinosaurs. In fact, all amniotic creatures are categorized this way; sauropsids, which are reptiles and birds, and synapsids, which are mammals and mammal-like reptiles. There is a direct line of evolution that can be seen from the first land vertebrates, to reptiles, to dinosaurs, to birds.

And the evening and the morning were the fifth day, or age. The age of life on land and birds in the air.



Phanerozoic Eon (542 mya to present) | Paleozoic Era (542 to 251 mya) | Ordovician Period (488.3 to 443.7 mya)

*** diverse marine invertebrates, such as trilobites, became common**
*** First vertebrates appear in the ocean**
*** 450 mya: Start of Andean-Saharan ice age.**
*** 443 mya: Glaciation of Gondwana.**
*** Mass extinction of many marine invertebrates. Second largest mass extinction event. 49% of genera of fauna disappeared.** (Ordovician–Silurian)

Phanerozoic Eon (542 mya to present) | Paleozoic Era (542 to 251 mya) | Silurian Period (443.7 to 416 mya)

*** First fish with jaws – sharks**

Phanerozoic Eon (542 mya to present) | Paleozoic Era (542 to 251 mya) | Devonian Period (416 to 359.2 mya)

*** 374 mya: Mass extinction of 70% of marine species** (Late Devonian)
– This was a prolonged series of extinctions occurring over 20 million years
*** 375 mya: Vertebrates with legs, such as Tiktaalik appeared**
*** First amphibians appear**

Phanerozoic Eon (542 mya to present) | Paleozoic Era (542 to 251 mya) | Carboniferous Period (359.2 to 299 mya) | Mississippian Epoch (359.2 to 318.1 mya)

*** Vertebrates appear on land**
*** Animals laying amniote eggs appear (318 mya)**

Phanerozoic Eon (542 mya to present) | Paleozoic Era (542 to 251 mya) | Carboniferous Period (359.2 to 299 mya) | Pennsylvanian Epoch (318.1 to 299 mya)

*** 310 mya: First reptiles**

Phanerozoic Eon (542 mya to present) | Paleozoic Era (542 to 251 mya) | Permian Period (299 to 251 mya)

*** Sail-backed synapsids like Edaphosaurus and Dimetrodon appeared**
*** 251 mya: * Mass extinction** (Permian-Triassic)

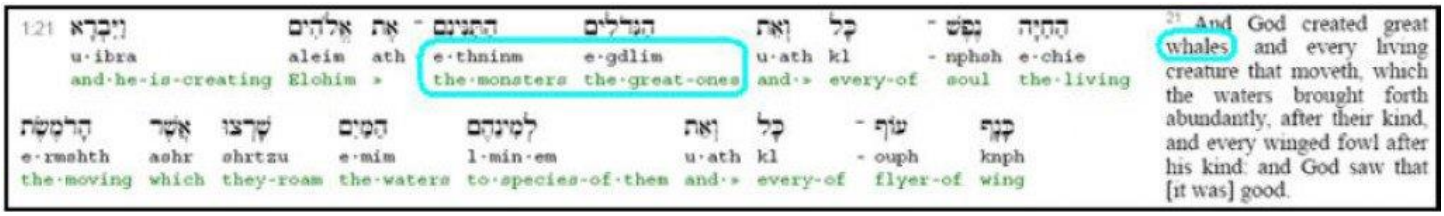
Phanerozoic Eon (542 mya to present) | Mesozoic Era (251 to 65.5 mya) | Triassic Period (251 to 199.6 mya)

*** Survivors of P-T extinction spread and re-colonize**
*** Reptiles populate the land.**
*** 240 mya: Sea urchins (Arkarua) appear**
*** 235 mya: Evolutionary split between dinosaurs and lizards**
*** Giant marine ichthyosaurs and plesiosaurs populate the seas**
*** First small dinosaurs such as celophysis appear on land**
*** 201 mya: Mass extinction caused by oceanic anoxic event killed 20% of all marine families** (Triassic-Jurassic)

Phanerozoic Eon (542 mya to present) | Mesozoic Era (251 to 65.5 mya) | Jurassic Period (199.6 to 145.5 mya)

*** Age of the dinosaurs**
*** Giant herbivores and vicious carnivores dominate the land**
*** Flying reptiles (Pterosaurs) appeared**
*** 150 mya: First birds like** Archaeopteryx **appear**

Why aren't there dinosaurs in the Bible?



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הָרֹמֶשֶׂת	אֲשֶׁר	שָׁרְצוּ	הַמַּיִם	לְמִינֵהֶם	וְאֵת	כָּל	שׁוֹף	כָּנָף
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21 And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind, and every winged fowl after his kind: and God saw that [it was] good.

Source

When the events of 'day 5' are read in this context something really interesting can be seen in verse 21. In the above translation it says, "God created great whales and every living creature that moveth...". In other translations, instead of stating God created 'great whales', it sometimes says 'great sea animals' (CEB), or 'giant sea monsters' (CEV).

The actual Hebrew words used here that are translated so many different ways are 'e-thninm', which means 'the monsters', and 'e-gdlim', which means 'the great ones'. We now know that between the debut of vertebrates on land and the appearance of birds there were numerous creatures that much more aptly fit these descriptions than 'great whales' .... namely dinosaurs.

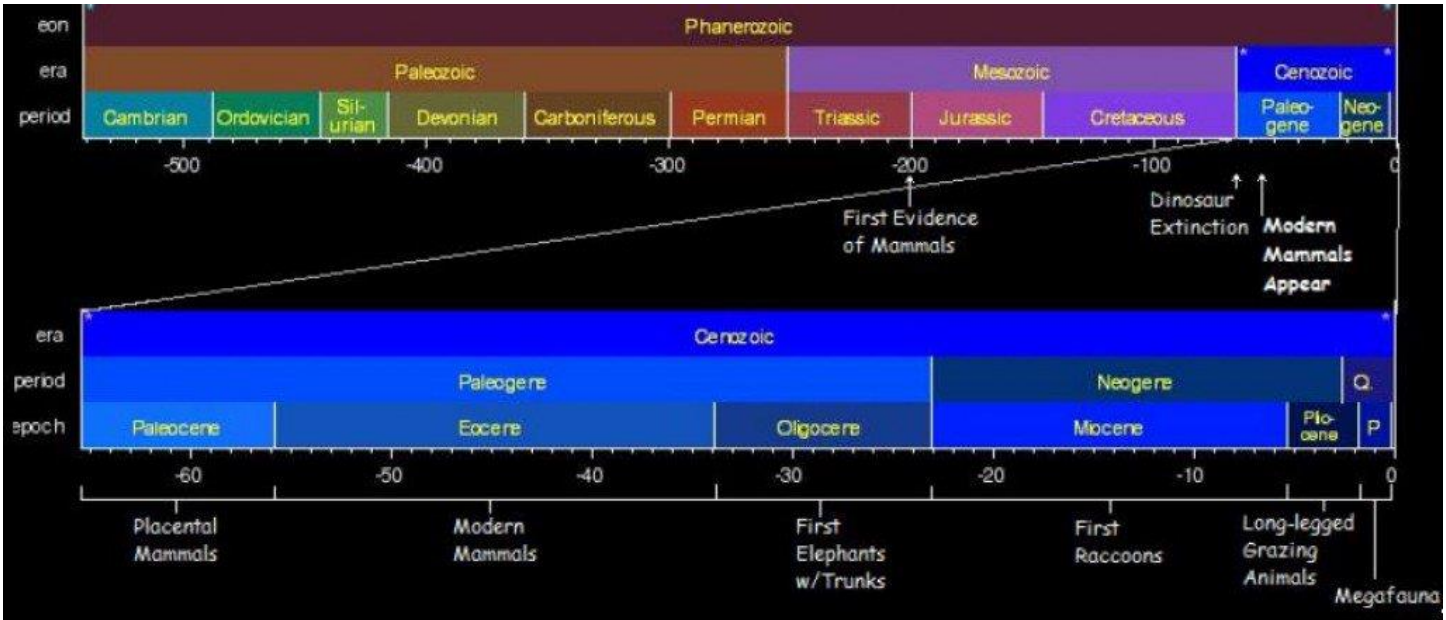
Considering the intended audience at the time Genesis was written would have no knowledge of dinosaurs it's unlikely they are what it was speaking of. It's more likely that these descriptions refer to large reptiles or other large non-mammal creatures familiar to people in this age. However, if there were to be any mention of dinosaurs anywhere in the bible, it would be right here.

Day 6 - Living Creatures from the Land

Genesis 1: 24-25 - And God said, "Let the earth bring forth the living creature after his kind: cattle and creeping thing and beast of the earth after his kind"; and it was so. And God made the beast of the earth after his kind, and cattle after their kind, and every thing that creepeth upon the earth after his kind; and God saw that it was good.

Here that dividing line mentioned above between sauropsids and synapsids begins to take on a whole new context. In verse 24 God calls for the 'earth' to bring forth specific kinds of creatures. Knowing that life had already made its way onto land during 'day 4', there would be plenty of living material to use.

The first mammals appeared way back during the end of the Triassic Period (251 to 199.6 mya), most likely evolving from synapsid reptiles (see proto-mammals). All throughout the Jurassic Period (199.6 to 145.5 mya) mammals continued to etch out an existence in terrain dominated by dinosaurs, but grew no larger than a small rodent. But once the dinosaurs were out of the way by the end of the Cretaceous Period (145.5 to 65.5 mya) mammals really began to thrive as placental mammals, and then modern mammals, developed all throughout the Paleogene Period (65.5 to 23.03 mya).



Phanerozoic Eon (542 mya to present) | Mesozoic Era (251 to 65.5 mya) | Triassic Period (251 to 199.6 mya)

* Adelobasileus **proto-mammal emerged (225 mya)**
* **205 mya: First evidence of mammals:** Morganucodon

Phanerozoic Eon (542 mya to present) | Mesozoic Era (251 to 65.5 mya) | Jurassic Period (199.6 to 145.5 mya)

* **166 mya: Evolutionary split of monotremes from primitive mammals**
* **148 mya: Evolutionary split between marsupial and eutherian mammals**

Phanerozoic Eon (542 mya to present) | Mesozoic Era (251 to 65.5 mya) | Cretaceous Period (145.5 to 65.5 mya)

* **110 mya: Crocodiles appeared**
* **Modern mammals and birds developed**
* **68 mya: Tyrannosaurus rex thrived**
* **65.5 mya: Mass extinction of 80-90% of marine species and 85% of land species, including the dinosaurs** (K-T or K-Pg Extinction Event)

Phanerozoic Eon (542 mya to present) |Cenozoic Era (65.5 mya to today) | Paleogene Period (65.5 to 23.03mya)
Paleocene Epoch (65.5 to 55.8 mya) – Appearance of placental mammals (marsupials, insectivores, lemuroids, creodonts)
Eocene Epoch (55.8 to 33.9 mya) – Modern mammals appear (rhinoceros, camels, early horses)
Oligocene Epoch (33.9 to 23.03 mya) – First elephants with trunks

Phanerozoic Eon (542 mya to present) | Cenozoic Era (65.5 mya to today) | Neogene Period (23.03 mya to today)
Miocene Epoch (23.03 to 5.3 mya) – First raccoons appear
Pliocene Epoch (5.3 to 2.58 mya) – Rise of long-legged grazing animals

Phanerozoic Eon (542 mya to present) | Cenozoic Era (65.5 mya to today) | Quaternary Period (2.58 mya to today)
Pleistocene Epoch (2.58 mya to 11,400 yrs ago) – Presence of large land mammals and birds

Day 6 – Humans

Genesis 1: 26-28 - And God said, "Let Us make man in Our image, after Our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth and over every creeping thing that creepeth upon the earth." So God created man in His own image, in the image of God created He him; male and female created He them. And God blessed them, and God said unto them, "Be fruitful and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth."

While it is clear that humans are mammals, the lineage between chimpanzees and early humans of the Homo genus are relatively unknown. The first mammals to begin to take on the 'image' and 'likeness' of modern humans were bipedal hominins who walked on two legs. These beings first showed up about six million years ago. It is not known at this time if these hominins are direct ancestors of modern humans or not.

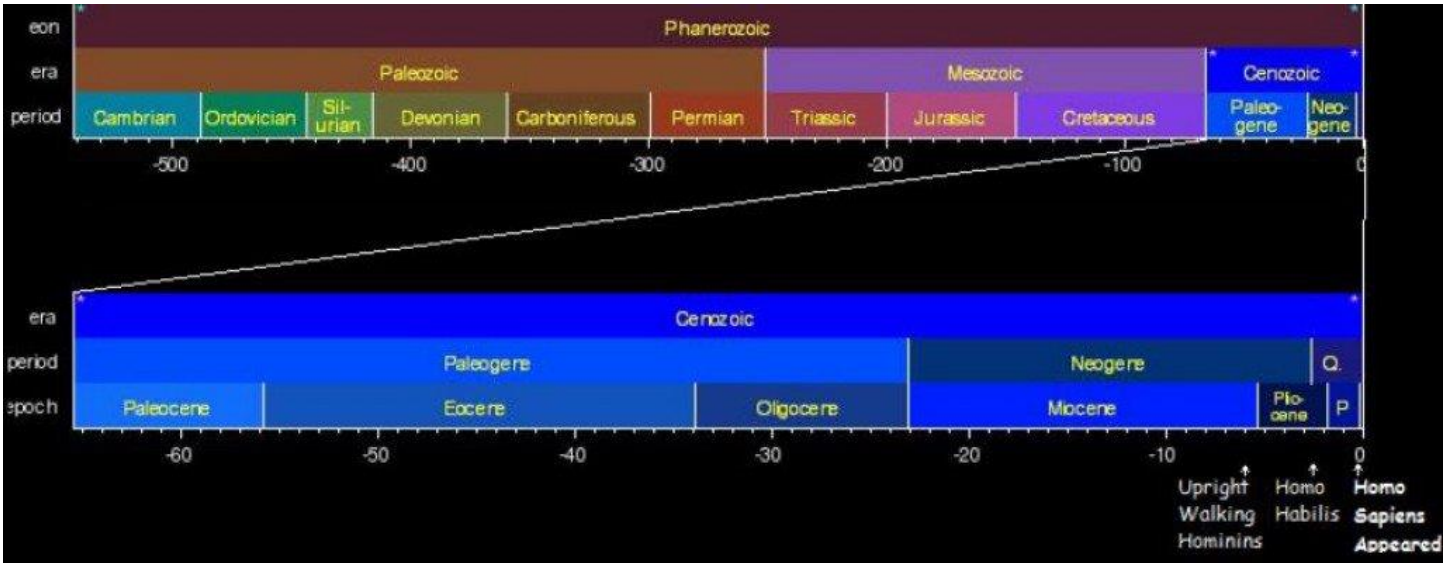
God gave humans very specific instructions according to Genesis. Each subsequent species of early humans progressively exhibited physical traits that more resembled the 'image' and 'likeness' of modern humans and behaviors that realized the instructions given; fill the earth, subdue the earth, and establish dominion over all the living creatures of the earth. This is exactly what early humans did, throughout the course of many generations and many different species.

Homo habilis first appeared during the early portion of the Pleistocene Epoch (2.58 mya to 11,400 years ago), marking the beginning of the Stone Age as they were the first species to use stone tools. Pleistocene is most well known for being the Epoch where megafauna existed; mammoths, sabre-toothed cats, dire wolves.... When the dinosaurs were taken out by the seemingly selective K-T mass extinction (65.5 mya), mammals enjoyed dominance in the animal kingdom and eventually grew to exceptional sizes. While *Homo habilis* exhibited increased mental capabilities in forging and using tools, they proved to be no match for the dominant megafauna, as fecal evidence shows they were a fairly regular diet for large cats known as *dinofelis*.

About 300,000 years into the Stone Age, a new species called *Homo erectus* showed up in the same region where most species of the *Homo* genus appear to have originated, the Great Rift Valley in East Africa. *Homo erectus* were very similar to modern humans in their skeletal build, the trait which earned them their name. They also proved to exhibit a natural 'will' to migrate over long distances mirroring God's command to 'fill' and 'subdue' the earth as this went a long way towards establishing humanity's existence in the natural world. Many also believe this to be the species where early humans lost a majority of their body hair and developed the ability to sweat, traits that would definitely prove beneficial for long trips on foot.

According to DNA evidence, both *Homo sapiens* and Neanderthals appear to have evolved from a species known as *Homo heidelbergensis*, who also migrated great distances. Neanderthals first showed up in Europe about 400,000 years ago. This is where early humans really began to establish their dominance in the animal world as Neanderthals only appear to have really done one thing, and they did it really well, they hunted megafauna. Homo Sapiens, who appeared around 200,000 years ago in East Africa, were also skilled hunters who preyed on megafauna, and who ultimately proved to be too much for Neanderthals as they literally pushed them out of existence within about 30,000 years.

From the moment *Homo sapiens* first appeared they migrated, they hunted, and they filled the earth, adapted to the various climates, and established dominance in the animal kingdom throughout Africa, Europe, Asia, and even Australia. They lived lives much like, and probably very much resembled, indigenous tribal cultures that still exist today. Namely the Aborigines of Australia and tribal cultures of central Africa.



Phanerozoic Eon (542 mya to present) | Cenozoic Era (65.5 mya to today) | Neogene Period (23.03 mya to today)
Miocene Epoch (23.03 to 5.3 mya)
*** 6 mya: Upright walking (bipedal) hominins appear**

Pliocene Epoch (5.3 to 2.58 mya)
*** 4.4 mya: Appearance of** Ardipithecus**, an early hominin genus**
*** 3.9 mya: Appearance of** Australopithecus**, genus of hominids.**
*** 3.7 mya: Australopithecus hominids inhabit Eastern and Northern Africa.**

Phanerozoic Eon (542 mya to present) | Cenozoic Era (65.5 mya to today) | Quaternary Period (2.58 mya to today) | Pleistocene Epoch (2.58 mya to 11,400 yrs ago)
*** 2.4 mya:** Homo habilis **appeared**
*** 2 mya: Tool-making humanoids emerge. Beginning of the Stone Age.**
*** 1.7 mya:** Homo erectus **first moves out of Africa**
*** 530,000 yrs ago: Development of speech in** Homo heidelbergensis
*** 400,000 yrs ago: Human and Neanderthal lineages start to diverge genetically**
*** 400,000 yrs ago: Hominids hunt with wooden spears and use stone cutting tools.**
*** 370,000 yrs ago: Human ancestors and Neanderthals are fully separate populations.**
*** 300,000 yrs ago: Hominids use controlled fires**
*** 230,000 yrs ago: Neanderthal man spreads through Europe**
*** 160,000 yrs ago: Homo sapiens appeared. Origin of human female lineage** (Mitochondrial Eve)
*** 105,000 yrs ago: Stone age humans forage for grass seeds such as sorghum.**
*** 80,000 yrs ago: Non-African humans interbreed with Neanderthals**
*** 74,000 yrs ago: Toba volcanic eruption releases large volume of sulfur dioxide**
*** Homo sapiens reduced to about 10,000 individuals**
*** 60,000 yrs ago: Oldest male ancestor of modern humans** (Y-Chromosome Adam)
*** 28,000 yrs ago: Neanderthals disappear from fossil record.**
*** 15,000 yrs ago:** Bering land bridge **between Alaska and Siberia allows human migration to America**
*** 12,900 yrs ago: Explosion of comet over Canada causes extinction of American megafauna such as the mammoth and sabretooth cat (Smilodon)**

In fact, every human alive today shares a common ancestor, a *Homo sapien* woman, that lived roughly 160,000 years ago in East Africa. She is known as Mitochondrial Eve, a name inspired by Eve from Genesis. Her descendants continued to fill and subdue and dominate the terrain, spreading to North and South America when the sea level was low enough to expose the Bering Land Bridge that linked Eastern Asia to the other side of the world.

The First Farmers

"When major climate change took place after the last ice age (c. 11,000 BC), much of the earth became subject to long dry seasons. These conditions favored annual plants which die off in the long dry season, leaving a dormant seed or tuber. These plants tended to put more energy into producing seeds than into woody growth. An abundance of readily storable wild grains and pulses enabled hunter-gatherers in some areas to form the first settled villages at this time." - http://en.wikipedia.org/wiki/History_of_agriculture

So as a result of climate change, at the beginning of a series of dry seasons, the conditions made for abundant plant life that produced a lot of seeds, which led directly to the discovery of horticulture and the first human settlements.

Genesis 1: 29-31 - And God said, "Behold, I have given you every herb bearing seed which is upon the face of all the earth, and every tree in which is the fruit of a tree yielding seed; to you it shall be for meat. And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth wherein there is life, I have given every green herb for meat"; and it was so. And God saw every thing that He had made, and behold, it was very good. And the evening and the morning were the sixth day.

By 10,000 BC, all species of megafauna were extinct, and the planet was 'filled' by Homo Sapiens, the only remaining species of the Homo genus. About 2,000 years later, early humans first began to farm. Farming first appears to have begun in Mesopotamia, and then spread from there.

Verse 29 and 30 both depict God showing humans the 'green herbs' and 'fruit trees' He provided for both the animals and humans to eat, but for the humans only He specifically spoke of the herbs and fruit that bore seeds, seeds that only humans would begin to use.

And the evening and the morning were the sixth day, the age of mammals and humans.

Conclusion

Using a more complete picture of earth's history provided by modern science, it can now be seen that the creation account in the Book of Genesis is much more accurate than many have given it credit for. Many of the things detailed throughout this article have only been determined in the past few decades.

It is unknown just how old the Books of Moses really are. Scholars estimate its original inception, based on a study of the text as it was around 200 BC when the oldest surviving copies were made, was probably during the kingdoms of Judah and Israel no earlier than 950 BC. Others say they were written by Moses around 3500 BC, though there's the logistical issue of Moses' death being written into the story. Tablets containing stories very similar thematically to stories in Genesis were written by the Sumerians of Mesopotamia as early as the end of the 3rd millennium BC.

In any case, the creation account in Genesis was written back when humans thought the earth was flat and was the center of the universe. Without divine intervention in some form, it's hard to believe the scribes that wrote the creation account could have correctly listed 13 details and 6 major eras of earth's history in the correct chronological order....

Details in order: The heavens, earth, oceans, darkness, light, atmosphere/water cycle, land, plant life, position of sun/moon/stars, life from the sea, birds, mammals, and humans.

Major eras or 'days':

The 6 'Days' of Genesis

Day 1: Verses 1 through 5	Hadean Eon - Age when oceans formed and atmosphere became translucent
Day 2: Verses 6 through 8	Archaen Eon - Age when water cycle and oxygenated atmosphere were established
Day 3: Verses 9 through 13	Proterozoic Eon - Age when continents formed; Paleozoic Era - Plantlife on land
Day 4: Verses 14 through 19	Paleozoic Era - Age when continents moved from beneath planet to between poles
Day 5: Verses 20 through 23	Mesozoic Era - Age when life from the sea thrived ultimately leading to birds
Day 6: Verses 24 through 31	Cenozoic Era - Age when modern mammals and humans developed