

## Origins and Earth History:

### I. Origin of the Universe

#### A. An Expanding Universe

Astronomer Edwin Hubble wrote in 1929 that the relation of the redshift of galaxies to their distance suggests that all galaxies are receding from one-another and therefore the universe is expanding. Since the universe is expanding it therefore had a beginning.

#### B. Universe Fine-Tuning

"Since the 1960s physicists have recognized that many physical parameters are finely tuned, against all odds, to make life possible." "Much of this fine-tuning, moreover, has been present from the very beginning of the universe itself." (S. Meyer) The fine-tuning of the parameters suggests a Fine-Tuner.

Additional information: [1]

Fine structure constant:

if larger: all stars would be at least 30% less massive than the sun

if larger than 0.06: matter would be unstable in large magnetic fields

if smaller: all stars would be at least 80% more massive than the sun

Strong nuclear force coupling constant:

if larger: no hydrogen would form; atomic nuclei for most life-essential elements would be unstable; thus, no life chemistry

if smaller: no elements heavier than hydrogen would form: again, no life chemistry

Weak nuclear force constant:

if larger: too much hydrogen would convert to helium in big bang; hence, stars would convert too much matter into heavy elements making life chemistry impossible

if smaller: too little helium would be produced from big bang; hence, stars would convert too little matter into heavy elements making life chemistry impossible

Entropy level of the universe:

if larger: stars would not form within proto-galaxies

if smaller: no proto-galaxies would form

Gravitational force constant:

if larger: stars would be too hot and would burn too rapidly and too unevenly for life chemistry

if smaller: stars would be too cool to ignite nuclear fusion; thus, many of the elements needed for life chemistry would never form

Ratio of electron to proton mass:

if larger: chemical bonding would be insufficient for life chemistry  
if smaller: same as above

Ratio of electromagnetic force constant to gravitational force constant:

if larger: all stars would be at least 40% more massive than the sun; hence, stellar burning would be too brief and too uneven for life support

if smaller: all stars would be at least 20% less massive than the sun, thus incapable of producing heavy elements

Astronomer and cosmologist Fred Hoyle wrote:

“A commonsense interpretation of the facts suggests that a super intellect has monkeyed with physics, as well as chemistry and biology.” [2]

Stephen Meyer, Ph.D. Philosophy of Science, University of Cambridge, notes:

“[The] fine-tuning of the universe exhibits extreme improbability and functional specification that invariably trigger an awareness of, and justify an inference to, intelligent design. Since the multiverse theory cannot explain fine-tuning without invoking prior fine-tuning, and since the fine-tuning of a physical system to accomplish a propitious end is exactly the kind of thing we know intelligent agents do, it follows that intelligent design stands as the best explanation for the fine-tuning of the universe.” [3]

A method of reasoning is inference to the best explanation. “This can be applied to different worldview hypotheses with respect to the origin of the universe...[M]aterialism has this problem: If matter itself comes into existence a finite time ago in the past, then there is no matter before it to do the causing. It is causally inadequate...

Theism, on the other hand, posits a God that is independent of the universe and therefore can provide a causally adequate explanation for the origin of the universe from something else, because there is a something else, there is a transcendent entity of great power that can bring the universe into existence. So applying this method we come up with a God hypothesis of some kind.

[The] assertion that the universe is as we would expect from the standpoint of a materialistic worldview is patently false. It looks exactly what we would expect from a theistic point of view...” [4]

### C. Planet Habitable Zones [5]

The circumstellar habitable zone (CHZ) for liquid water on a planet is dependent on the radius of the planet's orbit, planetary mass, and the radiative flux of the host star. For the solar system, the CHZ is approximately 0.99 to 1.70 AU.

The rotation rate habitable zone of a planet is where the rotation rate results in temperatures that are not too extreme, and atmospheric jet streams that don't produce too dry or too wet conditions.

The astrosphere habitable zone is where a star's stellar wind extends far enough to where other habitable zones overlap and is just-right to shield an orbiting planet's atmosphere and surface from deadly high-energy cosmic radiation.

The tidal habitable zone of a planet is the range that is far enough from a host star to prevent tidal locking but close enough for life-essential radiation. A large number of exoplanet candidates are likely tidally locked.

The obliquity habitable zone is determined by the axial tilt of a planet relative to its orbital axis. Higher obliquity pushes several habitable zones outward.

The ozone habitable zone of a planet is where an ozone shield can form. Ozone in Earth's stratosphere absorbs up to 99% of life-damaging UV radiation. Necessities are: quantity of oxygen, just-right UV radiation, and low variability.

The electric wind habitable zone is where a planet with an atmosphere greater than about 1% of Earth's is at a distance from the star more than about 90% of the Earth's distance to the Sun. If the distance is less, the electric field will dry out the planet.

To be life-friendly, a parent star temperature needs to be between about 4,600K and 7,100K for the UV habitable zone to be located within the water habitable zone. Over 80 percent of all stars would not have a planet within both zones.

The photosynthetic habitable zone of a planet is where photosynthesis can occur. The constraints for photosynthesis are: water quantity, temperature, seasonal variation, mineral availability, light intensity, and CO<sub>2</sub> concentration.

A habitable planet must have a strong magnetic field, similar to Earth's, to shield life from both deadly solar and cosmic radiation, and to maintain surface water. The planet's mass and rotation rate should be very similar to Earth's.

To sustain life a planet is only a truly habitable candidate if it resides in all of the habitable zones. For Earth to be within nine or more habitable zones suggests purposeful design. [6]

## II. Origin and Complexity of Life

### A. Origin of the Living Cell and DNA

The discoveries in modern science especially in the 21st century have had a significant impact on the question of the origin of living organisms. The abundant complex and specified information in the living cell has been called the DNA Enigma, and the questions which arise are these: [7]

1. What is the origin of the system for storing and encoding digital information in the cell, DNA's capacity to store digitally encoded information?
2. What is the origin of the large amount of specified complexity or functionally specified information in DNA?

3. What is the origin of the integrated complexity- the functional interdependence of parts- of the cell's information-processing system?

As Stephen Meyer has noted,

"[T]he presence of specified information-rich sequences in even the simplest living systems points definitely to the past existence and activity of a designing intelligence." [8]

Over fifty years of experiments attempting to produce abundant complex specified information have shown that such information generation is beyond the reach of undirected processes without the input of intelligent design. [9]

Features discovered in the living cell include: 1) nested coding of information, 2) files within folders hierarchical filing, 3) distributed storage and retrieval informational modules, 4) automated error correction systems, 5) integrated circuit structures, 6) non-coding DNA as operating system, and 7) irreducibly complex molecular machines, which we would expect to find if living cells had been intelligently designed. Conversely, such features would clearly not be expected from undirected mechanisms. [10]

B. Intelligent Design: Complex Molecular Machines, etc.

The bacterial flagellum is powered by a rotary motor, which has a drive shaft, universal joint, rotor, bushings, stator, and a clutch and braking system. It has a near 100% efficiency and displays a clear top-down design logic. The flagellum is irreducibly complex.

The ATP synthase machine with rotary motor is able to produce about 100 ATP molecules per second with near-100% efficiency. In humans it produces about 150 pounds of ATP every day, which is used rapidly as energy. ATP synthase is irreducibly complex.

F<sub>0</sub>F<sub>1</sub> ATP Synthase has two rotary motors joined by a stator. The F<sub>0</sub> motor is powered by protons and turns the F<sub>1</sub> motor.

A-type ATPases are found in single-celled Archaea and some extremophilic bacteria and are rotary engines that use ATP as fuel to pump protons across plasma membranes. The central rotor rotates against a stator apparatus.

V-type ATPases are molecular rotary engines that use ATP as fuel to pump protons across plasma membranes of numerous cell types. V-ATPases have a central rotor that rotates against a surrounding stator apparatus.

Archaea are single-celled microorganisms that are powered by a rotary motor which generates thrust by rotating a spike like structure. The rotary motor of the bacterial flagellum is different and powers a whip like structure.

RuvAB is a molecular machine in bacteria made of two motors, labelled RuvB AAA+ ATPases, and a RuvA stator. The RuvB motors rotate together with the DNA substrate and form the RuvAB branch migration complex that handles DNA recombination and repair.

MO-1 is a magnetotactic bacterium which can orient itself along geomagnetic field lines and has a gear-driven seven-engine flagellar bundle for propulsion, which is a very different architecture compared to the flagellar rotary motor in *E. coli*.

The eukaryotic cilium has over 200 different kinds of protein parts, built on a system of microtubules. An internal transportation system uses a molecular machine called kinesin. kinesin-2 has two "feet" that walk while carrying a load. The walking machines proceed along microtubule tracks to tow a cargo vesicle and even large cellular organelles to the required location. The cilium is irreducibly complex.

Photosynthesis is crucial to life and incredibly complex. In the leaves of plants it requires finely tuned enzymes, cofactors, and other biomolecules to facilitate the necessary chemical reactions. It may be an irreducibly complex system.

Cohesin is a multisubunit protein complex molecular machine that mediates sister chromatid cohesion, homologous recombination, and DNA looping. Cohesin is irreducibly complex.

ClpX is an ATP-dependent molecular machine that unfolds native proteins and translocates unfolded polypeptides into the ClpP complex. ClpX is irreducibly complex.

The MRX(MRN) complex plays a central role in the cellular response to DNA double-strand breaks, and also forms telomere length counting machinery that measures the integrity of telomeres. The MRX complex is irreducibly complex.

The blood coagulation system is a molecular machine with an assembly of substrates, protein cofactors, enzymes and calcium ions on a phospholipid surface. After its initiation pathways converge it is irreducibly complex.

The ribosome is an RNA molecular machine that plays a crucial role in protein synthesis and is optimized for error-correction, speed and control. The ribosome is irreducibly complex.

Lymphocyte cells can produce over 100,000,000 varieties of antibodies, and the processes that produce antibodies require an array of molecular machines. The adaptive immune system is irreducibly complex.

Topoisomerase molecular machines are present in all domains of life to untangle supercoils in DNA strands during replication and transcription by breaking and splicing a strand of DNA in a four-step procedure.

Helicases are essential enzymes involved in all aspects of nucleic acid metabolism including DNA replication, repair and transcription. The helicase PcrA can unwind DNA for transcription at an incredible rate of over 1000 base pairs per second.

Myosin nano molecular walking motors travel on actin filament track systems in defined directions. The myosin V walking motor exports cargo, while the myosin VI walking motor acts as the major motor for cargo import.

Aminoacyl-tRNA synthetases are aminoacylation machines which include transcription/translation machinery. The instructions are coded in DNA and executed by protein workers.

DNA Polymerase is a multiprotein machine that is involved in DNA replication and repair using a template strand. It tethers to DNA and uses a protein-based sliding clamp and then proofreads and fixes mistakes.

An irreducibly complex biological molecular machine is made of a number of essential parts, and all of the parts must be present for it to function properly. If one of the parts is missing the machine is non-functional. All parts of the machine had to come into existence at once. Irreducibly complex biological machines could not have arisen through any blind and gradual evolution process. Their discovery is compelling evidence for intelligent design.

#### C. Origin of Humans: Genetics

A scientific study has been presented that a single human-couple origin is possible. [11]

In studies concerning the genomes of humans and chimpanzees: "A comparison of the complete human and chimp genomes has identified twenty distinct gene families, each with multiple genes, that are present in humans but absent from chimps and other mammals." [12]

Early studies by some of those working within the philosophy of materialism claimed a 98-99% genetic similarity between humans and chimpanzees. The studies were confined to segments of DNA and were limited to a fraction of the genome. More recently, the genetic similarity has been on a downward trend. Comparisons of the whole genome have shown an average 70% genome-wide similarity [13]. The similarity to human Y chromosome was found to be only 43%. [14]

#### D. Origin of Humans: The Fossil Record

The fossil record of humans and apes confirms the genetic data. Both australopithecine apes and Homo erectus humans appear suddenly in the fossil record, without clear evidence for the 19th century notion that apes can gradually turn into humans. [15]

#### E. Origins and History of the Major Taxa and Predictions Concerning the Fossil Record

The fossil record prediction for the hypothesis of a common ancestry evolution of life is that there should be a bottom-up pattern of appearance of biological disparity, with innumerable transitional fossil examples. However, the major discovery after about one hundred sixty years of investigation of the fossil record is a top-down pattern with abrupt appearance.

Many scientists have also come to conclude that the problem with neo-Darwinism is the inability of the mutation-natural selection mechanism to generate genuine novelty. [16]

#### F. Origins of Taxa: Taxonomically Restricted ORFan Genes

Stephen Meyer writes:

“[G]enomic studies are now turning up hundreds of thousands of genes in many diverse organisms that exhibit no significant similarity in sequence to any other known gene. These ‘taxonomically restricted genes’ or ‘ORFans’ (for ‘open reading frames of unknown origins’) now dot the phylogenetic landscape. ORFans have turned up in every major group of organisms, including plants and animals as well as both eukaryotic and prokaryotic one-celled organisms. In some organisms, as much as one-half of the entire genome comprises ORFan genes....Since ORFans lack sequence similarity to any known gene—that is, they have no known homologs in even distantly related species—it is impossible to posit a common ancestral gene from which a particular ORFan and its homolog might have evolved.”

“As scientists have explored and sequenced more genomes, they have discovered more and more ORFans without finding anything like a corresponding number of homologs. Instead, the number of ‘unpaired’ ORFan genes continues to grow with no sign of the trend reversing itself.” [17]

Ann Gauger notes:

“Perhaps we see so many species and clade-specific orphan genes because they are uniquely designed for species- and clade-specific functions. Certainly, this runs contrary to the expectation of common descent” [18]

#### G. Origins and History of the Major Taxa: Interpretations of the Geological and Fossil Record

##### 1. Slow and Gradual Erosion Hypothesis

In the early 19th century a theory was published which assumed a slow and gradual depositional explanation of the rock layers which took significant time. This was followed by the assumption of a timescale of millions of years to explain the many layers of the rock strata. A major problem with the theory of a slow and gradual formation for most of the theoretical geologic column is that while there should be evidence of millions of years of erosion between the layers of rock strata, the evidence for slow and gradual erosional rates is generally absent.

##### Lack of Slow and Gradual Erosion Between Layers

“[W]hen we look at the widespread, thick layers of the rock record we are hard pressed to see the erosion we would expect over a long period of time. Layers allegedly separated by millions of years show very little erosion on the top of the underlying layer. In the same manner, layers that supposedly took millions of years to accumulate show the same absence of erosional features throughout the thickness of the formation.

According to the geological time scale, the flat, horizontal rocks seen at the Grand Canyon—some 1,220 m (4,000 feet) thick—represent around 250 million years of deposition. If so, we would expect both the layers and their boundaries to be riddled with signs of erosion. But one reason these sedimentary rock layers are so distinct is the lack of such features. Where is all the erosion?...Each layer should be riddled by valleys, gullies, and canyons.” [19]

### Original Biological Material in Fossils

Other discoveries related to the age of the geological and fossil record have been the finds of original biological material in many fossils. There have been eighty-five reports of biological remnants in dinosaur, mammal, bird, plant, reptile, amphibian, insect and other arthropods, clam, worm, and sponge fossils that span the globe. [20] Protein remnants were even found in layers below the Cambrian. Biological materials decay over time and although some might last for thousands of years, none should last into the tens and hundreds of millions of years.

Original biological materials found in some dinosaur bones include elastic blood vessels, blood cells, and DNA. The specific bone protein PHEX was also detected, as well as the DNA protein Histone H4 from the cells. Samples of unmineralized dinosaur bone have been Carbon-14 dated and yielded results between 17,850 and 49,470 years BP. [21] Carbon-14 dating has a limit just below 100,000 years. Material older than that should have virtually no radiocarbon left in them.

### Age of the Rock and Fossil Layers: Carbon-14

In a study of ten coal seams from Paleozoic to Cenozoic, measurable carbon-14 gave an average result throughout in the thousands of years (0.247 +/- 0.25 percent modern carbon), showing that the layers are approximately the same age. [22]

### Geologic ID C14/C12 (pMC +/- 1s)

Cenozoic..... 0.26  
Mesozoic..... 0.21  
Paleozoic..... 0.27

### Radiometric Methods

Rock samples from the dacite lava dome from Mt St. Helens, only ten years old, gave potassium-argon (K-Ar) dates ranging from 34,000 years to 2.8 million years. Seven samples of lava from known dates ranging from 122 BC to 1915 AD gave K-Ar dates from 0.1-1.6 million years. Samples from the Grand Canyon and other areas of the American West using the various radiometric methods (K-Ar, Rb-Sr, Sm-Nd, Pb-Pb) gave scattered dates which were different by up to a billion years. [23] This and other empirical data demonstrate that these radiometric methods are unverifiable.

## 2. Sedimentary Megasequences

"Each sedimentary rock layer across the globe is assigned to a group called a megasequence... Megasequences are not constructed based on the fossil record but rather on common erosional boundaries across the continents." [24] Megasequences include multiple geologic systems, and are traceable on a continental scale. Megasequence boundaries have been correlated to those of other continents.

Periods..... Megasequence

Holocene  
 Pleistocene  
 Pliocene..... Tejas  
 Miocene  
 Oligocene  
 Eocene  
 Paleocene  
 Cretaceous..... Zuni  
 Jurassic  
 Triassic..... Absoroka  
 Permian  
 Pennsylvanian  
 Mississippian..... Kaskaskia  
 Devonian  
 Silurian..... Tippicanoe  
 Ordovician  
 Cambrian..... Sauk

Clarey has found that the megasequences align with the stages of the worldwide Genesis flood. "The rock data tell the story of an ever-increasing global flood event." [30] "Although there are erosional boundaries between the megasequences, there is no evidence of millions of years of missing time. The rocks were merely stacked one on top of another, layer by layer, sequence by sequence, as the Flood rose higher and higher." [25]

Periods.....Megasequence.....Flood and post-Flood

Holocene  
 Pleistocene..... -Ice Age  
 Pliocene..... Tejas..... -Receding Phase  
 Miocene  
 Oligocene  
 Eocene  
 Paleocene  
 Cretaceous..... Zuni..... -High Point  
 Jurassic  
 Triassic..... Absoroka..... -Land Flooding  
 Permian..... -Land + Marine Fossils

Pennsylvanian  
Mississippian.... Kaskaskia  
Devonian  
Silurian..... Tippicanoe  
Ordovician..... -Marine Fossils  
Cambrian..... Sauk..... -Begin Flooding

#### Sauk Megasequence

"In the first 40 days of the Flood, the fountains of the deep formed the tectonic plates, which began to subduct into the mantle. These subductions caused tsunamis over the continents that laid down the first major megasequence: the Sauk, which includes the Great Unconformity and the Cambrian Explosion. Since most of the fossils in the Sauk are marine, these early waves likely buried the shallow seas of the pre-Flood world." [26]

#### Tippicanoe Megasequence

"Tectonic plate subduction created tsunamis that continued throughout the first 40 days of the Flood. They formed the Sauk Megasequence and then the second megasequence, the Tippecanoe. The two megasequences are roughly equal in thickness and composition, but the Tippecanoe rose slightly higher on the continents than the Sauk. At this point in the Flood, it's possible that some human settlements noticed the increasing pulses of water and began retreating to higher ground." [27]

#### Kaskaskia Megasequence

"As the tectonic activity continued, the Kaskaskia Megasequence was being deposited—still within the first 40 days of the Flood. This third megasequence rose slightly higher and shows a slight increase in average thickness over the two previous megasequences. At this point in the Flood, the waters still did not cover much land. The Sauk, Tippecanoe, and Kaskaskia megasequences contain almost 100% marine fossils. It's possible that creatures such as dinosaurs retreated to higher ground or were still living at high enough elevation during these early parts of the Flood. That's why so few dinosaur fossils exist in these megasequences." [28]

#### Absaroka Megasequence

"The Absaroka Megasequence marks a critical turning point. Things went from bad to worse. Land was now being flooded. Land animals and plants begin to appear as fossils in these rock layers. The Absaroka increases dramatically in thickness, more than double any of the earlier megasequences. This shows that floodwaters washed much higher on land than during the Sauk, Tippecanoe, or Kaskaskia. The Ark began lifting off the ground. Increasing global subduction, creation of new seafloor, and increasing thickness of the Absaroka all remarkably correspond, logging a critical chapter in the story of the Flood." [29]

#### Zuni Megasequence

"During the Zuni, the fifth megasequence, the Flood reached its high point, probably marking Day 150. The continents were completely submerged, and no land-dwelling creatures outside the Ark remained alive. The Zuni began at around Day 100 of the Flood and nearly tripled in thickness compared to the Absaroka. Fossils such as dinosaurs and mosasaurs are found in the Zuni on every continent, supporting the global nature of these deposits. The mixing of massive terrestrial and marine creatures also supports

their catastrophic deposition. At this point in the Flood, 10,000 duck-billed dinosaurs are found buried together catastrophically. The rock data tell the story of an ever-increasing global flood event.” [30]

#### Tejas Megasequence

“The floodwaters receded during the sixth and final megasequence, the Tejas. It seems clear from the biblical text that the receding began on Day 150, so this is probably when the Tejas began to be deposited. Even though the water was receding, there was still significant plate tectonic activity—about one-third to one-half of the ocean crust formed during the deposition of the Tejas. This megasequence also shows a reversal in water-flow direction...[S]ignificant amounts of water were draining off the continents during the deposition of the Tejas. The massive drainage probably carved Grand Canyon. The sea level also suddenly dropped, corresponding with the recession of the floodwaters. Geologic rock data give deep insights into the final recession chapter of the Flood story.” [31]

#### Sheet Flow Phase

The Retreating Stage of the Flood includes the Sheet Flow Phase and the Channelized Flow Phase, distinguished by the width of the Flood currents, from wide to narrow. During the Sheet Flow Phase, erosion of the continents would have been widespread. Mountains continued to rise, and as the continents uplifted and ocean basins lowered, the Flood water retreated into the oceans. Once the currents encountered the deeper waters of the sinking ocean basins, their velocity reduced dramatically, and seaward thickening of sediments occurred at the continental margins. In the Gulf of Mexico, these sediments are over 20 km thick. Wide sheets of water flowing off of the continents would be reduced to broad channels. It first planed mountain heights, then plateaus, and finally the continental lowlands. Thousands of planation surfaces (e.g. Serengeti Plain, Africa; Arnhem Land, Australia) and erosional remnants (e.g. Monument Valley, AZ; Spitzkoppe, Namibia; Uluru, Australia) were carved by the vast sheets of water that rushed off of the uplifting continents. Significant planation surfaces are not being formed today, but these surfaces exist globally.

#### Channelized Flow Phase

As the water lowered during this phase, it would have gone into progressively smaller sheets, and later into large channels, until only large rivers flowed into the valleys. The world-wide Flood paradigm predicts that channelized flow features, such as valleys and canyons, would commonly be superimposed on top of sheet flow land forms, and this is exactly what is found over many areas of the Earth.

#### End of the Flood

The Tejas Megasequence represents the time when the floodwaters were receding. It includes most of the Tertiary system, which is divided into the Paleogene and Neogene systems. The Neogene-Quaternary generally represents the Flood/post-Flood boundary.

#### Post Flood

The Genesis vessel of Noah came to rest on the mountains of Ararat at the end of the Flooding Stage at Day 150, but they did not leave the vessel until the end of the Retreating Stage of the Flood, at Day 371.

The mountains of Ararat are thought to be the area of eastern Turkey or western Iran. In the Alborz mountain range of north-western Iran on a mountain called Takhte Soleyman, expeditions from 2005 and 2006 found a huge black object at 13,125 ft elevation.

While having the appearance of rocks from a distance, close inspection revealed areas of apparent petrified planks, which gave the expeditions reason to bring samples back for further study. Microscopic analysis of the rock specimens revealed that the object is composed of petrified soft wood, with a marine fossil found in a sample. [32]

## Dispersal

From the mountains of Ararat, all life that was aboard the vessel began to spread across the earth. Post-Flood log and vegetation mats would have contributed significantly to both animals and plants spreading across the Earth. Log mats that were thick enough to survive the Flood would have been huge, and could have remained afloat for a few hundred years. Some animals could have embarked and unwittingly been transported over the ocean.

The necessity of an oceanic dispersal by rafting to explain the biogeography has been theorized by some scientists [33] who have not considered a worldwide flood. The worldwide flood hypothesis is in a better position to explain the biogeography as there would have been much more vegetation available for rafting.

According to the Research of Dr. Nathaniel Jeanson (Traced, 2022), who discovered a DNA-based generation by generation family tree for global humanity after correlating the DNA data with the genealogies in Genesis 10, global humanity can be shown from the Y chromosome data to be descendants of the three sons of Noah, who along with their wives populated the post Flood world:

Shem: K,L,M,N,O,Q,R1a,R1b,R2,S,T

Japheth: I,J1,J2

Ham: A,B,C,D,E1b,E1b1a,E1b1b,E2,F,G,H

The female mtDNA data show three early nodes, which apparently reflect the mtDNA of the wives of Shem, Ham and Japheth.

## Ice Age

About 500 years after the Flood the Ice Age began, a natural result of a climate imbalance. The oceans had warmed from extensive volcanic activity and the rapid separation of the continents, and continued volcanism injected tiny particles into the atmosphere, which caused cooler summers. The contrast between the temperatures of the continents and the oceans resulted in a dramatic climate. Eventually, snow and ice storms would pelt the continents.

The earliest fossils of humans have been found around this time, in what is termed the Pleistocene. During the Ice Age, the level of the sea lowered, with the result that land bridges were exposed.

Precipitation would have been heavy immediately after the Flood, but it would have decreased over time as the oceans cooled and ice sheets built up. Midway through the Ice Age, precipitation decreased, and grasslands would have mostly replaced forests. By the end of the Ice Age, expanded sea ice further reduced winter air temperatures.

If the Genesis Flood occurred in fairly recent times, in the thousands of years, we would expect evidence for a global Flood to be left in the memory and early records of people groups in many areas of the world, and this is what is found. [34]

#### Tower of Babel (Genesis 11:1-9)

1. Mention of baked bricks in the construction of the tower. (11:3)

The invention of baked bricks was made around the end of the Uruk Period.

2. Building of a tower with its top/head in the heavens. (11:4)

J. H. Walton in *Ancient Near Eastern Thought and the Old Testament* (pp. 80-81) writes, 'Throughout Mesopotamian literature, almost every occurrence of the expression describing a building 'with its head in the heavens' refers to a temple with a ziggurat. For example, here is a description by Warad-Sin, king of Larsa...'He made it as high as a mountain and made its head touch heaven.'"

#### Biblical Names: Ebla Archive

1. a-da-mu (Adam, a personal name, Gen 2:20 etc)
2. a-dam ("man" Gen 1:26 etc)
3. 'a-wa (Eve, Heb. Hawah, Gen 3:20 etc)
4. eden (Eden, Gen 2:8)
5. eb-ri-um (cf. Eber, Gen 10:21; ebri Hebrew Gen 14:13 etc)
6. ab-ra-mu (Abram, Gen 11:26 etc)
7. 'a-gar and 'a-ga-ru (Hagar, Gen 16:1 etc)
8. ish-ma-il (Ishmael, "El has heard", Gen 16:11 etc)
9. qu-tu-ra (Keturah Gen 25:1 etc)
10. ish-ra-il (cf. Israel, Gen 32:28 etc)
11. ish-ra-ya (cf. Israya)
12. ish-ma-ya (Ishmaya, "Ya has heard")
13. e-sa-um (Esau, Gen 25:25 etc)
14. mi-ka-il (Michael, "Who is like El?", Num 13:13 etc)
15. mi-ka-ya (Michaya, "Who is like Ya?")
16. ya-ra-mu (Joram, "Ya is exalted", 1Kgs 16:22 etc)
17. da-ni-lum (Daniel, Dan 1:6 etc)
18. sa-u-lum (Saul, 1Sam 9:2 etc)
19. da-'u-dum (David, 1Sam 16:13 etc)
20. ka-na-na, kananaum (Canaan, Canaanite, Gen 12:6 etc)
21. si-da-mu, sa-dam (Sodom, Gen 14:2; TM.76.G.524; Geo. At. no. 211)
22. ad-mu (Admah, Gen 14:2 etc; Geo. At. no. 210)
23. sa-bi-im (Zeboiim, Gen 14:2 etc; TM.75.G.2231, obv. l 7)

The four cities destroyed by God, namely Sodom, Gomorrah, Admah and Zeboiim, are thought to be the EB III cities of Bab ed-Dhra (Sodom), Numeria (Gomorrah), Feifa (Adma), and Khanazir (Zeboiim). These show evidence of a destruction by fire. The secular chronology is apparently off by about 230 years (2300-2070), while at the time of the Entrance into Canaan by Joshua and the Israelites the secular chronology is off by about 140 years (1550-1410).

Biblical Names: Mari Archive and Misc.

1. a-da-ma, a-dam-u (Adam, Old Akk., Gen 2:20 etc)
2. nukhu (Babylonian for "rest," cf. Noah, noakh "rest," Gen 5:29 etc)
3. palaku (Akk. verb "to divide"), pulukku (Akk. noun "divide territory"), Phalgu (Akk. town) (cf. Peleg "division," Gen 10:25)
4. ra'u (Akk., cf. Reu, Gen 11:18)
5. sarugi (Akk. town, 7th BC, cf. Serug, Gen 11:20)
6. nahur (Mari archive, cf. Nahor, Gen 11:20)
7. turahu (Akk., cf. Terah, Gen 11:24)
8. abi-ram, a-bi-ra-am (Abram, Mari archive, Gen 11:26 etc)
9. hibrum (designation for a tribe at pasture in the Mari archives, cf. Hebrew, Gen 14:13. habiru(m) were detached from their people)
10. shadwi (Old Akk. for lit. "breast," fig. "provision," cf. el shaddai, Gen 17:1)
11. aram nahrima (record of Tiglath-pileser I, cf. Amarna tablet 288: na-ah-ri-ma "Nahrima," Aram Naharim, Gen 24:10 etc)
12. laba-an (Laban, Mari archive, Gen 24:29 etc)
13. ki-na-ah-num (Canaanites, Mari archive, Gen 12:6 etc)
14. bi-ni-ya-mi-na (Benjamin, Mari archive, Gen 35:18 etc)
15. arriwuk, arriyuk (Arioch, Mari archive, Gen 14:1)

III. Biblical History: Egypt to the Messiah

A. Egyptian Sojourn

In the Middle Bronze Age (MB II A/B) in the 13th Egyptian Dynasty, a slave papyrus (Brooklyn 35.1446, Sobekhotep III) mentions Hebrew names:

1. Ashera (fem. Asher, Gen 30:13)
2. Sekera (fem. Issacar, Gen 30:18)
3. Shp-ra (Shiphrah, Exo 1:15)
4. Hy'b'rw (Hebrew, Gen 39:14)
5. Aqoba (fem. Jacob, Gen 25:26)
6. Menahema (fem. Menahem, 2Kings 15:14)
7. Dawidi-huat (David compound, 1Sam 16:13)

B. Egyptian Exodus and Conquest

Much evidence has been pointing to a synchronism between Senusret III and Joseph [35]. During this Pharaohs reign the nomarchs lost their power, which would be a consequence of Joseph's strategy for the famine. The biblical chronology points to Joseph as vizier beginning in 1886 BC, which would be the time of this Pharaoh. One alternative astronomically based reign for Senusret III is Yr. 1 = 1898 BC, which might be a better fit historically.

In the Egyptian delta at Avaris (Tel el-Dab'a), biblical Goshen, Stratum-b/c "Barren" phase marks an abandonment of the site by the slaves around the time of Amenhotep II or Thutmose IV, according to the excavations of Bietak. The workshops of the slaves were abandoned, leaving their work behind. In workshop W1 the slaves had been polishing bronze arrowheads with pumice imported from the Thera volcanic eruption. 140 Aegean arrow-tips of bronze were left behind. The archaeological time when Avaris was abandoned at Stratum-b/c is Late Bronze 1 (LB 1).

In the Conquest of Canaan by the Israelites, the book of Joshua notes that only three cities were destroyed by fire: Jericho (6:24), Ai (8:28), and Hazor (11:11). City IV of Jericho was destroyed with fire. Concerning the dating of the destruction of Jericho, in excavations by Garstang in the 1930s of Jericho City IV, Cypriot bichrome ware, a key indicator of Late Bronze Age (LBA) occupation (1550-1400 BC), was excavated in considerable quantity. The sherds were found on the east side of the tel. Being unaware of the bichrome ware discovered by Garstang, Kenyon misdated the destruction to an earlier time. [35] Garstang's LBA bichrome ware excavated from the city of Jericho are still extant for examination.

At the nearby tombs of Jericho, scarab evidence ends with Amenhotep III. In addition to the destruction of Jericho during LB 1, the city of Ai (Khirbet el-Maqatir) was also destroyed at the end of LB 1 and set on fire. Joshua and his army camped to the north of Ai (Joshua 8:11), and the gate of Khirbet el-Maqatir was on the north side. Tel Hazor was also destroyed and set on fire during LB 1.

The problem with assigning Amenhotep II as the Pharaoh of the Exodus is that Deuteronomy 11:4 says that Egypt was still destroyed "even to this day." However, the Pharaoh who came after Amenhotep II was Thutmose IV, and he continued the might of Egypt. Thutmose IV is thought to have reigned 1401-1391 BC. After the untimely death of Thutmose IV after a reign of only 8-10 years, one of his sons was placed on the throne, Amenhotep III. He was only a little boy, around age 10-12, a son from his minor wife Mutemwiya, who may have acted as regent in his early years. A notable decline of the Egyptian empire followed.

In the 38 year reign of Amenhotep III no military campaign was sent to the north. The alliance Thutmose IV had made with Mitanni now had no backing from Egypt and several nations took back territory that Egypt had controlled. Even near the end of his reign the pleas for help by the Canaanite rulers went unanswered. During his reign, Amenhotep III commissioned some 600 statues devoted to the goddess of healing. The Soleb inscription of Amenhotep III says an enemy is those of "the land of the nomads of (i-h-w3-3) Yahweh." According to the book of Exodus, Egypt did not know the name of Yahweh until the time of Moses and afterward.

In the last years of Amenhotep III, or at his death, the Habiru conquest of Canaan begins. The Amarna tablets, dated to Amenhotep III and or Akhenaten, are pleas from the Canaanite rulers to Egypt

concerning the Habiru that were taking over the land of Canaan. Egypt sent no troops to help the Canaanite rulers. Several archaeologists have concluded that the Habiru of the Amarna tablets are the Hebrew Israelites.

In the Amarna tablets, the people making a conquest of Canaan were variously written as the Habiru, Hapiru or 'Apiru, which match with the root of the name Hebrew, viz. 'Abar. There was an interchangeability of "b" and "p," and these sounds are known as "bilabial stops," used interchangeably across different languages. In the Mari archives of 1800 BC, hibru(m) was a designation for a tribe at pasture, and Habiru(m) were those that were detached from their people. Both Abram and Joseph were known as Hebrews, and the term was the favored foreign appellation, even in faraway Mesopotamia.

In the Amarna Letters there is a correspondence between the Canaanite leader of Jerusalem to the pharaoh about Milkil and Habiri. Malkiel and Heber were two clans of the tribe of Asher (Genesis 46:17; Numbers 26:45; 1 Chronicles 7:31). In EA 366 the king of Achshaph fights in a coalition against the Habiru. In Joshua 11:1 and 12:20 the king of Achshaph joins a coalition to fight a battle against the Israelites.

In EA 287 Ashkelon is in league with the enemy. In Judges 1:18 Ashkelon is taken by the Israelites. In EA 271, 284, and 366 Hebron is in league with Jerusalem and Lachish against the Habiru. In Joshua 10:5 the king of Hebron is in league with the kings of Jerusalem and Lachish. In EA 287, 288, 329, 330, and 333 the Habiru gained control of the city and killed a leader of Lachish. In Joshua 10:23-26 and 31-32 the Israelites killed the king of Lachish and later conquered the city.

At Midian (NW Saudi Arabia) in 1447 or 1446 BC, Moses was told that "all the men who sought to kill you are dead" (Exodus 4:19). This could have been at the time when a Pharaoh died, but the text only says "the men." A relatively short time after returning to Egypt the 10 plagues occurred followed by the Yam Suph/Red Sea event where "Pharaoh and his army (phar'oh ve'chelo) were shook off in the Red Sea" (Psalm 136:15). Estimates for the length of the 10 plagues are 4-10 months. According to the 3rd century BC Egyptian priest and historian Manetho, Thutmose IV had a reign of only 8 years and 9 months.

Thutmose IV was the son of Amenhotep II. According to the Dream Stele, Thutmose IV was apparently not a firstborn son. It is not known if his son Amenhotep III was a firstborn or not. [36]. The biblical Pharaoh was not a firstborn but he had a firstborn son who died during the plague of the firstborn. Thutmose IV had at least four sons: Aakheperure (present during the military campaign in year 7 in Nubia), Amenhotep (III, a son of Mutemwiya), Amenemhat (who died young and was buried with Thutmose IV), and Siatum. He also had at least four daughters: Amenemopet, Pyihia, Tiaa, and Tintamun. The wives of Thutmose IV were Nefertari, secondary wife Mutemwiya, sister Iareth, and possibly the Mitanni Princess Henutempet.

According to Exodus 14:30, after the Red Sea event Israel saw the bodies of the Egyptians on the shore. The mummy of Thutmose IV exists, and examination revealed that he was extremely emaciated at the time of his death, and his body suffered several post-mortem injuries, including having his legs broken at both ankles and at his right knee. Since the Pharaoh of the exodus died in the Red Sea, the body of

Thutmose IV would have been retrieved by Egyptians and taken back to Egypt for embalming and burial, which was necessary according to the instructions in their Book of the Dead.

If Thutmose IV was the Pharaoh of the Exodus, the following would approximate the chronology:

Hatshepsut ..... 1547-1526  
Thutmose III ..... 1547-1493  
Amenhotep II ..... 1493-1456  
Thutmose IV ..... 1456-1446  
Amenhotep III ..... 1446-1407  
Akhenaten ..... 1407-1390

Moses ..... 1526-1406  
Exodus ..... 1446  
Conquest ..... 1406

Assigning the end of the reign of Thutmose IV to 1446 BC, the sole reign of Thutmose III would have begun ca. 1526 BC, around the year of the birth of Moses when the biblical Pharaoh began to command the death of Hebrew male infants. This may have been instituted "in order to prevent a repeat of the Hyksos debacle." [Collins, 69] For further research on refining the above chronology with consideration of astronomical data, see [here](#).

In consideration of the above data, there is a pattern of evidence that the Exodus and Conquest occurred at this time in Egyptian history, and that Thutmose IV is the probable Pharaoh of the Exodus.

### The Length of the Sojourn in Egypt

There are four passages in the Bible that deal with the length of the sojourn in Egypt:

1. Genesis 15:13-16 says that Abraham's descendants will be in a land that is not their own and will be enslaved and mistreated for 400 years, but in the fourth "generation" (see below) will return there [to Canaan]. This is either exactly 400 years of being enslaved and mistreated out of the 430 years mentioned in Exodus 12:40, or the 400 is a round number compared to the actual 430 years.

2. Exodus 12:40 says that the time Israel "resided in Egypt" was 430 years exactly, according to the Hebrew text. The LXX adds "and in the land of Canaan." The Samaritan Pentateuch (SP) adds "in the land of Canaan and in the land [of Egypt]." The shorter text cannot be explained as a result of a copyist leap, and therefore from a text critical position the shortest reading of MT "in Egypt" is the oldest reading.

The LXX and SP seek to accommodate a calculation that will fit the fourth "generation" of Genesis 15:16 easier with 430 years, in their view. This is attractive to many scholars because it accommodates the "fourth generation" of Genesis 15:13 more comfortably.

In the "fourth generation" of Genesis 15:16, the Hebrew word usually translated "generation" is *dor*, West Semitic cognate *daru*. While it is rendered "generation" in most English translations, it can also mean "an age, span, cycle of time, a lifetime," cf. Deut 32:7; Psa 145:13; Isa 58:12, perhaps best viewed as an "age" or "century." Note that Abraham had Isaac at the age of 100.

3. Acts 3:17-20 talks about a 450 year period. The 400 years noted in Genesis 15:13, plus the wandering in the desert of 40 years, plus the period of entry into Canaan and the allotment of tribal territory of 6 years, equals 446 years, rounded to 450 years.

For the period of entry to the allotment of land 6 years later, Caleb says he was 40 when Joshua sent the 12 spies (Joshua 14:7) in the 2nd year of the exodus in 1445 BC, and he was 85 at the allotment of the land (Joshua 14:10) in 1400 BC. Since the Conquest began 1406 BC, the period in question is 6 years.

4. Galatians 3:15-18 has a calculation involving 430 years. From the making of God's promise to a descendant/seed of Abraham, Jacob, beginning in 1876 BC, and reception of the law 430 years (of Exodus 12:40) later, equals 1446 BC. Paul counted on the readers knowledge of the length of the Egyptian sojourn in Exodus 12:40.

For the calculation of the exodus at 1446 BC, the fourth year of Solomon to the exodus is 480 years (1 Kings 6:1). This is usually given as 966 BC, plus 480 equals 1446 BC. Further support for the 480 years of 1 Kings 6:1 can be found in 1 Chronicles 6:33-37 which gives 19 generations from Solomon to the exodus. Using 25 years for a generation totals 475 years.

An additional method for calculating the year of the Exodus is consideration of the years when Jubilees occurred. The Babylonian Talmud mentions two occasions for the observance of a Jubilee, in b. 'Arak. 12a, mentioning a Jubilee in the twenty-fifth year of captivity of Ezekiel (Ezekiel 40:1), Tishri 574 BC, and in b. Meg. 14b, mentioning a Jubilee in the 18th year of Josiah (2 Kgs 22:14), beginning of Tishri 623 BC.

The Jubilee of 623 BC is 49 years before the Jubilee of 574 BC.  $574 \text{ BC} + (16 \times 49) = 1358 \text{ BC}$ . The first year of that cycle, 48 years earlier, was the year that began in Nisan of 1406 BC,  $+ 40 = 1446 \text{ BC}$ . [R. Young, "The Talmud's Two Jubilees and Their Relevance to the Date of the Exodus" *Westminster Theological Journal* 68 (2006): 71-83.]

In addition to the above calculations, in Judges 11:26 Jephthah in ca. 1100 BC states that Israel occupied Heshbon, Aroer, and the towns along the Arnon river for 300 years, which brings us again to ca. 1400 BC as the time of the Conquest.

## B. Names of Biblical People in Inscriptions and Seals [37]

-Ahab (1 Kings 16:28, etc). A king of Israel (874-853 BC). The Kurkh Monolith of Shalmaneser III (859-824 BC), col. 2, lines 91-92, reads: a-ha-ab-bu sir-ila-a-a "Ahab the Israelite."

-Ahaz/Jehoahaz son of Jotham (2 Kings 16:1, etc). A son of Jotham and a king of Judah (732-716 BC). The Cuneiform Annals of Tiglath-pileser III (745-727 BC), 47 (K03751), r11', reads ia-u-ha-zi ia-u-da-a-a "Jehoahaz of Judah." A bulla reads: l'hz yhwtm mlk yhdh "Belonging to Ahaz, (son of) Yehotam, king of

Judah." A seal reads: l'sn' 'bd 'hz "Belonging to Ushna, minister of Ahaz." Dated by epigraphy to late eighth century BC.

-Ahikam son of Shaphan (2 Kings 22:12; Jeremiah 26:24, etc). The son of Shaphan, and an officer in the court of king Josiah of Judah (640-609 BC). A bulla reads: [l']hyqm [b]n spn "[Belonging to A]hiqam, [so]n of Shaphan." See also Gemariah son of Shaphan.

-Alexander son of Simon the Cyrenean (Mark 15:21). Alexander was one of two sons of Simon the Cyrenean who carried the crossbeam of Jesus of Nazareth (30/33 AD). An ossuary inscription pre 70 AD (Heb. Univ. No. 1965) reads: 1. (Greek) Alexandrou, 2. (Hebrew) 'lksndrws qrnwt/h "Alexander the Cyrenian," 3. (Greek) SimwnAle Alexandrou Simwnos, 4. (Greek) Alexandros Simwn "Alexander (son of) Simon."

-Amariah (2 Chronicles 26:11, 31:15; Zephaniah 1:1). Amariah was the son of Hananiah, and served king Hezekiah of Judah (726-697/6 BC). A bulla reads: l'mryhw hnnyhw 'bd hzqyhw " Belonging to 'Amaryahu, (son of) Hananyahu, minister of Hizqiyahu."

-Asaiah (2 Kings 22:12, 14; 2 Chronicles 34:20). An official of king Josiah of Judah (640/39-609 BC). A seal reads: l'syhw 'bd hmlk "Belonging to Asayahu, minister of the king."

-Azaliah son of Meshullam (2 Kings 22:3). The father of Shaphan the scribe, at the time of king Josiah of Judah (640-609). A seal reads: l'zlyhw bn mslm "Belonging to Azalyahu, son of Meshullam."

-Azariah/Uzziah (2 Chronicles 26:3, etc). A king of Judah (788/7-736/5 BC). A stone seal reads: l'byw 'bd 'zyw "Abiyaw, minister of 'Uzziyaw." Dated by epigraphy from mid to late eighth century BC. A stone seal reads: l'sbnyw 'bd 'zyw "Belonging to Shubnayaw, minister of 'Uzziyaw." Dated by epigraphy from mid to late eighth century BC. Significant archaeological evidence of biblical earthquake (ca. 750 BC; Amos 1:1, 3:14, 6:11, 8:8, 9:1; Zechariah 14:5) during kings Uzziah and Jeroboam II. Evidence in Jerusalem, Hazor, Gath, etc. The earthquake was a warning to Israel that its evil deeds were leading to destruction.

-Azariah son of Hilkiah (1 Chronicles 6:13, 9:11). A son of Hilkiah the high priest during king Josiah of Judah (640-609 BC). He held a sacerdotal function in the First Temple of Jerusalem. A City of David bulla reads: l'zryhw bn hlqiyhw "Belonging to Azaryahu, son of Hilqiyahu." A seal reads: 'zryhw hlqiyhw "Azaryahu, (son of) Hilqiyahu"

-Azzur of Gibeon, father of Hananiah (Jeremiah 28:1ff; ca. 627-585 BC). Hananiah was a false prophet. A seal reads: lhnnyhw bn 'zryhw "Belonging to Hananyahu, son of 'Azaryahu." A Gibeon jar handle reads: gb' n gdr ' zryhw "Gibeon. Wall of 'Azaryahu."

-Baruch son of Neriah (Jeremiah 32:12ff; 36:32). The scribe, disciple, secretary, and friend of the prophet Jeremiah (c. 650-570 BC). A bulla reads: lbrkyhw bn nryhw hspn "Belonging to Berekyahu, the son of Neriyahu, the scribe."

-Belshazzar of Babylon (Daniel 5:1ff). Ur, Col. I, 31, reads: ia-a-ti Nabu-na'id ...34 u sha Bel-sharri-user maru resh-tu-u si-it lib-bi-ia "31 As for me, Nabonidus...34 and lengthen the days of Belshazzar, the eldest son, offspring of my body."

-David (1 Kings 12:19; 2 Chronicles 10:19, etc). Davidic dynasty (ca. 1036-966 BC). The Tel Dan stele, line 9, reads: byt dwd "House of David." The Dhiban Mesha stele, line 12, reads: w'sb msm 't ar'l dwdh "I captured from there it's Davidic lion."

-Eliakim son of Hilkiyah (2 Kings 18:18; Isaiah 22:20). Overseer of the palace of king Hezekiah of Judah (726-696). A bulla reads: [l']lyqm [h]lqyhw "[Belonging to E]lyaqim, (son of) [Hi]lqiyahu."

-Elishama (Jeremiah 36:12, etc). A scribe and minister of king Jehoiakim of Judah (609-598 BC). A bulla reads: "Elishama, minister of the king."

-Elishama (2 Kings 25:25; Jeremiah 41:1). The father of Nethaniah, father of Ishmael of royal descent. A seal reads: l'ism' bn hmlk "Belonging to Elishama, the king's son."

-Gedaliah son of Pashhur (Jeremiah 38:1). An official of king Zedekiah of Judah (597-586). A City of David bulla reads: lgdlyhw bn [p]shwr "Belonging to Gedalyahu, son of [P]ashhur."

-Gemariah son of Shaphan (Jeremiah 36:10-12). A son of Shaphan the scribe and servant of king Jehoiakim of Judah (609-598 BC). A City of David bulla reads: lgmryhw [b]n spn "Belonging to Gemaryahu, [so]n of Shaphan." Dated by stratigraphy (early sixth), epigraphy (eighth-early sixth), and ceramic typology.

-Hanan/Hananiah son of Hilkiyah (2 Kings 22:4ff). A seal ring reads l'hnn bn hlqiyhw hkhn "Belonging to Hanan son of Hilkiyah the priest." Dated by epigraphy from late seventh to early sixth century BC.

-Hananiah son of Azariah (Jeremiah 28:1ff). Hananiah was a false prophet. A seal reads: lhnyhw bn 'zryhw "Hananyahu, son of 'Azaryahu."

-Hananiah son of Gedaliah (Jeremiah 42:4 LXX/35:4 MT, which has acquired a yod and is vocalized differently). A prophet whose sons occupied a chamber in the Jerusalem temple at the time of Jehoiakim king of Judah (609-598). A bulla reads: lhnyhw bn gdlyhw "Belonging to Hananyahu, son of Gedalyahu."

-Hananiah (2 Chronicles 26:11, 31:15; Zephaniah 1:1). Hananiah may have been a captain under king Uzziah of Judah (792-740 BC). A bulla reads: l'mryhw hnnyhw 'bd hzqyhw "Belonging to 'Amaryahu, (son of) Hananyahu, minister of Hizqiyahu."

-Hezekiah son of Ahaz (2 Kings 18:1, etc). A son of Ahaz and a king of Judah. The Sennacherib (Taylor) Prism, reads: (iii 74): u (m).kha-za-qi-a-u KUR.ia-u-da-a-a..." (iv 25) URU.ur-sa-li-im-mu URU LUGAL-[ti-shu] "Moreover, Hezekiah of the land of Judah ... city of Jerusalem, [his] royal city." A City of David royal bulla reads: lhzyhu 'hz mlk yhdh "Belonging to Hizqiyahu (son of) Achaz, king of Judah." A bulla reads: lyhwzrh bn hlq[y]hw 'bd hzqyhw "Yehozarah, son of Hilqiyahu, minister of Hizqiyahu." Dated by epigraphy from late eighth to early seventh century BC. A bulla reads: "Amaryahu, (son of) Hananyahu,

servant of Hizqiyahu." A bulla reads: "Azaryahu, son of Yehoah, servant of Hizqiyahu." A bulla reads: "Domla, servant of Hizqiyahu."

-Hilkiah (2 Kings 22:4, 1 Chronicles 6:13; Ezra 7:1). Father of Azariah and a high priest of the Jerusalem temple at the time of king Josiah of Judah (640-609 BC). A City of David bulla reads: l'zryhw bn hlqiyhw "Belonging to Azaryahu, son of Hilqiyahu." A signet ring with seal reads: lhnn bn hlqyhw hkhn "Belonging to Hanan, son of Hilqiyahu, the priest." Dated by epigraphy to late seventh or early sixth century BC. A seal reads l'zryhw hlq "Belonging to Azaryahu, (son of) Hilqa."

-Hoshea son of Elah (2 Kings 17:1, etc). A king of Israel (732/1-722 BC). Tiglath-pileser III's Summary Inscription 4, 49, line r10, reads: [...a-u-si-i a]-na LUGAL u-ti-ina UGU-shu-nu "[...I installed Hoshea as] king over them." A seal reads: l'bdy 'bd hws' "Belonging to Abdi, minister of Hoshea." Dated by epigraphy to late eighth to second half of the seventh century BC.

-Isaiah the prophet (2 Kings 19:20, etc.). The prophet Isaiah. A City of David seal reads: lysayh nvy: "Belonging to Yeshayah the Prophet." Found within ten feet of the king Hezekiah royal seal. King Hezekiah of Judah (726-696) was a contemporary of Isaiah. The word for prophet usually occurs with an aleph at the end, but this is not an exclusive spelling for prophet in Hebrew manuscripts of the Bible. For example, Dead Sea Scroll 1QIsa(a) for Isaiah 28:7 reads wnvny "and the prophet." Dead Sea Scroll 1QDeut(a) for Deuteronomy 13:4 reads hnvny "the prophet."

-Ishmael (2 Kings 25:23; Jeremiah 40:8). A son of Nethaniah and of royal descent, at the time of the governorship of Gedaliah (586- BC). A bulla reads: "Yishma'el, the king's son."

-Israel (Genesis 32:28, 1 Samuel 13:19, etc). God renamed Jacob (2006-1859 BC), the grandson of Abraham (2166-1991 BC), Israel (ca. 1909 BC). The Merneptah stele, line 26, reads: i-s-r-r(=l) "Israel." The Berlin Relief No. 21687 (Amenhotep II-Rameses II), name ring 3, reads: i3-shr-i-r(=l) "Israel," while name ring 2 reads: k-y-n-'3-nw "Canaan", and name ring 1 reads: i-s-q-l-n "Ashkelon." The Tel Dan stele, line 8, reads: ysr'l "Israel." Dated by epigraphy (mid ninth century BC), and ceramic typology (ninth to beginning of eighth century BC). The Mesha stele, line 5, reads: ysr'l "Israel." Dated by epigraphy to ninth century BC.

-Jaazaniah (2 Kings 25:23, Jeremiah 40:8). A son of the Maacathite and an officer at the time of the governorship of Gedaliah (586- BC). A Tell en-Nasbeh (ancient Mizpah) seal reads: "Ya'azanyahu, servant of the king."

-Jaazaniah son of Azzur (Ezekiel 11:1). A son of Azzur and a false prophet, at the time of Zedekiah king of Judah (597-586 BC), and is in a vision of Ezekiel. Accounting ostrakon, line 3, reads: "Ya'azanyahu, son of Azzur."

-Jehoahaz (2 Kings 23:30). A son of Josiah and a king of Judah (609 BC). A seal reads: "Yehoahaz, the king's son."

-Jehoash/Joash (2 Kings 12:1, etc). A son of Jehoahaz and a king of Israel (805-790 BC). In the Tel el Rimah Stele of Adad-Nirari III (811-783), line 8, it reads: ia-'a-su mat sa-me-ri-na-a-a "Joash, the Samarian."

-Jehoiachin/Jeconiah/Coniah (2 Kings 24:5, 8, etc). A king of Judah (598-597 BC). In the Ration Tablets of Babylon it reads: [ia]-'-kin lugal sha-kur ia-[a-hu-du] "Yaukin king of the land of Judah." A seal impression on jar handles reads: "Eliakim, steward of Yaukin."

-Jehu (1 Kings 19:16, etc). A king of Israel (841-814 BC). The annals of Shalmaneser III (859-824 BC), col. 4, line 11, and the Kurba'il Statue, lines 29–30, read: ia-u-a mar hu-um-ri-i "Jehu, son of (the land of) Omri."

-Jehucal son of Shelemiah (Jeremiah 37:3). An official of king Zedekiah of Judah (597-586 BC). A City of David bulla reads: lyhwkl b[n] slmyhw bn sby "Yehukal, [so]n of Shelemyahu, son of Shobi."

-Jerahmeel the king's son (Jeremiah 36:26). A son of king Jehoiakim of Judah (609-598 BC). A bulla reads: lyrhm'l bn hmlk "Yerahme'el, the king's son." Dated by epigraphy to latter seventh century BC.

-Jeroboam II (2 Kings 13:13, etc). A king of Israel (793-753 BC). A seal found at Megiddo reads: "Shema, minister of Jeroboam." Dated by epigraphy to mid eighth century BC.

-Johanan (Nehemiah 12:22). A son of Joiada and a high priest of the Jerusalem temple after the Babylonian exile. An Elephantine papyrus P13495 (Darius II), line 18, verso, reads: "the high priest Johanan and his associates, the priests in Jerusalem." A silver coin (378-368 BC) from the Persian period reads: "Yohanan the priest."

-Jotham (2 Kings 15:38, etc). A king of Judah (750-735 BC). A bulla reads: "Ahaz, (son of) Yehotam, king of Judah."

-Malchiah the king's son (Jeremiah 38:6). A son of king Zedekiah of Judah (597-586 BC). A seal reads: "Malkiyahu, the king's son."

-Manasseh (2 Kings 21:11, etc). A king of Judah (697-643 BC). In the Annals of Ashurbanipal (669-631), Cylinder C, col. 1, line 25, it reads: [me]-na-si-i MAN KUR.ia-u-di "Manasseh, king of Judah." A seal reads: "Manasseh, the king's son."

-Menahem (2 Kings 15:17, etc). A king of Israel (752-742 BC). In the Annals of Tiglath-pileser III, Fragment 2, line 10, it reads: me-ni-hi-im-me URU.sa-me-ri-na-a-a "Menahem of the city of Samaria." Tiglath-pileser III, BM 118899 + BM 118900, Nimrud wall slab, line 2, reads: me-ni-hi-me URU.sa-me-ri-i-na-a-a "Menahem of the city of Samaria."

-Mikneiah (1 Chronicles 15:18). A Levitical lyrist and singer at the time of king David (ca. 1006-966 BC). A seal reads: mqnyw 'bd yhw "Mikneyau, servant of Yahweh."

-Nathan-Melech (2 Kings 23:11). A court official of king Josiah of Judah (640-609 BC). A City of David bulla (2018) reads Intn mlk 'bd hmlk "Belonging to Nathan-Melech, minister of the king." Previously known from a seal in the Shlomo Moussaieff collection, which reads the same.

-Nebu-sar-sekim the Rab-saris (Jeremiah 39:3). Babylonian clay tablet BM 114789, reads: Nabu-sharrussu-ukin. Rab-saris is attested in Akkadian as rab sha reshi, which means "chief courtier."

-Nebuzaradan (Jeremiah 39:9 etc; 2Kings 25:8ff). He served under King Nebuchadnezzar of Babylon and carried out the destruction of Jerusalem in 586 BC. Nebuchadnezzar II's Prism, column 3 of prism ES 7834, reads: Nabu-zer-iddin.

-Nergal-sar-ezer the Rab-mag (Jeremiah 39:3). Rab-mag is equivalent to Akkadian rab mugī, which refers to a military official.

-Nergal-sar-ezer the Samgar (Jeremiah 39:3). Nebuchadnezzar II's Prism, column 3 of prism ES 7834, reads: Nergal-sharru-usur. Samgar is Akkadian for simmagir, which is a title for a high official.

-Neriah son of Mahseiah (Jeremiah 32:12ff). Father of the scribe Baruch, and possibly of Seraiah. A bulla reads lbrkyhw bn nryhw hspr "Belonging to Berekyahu, the son of Neriyahu, the scribe."

-Omri (1 Kings 16:16, etc). A king of Israel (884-873 BC). The Mesha stele, lines 4-5, reads: \*mry.mlk.ysr'l. "Omri was king of Israel." A building inscription of Tiglath-pileser III, Summary Inscription 4, 44, line 17, reads: KUR.E-hu-um-ri-a "the land of Omri."

-Pashhur (Jeremiah 38:1) [father of Gedaliah the royal official late seventh century] A City of David bulla reads: "Gedalyahu, son of Pashhur."

-Pedaiah (1 Chronicles 3:18-19). A son of Jehoiachin king of Judah. A seal reads "Pedayahu, the king's son."

-Pekah (2 Kings 15:27, etc). A king of Israel (752/740-732 BC). A building inscription of Tiglath-pileser III, Summary Inscription 4, 42, lines 17, 18, reads: u-ra-a pa-qa-ha LUGAL -shu-nu [x]-du-x-x-ma a-u-si- 18 [a-na LUGAL -ti i]-na "[l/they] killed Peqah, their king, and I placed Hoshea 18 [as king o]ver them." Summary Inscription 44 17, 18 reads: [KUR.E-hu-um-ri-a] ...18 URU.sa-me-ri-na e-de-nu-ush-shu u-mash-shi-[ru pa-qa]-ha LUGAL-shu-nu "[the land of Omri]...18 and the city of Samaria I isola[ted]-(now) [they overthrew Peqa]h, their king"

-Seraiah son of Neriah (Jeremiah 51:59). A brother of Baruch the scribe and disciple of the prophet Jeremiah, at the time of Jehoiakim king of Judah (609-598 BC). A Lachish seal reads: "Serayahu, (son of) Neriyahu."

-Shebna (2 Kings 18:37, etc). A scribe, and possibly overseer of the palace, at the time of Hezekiah king of Judah. A seal reads: "Shebnayahu, servant of the king."

-Shelemiah father of Jehucal the royal official (Jeremiah 37:3 etc.). A City of David bulla reads: "Yehukal, son of Shelemyahu, son of Shobi."

-Zedekiah son of Hananiah (Jeremiah 36:12). An official of king Jehoiakim of Judah (609-598 BC). A bulla reads: "Tsidqiyahu, son of Hanani."

Egyptologist Kenneth Kitchen writes:

"The periods most in the glare of contemporary documents—the divided monarchy and the exile and return—show a very high level of direct correlation (where adequate data exist) and of reliability...When we go back (before ca. 1000) to periods when inscriptional mentions of a then-obscure tribal community and its antecedent families (and founding family) simply cannot be expected a priori, then chronologically typological comparisons of the biblical and external phenomena show clearly that the Hebrew founders bear the marks of reality and of a definite period." [38]

### C. Archaeology and Jesus of Nazareth

#### 1. Ossuary of Alexander son of Simon of Cyrene

An undisturbed tomb was discovered in 1941 by archaeologists from Jerusalem's Hebrew University during a survey of tombs in the Kidron Valley, just south of Jerusalem. The tomb was sealed and the pottery inside the tomb helped the archaeologists to confidently date the tomb's last use to before the destruction of the Second Temple in the year 70. The inscriptions on some ossuaries point to a family with Cyrenian Origins. The inscriptions were first published in 1962.

Ossuary Serial No. XXXI. Inventory No. 1965, reads

Lid: (Greek and Hebrew) "of Alexander" "Alexander (the) Cyrenean"

Back: (in Greek) "Simon Ale..." "Alexander" "(son) of Simon"

Mark 15:21: "And they compelled one passing by, coming from the country, Simon of Cyrene, the father of Alexander and Rufus, to go with them, that he might bear his cross."

P. W. van der Horst remarks:

"[T]here is at least a good chance that we have here the ossuary of the son of the man who carried Jesus' cross." [39]

T. Powers writes:

"When we consider how uncommon the name Alexander was, and note that the ossuary inscription lists him in the same relationship to Simon as the New Testament does and recall that the burial cave

contains the remains of people from Cyrenaica, the chance that the Simon on the ossuary refers to the Simon of Cyrene mentioned in the Gospels seems very likely." [40]

## 2. Earthquake of 33 A.D. in Dead Sea Core Samples.

Twenty-foot deep cores of sediment were taken around the Dead Sea. Mixed layers in the core samples were found to match historical earthquakes. An unknown first-century earthquake was found and the date was calculated by counting the yearly rings in the core sample. The result was 31 A.D. +/-4, listed as "33 A.D." in the scientific literature. [41]

Matthew 27:50-51: "And Jesus shouted again with a loud voice, and yielded up his spirit. And suddenly, the veil of the temple was torn in two from the top to the bottom. The earth quaked and the rocks were split."

## 3. Ossuary of James son of Joseph brother of Jesus

A first-century ossuary was discovered with an Aramaic inscription, reading

"Ya'akov bar Yosef akhui di Yeshua" which is translated "James, son of Joseph, brother of Jesus."

James was the half-brother of Jesus and was martyred in 62 A.D. A recent archaeometric analysis of the James ossuary found that the ossuary and its engravings are likely authentic. [42] A statistical analysis of the three names with the relation on the ossuary showed that there would be only 1.71 (one or two) people named James with a father Joseph and a brother named Jesus. [43] The rare Aramaic spelling for "brother" has been found on one other first-century Jerusalem ossuary.

## 4. Early External Source Testimony

The Jewish historian Flavius Josephus in ca. 94 A.D. wrote:

"At this time there was a wise man called Jesus, and his conduct was good, and he was known to be virtuous. And many people from among the Jews and the other nations became his disciples. Pilate condemned him to be crucified and to die. But those who had become his disciples did not abandon his discipleship. They reported that he appeared to them after three days from his crucifixion and that he was alive. Therefore, perhaps he was the Messiah about whom the admirable prophets spoke." [44]

In a second passage, Josephus writes that the high priest Ananus brought James, the brother of Jesus, before the Sanhedrin:

"Festus was now dead, and Albinus was but upon the road; so he assembled the Sanhedrin of judges, and brought before them the brother of Jesus, who was called Messiah, whose name was James, and

some others. And when he had formed an accusation against them as breakers of the law, he delivered them to be stoned.” [45]

The Roman historian Cornelius Tacitus in ca. 115 A.D. wrote:

“Christus, the founder of the name, was put to death by Pontius Pilate, procurator of Judea in the reign of Tiberius.” [46]

## 5. Early Manuscripts and Witnesses of the New Testament

Date Written (A.D.) Book Earliest Manuscript, Dates Earliest Quote/Allusion: Author/Work, Date, NT Verse

35-40 Matthew	P104	100-200	Ignatius (c.110-117), 10:16; Polycarp (110-155), 7:1
45-65 Mark	P45	200-250	Polycarp, 9:35, 14:38; Barnabas (100-150), 2:17
53-57 Luke	P45	200-250	Ignatius, 6:46; Polycarp, 6:20
66-70 John	P52	100-150	Ignatius, 3:8, 8:29; Barnabas, 1:14
60 Acts	P45	200-250	Clement, 20:35; Polycarp, 2:24
57-58 Romans	P46	150-250	Clement, 1:32; Polycarp, 14:10
53-57 1Corinthians	P46	150-250	Ignatius, 4:20; Polycarp, 6:9
56-57 2Corinthians	P46	150-250	Ignatius, 6:14-16; Polycarp, 4:14
48-55 Galatians	P46	150-250	Ignatius, 2:20; Polycarp, 6:7
58-63 Ephesians	P46	150-250	Ignatius, 6:12, 16; Polycarp, 2:5, 8, 9
58-63 Philippians	P46	150-250	Ignatius, 3:18-19; To Diognetus (c.130), 3:20
58-63 Colossians	P46	150-250	Ignatius, 1:23; Irenaeus, 3:5
50-53 1Thessalonians	P46	150-250	Ignatius, 5:17; Polycarp, 5:22
50-53 2Thessalonians	P30	200-300	Ignatius, 3:10; Polycarp, 3:15
55-65 1Timothy	Sinaiticus	330-360	Ignatius, 4:10, 12; Polycarp, 6:7
58-67 2Timothy	Sinaiticus	330-360	Ignatius, 3:4, 6; Polycarp, 2:12
57-65 Titus	P32	100-300	Clement, 3:1; Irenaeus (182-188), 3:10
58-63 Philemon	P87	125-225	Polycarp, 3; Muratorian Canon (170-210)
50-67 Hebrews	P46	150-250	Clement, 1:3-5:7; Polycarp, 6:20
40-60 James	P23	200-300	Clement (96), 4:6; Polycarp, 5:10
58-68 1Peter	P72	200-350	Clement, 3:20; Polycarp, 1:21
64-68 2Peter	P72	200-350	Clement, 2:5; Justin (c.138-165), 3:8
57-95 1John	P9	275-500	Ignatius, 3:7; Polycarp, 4:3
57-95 2John	Uncial 0232	250-450	Polycarp, 6; Irenaeus, 10, 11
57-95 3John	Vaticanus	300-325	Polycarp, 1:8; Dionysius (246-265)
66-68 Jude	P72	200-350	Irenaeus, 7; ClementA, (193-220), 5,6
68-97 Revelation	P98	100-200	Didache (120-150), 12:9; Justin, 20:4,5

References

1. H. Ross, *The Creator and the Cosmos*, 118-19; Idem, *Big Bang Refined by Fire*. Posted on reasons.org 1998.
2. F. Hoyle, "The Universe: Past and Present Reflections." *Annual Review of Astronomy and Astrophysics* (1982): 20:16.
3. S. C. Meyer, "Yes, intelligent design is detectable by science." Posted on evolutionnews.org April 24, 2018.
4. Meyer, *Dallas Conference on Science and Faith* Jan 18-19, 2019. 41:14ff.
5. See for example H. Ross, *The Creator and the Cosmos*.; Ross, "Fine-Tuning For Life On Earth." Posted on reasons.org June 8, 2004. G. Gonzalez, and J. W. Richards, *The Privileged Planet*, 128-168.
6. Ross, "Astrosphere Habitable Zones Display Fine-Tuned Characteristics." Posted on reasons.org July 7, 2014.
7. Meyer, *Signature In The Cell: DNA And The Evidence For Intelligent Design* (2009), 135.
8. Meyer, *Signature In The Cell*, 343.
9. Meyer, *Signature In The Cell*, 334.
10. Meyer, *Signature In The Cell*, 477; Meyer, *Darwin's Doubt*, 364-365.
11. O. Hössjer, and A. Gauger, "A single-couple human origin is possible." *BIO-Complexity* 2019 (1):1–20. doi: 10.5048/BIO-C.2019.1. (Ann Gauger has a Ph.D. in developmental Biology. Ola G. H. Hossger is Prof. Mathematical Statistics at Stockholm University)
12. D. Axe, "Darwin's Little Engine That Couldn't," in *Science and Human Origins* (2012), 41, citing J. P. Demuth, et al., *PloS One* 1 (2006). (Douglas Axe has a Ph.D. in Chemical Engineering)
13. R. Buggs, *Chimpanzee? Reformatorisch Dagblad*. Posted on refdag.nl. October 10, 2008; Buggs, *70% Chimp? Reformatorisch Dagblad*. Posted on refdag.nl. December 5, 2008.
14. J. Tomkins, "Comprehensive Analysis of Chimpanzee and Human Chromosomes Reveals Average DNA Similarity of 70%." *Answers Research Journal* 6 (2013):63–69. (Jeffrey P. Tomkins has a Ph.D. in Genetics)
15. C. Luskin, "Human Origins and the Fossil Record," in *Science & Human Origins*, 73-74: "The Darwinian belief that humans evolved from apelike species requires inferences that go beyond the evidence and is not supported by the fossil record."
16. Cf. Meyer, *Darwins Doubt*, ix-x, 287, 450 n.13; "New Trends in Evolutionary Biology." *The Royal Society*, London. Nov 7-9, 2016.
17. Meyer, *Darwins Doubt*, 215-16.
18. Gauger, "Orphan Genes: A Guide for the Perplexed." Posted on evolutionnews.org July 30, 2013.
19. M. J. Oard, and J. K. Reed, *How Noah's Flood Shaped Our Earth* (2017), 180-81. (J. K. Reed has a Ph.D. in Geology. M. J. Oard has an MS in Atmospheric Science)
20. B. Thomas, and S. Taylor, "Proteomes of the Past." *Expert Review of Proteomics*. 2019 Nov-Dec; 16 (11-12): 881-895.
21. B. Thomas, and V. Nelson, "Radiocarbon in Dinosaur and Other Fossils." *Creation Research Society Quarterly*. 51(4): 299-311.
22. T. Clarey, *Carved in Stone: Geological Evidence of the Worldwide Flood* (2020), 75
23. Clarey, 81
24. Clarey, 48
25. Clarey, 52
26. Clarey, 194
27. Clarey, 216
28. Clarey, 234

29. Clarey, 256
30. Clarey, 282
31. Clarey, 312
32. R. Cornuke, Search For Noah's Ark: The Lost Mountains of Noah (DvD. 2008); Idem, Ark Fever (2005), 222-254; F. Turek, The Search for Noah's Ark in Iran (PowerPoint CD. 2008).
33. R. H. Cowir, and B. S. Holland, Dispersal is fundamental to biogeography and the evolution of biodiversity on oceanic islands. *J. Biogeography* 33:186, 2006; M. Vences, D. R. Vieites, et al. Multiple overseas dispersal in amphibians. *Proceedings of the Royal Society of London B* 270: 2435-2442, 2003.
34. Oard and Reed, How Noah's Flood Shaped Our Earth, 177.
35. B. G. Wood, Did the Israelites Conquer Jericho? *Biblical Archaeology Review* (1990) 16.2: 44-58.
36. Vanderslayen (1990), 3.
37. J. Mykytiuk, Identifying Biblical Persons in Northwest Semitic Inscriptions of 1200-539 BCE (2004); Mykytiuk, Corrections and Updates to "Identifying Biblical Persons in Northwest Semitic Inscriptions of 1200-539 B.C.E.," (2009); K. A. Kitchen, On the Reliability of the Old Testament (2003), 16-21, 93. Additional inscriptions of interest: Soleb (Amenhotep III) and Amarah-West (Rameses II) hieroglyphic inscriptions read: t3 sh3sw ya-h-wa: "the land of the nomads of Yahweh."
38. Kitchen, On the Reliability of the Old Testament, 499-500.
39. P. W. van der Horst, *Ancient Jewish Epitaphs* (1991), 140-41.
40. T. Powers, *Biblical Archaeology Review*, July/August 2003, 51.
41. R. Ken-Tor, et al., *Journal of Geophysical Research*. 106 (B2): 2221-2234, "Table 3...33 A.D. Reports were from Judea region. The Temple in Jerusalem was damaged."; J. B. Williams, et al., *International Geology Review*, Volume 54, Issue 10 (2012); S. A. Austin, GSA Poster (2012), "Jerusalem Earthquake of 33 A.D."
42. A. Rosenfeld, et al., *Open Journal of Geology*, Vol. 4 No. 3 (2014).
43. H. Shanks, *Biblical Archaeology Review*, July/August, 2012. See also T. Kennedy, *Excavating the Evidence for Jesus*, (2022, 222,23).
44. Josephus, *Ant.* 18:63-64, Arabic version
45. *Ant.* 20.9.1
46. *Annals* 15:44

This page updated September 29, 2023