

Books of Moses - Fact or Fiction?

Origin of Life

Today we will be examining the Origin of Life. In the Biblical Special Creation model, we will look at the origin of plants, aquatic animals and flying creatures.

In the Atheistic/Naturalist Evolution model we will restrict our examination to their first hurdle: the origin of the first living cell.

Special Creation:

The Bible teaches that physical life began with the direct creation of the basic kinds of plants.

Plants Created

Gen 1:11 And God said, “Let there spring forth *on* the earth grass, the plant yielding seed after its kind, and the fruit tree making fruit after its kind, in which is its seed, upon the earth.” And it was so.

Gen 1:12 And the earth brought forth grass, the plant yielding seed after its kind, and the tree yielding fruit in which is its seed after its kind, and God saw that *it was good*.

Gen 1:13 And there was evening and there was morning: Third day.

The creation of all the kinds of plants occurred on the Third Day. Kinds in the Biblical account needs to be made clear: A kind is a type of plant or animal which is distinct from other kinds, and the original created creatures contained complex genetics which would allow the kind to diversify into various families and species which can adapt to local conditions and environments. An example of a kind from the plant kingdom is the pea kind, which was able to diversify into field peas, garden peas, telegraph peas, snow peas and sugar snap peas. Evidence that these are derived from the same kind is the fact that they can interbreed and produce offspring which are usually fertile.

As the Bible claims that these original plants were created directly by God, we would also expect them to immediately have perfect genetics and be perfectly designed for their role in the completed biosphere. This is the opposite to the evolutionary model, in which the organisms are slowly shaped by mutations and natural selection until they become well enough adapted to survive in their niche.

As each kind is separately created, we would expect that there will usually be distinct differences, or gaps, between kinds. But as they are all made by the same Creator, we would also often expect that similar DNA, mechanisms and structures are used in different kinds to perform similar functions. These gaps and similarities indicate a common designer. In contrast, common descent, as taught in evolution, should only show smooth transitions, not the distinct gaps that are observed between kinds.

Note that these plants must have grown and matured rapidly and in significant numbers throughout the world as part of the preparation for the creation of animals, which was to happen only one day later. Some of these kinds are also created as complex vascular plants complete with the ability to flower and yield fruit and seeds.

Though not mentioned, it is reasonable to assume that at this time all photosynthesizers are meant, including cyanobacteria, algae and the aquatic plants that were also created as the food source for the aquatic animals which were soon to be created. Likewise for the microbes and fungus that both live symbiotically with the plants and also break down dead plant material so it can be recycled.

Finally, note that the plants are not described as breathing organisms having souls. They are essentially very complex self-reproducing machines designed to provide food and shelter for the animals and humans. As they do not have souls, they cannot die in a Biblical sense.

Now there is a day's delay from new creation on the Earth while the Sun, Moon and stars are being created, as we looked at in our last session. I believe that the plants were also growing very rapidly during that day, so there would be food available when the animals were created.

Creation of Aquatic Animals and Flying Creatures:

Gen 1:20 Then God said, "Let the waters swarm with swarms of live souls, and let flying creatures fly above the earth across the face of the expanse of the heavens."

Gen 1:21 God created great sea dragons and every living soul that moves,¹ which the waters swarmed with, according to their kind, and every winged flying creature according to its kind. And God saw that *it was good*.

Gen 1:22 And God blessed them, saying, "Be fruitful and become many, and fill the waters in the seas, and let the flying creatures multiply on the earth."

Gen 1:23 And there was evening and there was morning: Fifth day.

Now God moves into filling the earth with living souls. Note carefully that the Hebrew word for soul in vs 20 and 21 is *nephesh*. Most translations incorrectly substitute creature for soul. Nephesh is soul and it is precisely the same word the Bible uses to describe human souls.

Also, pause and think carefully about vs 22: God blesses and speaks directly to these animals, telling them to fill the earth. God did not bless the plants, nor speak to them. There can be no doubt that God has a relationship with these animals and communicates with them.

God tells us that He created all the many kinds of aquatic animals during this single day, and though not enough to completely fill the rivers, lakes and oceans, there was enough for them to make the waters swarm. The aquatic creatures included water bugs, corals, shellfish, trilobites, fish, dolphins, whales and even sea dragons, as a brief sampling. In this context, it is worth remembering that there were many kinds created at this time that no longer live today. We live in a world of extinctions, where not only species but entire kinds of creatures have died out and are still dying out. This is not a world where new kinds are appearing, only minor variations of existing kinds. We will see why this is so in later sessions.

¹ This is an accurate translation of soul from the Hebrew "nephesh". God tells us that all creatures capable of moving have souls. Ecclesiastes 3:21 also tells us that all animals have spirits. But it also confirms that mankind's spirit is different to that of the animals, as our spirits go to God when we die, but the animals' spirits go into the earth.

But God was not done yet. On this day he also created all of the flying creatures, including flying insects, butterflies, birds, bats, flying foxes and pterosaurs. Most of these flying creatures have very active metabolisms, such as hummingbirds, which can die after only four hours without food. This is why I believe that many plants were already flowering and some were producing fruit and seeds by Day Five of creation.

The main criticisms of the Biblical Creation Account are the clearly miraculous nature of the entire account and its short time line. The miraculous nature of the account is constrained by the numerous specific details given in Genesis, which specify what the miracles are and the order they were performed in. But it is underlain by the Bible's claim that Jehovah God is a self-existing being who is easily capable of doing such miracles. The only real issue here is acceptance that this God exists.

The short time line is really a subset of the miraculous nature of God's Creation. If this creation was done miraculously, as the Bible claims, there is no reason why it had to take much time. The time problem is really an issue for evolution, where even their claimed billions of years is far, far too little time for any of their claimed non-miraculous transformations of nothing into complex life to have occurred.

But by now we are a long way ahead of Evolution's Origin of Life story. Let us look at how they get to a point where they have just one living cell.

Evolutionist Explanations

Origin of the First Cell

Evolutionist claim that all life on earth is descended from one cell. But how could a living cell arise from non-living chemicals?

This is a topic mostly avoided by evolutionists, including Darwin. But without their first cell, they can not evolve any other life. It is avoided because they cannot explain how a first cell could arise by random processes. And the more we learn about the complexity of even a 'simple' cell, the worse their situation becomes. And they are also under increasing time pressure, as they once thought they had one to two billion years to form the first cell. Now that supposed 'gap' is less than three hundred million years, and it keeps shrinking. So they need to have a far more complex first cell arise in much less time, making the process increasingly improbable.

The evolutionists' problems intensified when Louis Pasteur, in 1864, demonstrated scientifically that spontaneous generation of life does not occur, which is what evolution is actually claiming. Pasteur's work led to effective sterilisation procedures and to the Law of Biogenesis, which states that **All life is from life.**

And why do they persist? This quote from Professor Richard Lewontin explains it well:

'Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take

the side of science *in spite* of the patent absurdity of some of its constructs, *in spite* of its failure to fulfill many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism.

It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.

But the struggle is really between atheism and theism, not science, as his quote makes clear, for he admits they believe in evolution even though science exposes it as absurd.

Chemical Evolution, also known as Abiogenesis

Evolution can't happen until we have a living cell capable of reproducing itself. So although some evolutionists call the origin of the first cell Chemical Evolution, it is more correctly called Abiogenesis: the origin of life from non-life. Until the first cell is able to self-replicate, there is nothing for natural selection to select between. So, how could that first cell arise by natural means?

This article from New Scientist, dated 14 October 2009 gives the current suggested route:

How life evolved: 10 steps to the first cells

By Nick Lane and Michael Le Page

We may never be able to prove beyond any doubt how life first evolved. But of the many explanations proposed, one stands out – the idea that life evolved in hydrothermal vents deep under the sea. Not in the superhot black smokers, but more placid affairs known as alkaline hydrothermal vents.

This theory can explain life's strangest feature, and there is growing evidence to support it.

Earlier this year, for instance, lab experiments confirmed that conditions in some of the numerous pores within the vents can lead to high concentrations of large molecules. This makes the vents an ideal setting for the "RNA world" widely thought to have preceded the first cells.

If life did evolve in alkaline hydrothermal vents, it might have happened something like this:

1. Water percolated down into newly formed rock under the seafloor, where it reacted with minerals such as olivine, producing a warm alkaline fluid rich in hydrogen, sulphides and other chemicals – a process called serpentinisation.

This hot fluid welled up at alkaline hydrothermal vents like those at the Lost City, a vent system discovered near the Mid-Atlantic Ridge in 2000.

2. Unlike today's seas, the early ocean was acidic and rich in dissolved iron. When upwelling hydrothermal fluids reacted with this primordial seawater, they produced carbonate rocks riddled with tiny pores and a "foam" of iron-sulphur bubbles.

3. Inside the iron-sulphur bubbles, hydrogen reacted with carbon dioxide, forming simple organic molecules such as methane, formate and acetate. Some of these reactions were catalysed by the iron-sulphur minerals. Similar iron-sulphur catalysts are still found at the heart of many proteins today.

4. The electrochemical gradient between the alkaline vent fluid and the acidic seawater leads to the spontaneous formation of acetyl phosphate and pyrophosphate, which act just like adenosine triphosphate or ATP, the chemical that powers living cells.

These molecules drove the formation of amino acids – the building blocks of proteins – and nucleotides, the building blocks for RNA and DNA.

5. Thermal currents and diffusion within the vent pores concentrated larger molecules like nucleotides, driving the formation of RNA and DNA – and providing an ideal setting for their evolution into the world of DNA and proteins. Evolution got under way, with sets of molecules capable of producing more of themselves starting to dominate.

6. Fatty molecules coated the iron-sulphur froth and spontaneously formed cell-like bubbles. Some of these bubbles would have enclosed self-replicating sets of molecules – the first organic cells. The earliest protocells may have been elusive entities, though, often dissolving and reforming as they circulated within the vents.

7. The evolution of an enzyme called pyrophosphatase, which catalyses the production of pyrophosphate, allowed the protocells to extract more energy from the gradient between the alkaline vent fluid and the acidic ocean. This ancient enzyme is still found in many bacteria and archaea, the first two branches on the tree of life.

8. Some protocells started using ATP as well as acetyl phosphate and pyrophosphate. The production of ATP using energy from the electrochemical gradient is perfected with the evolution of the enzyme ATP synthase, found within all life today.

9. Protocells further from the main vent axis, where the natural electrochemical gradient is weaker, started to generate their own gradient by pumping protons across their membranes, using the energy released when carbon dioxide reacts with hydrogen.

This reaction yields only a small amount of energy, not enough to make ATP. By repeating the reaction and storing the energy in the form of an electrochemical

gradient, however, protocells “saved up” enough energy for ATP production.

10. Once protocells could generate their own electrochemical gradient, they were no longer tied to the vents. Cells left the vents on two separate occasions, with one exodus giving rise to bacteria and the other to archaea.

This is a creative story, and more interesting than the earlier versions. But it is absurdly simplistic and contravenes almost every known law of biochemistry. Let us compare the above speculations with the simplest living cell:

The simplest natural organism may be *Mycoplasma pneumoniae*, a bacteria that can cause walking pneumonia in people. It has just 525 genes. In comparison the bacterium *E. coli*, a widely studied organism, has 4,288 genes. Humans have roughly 20,000 genes.

But that’s not the simplest possible organism.

In 2008, Craig Venter announced that a team of scientists had successfully constructed a synthetic DNA, based on the genome of *Mycoplasma genitalium*. They then used it to create a synthetic version of that organism. The DNA strand of this organism had 381 genes and 582,970 base pairs. They named this organism *Mycoplasma genitalium JCVI-1.0* (the name of the strain indicating J. Craig Venter Institute with its specimen number).

This organism has interesting implications for any theory about the origin of life. The first living thing must have had hundreds of genes and a strand of DNA possibly having hundreds of thousands of base pairs. It’s hard to imagine that natural, non-living, processes produced anything that complex but it must have happened.
By Israel Ramirez, Nov 8, 2017

You get the “but it must have happened.” a lot when you start lifting the lid on these topics. Many evolutionists are so anti-God that they can not accept any other explanation than their own theory, even when they can clearly see that it is impossible. Let us explore how complex their first simple cell really must be.

But first an interesting sidetrack. Is it perhaps actually simple? Have scientists already created synthetic life as this report claims?

<https://www.youtube.com/watch?v=aRzrYNVXF28> ABC news -3 min

Let’s get some more detail on what they actually did:

<https://www.youtube.com/watch?v=MIAIOZIkM2M> Sci Show 5 min.

So, in summary, their ‘synthetic life’ was built by taking the DNA code from a simple microbe and then reconstructing it, using extremely complex DNA splicing technology plus help from living bacteria and yeast. The US ABC report that they “created life” with “just four bottles of chemicals” is dishonest. They then removed the DNA from a living microbe

of the same type and inserted their reconstructed DNA into it. Their new copy of the organism's DNA was sufficiently accurate for the cell to survive and even replicate. Though it was an incredible achievement, this process does not even begin to address the question of how a first cell could arise. Nor is it a realistic simplest cell, as it can only survive in a protected and pampered lab environment.

-Powerpoint images..

Note that even the more complex *Mycoplasma pneumoniae* cannot reproduce on its own. It is a parasite that needs to be embedded in a mammal, usually its lungs, before it can get enough nutrients to multiply. So even it is an inadequate first cell.

So, how could Abiogenesis really happen?

Stanley Miller and Harold Urey's 1953 experiment, in which they made 5 amino acids, was also once claimed as the beginning of creating life from non-living chemicals. But time has proven many of their experimental conditions were unrealistic and their amino acids were a racemic mix of left and right handed amino acids. But living organisms only function with purely left-handed amino acids. Right handed amino acids would corrupt any proteins they went into and would soon kill the organism. Miller's experiment also produced many other compounds which are highly toxic to life.

Though later experiments by Miller and others produced other amino acids, including some containing sulfur, they came to realise that a few amino acids are nowhere close to explaining the origin of life. It is like making a simple steel ball that might work in a bearing and then claiming you are now able to make an Airbus A380.

Just like living organisms require left-handed amino acids to make proteins, we also require exclusively right-handed sugars to fuel life and make the sugar backbones of DNA and RNA. Even a single left-handed sugar in a DNA molecule would put a kink in its precise double helix, stopping its nanomachines from reading and repairing the DNA. Again, disability would soon result and likely even death. Are you seeing a comparison here to the Big Bang's problem with matter and antimatter? They can not explain how any of these three requirements for life arose.

Biomolecules do not spontaneously grow more complex. Instead, they spontaneously decompose to simpler molecules and gases, as we know from observing any living organism that has died. And millions, even billions, of years would not alter or improve this situation. Contrary to evolutionists' claims, time is not the hero of the plot.

Even if you could discover some natural way to force amino acids to form a protein chain, how difficult is it for random events to create a functional protein enzyme? Doug Axe investigated this experimentally, and published his results in *Estimating the prevalence of protein sequences adopting functional enzyme folds*, J Mol Biol. 2004 Aug 27;341(5):1295-315.

(https://www.researchgate.net/publication/8389796_Estimating_the_Prevalence_of_Protein_Sequences_Adopting_Functional_Enzyme_Folds) He found that only 1 in 10^{64} randomly made proteins would be potentially functional, and only 1 in 10^{77} would produce a protein

flagellum and irreducible complexity:

<https://www.youtube.com/watch?v=NaVoGfSSSV8> (15 min)

Video of eukaryotic DNA replication and transcription and protein production, centromeres and cell division process. The protein production process is essentially the same in ‘simple’ prokaryotes, but the centromeres are a more complex system that is required in eukaryotes.

<https://www.youtube.com/watch?v=fpHaxzroYxg> (20 min)

Photosynthesis (but no chlorophyll), even in ‘simple’ cyanobacteria

<http://www.dailymotion.com/video/x2fkksu> (7.5 min)

[Gorgeous animations of cell functions:

<https://vimeo.com/115969068> (8 Min)]

Worth watching, but not part of presentation, and some of these enzymes are from eukaryotes.]

Most of this is required just for a ‘simple’ single cell organism. The underlying issue here is information. Where has all the precisely coded information on the DNA molecules come from? There is no known physical process that can randomly produce complex information. And I have presented only a small sampling of what is going on inside that cell. What do the more honest evolutionist origin of life researchers say about this?

The famous British evolutionist J.B.S. Haldane stated in 1949 that evolution could never produce ‘various mechanisms, such as the wheel and magnet, which would be useless till fairly perfect.’ Therefore such machines in organisms would, in his opinion, prove evolution false. The wheel-like molecular motors seen above (ATP synthase and flagellum) have more than fulfilled one of Haldane’s criteria. Also, turtles and monarch butterflies use magnetic sensors for navigation that fulfil Haldane’s other criterion. The more we learn about the complexity of living organisms, the more absurd belief in the undirected evolution of life becomes.

“The biggest gap in evolutionary theory remains the origin of life itself... the gap between such a collection of molecules [amino acids and RNA] and even the most primitive cell remains enormous.”—Chris Wills, professor of biology at the University of California, USA.

“Anyone who tells you that he or she knows how life started on earth some 3.4 billion years ago is a fool or a knave. Nobody knows.”—Professor Stuart Kauffman, origin of life researcher, University of Calgary, Canada.

The impossibility of it has led to some evolutionists to suggest that life on earth was seeded here by extraterrestrials. But all that does is alter the location where something impossible must happen. And then it adds the additional improbability of extraterrestrials being able to come here at the right time to seed life. It is far easier to believe in God’s ability to start life on earth than an extraterrestrial’s, for which there is no evidence, as SETI has demonstrated.

As Sir Fred Hoyle stated it:

“The likelihood of the formation of life from inanimate matter is one to a number with 40,000 naughts after it ... It is big enough to bury Darwin and the whole theory of evolution. There was no primeval soup, neither on this planet nor any other, and if the beginnings of life were not random, they must therefore have been the product of purposeful intelligence.”

Conclusion

Abiogenesis, the origin of life due to random chemical reactions, is utterly impossible.

As there is life on Earth, the only viable alternative is that it must have been deliberately created. The Bible contains an account of such a Creation of Life. It says these living organisms were made by a remarkable being who claims to be Eternal.

Next session:

Special Creation: God creates land animals and the First Humans.

Evolution: From a single cell to complex organisms.

And how complex is an organism like a human?

Appendix:

Stanley Miller and Harold Urey's Amino Acids

This experiment is still in many textbooks because they have made no significant progress on chemical evolution since 1953.

<https://www.youtube.com/watch?v=2G3Gbr0eem8> (2 min)

Isolated five of the simplest amino acids.

Used an ammonia-nitrogen-hydrogen-methane carbon dioxide and water vapour gas mix which was never Earth's atmosphere and never could be. The ammonia would remain dissolved in the seas, and the evidence shows that the earth's atmosphere always contained free oxygen, which would destroy his amino acids.

Had a cold trap to isolate his compounds as they were made. -The real world has no such protective traps.

His amino acids were a racemic mix of left and right handed amino acids. But living organisms only work with purely left-handed amino acids. Right handed amino acids would corrupt any proteins they went into and would soon kill the organism.

Most of what Miller produced was tars which are highly toxic to life.

Though later experiments by Miller and others produced other amino acids, including some containing sulfur, they came to realise that a few amino acids are nowhere close to explaining the origin of life. It would be like making a crude steel ball that might work in a bearing and then claiming you are now able to make an Airbus A380.

Update on Miller's work:

<http://blogs.discovermagazine.com/notrocketscience/2011/03/21/scientists-finish-a-53-year-old-classic-experiment-on-the-origins-of-life/#.WvPas39x1EY>

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