God's Grand Design
Class #8
What did Charles Darwin actually see?
Genesis 1:1-2:3
Josh Whitney
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The Rock Church

(pray, pause, breath)

INTRODUCTION

Good evening everyone. Welcome to our next God's Grand Design. My name is Josh Whitney. I am one of the pastors at the Rock.

This is part 8. We will be addressing this question, What did Charles Darwin actually see?

This talk is full of history, biology, genetics and 4 videos.

And this will be our last "creation" lecture. Next class, we will start discussing the flood. We will be talking about geology, fossils, dinosaurs, etc. for the rest of the semester.

For the record, we are shifting to my area, soil, rocks, geology, dirt.

If you are new and not on my email list, send me an email and I will add you to the class list. And I always send the previous class notes, slides and audio recordings.

So let's start with prayer.

OVERVIEW

Let's look at our key overview slide. In this class, we are comparing two different views of origins. When I say origins I mean where did everything come from.

View #1 – God created the heavens and the earth. (in six days, thousands of years ago)

I believe View #1 makes the most sense, biblically and scientifically. And that is what this class is all about.

And View #2. The heavens and earth evolved without God. (millions and billions of years ago)

View #2 is the dominant view in our world.

WHO WAS CHARLES DARWIN?

Tonight is about Charles Darwin. Who was he? What did he actually see? Obviously, he was the father of modern evolutionary theory. But who was Charles Darwin?

Darwin was an English naturalist. A naturalist is somebody who studies nature.

He started studying geology and moved to biology. He was born in 1809. And lived about 73 years. And he is considered the Father of Modern Evolutionary Theory. This is how we imagine him, right photo. But when he did his initial research, he was a young man, left photo. And when he wrote his first book when he was 50. So the middle photo.

Darwin's dad was a wealthy doctor. And Charles tried to be a doctor, but according to multiple sources, he dropped out of medical school because he couldn't stand the sight of blood.

So Darwin actually studied to be a pastor at Cambridge. He described himself as a believer at this time.

But when he was 22 years old, an opportunity of a lifetime presented itself. The British government sent the HMS Beagle on a 5 year trip around the world to obtain a complete set of measurements of longitude.

Darwin was selected to be the naturalist on this voyage. As the ship's naturalist he received no wage, only a free passage. Again, I read a few sources that said Darwin's dad paid for him to go on this voyage.

This journey was amazing. It took 5 years, circled the entire globe, from 1831 to 1836. One account said Charles slept in a hammock and collected plant and animal samples from everywhere they stopped and stuffed his samples into nooks and crannies of the Beagle.

Notice the Galapagos Islands of the coast of south America.

On the western side of South America, off the coast of Ecuador, the HMS Beagle spent about a month exploring the chain of volcanic islands, called the Galapagos islands. Darwin continued his work of observing and collecting plants and animal samples. And he noticed the various creatures were different on the islands, including the turtles and finches.

He collected a lot of samples of these small birds, which today are called Darwin's finches. They weren't called Darwin's finches at the time. But he noticed the finches had adapted to the different environments on the different islands, eventually becoming different types of birds. They had different beaks which were suited to different food types, allowing them to occupy different ecological niches.

I would like to watch 2 minutes of a video that gives a good overview of this.

https://www.youtube.com/watch?v=mcM23M-CCog&ab_channel=biointeractive

3:40 – 5:41

That is a good overview of the concepts we are going to discuss in detail tonight.

We need to define some terms. This is my foundational slide for tonight's lecture. We are talking about two different kinds of processes here. First, Adaptation: changes within a kind of creature. Across the bottom there, the lizards are adapting. They are changing in response to their environment. Bigger, smaller, or different colors. But they are all still lizards.

Compare that with evolution. Evolution: change from one kind to different kind of creature. In this case, it is a lizard becoming a bird over time. Evolution.

So that is the difference between adaptation versus evolution. This is a critical concept you understand. We will come back to this a few times.

Darwin was observing lots and lots of adaptation. But he believed this was evidence for evolution. Darwin eventually theorized that every plant and animal on the planet could be explained by evolution. That a simple one celled organism could evolve into more, more complex life forms.

Something I learned in my study, the last few weeks, many Christians at this time believed that life was static. Creatures didn't change or adapt to their environment. They were fixed.

During his visit to the Galapagos islands, Darwin noticed that the finches were different from island to island, but perfectly adapted to their environments which led him to develop his theory of evolution.

So Darwin returned to England in 1836. He is now 27 years old. And an idea is forming in his mind. This is a sketch, on the left, from his actual notebook. He is mapping out a very simple evolutionary tree of life. Notice the "I think".

This is the prototype of this evolutionary tree of life, on the right, that we have discussed multiple times. That life rose from non-life. And that that simple one cell life became more and more complex through this process of evolution.

Everything is related. The plants, fish, birds, mammals, people. One kind of creature evolving into another kind of creature.

So in 1859, Darwin is 50 years old, 23 years after his trip, he publishes On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life.

A couple details from his personal life, during his researching and writing of his most famous book. When he was 30, he married Emma. They had 10 kids, but tragically 3 of them died in childhood.

You should also know that Darwin suffered from chronic illness. Varying from chronic stomach pains to suffering the loss of three children, Darwin had his fair share of mental and physical agony.

In a biography about his life, the authors write about the death of his beloved daughter, Annie. Here is how it is written in his biography. "Annie's cruel death destroyed Charles' tatters of belief in a moral, just universe. Later he would say that this period chimed the final death-knell for his Christianity." (Desmond & Moore's)

This is a very sad piece of all of this. People suffer from real hurts, but many times they have intellectual questions that mask their actual hurts. In other words, what is the question behind the question?

Back to his book, on the On the Origin of Species by Means of Natural Selection. Darwin presented 4 big ideas.
1. He spoke about variation of species.
2. He talked about the inheritance of favorable characteristics.
3. He talked about the struggle for existence.
4. He talked about natural selection.

All four of these big ideas I would generally agree with. There is incredible evidence for adaptation all over the planet.

But Darwin took his idea to somewhere untestable. Evolution. Remember the definition of science, testable, repeatable, observable.

You can do that with adaptation, but not evolution. Making evolution a theory.

But this theory of evolution was an absolute game changer. The scientific community embraced it fairly quickly.

We talked about some of these evolutionary concepts in previous classes.

In class 2, we talked about the impossibility of life rising from non-life.

In class 4, we talked about the impossibility of simple life evolving into more and more complex life.

But Darwin's theory had an incredible impact. This is how the BBC summarized it. The belief that God had created mankind in his own image and likeness was shared by most western scientists until the 1850s. That is until Charles Darwin arrived. The British naturalist was the first to explain, with evidence, how evolution might occur by natural selection.

I appreciate that they threw the might occur in there. This is a theory. It's not testable, repeatable or observable.

But the implications of Darwin's theory weren't just scientific. There were also ethical and spiritual implications. I appreciate the honesty of these quotes.

First from Charles Darwin in his autobiography. He said "A man who has no assured and ever present belief in the existence of a personal God or of a future existence with retribution and reward can have for his rule of life, as far as I can see, only to follow those impulses and instincts which are the strongest or which seem to him the best ones."

Darwin wrote that a long time ago, but it sounds very modern. You do you. You do whatever makes you happy. Darwin is saying if there is no God, then you do whatever you feel like doing.

Richard Dawkins, the evolutionary biologist said "Although atheism might have been logically tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist."

So there were ethical and spiritual implications to Darwin's ideas.

Darwin died at the age of 73. He was buried in Westminster Abbey in London, England. He considered himself an agnostic at the end of his life.

So that is the brief overview of the father of modern evolutionary theory.

WHAT DOES GENESIS TEACH?

I want to turn to the Bible. What does Genesis teach about adaptation and evolution? There are three big ideas in Genesis, we will briefly cover.

First Genesis shows us that God commanded all of creation to be fruitful and multiply.

Genesis 1:22 And God blessed them [sea creatures and birds], saying, "Be fruitful and multiply and fill the waters in the seas, and let birds multiply on the earth." 28 … And God said to them [Adam and Eve], "Be fruitful and multiply and fill the earth and subdue it…Genesis 8:17 Bring out with you every living thing that is with you of all flesh—birds and animals and every creeping thing that creeps on the earth—that they may swarm on the earth, and be fruitful and multiply on the earth."

So, we see, God created all forms of life to multiply and fill the earth.

Second, Genesis shows us that God commanded all of creation to multiple after its kind.

Genesis 1:12 The earth brought forth vegetation, plants yielding seed according to their own kinds, and trees bearing fruit in which is their seed, each according to its kind. And God saw that it was good.

Genesis 1:21 So God created the great sea creatures and every living creature that moves, with which the waters swarm, according to their kinds, and every winged bird according to its kind. And God saw that it was good.

Genesis 1:24 And God said, “Let the earth bring forth living creatures according to their kinds—livestock and creeping things and beasts of the earth according to their kinds.” And it was so.

Genesis 1:25 And God made the beasts of the earth according to their kinds and the livestock according to their kinds, and everything that creeps on the ground according to its kind. And God saw that it was good.

So summarizing these verses, a couple things stand out. Pretty clearly, God is telling all of the various plants and animals to reproduce according to their kinds.

But we don’t know how many kinds there were initially. Or how diverse they were. So there is a lot of flexibility in this. But we see according to their kind is a big concept.

And then third, the Bible shows us that all of creation is cursed after Adam and Eve sinned.

Romans 8:19 For the creation waits with eager longing for the revealing of the sons of God. 20 For the creation was subjected to futility, not willingly, but because of him who subjected it, in hope 21 that the creation itself will be set free from its bondage to corruption and obtain the freedom of the glory of the children of God. 22 For we know that the whole creation has been groaning together in the pains of childbirth until now.

So the entire planet is under the curse of sin.

So to summarize the Bible’s teachings on these concepts, God told life on this planet to fill it, according to its kind, and tragically all life has to deal with the curse of sin.

WHAT DID CHARLES DARWIN ACTUALLY SEE?

So two different models here. So the evolutionary model, on the left, has a tree of life. And creation model has more an orchard of life. I might use the word kinds instead of domains. But this is a good comparison of the ideas I am trying to explain.

And some of you noticed that line is Noah’s flood. (that is where we are going next class)

And very clearly, Genesis teaches that everything reproduces according to its kind. There is a limit to the kind.

So I want to compare these two models in detail. Looking at the scientific evidence. In order to understand our question of what Darwin was actually seeing when he observed his finches.

THERE IS NO SIMPLE LIFE

So again, Darwin thought the first life was simple. That the first cellular life arose from a warm little pond. And over time, that simple life evolved into more and more complex forms of life.

Darwin thought that life was simple. He had no idea of the processes going on inside of a cell. He had no idea there were molecular machines within all living things cells. So I want to show you a couple videos that explain some of these molecular processes.

But first, here is a person. A person is made of trillions of cells. And cells are basically microscopic factories. With all of these molecular machines and process. Like DNA and RNA is in there. Within these cellular factories, there are machines and parts so small, we can't even see them with a microscope.

The first video about a molecular machine in your cell, that uses DNA and RNA, that is your genetic code, makes proteins. I am not a biochemist. So talk to my wife if you want to understand this better. But your DNA and RNA, your genetic code, within your cells produces proteins. And proteins are the molecular machines of the cells.

So this video is how information in your cells produces micromachines that make your cell work. I don't expect you to understand all of this video. I don't. I just want you to see that there is no such thing as simple life.

https://www.youtube.com/watch?v=gG7uCskUOrA&ab_channel=yourgenome

0:00 – 2:41

Again, I don't expect you to understand most of that. But that is one of the many molecular machines within cells that incredibly small, incredibly complex and absolutely vital for life.

There is no such thing as simple life.

Here is a related quote by Carl Zimmer. He is a science writer. He has written 13 books on science. He believes in evolutionary theory, but he said in a Science magazine article.

"Because DNA and proteins depend so intimately on each other for their survival, it's hard to imagine one of them having evolved first. But it's just as implausible for them to have emerged simultaneously out of a prebiotic soup." Carl Zimmer, "How and Where Did Life on Earth Arise?" Science.

This is an honest statement. You can't have one without the other, DNA and proteins. They both had to be made at the same time. It's not implausible, it's impossible. He is not pointing us to the Creator.

Ok next video. I saw this TED talk years ago and wanted to show it to you.

This video focuses in on one chromosome. Again, talking about these molecular machines inside your cells. Again, I don't expect us to understand all of this. But it is fascinating. This is a microtubule that holds the chromosome in the correct position. And remember proteins are the machines of your cells.

So these are signal proteins. How the cell communicates. This is a microscopic, biological internet. We can't even see them they are so small.

https://www.youtube.com/watch?v=WFCvkkDSfIU&ab_channel=TED

6:24 – 8:27

That is a remarkable animation. There is no such thing as simple life. Those are molecular, teeny, tiny machines walking down these tubes to tell the cell a message. It's remarkable.

Richard Dawkins the evolutionary biologist said this about the amount of information stored in cells.

There is enough information capacity in a single human cell to store the Encyclopaedia Britannica, all 30 volumes of it, three or four times over. ... There is enough storage capacity in the DNA of a single lily seed or a single salamander sperm to store the Encyclopaedia Britannica 60 times over. Some species of the unjustly called 'primitive' amoebas have as much information in their DNA as 1,000 Encyclopaedia Britannicas." Richard Dawkins, The Blind Watch-maker

That is remarkable.

And again, back in 1859, Charles Darwin had no idea what was happening at a cellular level. We are just discovering some of these things right now. Many say we are living in a genetic revolution!

LIVING CREATURES PRODUCE ACCORDING TO THEIR KIND

So let's dig a little deeper into this concept of genetic code. In order to understand our question of what Darwin was actually seeing when he observed the finches.

How does a plant or animal or person know how to reproduce? Why does a bird give birth to another bird and not a lizard? Why do certain traits get passed from mom and dad to their children.

There is a genetic code that tells the cells what to become.

We don't have time to unpack all of this. But your DNA and RNA are the blueprints of life. My wife was insulted used the word blue print. She rightly said it is way more complicated than any set of blueprints. But that is the best word I can come up with.

So plants and animals and people reproduce according their genetic code. They pass on their genes to their offspring through genetics. Here is a more formal definition.

The gene is considered the basic unit of inheritance. Here is the more technical definition. Genetic code is the sequence of DNA and RNA that determines the amino acid sequence of proteins.

A simple way to understand it is to think about computer code. DNA and RNA is basically biological computer code that tells the molecular and cellular machines what to become and what to do.

Big idea, life is crazy complicated at a cellular and molecular level. There is no simple life.

ROB CARTER VIDEO

So our next video is a 7-minute clip. This entire video is amazing. You should go home and watch the whole thing. This is Dr. Rob Carter. He has a PhD in marine biologist. He is Christian and he is talking about what is happening in the genetic code, the computer programming of our cells.

He is going introduce us to a remarkable idea that our genetic code isn't static, it's dynamic. This is from Is Genesis History.

https://www.youtube.com/watch?v=fXFKJhUGNS8&ab_channel=IsGenesisHistory%3F

6:12 – 13:04

So much good stuff in this video.

So genetics is incredibly complex.

We are beginning to understand what Darwin was actually observing.

4 MECHANISMS OF EVOLUTION

Let's look at our adaptation versus evolution slide again. Was Darwin observing adaptation or evolution?

Now we are going to briefly review the four mechanisms of evolutionary change.

Here are the 4 mechanisms of evolutionary change. Mutation, migration, genetic drift, and natural selection. What are those? We talked about this in class 4.

I want to highlight 2 of these.

First mutation. There is some change in the parent's genetic code that causes their offspring to have different characteristics. In this example, the two green daddy and mommy beetles have a brown baby beetle. A genetic mutation causes a brown baby.

Here is a more formal definition.

Beneficial Mutation is a change in the DNA that provides a benefit to the organism.

So we are talking about breaking the genetic code in a way that actually benefits the organism. It's like adding or deleting random parts of code. It's randomly breaking something.

Lee Spetner, a mechanical engineer, applied biophysicist, and a Christian said.

"All point mutations that have been studied on the molecular level turn out to reduce the genetic information and not to increase it." Lee Spetner, Not by Chance book.

Every scientist knows this is true. A mutation is a loss of information and function.

So that is mutation. Let's talk about natural selection, or survival of the fittest. Let's say brown beetles blend in with their environment. And the green beetles get eaten more frequently. So the brown beetle survives.

Charles Darwin said this. All species of life have evolved over time from common ancestors through a process called natural selection.

Do we believe in natural selection? Yes

But do we believe that natural selection explains all life on the earth? No.

Let's define natural selection. This is a critical concept. Natural selection (survival of the fittest): organisms that are more adapted to their environment are more likely to survive and pass on the genes that aided their success.

So here, the faster guy lives and the slower guy dies.

Going back to this, what stands out to me about these 4 pictures? They are all still beetles.

After Darwin's 5 year trip on the HMS Beagle, he studied various animal breeds in England, including dogs. Did you know there are 300 breeds of dog? Dog breeders can breed kinds of traits into and out of dogs. Look at this incredible diversity within the dog kind.

In the biblical model, you have 2 proto dogs that walk off the ark with an incredible genetic potential in them.

And these dogs spread out to different parts of the globe.

They face different environmental conditions. They have different genetic options. Different dogs adapt to different environments. Short hair dog does better in a desert climate. The long hair dog does better in a winter climate.

But they are all still dogs genetically. They can interbreed. But there is this incredible diversity within the dog kind. These are wolf, bulldog, Chihuahua, and coyote skulls. But they all still

belong to the dog kind. There is this incredible ability to adapt to their environment, but they are all still dogs.

ADAPTATION OR EVOLUTION

So Darwin sees this incredible diversity of life. How life has this amazing ability to adapt to its environment and he develops the theory of evolution. That one kind becomes a different kind.

But the science is now showing that God created life with the incredible ability to adapt to its environment, really quickly.

There is a newer field in genetics. Rob Carter was talking about it some in the video.

Epigenetics: the study of the ability for the same source code (DNA) to express different programming under different environmental conditions.

This is a important consideration when we ask ourselves this question, what was Darwin seeing when he observed the finches.

In the evolutionary model, some non-bird creature evolved into a bird a long time ago. And that bird migrated to the Galapagos islands. It continued to evolve into different kinds of finches. And given enough environmental pressures, someday in the distant future, the finches will evolve into some other non-bird creature.

But in the creation model, God created various bird kinds and those birds have spread over the world. And God gave them the incredible genetic ability to adapt to their environment. God tells us that birds reproduce according to bird kind. They stay birds.

Epigenetics is a problem for evolution. Genetics are turned off and on by a switch. The genes aren't changing. They have parts that are utilized and then turned off based on the environment.

GRASSHOPPERS AND LOCUSTS

Here is an example of this epigenetic change that I learned about. Did you know that grasshoppers and locusts are the same creature? They have an off/on switch and they go like the hulk and start going crazy. When there is less food forcing them together, they transform from a mild mannered grasshopper to a swarming locust.

WHAT DID CHARLES DARWIN ACTUALLY SEE?

What did Darwin actually see? That is our question of the night. And scientist have been studying Darwin's finches recently.

There was a 2017 article in the BMC Evolutionary Biology journal. They found the finches weren't actually evolving by mutations and natural selection. Instead it was epigenetic changes. Which we now know is special coding that allows the animals to adapt to their environment

without changing the DNA. And that second article talks about how it happens in just one to two generations. So it was never evolution.

The cells receive signals and the genetics respond to create certain proteins to handle environmental situations.

Or another way to think about this is the bear kind. God gave the bears the genetic code to adapt to different dietary things, like eating fish versus berries or bamboo. Different hair types depending on temperature or environment. An incredible diversity of bears, but they are all still bears.

Adaptation versus evolution. So what did Darwin see? What are we still observing? How have new discoveries in genetics and epigenetics impact our understanding of what we see?

It is clear that Darwin was observing adaptation with in a kind and not evolution from one kind to another. We have scratched the surface on some of these topics.

If you want to dig deeper, I would recommend one of these books.

Darwin Devolves by Dr. Michael Behe

Glass House by Ken Ham and Bodie Hodge

By Design by Dr. Jonathan Sarfati

The Edge of Evolution by Dr. Michael Behe

Evolution's Achilles' Heels by Rob Carter and others.

3 MISSING QUESTIONS

So we are winding this class down, and wrapping up our first "season" of creation. We are moving to the flood in 2 weeks.

If you are paying attention, you might think, BUT Josh, you never answered 3 questions. For time sake, I cut them. I will include them in my notes.

Who was Cain's wife? Creation.com has a good write up. The link is in my notes.

https://creation.com/who-was-cains-wife

Is human and chimp DNA really 98% similar? Genesis apologetics has video and an article.

https://genesisapologetics.com/faqs/human-and-chimp-dna-is-it-really-98-similar/

Did Adam have a belly-button? Answers in genesis has a good write up.

https://answersingenesis.org/adam-and-eve/did-adam-have-a-belly-button/

I wanted to point you to 3 good resources. If you are dying to know, ask me after class.

CONCLUSION

I want to end with this passage in Job. This is Job talking about God. It is a beautiful section, speaks about giving God his glory for what he has done.

Job 12:7 "But ask the beasts, and they will teach you; the birds of the heavens, and they will tell you; 8 or the bushes of the earth, and they will teach you; and the fish of the sea will declare to you. 9 Who among all these does not know that the hand of the Lord has done this? 10 In his hand is the life of every living thing and the breath of all mankind.

We are all naturalists; we study the natural world.

We have an option when we look at the natural world. We either see purposeless processes that don't need God. Or we see an incredibly well designed world created to adapt to its environment.

When you look at all of the plants and animals of the earth, what do you see?

Let's get in our groups and discuss till 800. Thank you!

Discussion Questions:

PRAY

See you in 2 weeks.