Theistic Evolution – Part 2

Dr. Ray Bohlin reviews a second science critique of Theistic Evolution, asking if universal common descent is real. The evidence says no.

The Fossil Record and Universal Common Ancestry

In a previous article, I examined the failure of neo-darwinism on the basis of the landmark book ***Theistic Evolution: A Scientific, Philosophical, and Theological Critique.***{1}



In this article, I'm reviewing the second science critique of theistic evolution. This section asks whether universal common descent or UCD is real. Universal common descent simply states that all organisms today are descended from one or a few early organisms by Darwinian evolution. UCD is usually if not always vigorously defended by theistic evolutionists, or, as they now prefer, "evolutionary creationists." UCD is considered beyond question. And doubters of UCD are compared to flat earthers and those who believe the sun and planets revolve around the earth. In this section I'll review the first chapter in this section by Gunter Bechly and Stephen C. Meyer.

Bechly and Meyer simply ask if the fossil record records this smooth transition from a single common ancestor to all life forms today. They survey numerous gaps in the fossils where certain large groups appear suddenly again, and again, and again. When a variety of new forms appear, the fossil record is full of gaps. In an old earth perspective, which theistic evolutionists adopt, one of these gaps goes back to the earliest life on earth. Fossils of bacteria show up 3.8 billion years ago right after the Late Heavy Bombardment of the earth by asteroids from 4.1 billion years ago to 3.8

billion years ago. This leaves virtually no time for the origin of that first life.

Let’s jump ahead to the Cambrian Explosion where nearly all animal Phyla show up in the fossil record suddenly, with no ancestors, 450 million years ago. Arthropods, Mollusks, Annelids, Chordates, and many others just show up, already fully differentiated from each other, with few clues of which phyla are most closely related to other phyla.

Then there is the Silurian-Devonian Radiation of Terrestrial Biotas. Here vascular land plants show up suddenly with no clue as to how and when they transitioned from marine plants to land plants.

Then there are the flowering plants. Charles Darwin called their sudden appearance in the Cretaceous period “an abominable mystery.”

There are more problems in the animal kingdom. All the orders of mammals with placentas suddenly show up in a narrow time window, too narrow to have evolved from earlier animals. A paleontologist said, “Within approximately 15 million years of dinosaur extinction most of the 20 orders of placentals had appeared.” And last, the orders of modern birds show up all at once in the fossil record around the same time. Whew, more tomorrow.

Universal Common Descent: A Comprehensive Critique (Part 1)

In this section I’m reviewing Casey Luskin’s chapter called “Universal Common Descent: A Comprehensive Critique.”

In this chapter, Luskin covers four main topics:

• evidence against common descent from biogeography,

- the fossil record,
- molecular phylogenies, and
- embryology.

Since I covered the fossil record in the above section, I'll focus on biogeography here and molecular phylogenies in the next.

Why would biogeography even be considered by theistic evolutionists as evidence of common ancestry? Well, it was used by Darwin, when he saw that the fossil mammals in South America resembled the animals living on the continent today. Luskin looks at a most glaring example of a severe problem in this category, Platyrrhine monkeys. Two families have prehensile tails, which
can grasp things like tree branches while their four limbs perform other tasks. While some old-world monkeys have tails, they are not prehensile.

The new world monkeys are said to have arrived in South America about 30 million years ago. At that time however, Africa and South America were at least 600 miles apart. So how did the platyrrhine monkeys, supposedly recently evolved from old-world monkeys, cross the ocean? The usual response is to suggest that a group or even a single pregnant female rafted on some fallen trees and brush.

This seems incredibly improbable. First, it would require these branches or shrubs to provide food for at least one pregnant female. This drifting pile of branches would take several weeks or most probably months to drift from Africa to South America. This incredible hypothesis is offered because these two groups of monkeys are supposedly related by common ancestry, but on different sides of the ocean. So, there must be a way to preserve common ancestry of these two groups of monkeys no matter how improbable.

Biogeography hurts UCD far more than it helps.

Universal Common Descent: A Comprehensive Critique – (Part 2)

In this section on Casey Luskin's chapter on Universal Common Descent, my focus is on evidence from molecular phylogenies, where molecules like genes and proteins are compared to create trees based on molecules, not anatomy. Scientists can now determine the amino acid sequence of proteins and the nucleotide sequence of the gene that codes for the protein.

Previously, Darwin's tree of life was constructed by comparing anatomical similarities and differences to determine where a species or group of species belonged in the tree. And since it was thought that genes determine the anatomical structure of an organism, a tree constructed by comparing the gene sequences of a protein should give the same tree as the anatomical tree. This was the expectation of numerous scholars.

However, there has been no agreement between anatomical and gene sequence trees except with very closely related species. Molecular phylogenies for different proteins reveal contradictory trees. Now, many scientists have abandoned Darwin's tree of life. In 1999, W. Ford Doolittle offered that "Molecular phylogenists will have failed to find the 'true tree' . . . because the history of life cannot properly be represented as a tree." The problem has only gotten worse. Several authors over the last 25 years are quoted by Luskin{2}: one said that "Different proteins generate different trees" (1998); another said, "Evolutionary trees from different genes often have conflicting branching patterns," (2009). A third author wrote, "The problem was that different genes told contradictory evolutionary stories" (2009). And finally, a fourth author said, "Evolutionary trees constructed by studying biological molecules often don't resemble those drawn up from morphology."

Many evolutionists have abandoned the tree model altogether, which leaves Universal Common Descent in grave trouble.

Missing Transitions: Human Origins and the Fossil Record

Theistic evolutionists agree that humans show clear evidence of having a common ancestor with chimpanzees. But if humans evolved from an ape-like ancestor, was there a real Adam and Eve? Was there an actual fall? Many evolutionary creationists would say no. They hold that humans evolved from a population of at least 1,000 individuals, not two, and that humans were already sinful and therefore never fell into sin.

Casey Luskin explores whether the fossil record documents a steady series of fossils transforming an ape-like ancestor into humans over the last 6-7 million years.

Luskin focuses on three critical questions about the hominin fossils: first, are there candidates for something very close to the common ancestor of humans and chimps; second, are the australopithecines intermediates between our ape-like ancestor and us; and last, is there a series of fossils linking australopithecines and humans?

Fragmentary fossils of three possible candidates for a common ancestor between chimps and humans have been found between 6.6 to 4.4 million years ago. But all three were eventually dismissed as simple apes or too fragmentary to draw any conclusions. All these fossils would easily fit inside a child’s shoe box.

The second question is, were the australopithecines intermediates between our ape-like ancestor and us? The australopithecines ranged from 4 to 1 million years ago and have long been advertised as on the road to humans. But paleoanthropologists cannot agree about the roles, if any, the

australopithecines had in human origins.

The third question asks, is there a series of fossils linking australopithecines and humans?

Homo erectus, the first species in the genus *Homo*, appeared about 1.8 million years ago, but we haven't found *any* potential intermediates between australopithecines and *Homo*. "Although the transition from *Australopithecus* to *Homo* is usually thought of as a momentous transformation, the fossil record bearing on the origin and earliest evolution of *Homo* is virtually undocumented." The so-called evolution of the human species is fragmentary and blotchy.

Evidence for Human Uniqueness

Most evolutionary creationists believe that humans and chimpanzees share a common ancestor around 6-7 million years ago. Above, I addressed the lack of fossil evidence for the human descent from this common ancestor. But equally, evolutionary creationists claim there is powerful evidence linking humans and chimpanzees, that there is only a 1-2% difference of our DNA, indicating humans and chimps are closely related. Ann Gauger, Ola Hossjer, and Colin Reaves deal with this claim in their chapter, *Evidence for Human Uniqueness*.

This chapter uses an abundance of technical terminology. I will be avoiding many of those terms to save time needing to define them for you. I will be generalizing their discussion as much as possible.

If you simply compare the individual building blocks of DNA called nucleotides, where the sequences match up between human and chimp DNA, there is only a 1.23% difference between humans and chimps. But when you begin to include insertions, deletions, the number and location of repeated elements, as

well as the extreme differences between the Y chromosomes of humans and chimps, the difference rises to at least 5%.

It's estimated that there are about 60 genes found in humans that have no similar genes in chimps. It's difficult to get just one unique gene in 6 million years, but 60? Impossible!! There are differences in non-coding DNA, how chromosomes are arranged in the nucleus in cells of
different tissues, how genes are regulated, etc. Many of these differences are found in genes expressed in brain tissues.

These genetic differences bring about dozens of anatomical and physiological differences. Our brains are larger and constructed differently; our feet, necks, and location of the skull on the spine are different.

We think about past and future, we play, dance, make music, communicate through language, use symbolic logic, we write novels and poetry, use math and art, and show empathy for others. There are so many more differences. We do not share a common ancestor with chimps. There is not enough time for evolution bring about all these differences.

I hope that now you are convinced that evolutionary creationist insistence that Universal Common Descent be fully accepted is not based on evidence, just a belief that evolution is true.

Notes

1. J.P. Moreland, Stephen C. Meyer, Christopher Shaw, Ann K. Gauger, and Wayne Grudem, Editors. *Theistic Evolution: A Scientific, Philosophical, and Theological Critique.* Wheaton, IL: Crossway, 2017.

2. Pp. 380-382.

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Theistic Evolution: The Failure of Neo-Darwinism

Dr. Ray Bohlin provides an overview of the first section of a landmark book on theistic evolution, showing why evolution doesn't hold up to scrutiny.

Three Good Reasons for People of Faith to Reject Darwin's Explanation of Life

In this article I'm discussing the first of four sections in the book, ***Theistic Evolution: A Scientific, Philosophical, and Theological Critique***.{1} I'll be covering five chapters from the section, "The Failure of Neo-Darwinism." First we'll look at Doug Axe's chapter titled, "Three Good Reasons for People of Faith to Reject Darwin's Explanation of Life."

I need to let you know from the start that I totally disagree with any theistic evolutionary perspective. As a biologist, I see no reason for any accommodation since Darwinism should be rejected on purely scientific grounds.

But moving along, Axe makes three points in this chapter. First, that there is a cost to any theistic evolution position. Second, Darwin's view of life is false. Third, the reasons for the accommodation are confused. I want to focus on his first point that accommodating Darwin's view of life within traditional faith is costly. He begins with a familiar quotation from the Book of Job 39:26-27. "Is it by your understanding that the hawk soars and spreads his wings toward the south? Is it at your command that the eagle mounts up and makes his nest on high?" Eventually, Job was appropriately humbled as he responded later in Job 42:3, "I have uttered

what I did not understand, things too wonderful for me, which I did not know.” And if you *don’t* agree, then *you* should try to make an eagle. Oh, we can create flying toys with flapping wings and all, but these don’t come close to an actual eagle or hawk. These toys must be made on an assembly line with humans adding parts until the “eagle” is complete. With only the yolk and white of the egg as its nutrition, true eagles are formed within the egg by a seamless automated process. No human interference needed.

If a part breaks in the flying toy, it must be replaced by a human. Eagle’s bodies can mostly heal themselves and true eagles reproduce on their own. No flying toy will ever reproduce itself. Job’s response was correct. He didn’t respond, saying “Actually, God, hawks and eagles could have appeared by accident over millions of years.” As Doug states, “I see no way around the fact that the arresting awe we’re meant to have for the maker of the majestic eagle is lost the moment we accept that accidental physical processes could have done the making instead Neo-Darwinism and the Origin of Biological Form and Information Now we turn to discussing Stephen Meyer’s chapter on the origin of biological form and genetic information.

Neo-Darwinism and the Origin of Biological Form and Information

Before we begin, I need to discuss what a body plan is. The body plan of an animal is the overall structure of the body. For instance, the butterfly and the polar bear have very different body plans. The butterfly has its skeleton on the outside, what’s known as an exoskeleton. The polar bear has an endoskeleton; the skeleton is on the inside of the body. Butterflies have wings, polar bears don’t. In fact, all the major organs, limbs and other body parts are arranged very differently. So, each of these animals will need to form along

very different pathways to arrive at the final product. The question becomes, “How does the evolutionary process form such different body plans from similar beginnings?”

Studies in developmental biology, the study of how organisms develop from fertilized egg to final product, show that changes in biological form require attention to the timing, especially those steps involved in developing the body plan. Also, there is a need for careful choreography in the expression of genetic information, not just when, but how much, how long lived, the proper sequence.

There are real problems here for Neo-Darwinism. Major evolutionary change requires changes in the body plan which is formed very early in embryonic development. So, mutations need to occur early. Mutations that may occur late have no effect on body plan. But numerous studies have shown that early mutations are inevitably lethal. Late mutations don’t produce body plan changes. As Meyer puts it, “The kind of mutations we need, we don’t get. The kind we get, we don’t need.”

There isn’t just a need for new genes and proteins for new functions of the organism. Polar bears can endure freezing temperatures, butterflies can’t. But new regulatory pathways are needed. Early development is controlled by developmental gene regulatory networks, or dGRNs. These networks regulate the time and perform the choreography. Any mutations here are always inevitably lethal. Neo-Darwinism can’t explain the origin of new animal body plans.

Are Present Proposals on Chemical Evolutionary Mechanisms Accurately Pointing toward First Life?

Now we will review Dr. James Tour’s discussion on the origin of life. Dr. Tour is the foremost authority on organic chemical synthesis. That is, he makes chemical products based

on the element carbon. This background makes him just the scientist to critique the chemical origin of the first life, since life is also based on the element carbon.

Tour begins by describing the start and stop necessity of making something as simple as a carbon-based car and a car that also contains a motor and then an even better motor. These nano cars take many steps to build. Usually Tour and colleagues run into a roadblock necessitating, before moving to the next step, that they back up several steps and redirect the process. He also documents that each stage usually requires different chemical requirements. This makes it necessary to purify your product. What he demonstrates is that making something comparably simple as a nano car requires intelligent input at every step. This will not happen by chance. Tour emphasizes that the undirected chemical synthesis to make useful biological molecules, and even a cell, is far more complex with no opportunity to start over again when you hit a dead-end.

After walking the reader through the many and enormous roadblocks a prebiotic chemist faces in trying to form the building blocks—sugars, amino acids, fatty acids, and nucleotides—and then the macromolecules; carbohydrates, proteins, lipids, DNA and RNA, and *then* trying to assemble these very different parts into a functioning, reproducing cell, Tour comes to a final conclusion.

“Those who think scientists understand how prebiotic chemical mechanisms produced the first life are wholly misinformed. Nobody understands how this happened. Maybe one day we will. But that day is far from today. It would be more helpful (and hopeful) to expose students to the massive gaps in our understanding. Then they may find a firmer—and possibly a radically different—scientific theory.”

Why DNA Mutations Cannot Accomplish What Neo-Darwinism Requires

Now we discuss Jonathan Wells's chapter on why DNA mutations are insufficient to account for the arrival of new organisms through evolution. Mutations acted on by Natural Selection are what provides the variation, when given enough time and continued mutations with selection, to provide new types of organisms.

Dr. Wells begins his chapter by making sure we understand what is meant by the "Central Dogma." It goes something like this: DNA makes RNA, makes protein, makes us. It was thought that all the instructions for building organisms was in the sequence code of DNA. But DNA never leaves the nucleus. The sequence of DNA that codes for a protein is transcribed into a molecule of RNA. The messenger RNA then leaves the nucleus and enters the cell, where molecular machines called ribosomes, translate the RNA code into protein code. Proteins are made of long chains of amino acids. Proteins are the workhorse of the cell. They speed up necessary chemical reactions the cell needs and provide structure and support. Our bodies are composed of organ systems, which are made up of organs, which are composed of tissues, and tissues are composed of cells that perform their functions through the proteins each cell makes. Therefore, DNA makes RNA, makes protein, makes us.

Over the last few decades, this analogy has fallen apart. Initially, a stretch of DNA that coded for a single protein was called a gene. One gene, one protein. We now know that the RNA transcribed from a gene can be split up into two or more segments and these segments put back together in several different ways. The RNA then doesn't match the original sequence of DNA. About 95% of human genes can be spliced into more than one RNA and more than one protein. Proteins can also be modified with sequences of sugar molecules that are specific to a particular tissue. What controls the splicing

and the addition of sugar molecules is still not fully known. But for various reasons, it's not the DNA alone that determines these variations on a central theme.

Evidence from Embryology Challenges Evolutionary Theory

Finally, I'll cover the final chapter for this article, "Evidence from Embryology Challenges Evolutionary Theory." Sheena Tyler states early that Darwin thought that "Embryology is to me by far the strongest class of facts in favor of change of form."{2} Tyler goes on to indicate that in Darwin's time, embryology was largely a black box of which little was known.

The section I'll be covering is titled "Development is Orchestrated." Tyler makes a comparison to a mystery novel where the author plans to ensure the different characters come together at the right place and time to resolve the mystery. Embryological development is very much like that. She mentions a four-dimensional pattern of stored information. The first three dimensions of this pattern revolve around being in the right place, the fourth dimension is time. So embryological proteins, chemicals and even electrical fields need to be available at the right time and place. Any deviation and the structures are ill-formed, or the embryo could even die.

Skeletal development in vertebrates starts with an electrical field that begins the process. And from there she quotes an embryologist indicating that the size and shape of skeletal elements in the embryo are "exquisitely regulated." Another word used to describe the sequence of events is "precise." This doesn't sound like something that was cobbled together by chance over a few million years. There is a definite plan and prepattern that *must* be followed.

The central nervous system requires, again, a "precise and

exquisitely regulated gene expression." Another expression used is "intricately orchestrated." Each developing neuron anticipates where a connection with another neuron will need to be before contacting the other neuron.

Last, she mentions the heart and circulatory system. One embryologist reports that cardiac transcription factors (small proteins that help initiate the expression of a gene) *choreograph* the expression of *thousands* of genes at each stage of cardiac development. Every blood vessel ends up in the right place every time along with the proper architecture for veins or arteries. Just amazing!

Notes

1. J.P. Moreland, Stephen C. Meyer, Christopher Shaw, Ann K. Gauger, and Wayne Grudem, *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*. Wheaton, IL: Crossway, 2017.

2. Quoted in Sheena Tyler, Evidence from Embryology Challenges Evolutionary
Theory, in *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*, Moreland, J.P., Meyer, S.C., Shaw, C., Gauger, A. K., and Grudem, W., editors.

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Was Darwin Wrong? A Rebuttal to the November 2004 National

Geographic Cover Story

Our authors examine arguments for evolution commonly brought out by evolutionists. They show these arguments are not as strong as they purport and in many instances make a stronger case for intelligent design. Every person, especially Christians, should be aware of the information presented in this article.

Over the last few decades more and more scientists from every field of discipline have voiced concerns with Darwinian evolution's ability to explain the origin and diversity of life on earth. However, you would not know that from reading a recent article in *National Geographic*. The cover of the November 2004 issue grabs the reader's attention with the question, "Was Darwin wrong?" To few people's surprise, upon turning to the first page of the article you see the boldfaced words, "NO. The evidence for Evolution is overwhelming." But how can this be when so many scientists are in disagreement? Is it possible that the five lines of evidence presented in the article aren't as indisputable as the reader is led to believe? What if each one of these evidences for evolution is fatally flawed? What would evolution have left to stand upon? It is my opinion, as well as many others', that this is indeed the case. Let us critically evaluate each of these five lines of evidence (embryology, biogeography, morphology, paleontology, and bacterial resistance to antibiotics) and see what, if anything, we can conclude from them.

Embryology

First let's examine the so-called evidence from embryology, which Darwin himself considered to be "by far the strongest single class of facts in favor of" his theory.{1} *National Geographic* asks the question, "Why does the embryo of a mammal pass through stages resembling stages of the embryo of a reptile?"{2}This, however, is a loaded question.

This line of evidence presented by *National Geographic* is known as Embryonic Recapitulation, or in other words, as the embryo develops it passes through stages that retrace its evolutionary past. This idea was originally developed in the mid 1800's by Ernst Haeckel, which he illustrated with drawings of embryos of various species. However, as Jonathan Wells points out in his book *Icons of Evolution*, this has been known to be false for over 100 years! Not only were Haeckel's drawings fraudulent but the late Stephen J. Gould called them "the most famous fakes in biology." Furthermore, embryologist Walter Garstang also stated in 1922 that the various stages of embryo development of different species "afford not the slightest evidence" of similarities with other species supposed to be their ancestors, stating that Haeckel's proposal is "demonstrably unsound."{3}In 1894 Adam Sedgwick wrote, "A species is distinct and distinguishable from its allies from the very earliest stages all through the development."{4}

So how is *National Geographic*'s question, "Why does the embryo of a mammal pass through stages resembling stages of the embryo of a reptile?" a loaded question? Because mammalian embryos never pass through such stages in the first place! Darwin's "strongest" evidence for evolution turns out to be no evidence at all.

Biogeography

Biogeography, as defined by *National Geographic*, "is the study of geographical distribution of living creatures—that is, which species inhabit which parts of the planet and why."{5} *National Geographic* asks, "Why should [such similar] species inhabit neighboring patches of habitat?"{6} Why are there several different species of zebras found in Africa, or dozens of species of honey creepers in Hawaii, or thirteen species of finches in the Galapagos Islands? The answer given is that "similar species occur nearby in space because they have

descended from common ancestors." There is nothing controversial about that. But I don't believe that this in anyway supports the kind of evolution that *National Geographic* is trying to promote. Allow me to explain by taking a closer look at the term "evolution."

There are two different kinds of "evolution" within the biological sciences. The first kind of evolution is *macroevolution*, or, big change over time. Macroevolution requires a vast amount of new genetic information and describes the kind of evolution required to make a man out of a microbe. It is this kind of evolution that is being propagated by *National Geographic*.

The second kind of evolution is *microevolution* which describes small changes or variations within a kind. For example, you may breed a pair of dogs and get another dog which is smaller than both its parents. You may then breed the new smaller dog and get an even smaller dog. However, there are limits to this kind of change.{7} No matter how often you repeat this procedure the dog will only get so small. It is also important to note that the offspring will always be a dog. You will never get a non-dog from a dog through this kind of change. Not to mention this kind of evolution tells us nothing about where the dog came from in the first place.

So what about *National Geographic*'s examples? They are all examples of microevolution. Why, for example, are there several species of zebras in Africa? Because they had a common ancestor that probably lived in Africa—a zebra. Or why are there thirteen species of finch on the Galapagos Islands? Because they are all descended from a single pair or group of finches. To use this kind of observation and try to explain where a zebra or finch came from in the first place goes beyond the data and the scientific method, and enters into the realm of imagination.

Evolutionists are still puzzling over the connection between

these two forms of evolution, macro and micro. Perhaps the puzzle remains because macroevolution is just wishful thinking.

Morphology

Morphology is a term referring to "a branch of biology that deals with the form and structure of animals and plants."{8} It is presented by *National Geographic* as having been labeled by Darwin the "'very soul of natural history." So what is this evidence from morphology that lends itself as "proof" for microbes-to-man evolution? Simply put, it is that similarities in shape and design between different species may indicate that those species have originated from a common ancestor by way of descent with modification. *National Geographic* gives a few examples such as the "five-digit skeletal structure of the vertebrate hand," and "the paired bones of our lower legs" which are also seen "in cats and bats and porpoises and lizards and turtles."{9}

Perhaps an easier to follow illustration concerning this is evolutionist Tim Berra's famous illustration which he used in his book *Evolution and the Myth of Creationism*. In it he states the following:

> *If you look at a 1953 Corvette and compare it to the latest model, only the most general resemblances are evident, but if you compare a 1953 and a 1954 Corvette, side by side, then a 1954 and a 1955 model, and so on, the descent with modification is overwhelmingly obvious. This is what paleontologists do with fossils, and the evidence is so solid and comprehensive that it cannot be denied by reasonable people [emphasis in original].{10}*

So why is this illustration famous? It's because Berra, although an evolutionist, unwittingly demonstrated why similar structures across different species is just as naturally

attributed to intelligent design. For what do each of these various Corvette models have in common? They were all designed and manufactured by the same company, General Motors. In fact, the Corvette has many design features in common with other automobiles as well, such as four wheels, a gasoline engine, brakes, a steering wheel, etc. Why do most cars share these things, and many others things, in common? Because they are effective and efficient features designed for the proper operation of the vehicle. Maybe this is the same reason we find commonalities between many different kinds of plants and animals.

It must be granted that if evolution were true, then one would expect to see similarities between closely related species. However, as illustrated above, they could also be explained as the result of a common designer. So how can we tell which it is?

There are at least two ways. First, if similar structures did truly descend from a common ancestor, then those structures should have similar developmental pathways. In other words, they should develop in a similar manner while still in the embryonic stage. However, as early as the late 1800's scientists observed that this simply isn't the case. Embryologist Edmund Wilson in 1894 noted that structures which appear similar between adults of different species often differ greatly either in how they form or from where they form, or both.{11}

Secondly, if similar structures are the result of descent with modification, then you would expect the development of those structures to be governed by similar genes. Concerning this very point biologist Gavin de Beer said, "This is where the worst shock of all is encountered . . . the inheritance of homologous structures from a common ancestor . . . cannot be ascribed to identity of genes."{12} In other words, different genes govern the development of similar structures which runs contrary to what evolution would predict.

It would appear then, that morphology, the "'very' soul of natural history," is more the "ghost" of natural history than supporting evidence for evolution. There are certainly many features of organisms resulting from a common ancestry, such as the beak of the Galapagos finches; but that doesn't mean that the beaks of all birds are also related by common ancestry. Perhaps applying the perspective of Intelligent Design can help clarify the difference.

Paleontology

Paleontology simply put is the study of the fossil record. So how does the fossil record support the "theory" of evolution? According to *National Geographic,* Darwin observed that species presumed to be related tend to be found in successive rock layers.{13} *National Geographic* asks if this is just coincidental. The answer provided, of course, is a firm no. Rather, they say, it is "because they are related through evolutionary descent."{14} Is this conclusion truly supported by scientific observation?

The biggest problem with identifying a gradual change from one species into another within the fossil record is that by and large no such gradual sequence of fossils exists! With the exception of a few disputed examples, such as the horse and whale, what truly stands out in the fossil record is sudden appearance. The late Stephen J. Gould, a world renowned evolutionist, noted concerning this, "The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference, however reasonable, not the evidence of fossils."{15} This is *especially* true within the Cambrian rock layer, dated by evolutionists at over 500 million years old, where complex species appear for the first time with no sign of gradual development from simpler forms.

To illustrate this point, imagine, if you will, that you

covered the entire state of Texas with playing cards. If someone were to then go for a walk across Texas and periodically pick up a card at random, what might they begin to think if all they ever picked up were 2s and aces, and never any of the cards in between? He might begin to wonder if those other cards were there at all.

This is precisely what we find within the Cambrian rock layer. We always find fully formed species, like finding just 2s and aces, and never any intermediates, like your 3s, 4s, and so on. In fact, *National Geographic* even acknowledges this problem when it compares the fossil record in general to a film with 999 out of every 1,000 frames missing.{16} It's more likely that there are few if any missing frames; rather those frames never existed in the first place.

Darwin himself, observing the lack of transitional forms within the fossil record, noted this problem to be "perhaps the most obvious and serious objection which can be urged against [his theory of evolution]."{17} Today, with nearly 150 years of advancements in the area of paleontology, the fossil record still fails to meet the expectation of Darwin's theory. This problem goes unaddressed by *National Geographic*.

Bacterial Resistance to Antibiotics

National Geographic derives a fifth line of evidence from more recent scientific data. They state, "These new forms of knowledge overlap one another seamlessly and intersect with the older forms, strengthening the whole edifice, contributing further to the certainty that Darwin was right."{18} Is this really the case? The most lauded of these "new forms of knowledge" is from the study of bacteria that acquire resistance to modern medicines. *National Geographic* states that "there's no better or more immediate evidence supporting the Darwinian theory than this process of forced transformation among our inimical germs."{19}

These adaptations are in fact evidence for change over time, but not the kind that would change a microbe into a man. Rather, all examples of bacterial resistance are that of micro-evolution, i.e. change *within* a kind. For example, a staph infection is caused by a bacterium known as a *Staphylococcus* or "staph" for short. Whenever a staph bacterium acquires resistance to a particular antibiotic, it still remains a staph. It doesn't change into a different kind of bacterium altogether. In fact, no matter how much it changes, it always remains a staph.

Secondly, when we take a closer look at how bacteria become resistant to a particular treatment, we find something very interesting. Just like in humans, information on how bacteria grow and survive is stored in the bacteria's DNA. Therefore, if any change is to take place to turn an organism from one kind to another "more complex" kind, such as a microbe into a man, it must add new information to that organism's DNA. However, that is not what we observe taking place in bacteria at all. New information is *never* created. Existing information may be modified, lost, or even exchanged between bacteria, but never created.

Thirdly, and perhaps most significantly, is that nothing which *National Geographic* presents even begins to explain where the information to make a bacterium came from in the first place. Rather, and to no surprise to the creationists, the study of bacterial resistance testifies to an intelligent Designer who created all living organisms with an ability to adapt to changing environments.

Conclusion

Modern science has indeed offered us great insight into the complexities of life and the inner workings of all living things. Advances in population genetics, biochemistry, molecular biology, and the human genome will surely result in greater understanding of life on our planet. But unlike what

National Geographic suggests, it is these advances which have served to convince an increasing number of scientists to abandon Darwin's theory as an explanation for the origin of life on earth. Rather, these advancements point to the necessity of intelligent design as an added tool in the toolbox.

Notes

1. Jonathan Wells, *Icons of Evolution* (Washington, DC: Regnery Pub., 2000), 82.
2. David Quammen, "Was Darwin Wrong?," *National Geographic* November, 2004: 13.
3. Wells, 88.
4. Ibid., 97.
5. Quammen, "Was Darwin Wrong?," 9.
6. Ibid., 12.
7. Lester, Lane P., Raymond G. Bohlin, and V. Elving Anderson, *The Natural Limits to Biological Change* (Dallas: Probe Books : Distributed by Word Pub., 1989).
8. Merriam-Webster Inc., *Merriam-Webster's Collegiate Dictionary,* 10th ed. (Springfield, Mass: Merriam-Webster, 1996).
9. Quammen, "Was Darwin Wrong?," 13.
10. Tim Berra, *Evolution and the Myth of Creationism* (Stanford, Calif.: Stanford University Press, 1990), 117.
11. Edmund B. Wilson, "The Embryological Criterion of Homology," pp.101-124 in Biological Lectures Delivered at the Marine Biological Laboratory of Wood's Hole in the Summer Session of 1894 (Boston: Ginn & Company, 1895), p. 107.
12. Wells, *Icons of Evolution,* 73.
13. Quammen, "Was Darwin Wrong?," 12.
14. Ibid., 13.
15. Stephen J. Gould, "Evolution's Erratic Pace," *Natural History* 85(5).
16. Quammen, "Was Darwin Wrong?," 25.
17. Charles Darwin, *On the Origin of Species by Means of*

Natural Selection (New York, New York: The New American Library of World Literature, Inc., 1958), 287.
18. Quammen, “Was Darwin Wrong?,” 20.
19. Ibid., 21.

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