How to Talk to Your Kids About Evolution and Creation — What Kids Should Know About Evolution

Sue and Dr. Ray Bohlin bring decades of Christian worldview thinking and a PhD in science to the important topic of communicating a balanced rational position to our children and teenagers on questions that they will encounter in our society.

This article is the transcript of a Probe radio program the Bohlins recorded. Sue's questions and comments are in italics, followed by Ray's answers.

Problems with Evolutionary Theory

Why is there a problem with evolution in the first place? Someone once asked you, "What should I believe?" Remember what you told them?

Basically I said you should only believe what there is evidence for. After spending years studying evolution in bachelor's, master's, and doctoral programs, I can tell you that, first of all, there **is** evidence for small changes in organisms as they adapt to small environmental fluctuations.

Second, there **is** evidence that new species do arise. We see new species of fruit flies, rodents, and even birds. But when the original species is a fruit fly, the new species is still a fruit fly. These processes do not tell us how we get horses and wasps and woodpeckers.

Third, in the fossil record, there are only a few transitions between major groups of organisms, like between reptiles and

birds, and these are controversial, even among evolutionists. If evolutionary theory is correct, the fossil record should be full of them.

Fourth, there are no real evolutionary answers for the origin of complex adaptations like the tongue of the woodpecker; or flight in birds, mammals, insects, and reptiles; or the swimming adaptations in fish, mammals, reptiles, and the marine invertebrates. These adaptations appear in the fossil record with no transitions. And fifth, there is no genetic mechanism for these large-scale evolutionary changes. The theory of evolution from amoeba to man is an extrapolation from very meager data.

So the problem with evolution is that it is a mechanistic theory without a mechanism, and there is no evidence for the big changes from amoeba to man.

The Evolution of the Horse

I have our son's eighth-grade biology textbook here. Every textbook, including this one, has a story about the evolution of the horse. It is always offered as proof of evolution. What do you say?

It does not prove much about evolution at all. David Raup, with the Field Museum of Natural History in Chicago, says:

> *"Well, we are now about 120 years after Darwin and the knowledge of the fossil record has been greatly expanded. We now have a quarter of a million fossil species but the situation hasn't changed much. The record of evolution is still surprisingly jerky and, ironically, we have even fewer examples of evolutionary transitions than we had in Darwin's time. By this I mean that some of the classic cases of darwinian change in the fossil record, such as the evolution of the horse in North America, have had to be discarded or modified as a result of more detailed information—what*

> *appeared to be a nice simple progression when relatively few data were available now appear to be much more complex and much less gradualistic. So Darwin's problem has not been alleviated in the last 120 years and we still have a record which does show change but one that can hardly be looked upon as the most reasonable consequence of natural selection."*[{1}]

There is no chronological sequence of horse-like fossils. The story of the gradual reduction from the four-toed horse of 60 million years ago to the one-toed horse of today has been called pure fiction. All that can be shown is the transition from a little horse to a big one. This is not significant evolutionary change, and it still took some 60 million years. It does not say anything about how the horse evolved from a shrew-like mammal.

Homologous and Vestigial Organs

Homologous organs: What are they?

Homologous organs are organs or structures from different organisms that have the same or similar function. Evolutionists say this similarity is due to common ancestry. The important question is, Do these organs look and function the same because of common ancestry or because of a simple common design? In other words, do they look this way because they are related to one another, or were they designed to perform a similar function? Homology is not a problem for creationists; we have a different but reasonable explanation. It is the result of common design, not common ancestry.

What about vestigial organs, the ones that are supposedly left over from the evolutionary past? I remember being taught that the coccyx, the tailbone, is left over from when we were monkeys. And the appendix, same thing—we needed it when we were evolving, but we do not need it now. Vestigial organs are unused leftovers from our evolutionary past. Since we do not

use them, they have diminished; they have become vestiges of their past function—according to evolutionary theory.

Yes, according to evolution. But we have discovered that these structures do have a function. The prime example is the one you mentioned, the tailbone. The coccyx serves as a point of attachment for several pelvic muscles. You would not be able to sit very well or comfortably without a tailbone.

The appendix was also long thought to be a vestigial organ, having absolutely no function within our bodies, but now we find it is involved in the immune system. It does have a function. It is true that you can live without it. However, as we learn more about the appendix, we realize that if it remains uninfected, it may be serving a very useful purpose.

So in other words, "vestigial organs" are not necessarily useless; we just may not have discovered what their role is.

Yes, very often we have called these things "vestigial" because we never bothered to investigate their function because of their reduced stature. Now we find that things like the coccyx and the appendix really do have a function. And if they have a function, then we cannot call them vestigial; they are not leftovers from our evolutionary past.

I am looking at pictures of embryos in this textbook that are very similar. The explanation given in the book is that they are similar because they have a common evolutionary ancestor. Obviously, this is being advanced as evidence of evolution. Is that what it is?

Definitely not. Embryological development does not follow the history of our evolutionary past. That idea was proven wrong 50 or 60 years ago. It is unfortunate that this error is still in the textbooks. Obviously, there are some similarities among species very early in embryological development; for instance, among mammals, reptiles, amphibians, and birds. That is because they all start from a single cell. As development

progresses, they become less similar. That is exactly what you would expect from an evolutionist **or** creationist perspective.

The Early Atmosphere of the Earth

You know, I was pretty happy with how this particular textbook treated evolution. It does not even use the word evolution, and it treats it strictly as a matter of theory, not fact. But you came across another, newer high-school textbook that is stridently pro-evolution. I am concerned about some things I see in this chapter on the origin of life. It is talking about the earth's early atmosphere, and this statement is in bold print (so the students know it's going to be on the test, don't you know!) <smile>

> *"The earth's first atmosphere most likely contained water vapor, carbon monoxide and carbon dioxide, nitrogen, hydrogen sulfide, and hydrogen cyanide."*

Then in the very next section it talks about Stanley Miller's famous experiments in 1953. It says the atmosphere he was trying to recreate was made of ammonia, water, hydrogen, and methane. What is going on here?

This particular section is confusing at best and misleading at worst. Clearly they have described Miller's classic experiment, but researchers today agree that the atmosphere used for that simulation did not exist. But yet Miller's experiment produced results. If you use the atmosphere that the textbook describes as the real one, the results are much less significant. The textbook gives the impression that chemical evolution is easy to simulate. But this is far from the truth. One experimenter says:

> *At present, all discussions on principles and theories in the field [meaning the origin of life] either end in stalemate or in a confession of ignorance.{2}*

But you would definitely not get that impression from reading this section of the book.

Phylogenetic Trees

I have another question. Here is this beautiful, tidy chart that shows how neatly different animals evolved from one common ancestor. This evolutionary tree has a crocodile-like animal at the bottom, and all these branches coming out from him, and we end up with turtles and snakes and reptiles and birds and mammals all descended from this one animal. Are we talking science fantasy here, or is there a problem with this evolutionary tree?

Evolutionary trees, or phylogenetic trees, are regularly misrepresented in high-school textbooks. The nice solid lines give the impression that there is plenty of evidence, plenty of fossils to document these transitions—but the transitions are not there. If we were to look at this same type of diagram in a college textbook, all those connecting lines—the transitions—would be dotted lines, indicating that we do not have the evidence to prove that these organisms are related. The transition is an assumption. They assume these organisms are related to each other, but the evidence is lacking. Stephen Gould, a paleontologist and evolutionist from Harvard, says,

> *"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."*[{3}]

In other words, these charts make pretty pictures, but they're not pictures of reality.

That's correct.

Natural Selection and Speciation

In this same high-school biology text, I am looking at the chapter on evolution called "How Change Occurs." The big heading for this section is "Evolution by Natural Selection." Natural selection always seems to be linked inseparably to evolution. What is it?

Natural selection is a process where the organisms that are fit to survive and reproduce, do so at a greater rate than those that are less fit. It sounds circular, but it is a simple process, something you can easily observe in nature.

There are some pictures here of England's famous peppered moths. Why do they keep showing up in science textbooks?

They keep showing up because the peppered moth was the first documented example of Darwin's natural selection at work. There were two different color varieties of the same moth: a peppered variety and a dark black variety. The peppered variety was camouflaged on the bark of trees, but the black variety was conspicuous. As a result, the birds ate a lot of black moths. The most common variety, therefore, was the peppered variety. But then the bark of the trees turned dark or black because of pollution. Now the dark form was hidden, but the peppered variety stood out, so the birds ate up the peppered variety. The proportion of peppered moths to black moths shifted in response to the change in the environment.

So here was a change of frequency. At one time we had more peppered moths, and now we have more dark ones. A clear example of natural selection taking place. But the question is, Is this really evolution? I don't think so. It just shows variety within a form. This does not tell me anything as a biologist and a geneticist about how we have come to have horses and wasps and woodpeckers.

When we are looking at peppered moths, we are dealing with

natural selection within the same species. What about a whole new species; for example, Darwin's Galapagos finches off the coast of Ecuador. Isn't that an evidence of evolution?

Here is another area where we need to be careful. Speciation is indeed a real process, but speciation only means that two populations of a particular species can no longer interbreed. The two populations get separated by a geographical barrier such as a mountain range, and after a time they are no longer able to interbreed or to reproduce between themselves.

But all we have really done is split up the gene pool into two different, separate populations; if you want to call them different species, that's fine. But even Darwin's finches, although there are some changes in the shape and size of the bill, are clearly related to one another. Drosophila fruit flies on the Hawaiian Islands—there are over 300 species—probably originated from one initial species. But they look very much the same. The primary way to distinguish them is by their mating behavior.

There is a lot of variety within the organisms God created, and species can adapt to small changes in the environment. But there is a limit to how far that change can go. And the examples we have, like peppered moths and Darwin's finches, show that very clearly.

Responding to Evolutionary Theory

You have given a creationist's response to evolution in textbooks, but apart from the books there is a personal issue to deal with. How do you think Christian students ought to react when they get to evolution in a science curriculum in school?

First, don't panic. This should not be a surprise; you knew it was going to come eventually. Second, understand that evolution is a very important idea in society today. It is

important to know about it and to understand it. Try to explain it to your kids in that way. You do not have to believe it or accept it, but you need to understand it, know what people mean when they talk about evolution.

What about answering a question on a test?

Here it can get a little sticky. You may feel that you have to lie in order to give the answer the teacher wants. But I do not think that is the case at all. What you are doing is simply addressing the issue of evolution; you are showing that you understand it. You do not have to phrase your answer in such a way that says, "I believe this is the way it is." It may come down to how you state your answer. But you are simply demonstrating your knowledge about evolution, not your acceptance of it.

It seems to me that when you show you understand the concept of evolution, you are demonstrating respect for the teacher and really for the theory too, as the prevalent theory of our day, without having to make a statement of, "Yes, I believe this!"

Sure. The concept of respect, I think, is extremely important, because you have to realize that as a middle-school or high-school student, you are dealing with teachers who have studied or taught evolutionary theory for many years. Their level of understanding is much deeper than yours. You cannot simply go in there and try to convince the class that the teacher is wrong, or that evolution is wrong; you need to play the role of a student. And the role of a student is to learn, to try to understand and comprehend the ideas being discussed. But you do not have to communicate in such a way that you appear to believe evolutionary theory.

I found this page in the textbook we have been looking at, right after the chapters on evolution. It is a message from the authors to the students. It says,

> *"Evolutionary theory unites all living things into one enormous family—from the tallest redwoods to the tiniest bacteria to each and every human on Earth. And, most importantly, the evolutionary history of life makes it clear that all living things—all of us—share a common destiny on this planet. If you remember nothing else from this course ten years from now, remember this, and your year will have been well spent."{4}*

I have never seen a message like this before, from the authors to the student. This textbook obviously has a very strong evolution bias.

Here we have to realize that what is being taught is not science anymore; this is a worldview. This is a statement of naturalism. Obviously, evolution is extremely important to the naturalistic worldview, and the authors are trying to communicate its significance. We are going to see more and more of this bias in textbooks.

Before Christian parents can talk to our kids about evolution, we first must have an understanding of evolution itself, as well as an understanding of the problems with it. We don't need to be afraid of this powerful theory; we do, however, need discernment, in sifting through the rhetoric and distinguishing it from the truth about God's world.

Genesis 1

Typically, if a child spends any time at all in Sunday school, he gets to the point where he realizes, "Hey, this doesn't relate at all to what I'm learning in school!" Our hope is that we can help parents integrate the truth of Scripture with what is known about origins in the world. As Christians, our starting point for thinking about origins is Genesis 1: "In the beginning God created the heavens and the earth." From that point on, though, there are a lot of different

perspectives explaining the rest of the chapter.

That is true, and unfortunately it not only gets confusing for many of us, but it gets very confusing for many of the academics and the scholars as well. There are a number of different ways to interpret Genesis 1. Let me just run through three of the most prominent views among evangelicals today.

The first is the **literal** or the **very recent** creation account. Some people would call the proponents of this view "young earth creationists." They believe that each of the six days of creation was a twenty-four hour period similar to our days today. These days were consecutive and in the recent past, probably ten to thirty thousand years ago. They hold that the flood was a world-wide and catastrophic event and that all the sedimentary layers were a result of Noah's flood. All the fossils, therefore, are a result of the flood of Noah.

The second way of looking at Genesis 1 is the **Day Age Theory**, sometimes called **Progressive Creation**. Here, each of the six days of creation is a very long period of time, perhaps hundreds of millions of years. God would have created progressively through time, not all at once. The flood was a local event in Mesopotamia or perhaps even a world-wide, but tranquil flood. Therefore, the flood did not leave any great scars or sediments across the earth.

The third view understands Genesis 1 as a **Literary Framework**. This view suggests that Genesis 1 was not meant to communicate history. Peoples of the Ancient Near East used a similar literary device to describe a complete or perfect work; in this case, a perfect creation. God could have created using evolution or progressive creation; the point is that there is really no concordance between earth history and the days of Genesis 1.

We need to explain to our children the view that makes the most sense to us, but at the same time let them know that

there is some disagreement between evangelicals. You may even be confused yourself, and it is okay to communicate to your children that you do not know, either, and that not knowing is all right. We need to give direction but leave the doors open for other options.

Can we know which one is the correct interpretation?

Creation is a mystery. We need to show respect, not only for the mystery, but also for those people holding different views. Evangelicals with backgrounds in Hebrew and Greek differ on their understanding of Genesis 1. So how can we expect a ten-year-old to grasp the problem and make an actual decision?

When we explain the creation account in Genesis 1, we need to communicate to our children that different scholars, all committed to the Bible as God's Word, interpret Scripture differently. The important thing is that we stress that God created the earth, the universe, and every living thing, especially humans.

Early Human History

Now we are going to look at some specific issues that arise from Genesis in terms of early human history. Let's start with Adam and Eve. Were they real people?

This is a very important question, and I think it is one that most evangelical scholars can agree on. Adam and Eve were real people, and almost all evangelical scholars agree that they were created by God. The reason is that this is the one creation event where God gives us details as to how He went about it. When He created the other mammals and the sea creatures and the birds, He *made* them or He *created* them or He *formed* them, but we are given details about Adam and Eve's creation. We are told how God did it. Adam was formed from dust, and Eve was created from a rib taken out of Adam's side.

It is clear that humans do not have an evolutionary origin.

What about australopithecines, those supposed ape-like human ancestors?

Australopithecines most likely are simply extinct apes. Some quibble as to whether they walked upright and therefore may have been on their way to developing into human beings, but even if they did walk upright, that is not a real problem. They are still extinct apes, and they really had no human qualities whatsoever. There is a very good book that you may want to look at called *Bones of Contention*. There are a couple of books called *Bones of Contention*, but this is a recent one by Marvin Lubenow. Lubenow goes into great detail about the actual fossil finds—what they mean, where they fit—all from a creationist's perspective, and he does a very good job. He talks about the fact that human remains seem to span the whole era of supposed human evolution from four million years ago to the present, and that even the one particular type of fossil called *homo erectus* covers a very broad range. *Homo erectus* does not really fit where he is supposed to, and the fossils seem to contradict evolutionary theory rather than support it.

There is one more question that keeps coming up again and again. Where did Cain's wife come from?

In some ways it is surprising that this question seems to be so perplexing to people, but in another way I really understand it. Clearly, Cain married a sister. We react against that idea today because of the many laws we have today concerning incestuous relationships. We have laws against incest because the children that result from that type of relationship are often afflicted with a genetic disease. This is because all of us carry detrimental recessive genes within our chromosomes. Closely related family members may carry similar if not the same set of recessive genes. When we marry within the family, those recessives can pair up and result in a child who is genetically handicapped. But in the original

creation, there was no such problem. These were the originally created beings, there were no genetic mutations to worry about.

When it comes to human origins, the Bible gives no room for anything other than God's personal fashioning of Adam and Eve. It is the fact that God personally created mankind that gives us such intrinsic value.

Noah's Flood

The flood of Noah is extremely important because several New Testament teachings depend on it. The Lord Jesus told us that the time right before He returns will be just like it was in the days before the flood. Peter reminds us that God's judgment fell once on the earth and He has promised to do it again. If the first judgment was not real, what are we to think of the second one?

But all too often what comes to mind when we think of Noah's flood is the image of a cute little round boat with the heads of fluffy sheep and tall giraffes and friendly elephants sticking out of it. We think of it as a harmless bedtime story like Cinderella or Scuffy the Tugboat, a remnant of childhood Bible lessons and storybook times. Did the flood of Noah really happen?

We are talking about an historical event and one that is very serious. It is spoken of in Genesis in a historical narrative. But evangelicals do disagree as to just how it happened. There are basically three different views.

One is the universal catastrophic flood account, where the flood was a world-wide event. It did indeed cover all the high mountains at that time, and it was catastrophic—lots of tidal waves and breaking up of the fountains of the great deep.

The other view is that the flood was universal—it covered the whole earth—but it was a tranquil event and probably did not

leave any scars or sediments on the earth.

And the third view is that the flood was just in the Mesopotamian area. Since its intent was to destroy mankind, and mankind had not spread very far, the flood only had to cover the Mesopotamian area. Again, as with the creation account, we need to tell our kids what our conviction is. What do *we* think about it? And again, if you are not certain, if you are not sure about your view, go ahead and communicate your uncertainty as well. It is okay to be uncertain about some of these things; scholars do not really know everything about them, either. And we have to be ready to realize that the kids might not even like our particular interpretation, or they may have heard things in school, Sunday school, or church that may differ with our view. But it is okay to give our kids a little bit of room on these kinds of issues.

With all of these different interpretations of the flood, what can we feel safe telling our children? What is the point of the flood? What is the bottom line of this event?

The purpose of the flood of Noah was to destroy mankind as it existed at that time. Where scholars differ is just how far mankind had spread. Some suggest that the human population may only have been a couple hundred thousand, so they may have been contained in the Mesopotamian area. But if humans had been around for four or five thousand years, and they had a chance to multiply and grow, there may have been several millions or tens of millions of people spread across the earth. That may be why some suggest that, in order to destroy mankind, the flood had to be universal. But we still do not know whether the flood was a catastrophic or a tranquil event, and so there is some room for discussion. I think all these different theories are helpful because they allow us to investigate God’s Word to the best of our ability and try to determine what it really means.

There is one view of the flood—the universal catastrophic

flood model—that has really captured the attention of much of the Christian community. Several organizations propose this model. In fact, you spent a couple of weeks in the Grand Canyon with one of these organizations investigating the flood model for the formation of the canyon. We want to address a few specifics about this catastrophic model of the flood of Noah. Would you give just a brief outline of this model?

This catastrophic model definitely suggests a very different scenario than the cute animals or the little round boat. We are talking about the breaking up of the fountains of the great deep and huge amounts of water rocking back and forth across the earth. The young earth creationists suggest that most of the sedimentary layers were formed during the flood. Most of the fossils that we find in those sedimentary layers, therefore, would have been laid down as a result of the flood of Noah. There should also be evidence around the earth of the catastrophic formation of all these sedimentary layers.

How close to the truth is this model? Does it explain everything?

There are a lot of things that it does explain. There is evidence for catastrophic origin for most, if not all, sedimentary layers. Organisms seem to require a very rapid burial in order for them to be formed as fossils. But there are problems with this model as well, and I think it is important that we recognize what those are. For instance, all the different types of sediment would have to be the result of just one event, a catastrophic flood. When we look at these sedimentary layers, we have sandstone, limestone, mudstone, shale—all different types of rocks—but they all would have had to come from the same event, and that is a bit of a problem. The majority of Christian geologists believe that the strata are due to other events like river floods, deposits from big storms or hurricanes that occurred periodically or, in some cases regarding the sandstones, even desert sand dunes. While the catastrophic model is a captivating idea, I do not see a

need to force ourselves to accept it or reject it at this time.

There is a lot of work to be done concerning this model. If you have a curious, science-oriented child, why not encourage him or her to pursue a career in science and become a part of the group that tries to investigate it?

Cavemen

Another question the kids are often curious about: Where do cavemen fit into the Bible?

Most creationists believe cavemen were the early survivors of the flood. Remember, if the purpose of the flood was to destroy mankind, then most of these fossils would be individuals who survived the flood or lived soon afterwards. Cro-Magnon man and Neanderthal man, and probably even fossils described as *homo erectus*, are all post-flood humans, descendants of Noah's three sons. The so-called primitive characteristics could be due to genetic in-breeding, faulty diets, and life in a harsh environment.

Racial Differences

Where do the different races come from? If we are all descended from one couple, Adam and Eve, why are there different colors of skin?

Races would have originated with Noah's three sons and their wives. Several sets of genes produce the wide variety of skin color present in the current population. It is not difficult at all to envision genetically-similar populations becoming isolated after the flood and being the progenitors of the different races. Much of this genetic variability may have been contained in Noah's sons' wives, arising from genetic segregation that took place since the creation of Adam and Eve. Adam and Eve were probably people of intermediate skin

color with most, if not all, of the genetic variability present in their genes.

Dinosaurs

We cannot talk about explaining creation to our kids without addressing the inevitable question of the dinosaurs. Where do dinosaurs fit into the Bible?

There is no question that kids today, particularly boys, are really enamored of dinosaurs. The answer depends on what your approach is.

If you are approaching creation from an old earth perspective, then the dinosaurs have been extinct for seventy or so million years and there is no reason to expect them to be mentioned in the Bible at all. Men and dinosaurs never existed together.

If, however, you are approaching creation from a young earth model, where everything was created in the fairly recent past, then dinosaurs must have existed at the same time as man because they were created on the same day, only ten to thirty thousand years ago. And that raises the question as to whether Noah took dinosaurs on the ark.

It is difficult to imagine a brontosaurus getting on the ark, and most creationists answer that by suggesting he probably did not take adult dinosaurs on the ark, just juveniles or small babies. The extinction of the dinosaurs then was probably due to the flood. Even if Noah did take some on the ark, apparently the climate and ecology of the earth had changed dramatically as the result of the flood and they were not able to survive following the flood.

But it also raises the very distinct possibility that some dinosaurs may still exist in small, isolated pockets around the world. I do not want to add too much credence to this, but there are very intriguing stories—and I just want to call them stories for right now, not fact—from the Congo of different

kinds of dinosaurs being reported by villagers and even some missionaries seeing very large reptile-like creatures out in the swamps. We have cave paintings from South America of dinosaur-like creatures. We have legends from all over the world about dragons, in China and the East and in Europe during the Middle Ages. We seem to have it in our heads that big reptiles are out there somewhere. It is a lot easier to think of them as being left-overs from the flood rather than having existed in small pockets for sixty or so million years since they became extinct in an evolutionary perspective. It is also feasible that dinosaurs could be mentioned in the Bible.

You mean under a different name?

Yes. For instance, Job 40 talks of a creature called "behemoth" in verses 15 to 24. He feeds on grass, he has strength in his loins,

What we have tried to do in this discussion is help parents understand the biblical accounts of creation in the early earth so that they can explain it to their children. Although we have presented a few options instead of absolutes, we can still tell our kids that God is the Creator and Sustainer of all things, and that the flood was a real event, although some of the details of how these things happened may escape us at this time. This approach allows us to communicate clear biblical truth while at the same time encouraging a child's curiosity and desire to investigate God's world. This is our Father's world, and it delights Him when His children want to discover it and search out the mysteries of the past, of history, of His story.

Notes

1. David Raup, "Conflicts Between Darwin and Palentology," *Field Museum of Natural History Bulletin*, vol. 30, no. 1 (1979): 25.

2. Kraus Dose, “The Origin of Life: More Questions Than Answers,” *Interdisciplinary Science Review* 13 (1988): 348-56.
3. Stephen J. Gould, *The Panda’s Thumb* (New York: Norton, 1980), 181.
4. Kenneth Miller and Joseph Levine, *Biology* (Englewood Cliffs, N.J.: Prentice-Hall, 1991), 335.

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See Also:

- Pictures and Account of Ray and Sue Bohlin’s Visit to the Galapagos Islands
- **All the Probe articles on Origins**

“Was God Silent Between Cain and Noah?”

One of her reasons my Wiccan friend gives for turning away from Christianity is that God was silent after dealing with Cain and Abel up to the time of Noah and the flood. For nearly two thousand years pagan civilizations thrived, say in Sumeria and Mesopotamia. Where was this monotheistic God at this time in history? In her mind this God is uninvolved and therefore heartless for bringing a flood. Where in the Bible does it say God was involved with man during this time?

God was indeed involved in the affairs of His creation between the time of Cain and Abel and the Flood. The clearest example of His involvement (in a clearly miraculous sense) can be found in Genesis 5:24 “And Enoch walked with God; and he was not, for God took him” (see also Heb. 11:5). Clearly, such an event requires Divine intervention.

Obviously, this one example is enough to prove God's involvement in the affairs of men and the world between the time of Cain and Abel and the Flood. But God is actually constantly involved in the affairs of the world. In the first place, the world only exists because God created it (Gen. 1:1; John 1:1-3; Col. 1:16; etc.). And the universe is continuously upheld in existence by the word and power of God (Heb. 1:3). Thus, God's involvement with His creation is continuous. And God has revealed Himself to man not only in the Bible and Christ (special revelation), but also in creation (Psalm 19:1-4; Rom. 1:18-23), providential acts of kindness (Acts 14:17), and conscience (Rom. 2:14-15) all examples of what is called general revelation. Such revelation is also continuous and ongoing to all men, at all times, in all places.

Shalom,

Michael Gleghorn

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"Help Me Understand the Genetics of Skin Color"

Ray,

I've got a genetics question for you. A pastor friend posed the following for me, which he says is the argument of some creationists he knows. He sums up their argument this way:

1. Adam and Eve were the first parents of all the races.

2. Adam and Eve contained all the genetic information from which eventually all the races came.

3. From Adam to Noah, all descendants of Adam and Eve were probably all a mid-brown color since Adam and Eve were also mid-brown.

4. After the global flood and the tower of Babel incident, descendants of Noah separated into people groups according to their own languages and traveled to different parts of the world.

5. As different "people groups" were exposed to different environments, natural selection occurred resulting in certain genetic traits to be enhanced for adaptability (for example: darker skin pigmentation for environments with more intense sunlight due to the genetic "potential" to increase more melanin).

6. As the "people groups" were isolated and intermarried with each other with a certain group, they eventually lost certain genes that were not needed for adaptability. (That would explain, from this point of view, why African Negroes who move to different northern environments or European Whites who move down to Africa, do not change back to another color because over time they previously lost the genetic potential to do so.)

Ray, from your knowledge of genetics, does this hold water? Or is it speculation? Thanks.

Your pastor friend is essentially correct. This scenario as regards to skin color is emminently workable genetically. There are at least three and perhaps four genes involved in skin color and several alleles at each gene producing differing amounts of melanin. It would not take long for these to segregate out into different inbred populations creating true-breeding lines for particular skin color shades. I even discussed this back in the late 70s with my genetics professor and he saw no genetic problem with this scenario.

The only change I would make in the scenario would be to

emphasize the critical role of the wives of Noah’s three sons. They are actually more important than Adam and Eve. Noah’s sons would most likely be very similar genetically so the major variation would need to originate with their wives since the world is repopulated from these three pairs. The full genetic range could easily be incorporated into these individuals. Adam and Eve would not necessarily need to possess the entire range of skin gene possibilities since there is some time for accumulation of mutations between them and Noah’s sons. With that said, since Adam and Eve would both possess two copies of each gene, that means a possible total of at least 4 different alleles at each gene and if there are 3 different genes, that means 12 different alleles which could be combined 144 different ways. This would seem more than adequate to accomodate the full range of human skin color.

Respectfully,

Ray Bohlin

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