“Why Are Dating Methods Unreliable?”

I’m a Christian who believes in a six day literal creation and I have been looking at lots of material on the Grand Canyon to see if it can shed any light on how it was formed and how old it is, and in my search I come across your report which to me seems a very honest and an unbiased report.

Could you help me by telling why dating methods of rocks are unreliable and sometimes come into contradiction? As since I have been doing my own research into how old some things are, I keep getting different answers from different scientists, whether they be young earth or old earth scientists.

Also, I have been informed that only a geologist with a Ph.D can tell the age of rocks and no one else in any other field; is this true?

Your confusion is reasonable. There are many conflicting messages on this topic from people who ought to know what they are talking about. This is one of the reasons why I am undecided about the age question. I simply am unable to discern the reason for these conflicting views. Is it because of prior assumptions? Is it because of truly conflicting data? Is it because of incomplete knowledge of the facts? Is it because of a deep-seated prejudice against a particular position? As a biologist, I find myself unable to follow the technical critiques that go back and forth and so I am unable to truly answer the above questions for myself.

The conflicting age estimates can be due to a number of problems. The dating methods themselves can be unsound, based on faulty presuppositions (the position of young earth creationists). They can be due to local anomalous conditions that do not apply to most great age estimates (position of

most old age creationists and evolutionists). Old earth creationists maintain that the preponderance of the evidence should hold sway over the few exceptions that young earth creationists have found. Yet some young age research is being submitted to the scientific community for scrutiny and is holding up well. But is it a local exception or something more significant?

Your last statement about only geologists being able to tell the age of something should be treated suspiciously. While it is reasonable to say that they have a better grasp of the details of geological dating methods, it is also an unveiled appeal to authority: "Only I know what I am talking about therefore you should trust me and me only." Scientists shouldn't communicate this way. Science has always been marked by humility before nature and openness to new information and theories. This view is not very open. It sounds like they have something to hide.

ICR has come up with some new data on dating methods and some of the information is online at http://www.icr.org/research/. Articles 3-10 in the first list all relate to your concern. These papers were all presented at the 2003 International Conference on Creationism here in the US. They might help to clarify some things for you.

Respectfully,

Ray Bohlin, Ph.D.
Probe Ministries

“Aren’t the Bonds in Peptides More Easily Formed?”

Dr. Bohlin: I have been in contact with a good friend and we have been having a wonderful discussion regarding a series of topics centering around intelligent design. As typical of our conversations we tend to head down tangential trails that avert our focus momentarily. This week’s parley has to do with chemical bonding as associated with protein synthesis. Specifically, your position that the probability of amino acids forming proteins on their own is astronomical. My friend sent you an email recently asking why covalence is not a possibility when considering formation of amino acids and eventually proteins. In your response you referred to two primary problems: chemical and informational. In regards to the chemical you briefly stated that using the early earth scenario (where earth scientists envision a watery world) the energy required to release the water molecule during the peptide bonding process is high especially in an aqueous solution. Further, you state that this barrier can be overcome by the cell through the use of ribosome in a protein fold devoid of water but that the early earth had no RNA to overcome this barrier. Here is my long drawn out question to you.

First, I contend that the weak hydrogen bond (not covalent) associated with the loss of the two hydrogen and one oxygen atom during the formation of an amino acid with the peptide bond is easily broken through a heat catalyst such that existed during the high radioactive decay of the early earth as it cooled from its molten stage (and still does today but to a much lesser degree). This loss of a water molecule would heighten the affinity of the amino acid to the peptide bond thus strengthening their mutual attraction. The early earth model also indicates that pH (percent hydrogen) levels were

probably very different which would also act as a catalyst to break the hydrogen bond as the hydrogen and oxygen atoms try to degas from solution and neutralize the solution. The earth's closed system perpetuated this process indefinitely by trapping the heated gases laden with other hydrous compounds such as sulfuric acid. The formation of the amount of water on earth certainly could not be accomplished by the release of water molecules through the formation of proteins alone. This begs the question of which came first the chicken or the egg? If it were the amino acids, then we would have a sea of amino acids greater than the volume of the oceans. If the amino acids were formed outside of an aqueous solution then where did the water molecules come from that were eventually released? Both hydrogen and oxygen had to be abundantly present and together they form many, many more molecules other than just amino acids and water. The information concern you were referring to suggests that 10 to 65th power is unobtainable. However, when there exists many times more that number of amino acids the odds quickly reduce and become more favorable. 10 to the 65th sounds astronomical but 10 to the 6500th is even more astronomical thus diminishing the former. Further, amino acids can be synthesized in the laboratory which suggests that the building blocks are present on earth. In time, with the correct agents in place (such as powerful radioactive isotopes {neutrinos perhaps?}) the left-handed stereoisotopes of amino acids may also be laboratorily synthesized.

Finally, I would like to know your thoughts on why you believe that proteins were designed. Is it purely philosophical or have you developed a hypothesis that has been tested by others that lends further credence to your postulation? Thank you for your time in advance.

Thank you for your consideration of my earlier response and I am glad to answer your questions and objections.

First, the bonds that are broken to form a peptide bond

formation with the subsequent release of water are not hydrogen bonds, they are covalent. That is why peptide bond formation is endothermic or uphill in relation to energy. Simply providing heat is not going to overcome this problem. Sydney Fox attempted thermal synthesis of proteins in early earth conditions, the results of which he termed proteinoids. Beginning with amino acids (in solution or dry) he heated the material at 200 degrees C for 6-7 hours. The water produced by bond formation (and any original water from the aqueous solution) is evaporated. The elimination of water makes a small yield of polypeptides possible. The increased temperature plus the elimination of water makes the reaction irreversible. However, this process has been rejected for four reasons. First, in living proteins only alpha peptide bonds are formed. In Fox's reactions, beta, gamma and epsilon peptide bonds are also found in abundance. Second, these thermal proteinoids are composed of both L and D amino acids. Only L amino acids are found in living proteins. Third, these are randomly sequenced proteins with no resemblance to proteins with catalytic activity. "Fourth, the geological conditions indicated are too unreasonable to be taken seriously. As Folsome has commented, 'The central question [concerning Fox's proteinoids] is where did all those pure, dry, concentrated, and optically active amino acids come from in the first place.'" (*Mystery of Life's Origin*, 1984, Thaxton, Bradley, and Olsen, p. 155-156)

I am sorry you got the impression that I believed that the formation of peptide bonds and the concomitant release of a water molecule produced the original water on the planet. That is not the nature of the chicken or egg dilemma. The chicken or egg dilemma refers to the fact that in living systems today, proteins are required for DNA and RNA to function with specificity. Histones are required to maintain DNA folding structure and more importantly, proteins are required for DNA and RNA replication. However, it is the DNA which contains the code for the construction of proteins. DNA needs proteins,

proteins need DNA. Which came first in the early earth? DNA or protein, chicken or egg? The proposed RNA world, RNA molecules which can perform some limited enzyme (protein) functions is negated by the fact that there is no mechanism for the production of RNA in an abiotic early earth. Even if this is accomplished, the enzyme-like functions of some small RNA molecules are not sufficient to support life in any shape or form.

Just because 1/10 to the 65th power is large compared to 1/10 to the 6,500 power does not minimize 1/10 to the 65th as a very small probability. It is estimated that there are 10 to the 80th power particles in the universe. The smallest amino acid, glycine is comprised on 13 atoms, each atom (either hydrogen, carbon, nitrogen or oxygen) is composed of multiple protons, electrons and neutrons and each of these is composed of multiple quarks. You can readily recognize that a sea of 10 to the 65th amino acids is a physical impossibility. Current estimates suggest that the concentration of amino acids in the early earth could never have exceeded, 10 to the -7 molar, which is the same as the present Atlantic Ocean (*Mystery of Life's Origin* cited earlier, p. 60). Sheer numbers are not going to help. Most researchers rely on some form of concentration mechanism to get enough amino acids together for protein formation. Even when this happens, many of the same problems that Fox's experiments run into are difficult to eliminate.

Finally, I believe that proteins are designed for both philosophical and scientific reasons. Proteins as stated earlier, contain information. The sequence of the 20 different amino acids in a protein consisting of 100 amino acids is crucial to its function. William Dembski (in the *Design Inference*, Cambridge University Press, 1999 and *Intelligent Design*, Intervarsity Press, 2000) rigorously defines this information as complex specified information or CSI. It is complex because the sequence of a protein is not a simple

repetition as in a nylon polymer. And it is specified because it can tolerate only a small range of substitution at any one of the 100 positions, indeed at some positions, no substitution can be tolerated. Summing these up is where the 10 to the 65th power came from.

Most biologists readily admit today that chance alone is incapable of overcoming these odds. Therefore, they hold out for some undiscovered natural law that will allow information to arise out of the chaos of a mixture of amino acids. But law is also an unlikely candidate. Some have suggested that perhaps certain amino acids have an affinity for certain other amino acids. This could give some level of sequence specificity. This fails on two counts. First no such pattern is observable when nearest neighbors are analyzed in modern proteins. Second, this would defeat the entire process since the sequence would no longer be complex but simple. Simple because the sequence could now be predicted once the first amino acid is put in place. This would lead to a very limited number of possible combinations and not the millions of possibilities currently residing in living cells.

The only known source for CSI today is intelligence. Even the fundamentalist Darwinian Richard Dawkins, said in his book *The Blind Watchmaker*, "Biology is the study of complicated things that give the appearance of having been designed for a purpose." Perhaps they appear to be designed because they were designed. There is certainly nothing unscientific about wanting to explore that possibility.

Respectfully,

Ray Bohlin
Probe Ministries

“Why Are You Trying to Redeem Darwin?”

I am curious, why do you call this effort “Redeeming Darwin”? What exactly about Darwin are you attempting to redeem?

Thanks for your question. *Redeeming Darwin* is a part of our *Redeeming the Culture* series of studies. In this series, we take topics that are counter to and/or hostile to Christianity and educate Christians on how to use these topics defend their faith and to share the gospel. (Our first project was “Redeeming *The Da Vinci Code*.”) By equipping Christians to use a negative topic as a bridge to share the gospel, we are in a sense redeeming that topic. So the title does not imply that we are in some way redeeming the *person* of Darwin, but rather using the *topic* of Darwinism as a tool to accomplish a redemptive purpose.

Best regards,
Steve Cable

“I Object to Your Article on Genesis Unbound”

I came across your review of the book *Genesis Unbound*. The article wasn’t written as a way to see a parallelisn in Genesis 1-3it presents a substitute “Interpretation” of Genesis 1-3. It in fact totally misses an even bigger problem which this view causes: the worldwide flood.

I’m not saying that Mr. Milne hasn’t a right to state his views. I am questioning its consistency with Probe’s past overall Biblical worldview. It is questionable as an article representative of Probe.

I regret that you had such a negative reaction to Rich Milnes review of John Sailhammer’s book. The controversy over the age of the earth within the church is a critical discussion that often gets lost in people protecting their territory more than seeking the truth and being open to a different approach.

As Probes main science speaker I still refer to Sailhammers work not because I necessarily agree with his conclusions but because I think he challenged the underlying assumptions of both young- and old-earth creationists. If there is ever going to be an in house resolution to this controversy, works such as Sailhammers will need to be discussed openly and critically. That never really happened, unfortunately.

Please read Milnes closing paragraph again:

> *You will have to read all of Dr. Sailhammer’s provocative book to make up your own mind. But at least give him the chance to make his case directly from the text. Genesis Unbound is a book to stir your thinking, and should be read slowly. But go back and read Genesis to be reminded of God’s greatness in His creation.*

Rich (as well as I) simply thought it was a provocative work that deserved wider attention and response. If you havent read the book, then I would ask that you suspend judgment on Sailhammer until you do. (Though I admit the book would be hard to find now.)

Thank you for your participation with us and for writing.

“What’s Your Position on Creationism?”

Kerby,

Thanks for coming to the Worldview Weekend. I know you don’t hold to evolutionism, per se. But after the conference in Wichita last week, I was wondering, do you agree with the Bible’s chronology of the earth being older than the sun. That the record in Genesis (and Ex. 20:11) of the six days of creation are to be understood as ordinary days. Finally, do you agree with the idea of no bloodshed and disease before the fall of man? In other words, should I believe the Bible or what I have been taught?

The reason why I am asking is I know that I have compromised in these areas of Genesis and lead many down a road of disbelief because of that.

Please send me your answers with Biblical references.

Thank you for your e-mail. You might want to visit the Probe web site (www.probe.org) and read two articles. One deals with different views of science and earth history. The other deals with why we believe in creation. I think these two will help you think through the issues and would accurately represent the perspective of all of us on Probe Ministries staff.

Thanks for writing.

Kerby Anderson
Probe Ministries

“Why Don’t You Cite Young Earth Creationists in Your Material?”

Ray:
I couldn’t help but notice that ICR/Dr. Henry Morris and Answers In Genesis/Ken Ham aren’t cited (or at least I did not see their viewpoints) in some of your material about creation/evolution. Are there points of disagreement? Do you take a stand beyond design that commits to either a young earth or old earth?

I do occasionally refer to writings from young earth creationists. The article on human fossils, for instance, comes directly from young earth creationist Marvin Lubenow’s book *Bones of Contention.* I focus on intelligent design because it is an area that nearly all creationists, young and old earth agree on. At Probe we do not take an official position on the age of the earth question primarily because most of us here, including myself are undecided (see Christian Views of Science and Earth History) about this critical issue. I agree with Phillip Johnson that we need first to stand united against the current naturalistic filibuster in science by opposing the naturalistic approach to origins and then come back to the age of the earth question later.

Respectfully,

Ray Bohlin
Probe Ministries

“What About the Ice Age?”

My son told his teacher that he was tired of learning about the Ice Age because there is nothing about it in the Bible and he shouldn’t have to learn about things that aren’t in the Bible. Any advice?

The quick and simple answer to your question is that yes, there was an ice age, but there is disagreement as to its extent, length of time, and actual time of occurrence. Standard old earth (this would include old earth creationists; see our article Christian Views of Science and Earth History) rendering concludes that there were several ice ages over the last 50,000 years with the ice advancing and retreating several times. Young earth creationists also accept an ice age but there was only one and it occurred much more recently (within the last 10,000 years) as a post-flood event.

The dilemma you write about can indeed prove difficult for young minds at times. They have difficulty drawing a distinction between learning about something and believing it is true. In my article How to Talk to Your Kids about Creation and Evolution I address this in section seven titled, “Responding to Evolutionary Theory.” I basically suggest you tell your kids that simply demonstrating knowledge about evolution is not the same as believing it. You can always phrase your answer this way, “According to evolution . . .” This way you can demonstrate you understand the material but not necessarily believe it. I also address this in the section “Cultivate a Teachable Spirit” in the article Campus Christianity.

I think you’ll find both of these articles helpful.

Respectfully,

Ray Bohlin
Probe Ministries

“You Misguided Piece of ****!”

What the h*ll are you, you misguided piece of sh!!! What did your so called ‘God’ snap his fingers and wham! earth is ‘created’ hehe you are an idiot. Where is your God anyway? Floating up in the atmosphere somewhere? Religion is something misguided humans look for when their life is in the dumps (eg. crops fail, someone dies etc etc), they want to believe in something…….. which does not exist. Homo sapiens increased brain size has allowed it to think of things like this. That is all Christianity is, you can believe in it but don’t expect other people to believe a falicy.**[sic]

Thanks for taking the time to visit at least one of my articles; whether you actually read anything I can’t tell from your message. Unfortunately your comments follow a rather common pattern of showing a lot of bluster with no substance. If you think I have made an error of fact or judgment, I would be glad to discuss something specific with you. I am sorry you have such a low opinion of people of faith (who, by the way, in reference to your comment about other people not believing it, are in the vast majority). It sounds to me like you are more mad at God than convinced of His nonexistence.

Respectfully,

Ray Bohlin, Ph.D.
Probe Ministries

“When Does Human Life Begin?”

I am in an exchange of views with someone in regard to the question of when life begins. He is a very well read and educated person, however I cannot vouch for what or who he reads! According to him, “There is no hard line to draw where life of a human being begins. We only know that as soon as the sperm cell and egg fuse, the resulting cell bears the genetic and biochemical potential to become a new human person. Everything else is an opinion, not science, only God knows at what stage the life of a human person really begins.” What recommendations might you have in dealing with this discussionspurred by the stem cell research issue during the election.

Your friend is essentially correct from a scientific perspective, but what he cites is very important. Having the full genetic and biochemical potential to develop into a baby in nine months is the only certain point of demarcation. Anything else will be an arbitrary point chosen largely for convenience. So why not establish fertilization as the point at which human life ought to be protected?

U.S. law was originally quite clear that where there was doubt, err on the side of life. Now we choose to err on the side of death just so we can pursue the next series

of experiments. Nobody wants to worry about what if we're wrong? We just redefine life so we can proceed ahead. And those who think religious perspectives should be left out are fooling themselves. If scientifically we cant make any other clear point of reference then the point you do choose has been chosen for reasons other than science, which means personal values and beliefs. This should be a lesson that so-called personal values intersect with facts all the time and they truly cannot be separated.

Of course, biblically and theologically, the line of demarcation is quite clear. Beginning with Psalm 139:13-16,

> *13 For You formed my inward parts; You wove me in my mother's womb.*
> *14 I will give thanks to You, for I am fearfully and wonderfully made; Wonderful are Your works, And my soul knows it very well.*
> *15 My frame was not hidden from You, When I was made in secret, And skillfully wrought in the depths of the earth;*
> *16 Your eyes have seen my unformed substance; And in Your book were all written The days that were ordained for me, When as yet there was not one of them.*

followed by Isaiah 49:1,

> *Listen to Me, O islands, And pay attention, you peoples from afar. The LORD called Me from the womb; From the body of My mother He named Me.*

Psalm 51:5,

> *Behold, I was brought forth in iniquity, And in sin my mother conceived me.*

and Jeremiah 1:5,

> *"Before I formed you in the womb I knew you, And before you were born I consecrated you; I have appointed you a prophet to the nations."*

The Scriptures clearly indicate that a person made in the image of God is present even before there is a biological manifestation of such.

I would basically tell your correspondent that he has helped make your case for protecting the earliest life. Fertilization is the only sure point of demarcation. We were all once a blastocyst and even a fertilized egg. But none of us was ever just a sperm or egg cell.

Respectfully,

Ray Bohlin, Ph.D.
Probe Ministries

"Why Would an E.T. Have to

Have a Biology Like Ours?”

Love your ministry. Keep up the good work! Just a question on your article UFOs and Alien Beings…

You wrote:

> *In the first place, it is highly improbable that there is another planet in our cosmos capable of supporting physical life. Dr. Ross has calculated the probability of such a planet existing by natural processes alone as less than 1 in 10^{174}.*

My question would be: Why would one assume that an E.T would have to have biological mechanism that functions as you and I? Is it possible they can have a body that is not limited or constrained to “our” conditions here on planet earth?

You asked a good and frequent question. Actually complex life would have to be of similar chemistry as us. It turns out that carbon is the only element capable of forming the diversity of bonds and molecules that would allow life. Carbon can form bonds to four other atoms, including hydrogen, oxygen, and nitrogen as well as others. These bonds can serve as the basis for numerable molecules which life depends on. Since other life would necessarily be carbon based, there would also be requirements for water, oxygen, carbon dioxide, phosphorous, sulfur, etc. Eventually life’s chemistry would be similar to our own and intelligent life would have to be similar to us.

Respectfully,

Ray Bohlin, Ph.D.
Probe Ministries