Issues, Etc.™
Christ-Centered Cross-Focused Talk Radio

TRANSCRIPT

Rev. Todd Wilken, Host

+ + + + +

"Creation, Part 2: Dating the Age of the Earth"

Guest:
Dr. Joel Heck
Professor of Theology, Concordia University Texas
Author: *In the Beginning, God*
Conference Speaker at "The Heavens Declare: What Astronomy Can Tell Us About Biblical Creation," July 8-10, 2013, Concordia University Wisconsin

Monday, February 25, 2013

+ + + + +

WILKEN: What are we supposed to do when we hear these numbers, and they are laid out there as a matter of fact when their factuality has yet to be determined? We don't know, often, how it is that the numbers are arrived at. For the universe, it's usually 15 billion years – that sounds like a long time. And we say, okay, that sounds like a number kind of befitting the age of something like the universe and everything there is. Now they say very often, "*At least* 15 billion years." And then for the earth, oh, 4 or 5 billion years. Where do these numbers come from? From the evolutionary viewpoint, the grand evolutionary viewpoint, they are a long time. Are they long enough for everything that is to have become what it is right now? Is it enough time, 15 billion years, or on earth, 4 or 5 billion years, to get where we are today, using the evolutionary mechanisms that we are told, as a matter of fact, account for everything that there is, especially life here on earth?

Welcome back to *Issues, Etc.* We're coming to you live from the studios of Lutheran Public Radio in Collinsville, Illinois. I'm Todd Wilken. Thanks for tuning us in. We're going to be picking up part 2 of our 7-part series on creation today: the dating mechanisms on the age of the earth. Dr. Joel Heck, Professor of Theology at Concordia University Texas, will be our guest.

Dr. Joel Heck is Professor of Theology at Concordia University Texas, author of the book *In the Beginning: God,* and he'll be one of the speakers at The Heavens Declare Conference, July 8-10 at Concordia University Wisconsin.

Dr. Heck, welcome back to *Issues, Etc.*

HECK: Thank you very much. It's good to be with you once again.

WILKEN: These numbers that are counted in the billions of years for the age of the earth, or in a broader sense, for the age of the universe, how are these numbers arrived at?

HECK: Well, the short answer is that it's based upon dating of meteorites, and one meteorite in particular, the Canyon Diablo meteorite. But the long answer is that it's based upon an analysis of the content of those meteorites, which operate with several assumptions. And dating the minerals that that meteorite is made of helps to lead them to this 4.55 billion years for the age of the earth.

WILKEN: Just to kind of pick up on a question I raised earlier, if we're dealing with evolution as the alternative to a creation model, creation obviously doesn't require any time, if we understand it as a divine creation. Evolution requires enormous amounts of time. Is 4.55 billion years enough time, using the evolutionary model, to get where we are today?

HECK: It's really not, if you look at the complexity of the different systems of the human body – the complexity of the eye, the complexity of the blood circulatory system, the nervous system, the breathing mechanisms, the reproductive systems, etc. You can't imagine there being enough time for all of the changes even to develop over the course of hundreds of millions of years for all of this to take place. And people have shown that fact. The atheist J. B. S. Haldane, a British atheist, once did a mathematical study of how mutations could become widely distributed through a population, and it was really kind of a depressing result for him. He found out based on his calculations – and he was a pioneer of the application of mathematics to evolutionary theory – he found out that for one mutation to be widely distributed in a population, it would really take 300 generations for that mutation to take place. And it would be hundreds and thousands of mutations that would be necessary in order for the human being to have evolved from a small micro- or single-celled organism. There's just not enough time for that to take place.

WILKEN: So the real problem that, when it comes to the age of the earth and therefore then, life on the earth, because life – well, unless you're dealing with a different theory than evolution – life on the earth can't be older than the earth itself, not by a long shot. The bigger problem for evolution, with regard to the numbers, is the numbers aren't big enough.

HECK: Yes. You could multiply the 4.5 billion by 10 or 1000 and it still wouldn't be enough time for evolution to produce the various living creatures that we have today. And microbiology is seeing this over and over again with the marvelous complexity of the individual cell, with the DNA inside our nucleus consisting of two complete sets of 3 billion nucleotides, conveying all kinds of information. To imagine how our DNA could

have evolved over the course of millions or billions of years – it's just mind-boggling. Again, there isn't enough time for that to happen.

WILKEN: So what are the primary – let's come back to the method that you described, this meteorite that is used to give the general age of the earth. Can you, in layman's terms, walk us through how we get from a meteorite and its composition to 4.55 billion years?

HECK: Well, there are various radioisotopes that exist in our universe and in our earth, where you have certain elements decaying from one element to another – so uranium decaying to lead, for instance. And when these radioactive elements, which are basically unstable elements, when they lose a part of their makeup, they decay to a more stable form of – in the case of the uranium, they decay to a more stable element, namely lead. And that decaying process really operates with three assumptions, and hardly anybody knows about the assumptions for the radioisotope dating methods. Probably the best known one is the carbon-14 dating method, which is especially useful because the half-life of carbon-14 is 5,730 years. So the idea is that if a creature which was taking in carbon during its life dies, at that point it no longer is consuming food products, no longer being penetrated by carbon-14 in the air. And so the amount of carbon will no longer be accumulating, but will gradually disappear from the body, and every 5,730 years then, half of the carbon-14 in that creature will disappear. And so if we can measure how much carbon-14 was there at the beginning and how much is there now, we should be able to calculate its age.

Well, what people don't tell you is that there are three assumptions with carbon-14 dating, or any other dating methods. First of all, you have to assume that the decay rates have remained the same – they've been unchanged throughout the history of the earth. Secondly, you have to assume that we know what the initial amount of carbon-14 was in that creature, or in the case of uranium to lead, how much was originally uranium and how much was lead. And then we also have to know that there has been no contamination yet in the meantime. We happen to know, for instance, that uranium can be – its decay rate can be accelerated by groundwater that flows through it. But uniformitarianism operates on the assumption that the uranium is a closed system, that the rate has never accelerated, and that it was 100% uranium at the beginning. And if you make those assumptions, then you can come up with some rather large ages of the earth, or the particular product that you're trying to date, and be very, very wrong. Because any one of those assumptions can be inaccurate, and there's been some recent research done in the last decade or so that shows strong evidence that decay rates have been much, much faster at certain points in a relatively recent past of Earth's history.

WILKEN: So, just to kind of put a cap on that right before our break: in the case of carbon-14, the ruler is too short to say anything about the age of the earth, only about organisms that have lived on the earth. And I want to talk about it a little bit more on the other side of the break. In the case of the radiometric dating, we're really talking about some assumptions as to decay rates that cannot necessarily be proven or noticeable.

HECK: Yes, and I'd like to tell you a little bit about the RATE Project and the coal samples that were sent to labs for testing, as well as the diamond samples that were sent there also, and what the remarkable results of that research was.

WILKEN: We will do that on the other side of the break.

Dr. Joel Heck is our guest. It's Monday afternoon, February the 25th. Part 2 of a 7-part series on creation today: dating mechanisms as they bear upon the age of the earth.

[BREAK]

WILKEN: Welcome back to *Issues, Etc.* I'm Todd Wilken. We're talking about dating mechanisms for the age of the earth as part of our series on creation with Dr. Joel Heck, Professor of Theology at Concordia University Texas, author of the book *In the Beginning, God*, and he's going to be one of the speakers at The Heavens Declare conference, July 8-10 at Concordia University Wisconsin.

You mentioned something before the break: the RATE Project. What is it, Dr. Heck?

HECK: RATE stands for Radioactivity and the Age of the Earth, so R-A-T-E. This is a project that was done out of ICR, the Institute for Creation Research, and they funded a number of projects, one of which was to take a look at carbon-14 dating. They have noticed that in the secular, peer-reviewed literature, much of it published by evolutionists, that study after study showed significant amounts of carbon-14 appearing in various fossils that were dated by carbon-14. In fact, there wasn't a single study in which a fossil's age was tested in which they didn't find any carbon-14. And that was a little bit odd, so they decided to pursue that a little bit further and make it one of their projects in the so-called RATE Project. They have several different research projects going on, but this was the most fascinating one to me. And since carbon-14 is more familiar to people, it's probably one that's a little bit easier to understand. What they did was take 10 coal samples from the US Department of Energy coal bank at Penn State University. They selected them from regional distribution from different parts of the country, and also from different alleged ages in the geological column. So the ten samples ranged in age from 30 million years old to 300 million years old, at least according to the conventional dating scheme. And they sent them to the highest, the most accurate lab in the world for dating. So they have to crush these samples and prepare them and send them off and make sure they're carefully sealed and protected from contamination. And they sent these samples off to this lab, and the lab was able, by a very, very sophisticated method, to measure how much carbon-14 there is in these samples. And all of the samples came back with roughly the same amount of carbon-14 in it. So that tells us, first of all, that these coal samples weren't between 30 million and 300 million years old. The oldest one wasn't 10 times as old as the youngest one, but they were all from about the same period of time. And amazingly, they all came back with significant amounts of carbon-14. And carbon-14 is not detectable in any particular product, be it wood or coal or fossil, after 100,000 years of time have elapsed. And there shouldn't be a single molecule of carbon-14 in a particular object or living thing that has died after 200,000 years when we can't even detect it after 100,000 because of the rapid decline in the amount of carbon-14 with its relatively short half-life. So the fact that they found carbon-14 in them suggests that these coal samples were thousands of years old, rather than tens of millions of years old, which is very consistent with the young age of the earth. The results of this are summarized very, very briefly in the last part of my book *In the Beginning, God.* But if listeners are interested in a little bit more detail than that, there is a book that gives a lot of the results of the RATE team in fairly popular language for the layperson, edited by Don DeYoung. The book is called *Thousands…Not Billions.* It's produced and published by Master Books in the year 2005. There's also a very technical version that is available online, and people can Google that, but I believe they can find out about it at the website of

ICR, the Institute for Creation Research – so free-of-charge online versions of the very technical aspects of the study just for scientists. There are a number of ways to get access to this information if a listener is interested.

WILKEN: So the takeaway from that is that the coal that was tested should not have had any, if it was old as we are told, it must be according to the model of the age of the earth that sets it at billions of years, shouldn't have had any carbon-14 in it at all. It had detectable amounts, and the amounts suggested thousands of years old. This coal, rather than – well, I don't know; what would be the age as supposed by the older earth model?

HECK: Well, if they were dating it correctly according to their geological column, the youngest was 30 million and the oldest was 300 million. That's what they were told, based upon where the coal was discovered and using the conventional dating methods. That's what they were told were the expected ages of these various coal samples. They also went to diamonds. And according to even evolutionists, diamonds are supposed to be primordial material that can be 1-3 billion years old. And they sent diamond samples to the lab. Of course when they're sending these to the lab, they're not saying who it is that's sending these samples or what their purpose is. But they sent them and the diamonds, of course, being impermeable, pretty much – a very, very hard element – also shouldn't have any bits of carbon-14 whatsoever. And they found carbon-14 in the diamonds – about half of what they found in the coal. So older than the coal, but still much, much younger than they were expecting to find, given what the conventional dating for these diamonds would be. A very, very surprising result, obviously, for that particular testing. So the carbon-14 part of the RATE Project was just one of several projects. They did others in addition to that. They studied helium leakage from zircon crystals; that was another one of those, and several others. A couple of them are summarized briefly at the end of my book, and all of them are described in detail in the book *Thousands…Not Billions.*

WILKEN: Chris listens in Michigan. Chris, thanks for waiting on the line.

CHRIS: Yeah, what truth do the evolutionists give that mutations actually add information?

WILKEN: That's a good short, sweet question there. Dr. Heck?

HECK: I would say there is no proof whatsoever. What proof do they give? This is a little bit out of my field, but a year ago we had Dr. Georgia Purdom from Answers in Genesis come and speak to us about mutations, and she argues that there is not a single unambiguous instance where a mutation has produced additional genetic information in the genome of any given creature. She's been studying this very, very carefully. You can go to answersingenesis.com or creation.com and type in the word "mutations" in the search box, and it'll bring you several different articles that relate to this. And the argument from the creation point of view, which I think is valid and cogent, is that mutations are 99.9% of the time harmful, and the ones that aren't harmful are neutral. They appear to be beneficial, but the mutation does not actually add any genetic information to the genetic code of that creature.

WILKEN: So, returning to the age of the earth here in the last few minutes that we have. When we hear these numbers, the caliber of which have 9 zeros – because we're not talking about anything under billions of years – how should we regard those assertions?

HECK: With a great deal of suspicion. We do need to understand that a lot of these

are based upon the radiometric dating methods which operate with those three assumptions. We also need to know that very often, those dating methods contradict one another. And I have a number of instances of actual tests that were done on lava flows that have hardened into lava rock, or a tree that was cut down at a particular time, or an animal that died at a particular time that were sent to labs and dated variously by the various dating methods. They don't agree with one another. You would expect that if a particular fossil were tested by multiple methods and those methods were accurate, they'd all give the same estimate for that particular artifact. And yet they often give widely varying ages for this object that was tested.

Listeners also should know that there are more than a hundred methods for dating the earth, and that 90% of them give a young earth, and that 10% of them at first sight appear to give an age of the earth of billions of years. But in reality, those are also easily explained from a young earth perspective. One of the most serious issues for the age of the earth is the size of the universe. And that's the issue that we're going to be addressing at the conference this summer at Mequon in July. Because the universe appears to be at least 150 billion lightyears across, and of course that creates a problem for a young earth, from a young earth perspective. But we have two people who are coming, who are going to address that issue in some plenary sessions. And listeners have the opportunity to hear about the flaws of the Big Bang theory, and how different distances in the universe can be explained from a young earth perspective. And I guess I would assure the listener that they can indeed be explained. And by the way, as long as I'm on that topic, I'd like to let the listeners know that we now have a website that publicizes that conference. So if anybody wants to look it up, they should go to www.societyofcreation.org. And click on the "Conferences" link, and it will contain the latest information on that conference this July 8-10 at Concordia University Wisconsin.

WILKEN: And next time we'll be talking with Dr. Joel Heck about the icons of evolution.

Dr. Joel Heck is Professor of Theology at Concordia University Texas and author of the book *In the Beginning, God.* He'll be one of the speakers at The Heavens Declare Conference, July 8-10 at Concordia University Wisconsin.

Dr. Heck, thank you very much for your time.

HECK: It's been my pleasure.

+ + + + +