

March 2004

## RARE EARTH

By Joe Spears

It is interesting to put together all the data. Isaiah 28 mentions learning, teaching, doctrine and knowledge. It mentions line on line, here a little and there a little, and precept on precept. This is how we come to truth in mathematics—in a proof of a theorem, we see line upon line and concept used to prove another concept. Math builds on itself.

For example, we generally learn to crawl before we learn to walk. And, it is often necessary to put all the relevant information together to come up with the best interpretation. We have all heard of the blind men who examined the elephant. Alone, in isolation, they came to erroneous conclusions. This is because they had only a part of the data. Missing information was the problem. One thought the elephant was like a fan, because he had examined the ear. Another, however, who had examined (by touch—remember, these were all blind men) the elephant's leg, said the elephant was like a tree. Well, the part of the elephant that each man examined *was* as he found it, but that was not all there was to the elephant.

It does seem that we have been jumping to conclusions a bit too quickly in some areas, and in evolution in particular. For example, some scientists have said that dinosaurs evolved from birds, and others that birds evolved from dinosaurs. One must wonder, if there is room for such difference of opinion among scientists, whether the evidence is actually all that clear-cut and conclusive, after all.

One thing that has been pretty much taken for granted is that nature naturally leads to intelligent life. Well, that is now brought into question. Some scientists are now rethinking the prevalence of intelligent life in the universe.

In a sense, it is the job of science to rethink positions, some might say. Yet perhaps that is not the problem in the changing views that have occurred in the history of science. The problem seems to have been adopting a theory, a conjecture, a possibility, as fact, as proven, as written in stone, when it actually was not. It was running with a theory, and claiming it to be a fact.



### Is Anybody Listening?

You may have heard of the Drake Equation, which is used to estimate the number of planets where there may be intelligent life.

$$N = R \cdot f_p \cdot n_e \cdot f_l \cdot f_i \cdot f_c \cdot L$$

where

N is the number of civilizations in our galaxy whose electromagnetic emissions we might detect,

R is the rate of star formation,

$f_p$  is the fraction of stars that have a solar system,

$n_e$  is the average number of planets per solar system,

$f_l$  is the fraction of planets with life,

$f_i$  is the fraction of life-bearing planets that have intelligent life,

$f_c$  is the fraction of those planets with intelligent life that have developed civilizations that can communicate with us, and

L is the length of time these civilizations have been sending signals into space.

Depending on the assumptions, that is, the values input to this equation, one can get various results from this equation. Some have used this equation to argue that N, the number of civilizations in our galaxy, is much greater than one. Carl Sagan and Drake estimated perhaps a million civilizations exist in our galaxy.

But, there is a Rare Earth Hypothesis, which has been described in a book titled *Rare Earth*. This hypothesis is

that the number of civilizations in our galaxy may be very, very small.

They argue that complex, intelligent life may be rare indeed. The presence of such life on earth, they claim, may be due to very highly unlikely events and conditions.

They deal with primarily with the question of whether more complex life forms, animal life, and therefore, intelligent life, can exist on other planets. They also deal with its existence on earth—while not denying its existence on earth, they point out that perhaps certain rare occurrences and conditions were required for it to be on earth.

For example, they suggest that possibly a large moon is needed for the appearance of complex life forms. Why? One reason is that such a large moon would tend to stabilize the planet's motions, preventing major disturbances from occurring, disturbances which would interfere with the evolution of complex life forms.

Another possible requirement is the existence of just the right amount of water—not too much, not too little. Also, the planet must contain the right elements. They also suggest that the existence of a large planet such as Jupiter in the same stellar system might be needed for intelligent life to form. Such a large, heavy planet's gravitational attraction should remove heavenly bodies from impacting on the earth, causing major disasters and ending the evolution of life.

The star itself should not be located in the right galaxy—one that contains enough heavy elements. Also, the planet should be in the right position, not in the dense center of the galaxy, and not in the edge. In a dense region, there is greater risk of a nearby supernova, which could be devastating for life. Yet too far away from the galactic center, and they suggest that the concentration of heavy elements might be insufficient for complex life to evolve.

Also, the planet must be at the right distance from its star—too far away, and its water might freeze, while too close, and the water might boil.

Mass extinctions and plate tectonics also are important. Some mass extinctions can stimulate evolution, but not too many! Plate tectonics might be needed for complex life.

After considering conditions such as these, they conclude that intelligent life may not be as common in the universe as once was thought.

There are several points to note about this hypothesis. One, it points out that what was once assumed as fact by science, may be later brought into question. One solution

for this is requiring evidence before accepting theories. Be that as it may, new data—new evidence—may shed new light on old ideas and result in the changing of those ideas. Scientific ideas are not always “written in stone”. Some notable ones that have fallen by the wayside are the notion that the sun revolves around the earth, and the notion that the earth is flat.

Beliefs of geologists concerning the available supply of petroleum or coal can be seen to have changed greatly over time. Einstein blew the lid off what had been assumed to be true concerning Newtonian mechanics.

This being the case, we can see that historically, the mere fact that an idea or belief has been held by scientists has not guaranteed its veracity. And the acceptance of a theory today does not guarantee its veracity. Scientific truth is not decided by majority vote.

What does decide scientific truth? The facts. Hard evidence. And, if one looks closely at real evidence and not at conclusions or beliefs of people (even scientists) about those facts, one sees a lack of evidence to support evolutionary theory.

Another point to note concerning the Rare Earth Hypothesis is the suggestion that, perhaps, intelligent life has not evolved anywhere else than on earth. If we see now that we were perhaps a little too optimistic about the chance of evolution's success in the arena of extraterrestrial intelligence, then we might wonder whether we might not have also been a little too optimistic about the success of evolution on earth.

This argument shows that previous assumptions concerning the evolution of intelligent life are being called into question. In other words, they are suggesting that the evolution of life even here on earth was more unlikely than previously believed, even though it did occur.

Beyond what they have suggested, there are other requirements for even the existence of atoms. The mass of the electron, the electric charge, and other constant values of physics are “just right” for the universe as we know it. If some of these values were changed, scientists tell us, we might not have stars, or atoms, and certainly not life.

This is an interesting theory, the Rare Earth Hypothesis, and points out the reasons evolution of intelligent life is less likely than previously suspected. Others have pointed out the improbability of evolution at the other end of the scale, the evolution of a single cell from non-living constituents. This required the formation of proteins. In water, however, proteins tend to split apart into constituent amino acids. Life uses DNA/RNA to put

these acids together to form proteins. Yet, proteins are needed to form the nucleic acids that are needed to form proteins. How did this get started? This is a problem to explain, without a creator.

There are many difficulties that must be explained for evolution to have occurred and for the theory to be justified. Blindly accepting it is just that. Evolution seems not to have been proven yet—merely described as proven by some. Yet, as Shakespeare noted, a rose called by any other name is still a rose. And an unproven theory, regardless of how it is described, remains unproven.

If we say that 2 plus 2 is 500, does that make it so? If you give a man 2 dollars, and someone else gives him 2 dollars, does he have 500 dollars? Or 4 dollars? Once, a state legislature considered changing the value of Pi—3.14159... This actually passed one house of the legislature and was on its way to successfully passing the other and becoming law, when a mathematician heard of it and explained to the legislators that you cannot change pi. It is just like changing the value of 2 plus 2. It is still 4, regardless of what people say about it.

As scientists, people do the best they can. Sometimes we have just a few pieces of the puzzle, and more pieces come to light as time goes on. Theories therefore change and evolve. It is good to update our ideas based on facts. But let us remember that theories are just that, theories and not facts. We should let the facts determine the theories, and not vice versa. ☒

### **THE REMARKABLE STORY OF ROGER DEHART: A NEW DOCUMENTARY ABOUT THE "ICONS OF EVOLUTION"**

*BreakPoint* with Charles Colson, Commentary #020522 - 05/22/2002 The Remarkable Story of Roger DeHart: A New Documentary about the "Icons of Evolution"

In the early twentieth century —during the Scopes Trial, for instance—evolution was the new theory challenging settled opinions about divine creation. Now, however, said Bill Rice on National Public Radio, it's evolution that "is being questioned." Darwinian evolution has become the established view—and those who want to consider alternatives to Darwinism have become the innovative thinkers challenging the status quo.

Nowhere is this stunning role reversal better portrayed than in the new documentary, "Icons of Evolution." "Icons" tells the story of Roger DeHart, a high school biology teacher in Washington state who wanted to tell his students about evidence that casts doubt on aspects of Darwinian evolution. The evidence that DeHart hoped to discuss wasn't fringe stuff. It was the material

already published in scientific literature. For example, biology textbooks have long featured drawings of animal embryos, purporting to show similarity. This was widely taken as proof that the species in question shared a common evolutionary ancestor.

But the drawings are seriously inaccurate, omitting many details and falsely suggesting similarities among embryos. Stephen Gould, the noted Harvard paleontologist, called the drawings "scientific fraud," and he said that we should "be ashamed and astonished by the century of [their] mindless recycling" in textbooks.

It sounds like something students ought to know about, yet, when DeHart wanted to bring Gould's article about the fraudulent drawings into his classroom, the school administration forbade him from doing so. He wasn't even allowed to discuss Gould's article or say anything questioning the drawings in the school district's officially mandated textbook.

But the censorship didn't stop there. DeHart wanted to tell his students about the "Cambrian Explosion," the sudden appearance of the major groups of animals about 550 million years ago. The Cambrian Explosion has long been a puzzle for Darwinian evolution. Again DeHart was forbidden to bring in any supplementary materials offering an alternative explanation. It didn't matter that the issue is part of ongoing scientific debate. DeHart's students weren't allowed to see or hear anything challenging textbook orthodoxy.

All this, and more, is retold by the participants themselves in the documentary "Icons of Evolution." You'll hear from Chinese paleontologists who worked with the Cambrian Explosion fossils and believe that Darwinian evolution fails to explain the data. You'll hear from Roger DeHart himself about his experiences and also from his school's administrators, telling why they wouldn't let him depart from the established curriculum.

It's an amazing, even shocking, story—shocking, that is, because most people assume that science ought to be a search for the truth about the natural world. While we may be cynical about advertising, or politics, or the media, science is still supposed to be above it all, pursuing what is really true.

The "Icons" documentary will shake you up. Science teaching today has become indoctrination, but the good news is we can still do something about it. Call us here at BreakPoint (1-800-995-8777) and order your copy of "Icons of Evolution." You'll learn how and why to make the case. ☒

## COMING EVENTS

### Thursday, March 11, 7:30 P.M., Providence Baptist Church, 6339 Glenwood Ave., Raleigh

*RACISM: Is There An Answer?* Are you searching for answers to one of the greatest challenges of our day? Carl Kerby sheds light from God's Word and from science on the truth about so-called "races": we all share common ancestors in Adam and Eve. Please plan to attend and view this new video by Answers in Genesis. Come out and bring a guest to become equipped to speak knowl-

edgably about the origin of "races". Or are races simply the display of variety within this single, wonderful human race created by God, not evolved by survival-of-the-fittest or so-called superiority of one human over another? Can we say we are truly equal in the sight of God?

### Thursday, April 8, 7:30 P.M., Providence Baptist Church, 6339 Glenwood Ave., Raleigh

Jeff Gift, PhD. Topic to be announced

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