

ACTS & FACTS

INSTITUTE FOR
CREATION RESEARCH

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NEW!

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SPACE

God's Majestic Handiwork



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Our Solar System

- Anything that orbits the sun is part of the solar system.
- Our solar system shows amazing design.
- Eight planets orbit 7 times.

It's a beautiful day in the neighborhood—the solar system home. And so do all other celestial objects that orbit the sun, including comets, asteroids, dwarf planets, lone-Neptunian objects, and dust.

Our sun is amazingly stable for a star. It doesn't flare or pulse like other stars. And when solar flares do happen, they are not big enough to destroy life on Earth.

The four rocky planets—Mercury, Venus, Earth, and Mars—orbit closest to the sun. They're also known as terrestrial planets. Earth's the biggest. The four gas giants—Jupiter, Saturn, Uranus, and Neptune—orbit farther out. They're made of a rocky core enclosed by gasses held together by gravity. Some also contain ice.

Pluto used to be called the ninth planet, but scientists found many ammonia-ice rocks orbiting with it. Since Pluto's so small, they renamed it a dwarf planet instead.

God created our solar system with incredible balance, order, and design.

Now, let's get to know these amazing citizens in Earth's neighborhood.

Mysterious Black Holes

- Black holes can form from extremely large exploding stars.
- Their smaller crushing that comes near them.
- Their power is the center of many galaxies.

Black holes aren't scary, but they can seem a little mysterious. A black hole is an area of space where the gravity is so strong that even nearby light can't escape—so the hole stays dark all the time.

What causes black holes? Since they're found at the centers of spiral and elliptical galaxies, God probably created them during creation week. But black holes can also form when big stars, like giant blue stars, run out of fuel.

When they can't hold themselves together any longer, the big stars blow up. The star's outer layer catches a colorful supernova remnant. And the remaining star stuff collapses into a super-small space and becomes a black hole. The thing that it could fit on the head of a pin!

Fun-Fact: The supermassive black hole at the center of our Milky Way galaxy is called Sagittarius A* (Sag A*).

Our Young Universe

- Big bang scientists claim the universe is billions of years old.
- The Bible's timeline shows the universe could only be thousands of years old.
- Moon evidence confirms the Bible's young age for the universe.

Many people like to say that the universe is old, but that's not what the Bible says! The Bible says God created everything in six days. The timeline in the Bible adds up to about 6,000 years. And we can just watch the Bible say because God inspired it!

Science also confirms it. We've talked about some evidence for a young universe throughout this book, but let's check out some more!

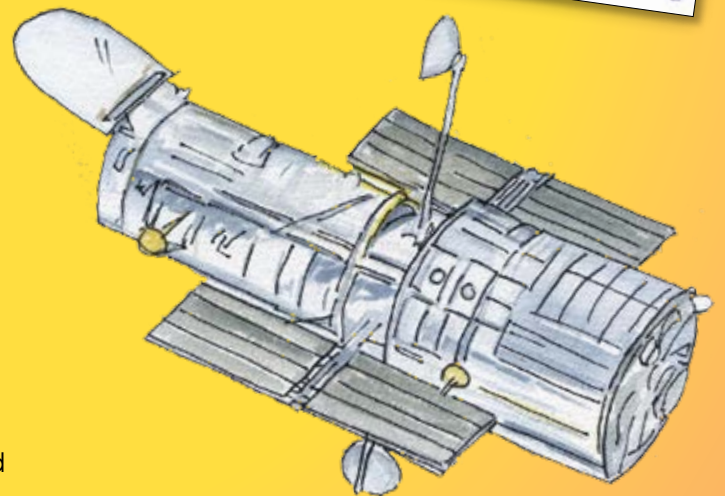
Sunlight is breaking down a chemical called methane in the atmosphere of Saturn's moon Titan. All of the methane should be gone after millions of years, but it's still there!

A thick layer of dust would have collected on Saturn's icy rings after billions of years. The rings must not have been there for very long—they sparkle and shine.

Like Jupiter, Neptune gives off more heat than it receives from the sun. After billions of years, it should have exhausted its heat, but it hasn't. It must be young.

Jupiter's tiny moon has lots of erupting volcanoes. These eruptions require lots of energy—energy that should've been used up if it's billions of years old.

Evidence of still-erupting volcanoes was recently discovered on Venus. Even Big Bang scientists admit that Venus' surface looks much younger than it should if Venus is billions of years old.



Did the universe begin with a Big Bang or God's creative design? How did we get to the moon? Where are we going next? In *Space: God's Majestic Handiwork*, you'll find answers to these questions and more! Get to know the amazing citizens of our solar system from Mercury to Pluto and uncover their creation clues. Dive in to discover:

- What do Venus' volcanoes reveal about the age of the universe?
- Can life exist on other planets?
- How does the universe proclaim our Creator?

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The Lord Is His Name

We sometimes hear from Christians who say they believe the Bible but struggle with the idea of a six-day creation. That’s curious to me. If we know God, how can we not trust what He says? He told us “in the beginning God created the heavens and the earth” and “so the evening and the morning were the first day.... So the evening and the morning were the second day.... So the evening and the morning were the third day” and so on (Genesis 1:1, 5, 8, 13). If these aren’t convincing, then how about all the other Scriptures that point to our mighty God’s authority over all creation?

Our Creator rules the universe. “For by Him all things were created that are in heaven and that are on earth, visible and invisible, whether thrones or dominions or principalities or powers. All things were created through Him and for Him. And He is before all things, and in Him all things consist” (Colossians 1:16-17).

Our Creator is the “Lord GOD of hosts, He who touches the earth and it melts... who builds His layers in the sky, and has founded His strata in the earth; who calls for the waters of the sea, and pours them out on the face of the earth—the LORD is His name” (Amos 9:5-6).

How long does it take to speak, touch, call, and pour? A word or a touch is instantaneous.

Our sovereign God is the Lord who made bitter water sweet (Exodus 15:22-26), parted the sea for His children to pass on dry ground (Exodus 14:21-22), and turned water into the best wine (John 2:1-11). He calmed the seas (Mark 4:35-41), made the

sun stand still (Joshua 10:13), and caused a star to lead wise men to Jesus (Matthew 2:9). All of creation obeys His command.

Our Creator spoke the universe into existence. “By the word of the LORD the heavens were made, and all the host of them by the breath of His mouth. He gathers the waters of the sea together as a heap.... For He spoke, and it was done; He commanded, and it stood fast” (Psalm 33:6-7, 9).

How long does it take to speak or breathe? That’s how long it took our Lord to create the universe.

ICR founder Dr. Henry M. Morris once said, “Creationists at least postulate an adequate Cause to produce the universe—that is, an infinite, omnipotent, omniscient, transcendent, self-existing, personal Creator God.” He wrote those words years ago, and they’re just as relevant today. We’re sharing his timeless insights in our feature article this month, “The Universe Out of Nothing” (pages 5-7).

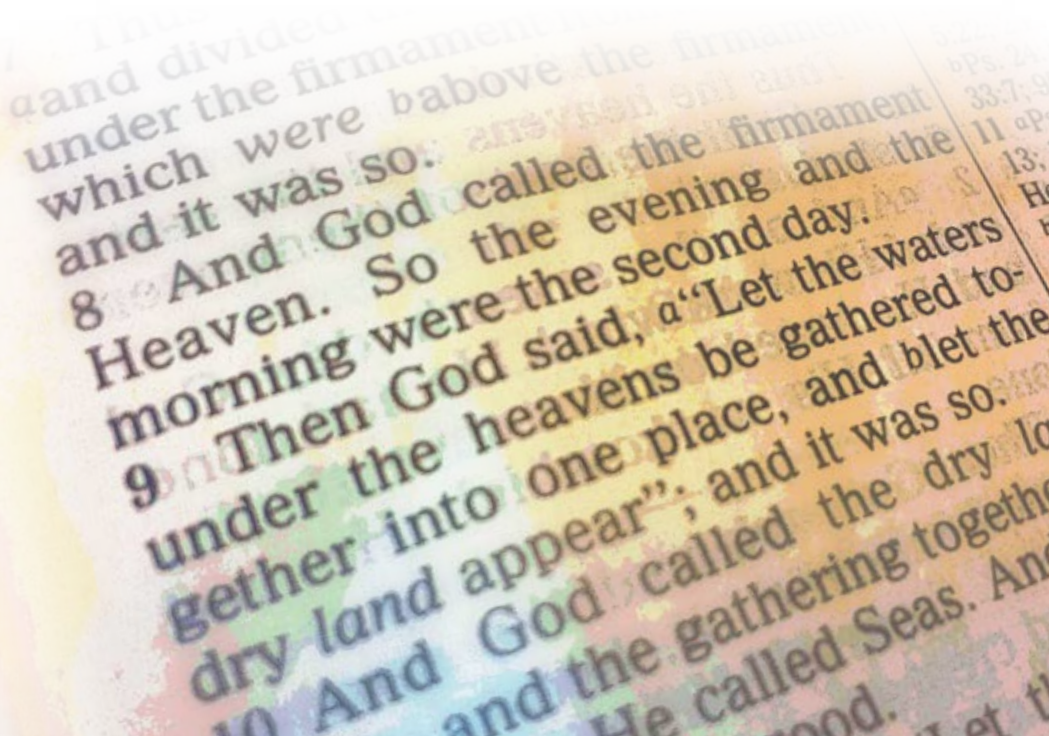
Our new DVD series *The Universe: A*

Journey Through God’s Grand Design (page 24) promises to reach a wide audience with both the Scripture and the science that demonstrate God’s handiwork in creation. We’ve also published a new Science for Kids book, *Space: God’s Majestic Handiwork*, that answers many of your children’s questions about the universe, pointing them to the God who created it all (page 2).

We hope this issue of *Acts & Facts* and our newest resources will strengthen your faith and provide deeper understanding of our magnificent Creator. What incredible power He must possess to bring the cosmos into existence by His spoken Word. When we ponder the vastness of the heavens and the incredible orchestration required to sustain our lives on Earth, perhaps we can approach Thanksgiving Day with a fresh appreciation for the One who created all of this in just six days. The Lord is His name.

Jayme Durant

Jayme Durant
EXECUTIVE EDITOR





THE UNIVERSE OUT OF NOTHING

H E N R Y M . M O R R I S , P H . D .

ICR founder Dr. Henry Morris wrote this article in 1984. Despite the many discoveries and developments in cosmology since then, the points he makes about the creation of the universe are still valid. We invited ICR physicist Dr. Jake Hebert to review this article. He commented:

Inflation theory is now an important part of the Big Bang model for the universe's origin. If anything, Dr. Morris' criticisms understate the problems with inflation because the newer version of inflation is even weirder than the older version described here. Inflation is currently under attack even from its former supporters, such as Princeton's Paul Steinhardt, who now advocates his own version of the cyclic universe model (i.e., endless cycles of expansion and contraction). Critics forcefully argue that inflation theory can never be shown to be wrong, which means it cannot be considered a genuine scientific theory.

Evolutionists have frequently criticized creationism as unscientific because of its basic commitment to the doctrine of creation *ex nihilo*—that is, “creation out of nothing.” The idea that God simply called the universe into existence by His own power, without using any preexisting materials, is rejected out of hand by evolutionists since this would involve supernatural action, which is unscientific by definition—that is, by their definition.

Yet, evolutionary cosmogonists maintain that the universe evolved itself out of nothing! Creationists at least postulate an adequate Cause to produce the universe—that is, an infinite, omnipotent, omniscient, transcendent, self-existing, personal Creator God. For those who believe in God, creation *ex nihilo* is plausible and reasonable. But even if people refuse to acknowledge a real Creator, they should realize that a universe evolving out of nothing would contradict the law of cause and effect, the principle of conservation of mass/energy, the law of increasing entropy, and the very nature of reason itself. How can they say such things?

For example, physicist Edward P. Try-

on, one of the first to propound this idea, stated:

In 1973, I proposed that our Universe had been created spontaneously from nothing (*ex nihilo*), as a result of established principles of physics. This proposal variously struck people as preposterous, enchanting, or both.¹

Naturally it would! But it has become semi-official “scientific” doctrine, and cosmogonists have taken it quite seriously.

For many years, the accepted evolutionary cosmogony has been the so-called Big Bang theory. However, there have always been many difficulties with this concept, one of which is to explain how this supposed primeval explosion could be the cause of the complexity and organization of the vast cosmos, and another of which is to explain how a uniform explosion could generate a heterogeneous (diverse) universe. Creationists have stressed these problems, but now evolutionists themselves recognize them:

There is no mechanism known as yet that would allow the Universe to begin in an arbitrary state and then evolve to its present highly ordered state.²

The cosmological question arises from cosmologists' habit of assuming that the universe is homogeneous. Homogeneity is known to be violated on the small scale by such things as galaxies and ordinary clusters, but cosmologists held out for a large-scale over-all homogeneity. Now if a supercluster can extend halfway around the sky, there doesn't seem too much room left to look for homogeneity.³

There are many other difficulties with the Big Bang model,⁴ but evolutionary cosmologists have had nothing better to offer, especially since the abandonment of the rival steady-state theory.

Sir Fred Hoyle, outstanding astronomer and cosmologist, also showed that the Big Bang theory should be abandoned for still other reasons.

Creationists at least postulate an adequate Cause to produce the universe—that is, an infinite, omnipotent, omniscient, transcendent, self-existing, personal Creator God.

As a result of all this, the main efforts of investigators have been in papering over holes in the big bang theory, to build up an idea that has become ever more complex and cumbersome....I have little hesitation in saying that a sickly pall now hangs over the big bang theory. When a pattern of facts become set against a theory, experience shows that the theory rarely recovers.⁵

To overcome some of the difficulties of the Big Bang theory, an amazing concept was promoted—the “inflationary universe.” This is strictly a mathematical construct, impossible even to visualize and likely impossible to test, but its advocates claimed it can resolve the problems posed by the initial stages of the Big Bang. Its essentials are outlined in the following remarkable scenario:

Our present understanding now leads us to the belief that sometime around 10^{-35} second the rate of expansion underwent a dramatic, albeit temporary, increase, to which we apply the term inflation. The physical processes that took place during the unification of the

strong force with the others caused the universe to expand from a size much smaller than a single proton to something approximately the size of a grapefruit in about 10^{-35} second.⁶

Now, 10^{-35} second is one hundred millionth of a billionth of a billionth of a billionth of a second, whatever that can possibly mean. These inflationary cosmologists are telling us that at the beginning, the entire universe (of space, time, and matter) was somehow concentrated as an infinitesimal particle, with all force systems (gravity, electromagnetic, nuclear, and weak forces) unified as a single type of force. This “universe” somehow went through an inconceivably rapid inflationary stage, reaching grapefruit size in 10^{-35} second, by which time the four forces had become separate forces, the het-

erogeneities had been generated that would eventually become expressed in the heterogeneous nature of the expanded universe, and the universe was ready to enter the “normal” phase of its Big Bang. Thus, as Tryon says:

In this scenario, the “hot big bang” was preceded by a “cold big whoosh.”⁷

To comprehend the arguments behind this inflationary model of the early cosmos, one would require a background in advanced mathematical physics, and not even those who have such a background all accept the model. As the very title of Don Page's previously cited article states, inflation does not explain time asymmetry. That is, it still contradicts the principle of increasing entropy, or disorder.

The time asymmetry of the universe is expressed by the second law of thermodynamics, that entropy increases with time as order is transformed into disorder. The mystery is not that an ordered state should become disordered but that the early universe was in a highly ordered state.⁸

Many have speculated that the universe as a whole has been eternally oscillating back and forth so that the inferred infinitesimally sized beginning of the expanding universe was merely the hypothetical end result of a previously contracting universe. But this strange notion is clearly not a solution to the entropy problem.

We now appreciate that, because of the huge entropy generated in our Universe, far from oscillating, a closed universe can only go through one cycle of expansion and contraction. Whether closed or open, reversing or monotonically expanding, the severely irreversible phase transitions transpiring give the universe a definite beginning, middle and end.⁹

In fact, physicist S. A. Bludman made the following fascinating comment:

Finally, we show that if space is closed and the Universe began with low entropy, then it had to begin, not with a big bang, but with a nonsingular tepid little bang.¹⁰

If the universe is “open,” then its inferred expansion should go on forever, but if it is closed and eventually begins to fold back in on itself, then it could not ever bounce back again. It would end in a “final crunch.”

Which brings our discussion back to the singular beginning postulated by the inflationary model. Where did the initial “point universe” come from? This amazing infinitesimal particle that contained the entire universe and, in principle, all its future galaxies, planets, and people—how do we account for it? If one thinks that the scenario up to this point has been enchantingly preposterous, one will surely think the rest of it is simply a creationist plot to make evolutionists look ridiculous. Readers should certainly check this out for themselves!

How did it all come to pass? Edward Tryon, who started much of these metaphysical exercises in 1973, said:

So I conjectured that our Universe had its physical origin as a quantum fluctuation of some pre-existing true vacuum, or state of nothingness.¹¹

“There is no mechanism known as yet that would allow the Universe to begin in an arbitrary state and then evolve to its present highly ordered state.” — Don Page

So, our vast, complex cosmos began as a point of something or other that evolved as a fluctuation from a state of nothingness!

In this picture, the universe came into existence as a fluctuation in the quantum-mechanical vacuum. Such a hypothesis leads to a view of creation in which the entire universe is an accident. In Tryon’s words, “Our universe is simply one of those things which happen from time to time.”¹²

Lest any readers begin to wonder, this discussion is not intended as a satire. It is a straightforward recital of what modern astrophysical cosmogonists have proposed as the beginning of our universe. Alan Guth and Paul Steinhardt said:

From a historical point of view probably the most revolutionary aspect of the

inflationary model is the notion that all the matter and energy in the observable universe may have emerged from almost nothing....The inflationary model of the universe provides a possible mechanism by which the observed universe could have evolved from an infinitesimal region. It is then tempting to go one step further and speculate that the entire universe evolved from literally nothing.¹³

Regardless of the sophisticated mathematical apparatus leading the inflationary-universe cosmogonists to their remarkable statement of faith in the omnipotence of nothingness, there will continue to be a few realists who prefer the creationist alternative: “In the beginning God created the heavens and the earth.” ✂

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Adapted from Dr. Morris’ article “Evolution *Ex Nihilo*” in the September 1984 edition of *Acts & Facts*.

Dr. Morris (1918-2006) earned his Ph.D. in engineering from the University of Minnesota and was head of the Civil Engineering Department at Virginia Polytechnic Institute before he founded the Institute for Creation Research. Dr. Morris wrote over 60 books. *The Genesis Flood*, co-written with Dr. John Whitcomb, was a primary catalyst for the creation movement.

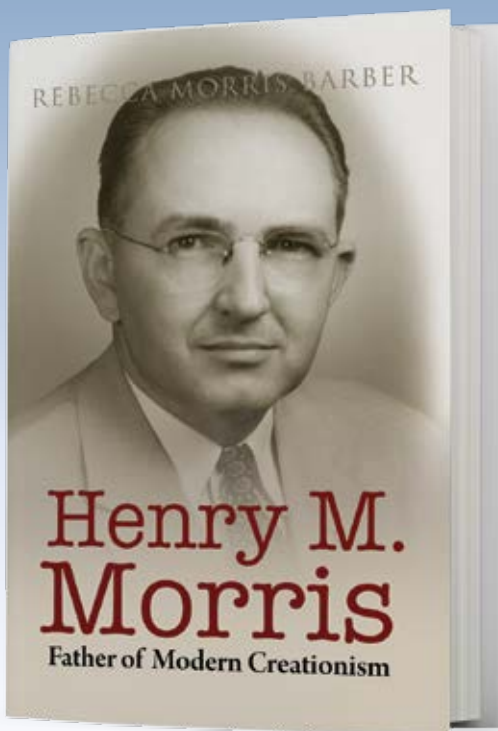


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Dr. Morris’ work rebuilt Christians’ confidence in the accuracy of the Bible and turned many toward Christ for the first time, as evidenced in the man who wrote the moving note in the graphic to the right.



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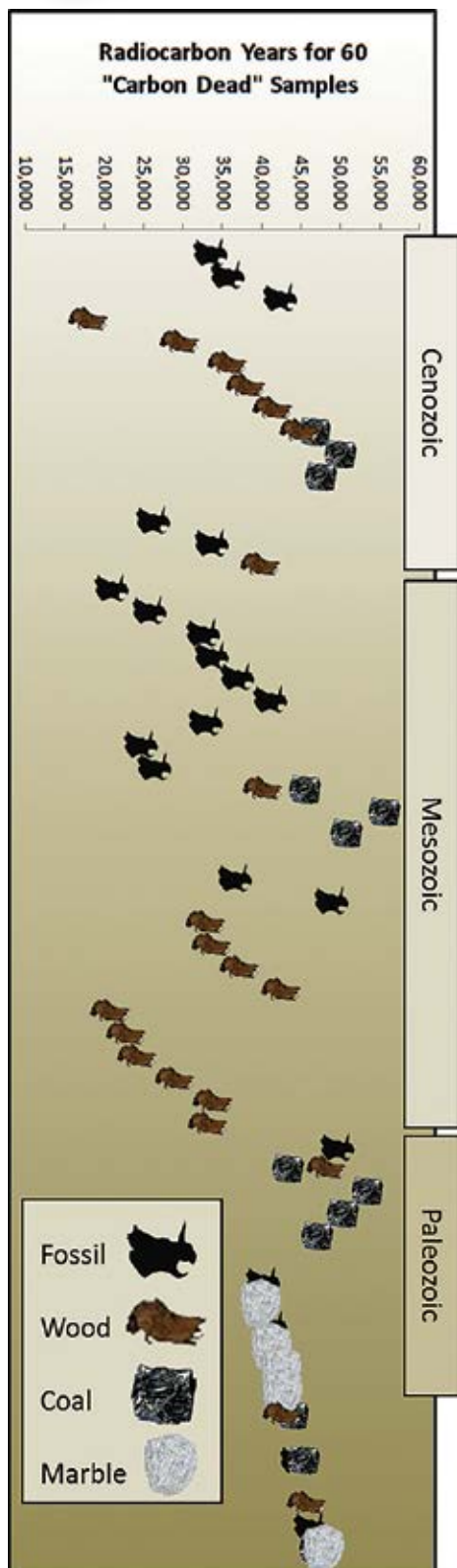
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Young Radiocarbon in Old Samples



Old-earth advocates often claim that dating methods, including radiocarbon, show the earth must be older than the Bible says. But is this true? This chart reflects the radiocarbon that still lingers inside 60 carbon-containing Earth materials collected from representative rock layers. Each result confronts millions-of-years age assignments for those layers.

Radiocarbon refers to a radioactive isotope of carbon. Neutrons from sunrays collide with nitrogen in Earth's upper atmosphere to form radiocarbon, which steadily emits beta particles until it all reverts to stable nitrogen. The calculated shelf life for radiocarbon atoms does not exceed 100,000 years. Thus, detectable radiocarbon within a given sample would become nitrogen before then.¹

Scientists expect no radiocarbon in samples they deem older than 100,000 years. Most dating experts call these materials "carbon dead" regardless of their actual radiocarbon content. Then they use low (but not dead) radiocarbon materials as background blanks.² Most results on this chart show fewer than 47,000 carbon years—the age of many labs' background blanks. Thus, nearly 60 samples of fossils (mostly bone), wood, coal, and marble not only fail to fit their evolutionary ages, but they have more radiocarbon than the supposedly carbon-depleted background.

The labs did not measure exactly how old these were—that's impossible. Instead, they measured isotope amounts. Assumption-laden formulas converted those amounts into the age estimates shown on this chart. Hence, carbon years do not correspond to actual years in these cases.³ What gave these artifacts more carbon years than the actual number of years since they were buried? Possibly Earth's decaying magnetic

field was once strong enough to deflect the sun's rays and lessen radiocarbon production.⁴ Nearby supernovas affected radiocarbon levels,⁵ but mostly the much higher pre-Flood biomass diluted radiocarbon.⁴ That would produce high numbers of carbon years for objects buried in the Flood about 4,500 years ago, which is consistent with these data.

Two technical papers reference detailed descriptions of almost all these results.^{6,7} Secular scientists demand millions of years for all 60 samples—but all 60 still contain particle-emitting radiocarbon! The logical way to rescue such deep-time dogma from these results is to assert they were somehow all contaminated. But from what? Sunrays' neutrons do not penetrate very far through Earth, labs strictly control and cross-check for contamination, and radiation from uranium decay is laughably insufficient to generate radiocarbon underground.⁸ These 60 radiocarbon results help confirm Scripture's picture of a recent flood. ✍

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Mr. Thomas is Science Writer at the Institute for Creation Research and earned his M.S. in biotechnology from Stephen F. Austin State University.



Testing Old-Earth Climate Claims

PART 1

In a scientific controversy, how do laypeople evaluate the merits of each side's arguments when those arguments involve technical details? Unfortunately, many people simply assume that the majority's arguments and conclusions are correct. This is certainly true in the creation-evolution debate, where most scientists make claims that clearly contradict Scripture.

However, a situation occasionally arises in which it is possible for laypeople to verify for themselves whether a claim is true or not. Creation scientists are delighted when this happens since Christians *should* be testing our claims, as well as those of other teachers, to see if they are true (Acts 17:11; 1 Thessalonians 5:21).

This article shows how you can confirm for yourself, using a simple pocket calculator, that an iconic old-earth claim about past "climate change" has long been invalid.¹ Although understanding this argument may take some effort, remember the words of Ecclesiastes 7:19: "Wisdom strengthens the wise more than ten rulers of the city." It is my prayer that you'll feel greatly empowered by your ability to verify these results for yourself without having to take anyone's word for it—including mine!

The Astronomical Ice Age Theory

There is strong geological evidence for a past Ice Age, which creation scientists attribute to the aftermath of the Genesis Flood.² Secular scientists, however, claim that many ice ages have occurred within the last few million years of "prehistory." Supposedly, ice ages are paced by seasonal and latitudinal variations in the sunlight falling on Earth. These variations in sunlight are thought to be caused by slow changes in Earth's orbital and rotational motions. Many scientists believe this astronomical (or Milankovitch) theory to be correct because of a 1976 paper titled "Variations in the Earth's Orbit: Pacemaker of the Ice Ages."³ (As you read this article, you might find it helpful to have a copy of the Pacemaker paper in front of you.⁴)

Some background information is necessary to see why the Pacemaker results are invalid.

Wave Basics

A sine function is a repeating wave-like mathematical function that can vary in time or space or both. A complete wave cycle is de-

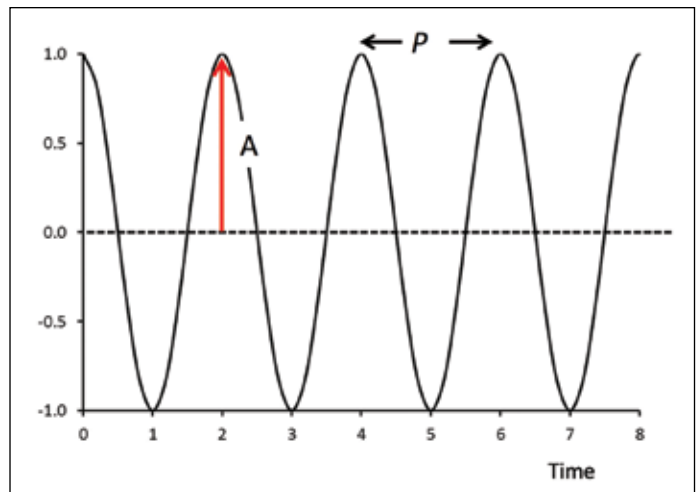


Figure 1. This sine wave has an amplitude A of 1.0 and a period P of 2.0 (arbitrary units).

Superposition

Waves can be added (or superposed) together. For instance, one can add two sine functions together with the same periods and amplitudes so that the peaks of one wave align precisely with the troughs of the other wave. In that case, the wave features completely cancel out, resulting in a flat line (Figure 2a). One could also add those same two waves together so that the peaks of one wave align precisely with the peaks of the other wave. In that case, the resulting wave will retain the original period but have twice the amplitude of the individual waves (Figure 2b).

One can also add waves in more complicated ways. For instance, the wiggly pattern at the bottom of Figure 3 was obtained by adding together the three sine waves shown in the figure. A technique called *spectral analysis* enables scientists to “reverse engineer” the ampli-

fined by two consecutive peaks. The time corresponding to one complete peak-to-peak wave cycle is called the *period*.

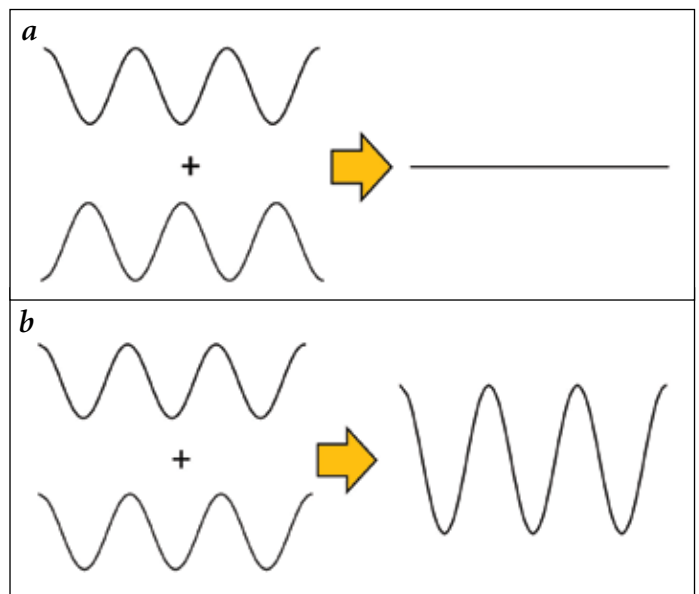
One can calculate the period P by dividing the total time T the wave was observed by the number of wave cycles N that occurred during that time:

$$P = \frac{T}{N} \quad (1)$$

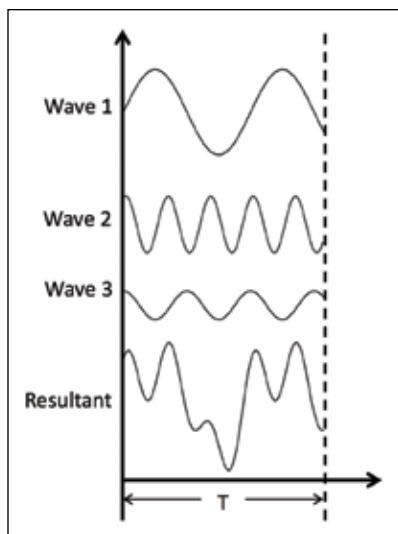
In Figure 1, four horizontal peak-to-peak cycles occur within a measured time of 8.0 seconds. Thus, the period for this sine function is $P = (T \div N) = (8.0 \text{ s} \div 4) = 2.0$ seconds. We can rearrange Equation (1) to give us an expression for the number of cycles, N :

$$N = \frac{T}{P} \quad (2)$$

Another important wave property is the wave’s *amplitude*, half the vertical peak-to-trough distance. The amplitude A of the wave in Figure 1 is 1.0.



Figures 2a and 2b. Waves may be added together (superposed) in different ways to get different overall results.



◀ **Figure 3.** A more complicated wiggly pattern is obtained by adding together three sine waves of varying amplitudes and periods.

tudes and periods of the waves that were added together to obtain the resultant wiggly pattern.

Deep-Sea Cores and Oxygen Isotope Values

The Pacemaker authors analyzed data from two southern Indian Ocean deep-sea cores, designated as RC11-120 and E49-18. They calculated a quantity called the *oxygen isotope ratio*, indicated by the shorthand notation $\delta^{18}\text{O}$. High $\delta^{18}\text{O}$ values within the sediments are thought to indicate that the sediments were deposited during ice ages, and sediments having low $\delta^{18}\text{O}$ values are thought to have been deposited during warmer periods. Secular scientists also recorded other values within the sediments thought to have climate significance: inferred sea surface temperatures (SST) and the percentage abundance of a microscopic organism called *Cycladophora davisiana*. Secular scientists believed that these three quantities within the sediments told a story about prehistoric climate change.

If one plots the $\delta^{18}\text{O}$, SST values, or the percentage abundances of *C. davisiana* within a core as a function of depth (or time), the result is a wiggly pattern similar to that shown at the bottom of Figure 3. However, these wiggly patterns are generally more complicated than the one in Figure 3, so it is often necessary to add together *dozens* of sine waves to produce these patterns.

Constructing the Timescales

Before performing their spectral analysis, the Pacemaker scientists used uniformitarian assumptions to assign ages to the seafloor sediments. How they did so will be explained in part two of this series, but critical to the construction of their timescales was their assumed age of 700,000 years for the most recent “flip” or reversal of the earth’s magnetic field.^{3,5} After using this age to help set up their age models for the two cores, they assigned a total time of 273,000 years (273 ka) to the shorter RC11-120 core and 363,000 years (363 ka) to the longer E49-18 core.⁶ They used a similar method to assign

a total time of 486,000 years (486 ka) to the PATCH “core” that they constructed by combining segments of data from the two cores.⁷

Evidence for the Astronomical Theory?

Spectral analysis showed that of the dozens of waves added together to produce the $\delta^{18}\text{O}$, SST, and percentage *C. davisiana* wiggly

RC11-120	P ₀ (ka)	<10% Error?	P _{new} (ka)	<10% Error?
$\delta^{18}\text{O}$	91	N/A	103	N/A
	38	Yes	43	Yes
	23	Yes	26	No
SST	87	N/A	98	N/A
	38	Yes	43	Yes
	21	Yes	24	Yes
% <i>C. davisiana</i>	106	N/A	120	N/A
	37	Yes	42	Yes
	N/A	No	N/A	No
E49-18	P ₀ (ka)	<10% Error?	P _{new} (ka)	<10% Error?
$\delta^{18}\text{O}$	109	N/A	121	N/A
	47	No	52	No
	24	Yes	27	No
SST	94	N/A	104	N/A
	43	Yes	48	No
	24	Yes	27	No
% <i>C. davisiana</i>	119	N/A	132	N/A
	N/A	No	N/A	No
	N/A	No	N/A	No
PATCH	P ₀ (ka)	<10% Error?	P _{new} (ka)	<10% Error?
$\delta^{18}\text{O}$	106	Yes	119	Yes
	43	Yes	48	No
	24	Yes	27	No
SST	94	No	105	Yes
	40	Yes	45	Yes
	23	Yes	26	No
% <i>C. davisiana</i>	122	No	137	No
	43	Yes	48	No
	24	Yes	27	No

Table 1. Climate periods P₀ for the RC11-120, E49-18, and PATCH data sets (from Tables 3 and 4 in the Pacemaker paper³) and estimated new periods P_{new}. In this chart, ka = thousand years; SST = Sea Surface Temperatures; % *C. davisiana* = percentage abundance of the radiolarian species *Cycladophora davisiana*; N/A means either the Pacemaker authors did not attempt to find the precise length of the ~100 ka astronomical period or an expected cycle was absent from the seafloor data. The precise before and after values of the shorter periods were always close to 23 and 41 ka, so I used those values for the percent error calculations. The original value of the long astronomical PATCH period was 105 ka (from the Pacemaker paper), and the new value was 112 ka (my calculations).¹⁰ Not shown is the 19.5 ka PATCH $\delta^{18}\text{O}$ cycle since some uniformitarian scientists have argued that it was not statistically significant.¹¹

patterns, the waves having the largest amplitudes had periods close to 100, 41, and 23 ka, the periods calculated from Earth's orbital and rotational motions (see the second column in Table 1). This was seen as strong evidence for an astronomical influence on climate.

For instance, Table 1 shows that the largest amplitude $\delta^{18}\text{O}$ waves in the RC11-120 core had periods of 91, 38, and 23 ka. Likewise, the largest amplitude $\delta^{18}\text{O}$ waves in the E49-18 core had periods of 109, 47, and 24 ka. The PATCH $\delta^{18}\text{O}$ data seemed to show cycles of 106, 43, 24, and 19.5 ka. They found similar results for the other two variables measured in the seafloor sediments.

It is *not* necessary to understand the mathematical details of spectral analysis to make a devastating case against the Pacemaker paper. Instead, for the sake of argument, we will simply accept their reported results at face value and then show that uniformitarian scientists have themselves since invalidated these results!⁸

Finding the Number of Cycles

For each of the large-amplitude waves listed in the Pacemaker paper's Tables 3 and 4,³ we can use Equation (2) to find the number of associated wave cycles. For the first $\delta^{18}\text{O}$ wave from the E49-18 core, we obtain $N_1 = (363,000 \text{ years} \div 109,000 \text{ years per cycle}) = 3.33$ cycles. For the second E49-18 $\delta^{18}\text{O}$ wave, we obtain $N_2 = (363,000 \text{ years} \div 47,000 \text{ years per cycle}) = 7.72$ cycles, and for the third E49-18 $\delta^{18}\text{O}$ wave, we find $N_3 = (363,000 \text{ years} \div 24,000 \text{ years per cycle}) = 15.13$ cycles. Similar calculations give the numbers of prominent wave cycles for the other two climate variables within the cores.

A Problematic Age Revision

But over 25 years ago—more than a decade after the Pacemaker paper's publication—secular scientists changed their age estimate for the magnetic reversal on which the calculations were based to 780,000 years.⁹ Using the Pacemaker authors' own method (which will be explained in part two), this revision changes the times assigned to cores. The new total times assigned to the RC11-120, E49-18, and PATCH data sets are 309,000, 403,000 years, and 544,000 years, respectively. What effect do these changes have on the original results?

Finding the New Periods

Figure 3 illustrates an important point: the value assigned to the time T in Figure 3 *does not change* the shape of the resultant wiggly pattern. Regardless of whether one claims that T equals 8.0 seconds or 800,000 years, the wiggly pattern looks *exactly the same*. And because the resulting pattern looks the same, so do the sine waves that were added together to obtain that pattern. And this means the number of wave cycles N for each sine wave will remain the same regardless of what value is assigned to T . For instance, Wave 2 in Figure 3 exhibits a little more than four wave cycles, and Wave 3 exhibits a little

more than three wave cycles, no matter what number we assign to T .

Because of the way the Pacemaker scientists assigned ages to the seafloor sediments, the new timescales caused little change to the shapes of the wiggly patterns from the sediment cores. And this means that the shapes of the individual sine waves were not changed much either. For instance, changing the total time assigned to the E49-18 core from 363,000 years to 403,000 years does not significantly change the number of cycles exhibited by each of the three large-amplitude waves. But now those same numbers of cycles must fit into a total time of 403,000 years instead of the original 363,000 years. So, dividing 403,000 years by 3.33, 7.72, and 15.13 gives new climate periods of 121, 52, and 27 thousand years. The last two values are especially in poor agreement with the values of 41 and 23 thousand years expected from the Milankovitch theory.^{1,10}

In the Pacemaker paper, the calculated periods were almost always within 10% of the astronomically calculated values (the first three columns in Table 1). But this is no longer the case with the new calculations, as shown in the last two columns of the table. The age revision—made by uniformitarian scientists themselves—has dramatically weakened their argument for an astronomical influence on climate!

This method is not perfect since there are complications that affect the results slightly, but it gives a very good estimate of what the Pacemaker results *would* have been had the authors used in their calculations the currently accepted age of 780 ka for the most recent magnetic reversal rather than their previous age of 700 ka.¹

That's it—that's all you have to do to verify that these iconic results are wrong. We will tie up the loose ends of this argument in part two of this series by explaining *how* the Pacemaker scientists assigned their ages to the Indian Ocean sediment cores. We will also briefly discuss the implications, and they are quite significant, of these results for both the creation-evolution controversy and the debate over climate change. ☞

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7. Their Table 4 reports this time as 468 ka, but they transposed the 6 and 8. Again, all values of T had to be evenly divisible by 3.
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Resolving the Sheet Sand Enigma

Sheet sands are widespread, thin sandstones that blanket large regions of the continents. Most are composed of extremely pure quartz of uniform, well-rounded grains that contain almost no shale. Secular geologists have tried to explain their presence for decades and have failed to develop a satisfactory answer.¹ Their best models invoke “atypical depositional conditions unique to shallow epeiric seas” and “are viewed as sufficiently different from other modern and ancient sedimentary successions that some textbooks treat them as a separate category of stratigraphic unit.”²

In other words, not only are the sands hard to explain, they fail to follow uniformitarian expectations. Many of these sheet sandstones extend for hundreds of miles and are just a few tens of feet thick. The so-called Tapeats Sandstone that blankets much of North America is an excellent example (Figure 1) and is found at the base of the Sauk Megasequence (Cambrian through Lower Ordovician systems).³

The continuity of the basal Sauk sandstone layer across North America is a testament to the Flood, specifically to the extent and uniformity of the first marine transgression of the continents. In many places, the base of this layer is also known as the Great Unconformity. This erosional surface has been mapped across multiple continents and is accepted as a global phenomenon.⁴ The basal Sauk Megasequence also coincides with the Cambrian Explosion, where fossils representing most animal phyla suddenly appear in the rock record. Most creationists recognize this sandstone layer as

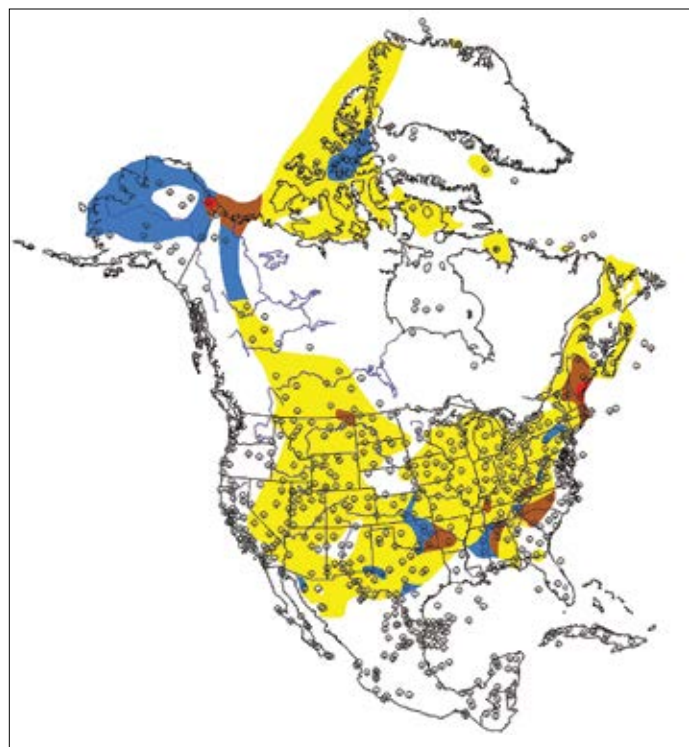


Figure 1. Basal Sauk Megasequence map for North America. Yellow = sandstone, brown = shale, blue = limestone, and red = volcanic rocks.

Courtesy of Davis J. Werner.

the Flood’s first extensive deposit.

This same layer also extends across North Africa and the Middle East, including Jordan and the city of Petra (Figure 2). It can even be found across parts of South America, demonstrating that the basal Sauk sandstone layer (the Tapeats equivalent) extends across multiple continents.

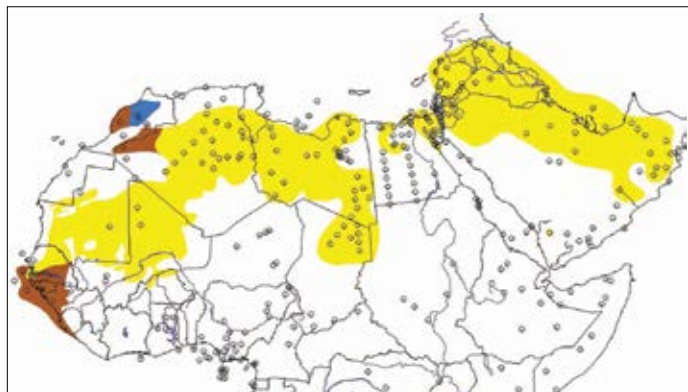


Figure 2. Basal Sauk Megasequence map for North Africa. Yellow = sandstone, brown = shale, and blue = limestone. Courtesy of Davis J. Werner.

The Tippecanoe Megasequence (Ordovician to Silurian systems) just above the Sauk also exhibits a large sheet sand at its base called the St. Peter Sandstone. This thin sandstone spreads across the midsection of North America. It can be correlated from Canada to Texas and Montana to West Virginia.

A St. Peter-equivalent Tippecanoe sandstone is also found across North Africa and the Middle East in a similar location and extent as the Sauk basal sandstone. And this same sandstone is again found across parts of South America.

Extensive, thin sheet sandstone layers continue to baffle secular geologists. They have failed to develop an acceptable model to explain these widespread deposits, and yet there they are, stacked one on top of the other across multiple continents.

It appears that these geologists’ refusal to take into account the history recorded in the Word of God is blinding them to the real explanation for the vast sandstone layers. Genesis clearly describes a global flood event. The Flood offers the only reasonable explanation for the thin, uniform sandstones that were deposited at the same time across multiple continents. God’s Word can resolve many mysteries if we simply choose to believe it. ☞

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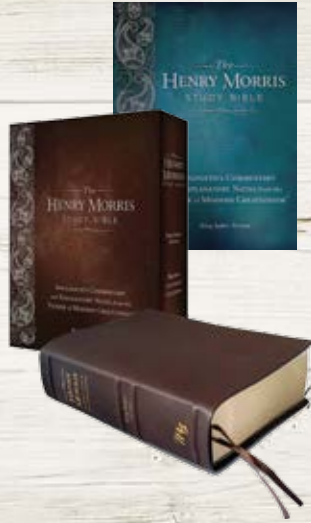
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Engineering Causality Studies Unmask Evolutionary Externalism

R A N D Y J . G U L I U Z Z A , P . E . , M . D .

Imagine the challenges facing an engineer who's been tasked with designing a fully automated, unmanned spacecraft that needs to travel to a planet and safely return. The vessel will be equipped with adaptable systems that can handle exposures to many uncertain conditions. Aside from heat shields and parachutes, the craft can deploy numerous external features that, if utilized, will make it look different from its liftoff appearance.

Every capability the autonomous vessel has, including the ability to relate to external conditions, will be due to its own features...and nothing else. So, the engineer needs to accurately anticipate the exposures, select adequate parameters (and add a factor of safety), specify certain external conditions to be the correct stimuli/cues, and get the design right. If the design fails, then the engineer will correct the design—not the external conditions—for the next generation of spacecraft. The precise, objective reality of engineering causality can be demanding.

Two decades later, the craft safely returns home with great fanfare. All the adaptable features successfully deployed, and the ship looks quite different from when it left. Experts marvel at how the space environment dramatically molded this “passive” vessel as it was being driven along. Though the spacecraft performed as programmed, no credit is afforded the design team. Astoundingly, some *scientists* wonder what space condition caused one vital feature to emerge—and don't even mention that the engineers specified the condition to be a stimulus and programmed the response that caused the feature to deploy. These scientists completely disregard the design and adaptive devices built into the machine and instead praise the adaptive creativity of space.

Evolutionists Invert the Cause of Adaptations

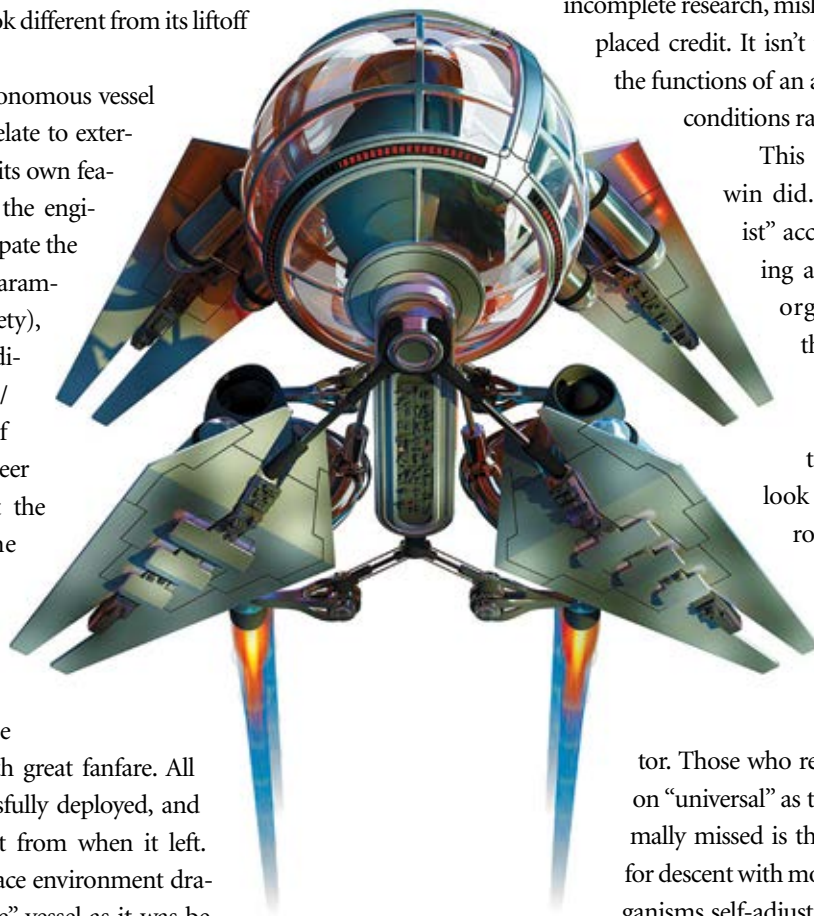
Those senseless assessments of the experts about the spacecraft are identical to the serious explanations evolutionists give for why organisms express different traits in response to changed conditions.¹

But the result is the same. Misattributed causality results in incomplete research, misleading explanations, and misplaced credit. It isn't trivial to ascribe causality for the functions of an autonomous entity to external conditions rather than its internal systems.

This is exactly what Charles Darwin did. He presented an “externalist” account of evolution, overturning all previous traditions. When organisms adapt, he granted the external environment the causal and controlling role to explain the organism's new traits, which otherwise would look designed to suit specific environmental conditions.

When people think of evolution, what usually comes to mind is descent with modification from a universal common ancestor. Those who reject evolution generally focus on “universal” as the incorrect part. What's normally missed is that Darwin inverted the cause for descent with modification—i.e., adaptable organisms self-adjusting over time. In doing so, he effectively targeted a distinguishing characteristic

of adaptable entities, which is that the cause underlying their adapted outcome is due to their internal systems (whether spaceships or organisms) and not to external environmental forces molding them. It makes no sense to approach scientific explanations of the functions for organisms differently from those of a spacecraft unless it could be shown that they operate by different laws of nature or that their functions should be explained by different engineering principles.





There is a way to cut through the confusion of Darwin’s externalism. The utilization of engineering causality may identify and correct the misconceptions in evolutionary literature just as the rocket engineer could remedy the confusion about his spacecraft.²

“There’s More to It Than the Iceberg”

A process engineering company presents a case study in causality under the heading “Loss of the Titanic—There’s more to it than the iceberg.”³ The firm specializes in identifying causality through objective methods that dig to identify hidden factors that have been overshadowed by obvious factors related to usually failed events. It uses a methodical, engineered approach to prevent snap judgments about causation that may thoughtlessly focus only on what is readily seen. Company executives hire process-engineering professionals to accurately identify causality so that harmful problems are not perpetuated.

Many people may not give much thought to the way adaptable systems truly function. With only a cursory review, there appear to be two variable parts causing the response—an organism’s obscure microscopic systems and easily seen external conditions. This may be one reason Darwin’s externalism easily took hold as the foundation for modern evolutionary biology. His contemporaries readily saw changed environments. But for decades scientists couldn’t see the molecular systems inside organisms that produce new traits.

Thus, in the overwhelming number of environment-centered papers on adaptability, seasoned researchers fixate on the obvious external conditions, especially since they’ve been trained to see nature as imposing changes on passive organisms. Superficial analysis and externalism lie beneath the status quo for framing biological phenomena—e.g., droughts create drought-resistant plants, predators induce evolutionary adaptations in prey, or climate and geology drive evolution.

For example, consider a headline about epigenetic changes in offspring born to starved mothers: “Famine alters metabolism for successive generations.”⁴ Or research papers on carp fish that automatically change size when they detect evidence of predators: “Chemical cues from piscivores [fish-eating organisms] induce a change in morphology in crucian carp,” and a few years later, “Predator-induced phenotypic changes in crucian carp are caused by chemical signals from conspecifics.”⁵

Even after describing a highly regulated internal mechanism that indicates that many mutations aren’t random but appear purposefully directed toward specific adaptable outcomes, a Baylor College of Medicine researcher externalistically concludes:

It’s a totally new way that the environment can have an impact on the genome to allow adaptation in response to need. It is one

of the most directed processes we’ve seen yet.⁶

Adhering to the status quo doesn’t ensure accurate assignments of causality. Another evolutionist recognizes externalism’s pervasive mental straightjacket. He thoughtfully reveals that environments don’t communicate directly with genomes or “allow” responses:

In everyday parlance, environmental stimuli is [sic] said to induce or even regulate the expression of specific genes. This notion is *so engraved* in the biological conceptual system that it comes *as a revelation* when, upon closer scrutiny, it turns out that *no external stimuli that could directly induce the expression of any gene are known*. No biotic or abiotic agent *per se* (the viruses’ case is irrelevant) is capable of inducing expression of any gene.⁷

Evolutionary researchers who desire more precision than externalism affords have taken to making dual ascriptions of causality that incorporate both external conditions and internal biological mechanisms. But one scientist dubbed these causal explanations “deeply entangled.”⁸ A recent book meant to elucidate biological and social relationships between multiple, adaptable organisms all relating together is simply called *Entangled Life*.⁹

Misattributed causality results in incomplete research, misleading explanations, and misplaced credit.

China’s Tragic Famine: A Study in Internal Causes Mistaken for External

From 1958 to 1962, 35 million people starved to death in China.¹⁰ The results of the famine highlight an unseen multigenerational biological relationship between organisms and their environments.¹¹ A recent study on one city in China compared the health status of residents between those who had prenatal exposure to famine and those who had not. Prenatal exposure to famine was classified as having 1) no parents exposed, 2) mother only, 3) father only, or 4) both parents.¹²

Research explored the potential correlation between famine exposure in parents to high blood sugar concentrations (hyperglycemia) and type 2 diabetes in their adult children or grandchildren. The odds were about 2:1 of developing hyperglycemia in both children and grandchildren of starved parents, while there was about a 75% increased risk of type 2 diabetes. The risk was highest if both parents were starved.

Does Famine Alter Metabolism?

The researchers didn’t identify a causal mechanism. So, the Medical Xpress headline “Famine alters metabolism for successive generations” reporting on the research is erroneous.⁴ Linking famine exposure directly to altered metabolism bypasses the vital role of a person’s biological systems that direct all metabolic outcomes.

Epidemiologists use safeguards against the mistake, depicted as (+) exposure → outcome.



First, a study must find a valid statistical correlation between exposure and outcome.

A second safeguard relies on engineering causality. There must be a plausible biological mechanism that explains the linkage of an exposure to the outcome. This will focus on an organism's internal systems. This relationship is depicted as (+) exposure |—organism's innate systems→outcome.

The symbolism of the |— represents an organism's boundary. This boundary has features to exclude elements of the external environment but other qualities to detect, actively transfer, or allow elements into the organism for further processing.

Superficial analysis and externalism lie beneath the status quo for framing biological phenomena—e.g., droughts create drought-resistant plants, predators induce evolutionary adaptations in prey, or climate and geology drive evolution.

that continuously track environmental changes. If a mother is in a nutrition-deprived environment, one purpose of design-based systems is to prepare her offspring to cope with that same environment after birth. This theory integrates engineering causality and enables predictions of findings.

Mistakes in process description happen when researchers fail to report key steps—perhaps, in this case, by thinking that a parent's exposure to malnutrition is the same exposure for a baby in-utero. These exposures are not equivalent. Malnutrition for a developing baby doesn't start at the same time—or even necessarily happen at all—as malnutrition for the mother. For example, in pregnant women with severe iron-deficiency anemia, the baby's iron stores and hematocrit may be normal. The placenta operates by “rules” to selectively absorb and distribute circulating nutrients to meet the baby's needs first, then the mother's.¹³

This relationship is depicted as (+) famine (exposure) |—parent's systems response (exposure) |—offspring's systems→offspring (+/-) hyperglycemia or diabetes (outcome).

Do Parents Detect a Famine “Stimulus” and “Signal” Developing Offspring?

In humans, parents and offspring have systems to detect starvation and respond accordingly. Chinese famine researchers speculate that “genetic, epigenetic reprogramming, and subsequent gene-diet interaction are all possible explanations.”¹⁴ Aside from the mystical “gene-diet interaction,” this mechanism is like other epigenetic changes detected in offspring of starved parents.¹⁵

Recent experiments support maternal-to-offspring signals about a nutrition-deprived environment. A Duke University study on the tiny worm *C. elegans* found “a genetic network that mediates effects of a mother's diet on the size and starvation resistance of her offspring,” with genes that “function in the mother to transmit information about her diet to her offspring.” The researchers add that since this network is doubtless not limited to worms, the “conserved genetic network controlling such effects of diet across generations is likely relevant to human diseases related to nutrient sensing and storage.”¹⁶

In regard to offspring born to diet-restricted mothers, study leader L. Ryan Baugh commented that “these animals are able to an-

ticipate adverse conditions based on their mothers' experience.” Although the report acknowledges that “the molecular mechanisms behind the buffering effects of maternal diet are still unclear,” Baugh believes that “mom somehow provisions the embryo, or programs it.”¹⁷

These findings tend to confirm design-based theory that emphasizes active, problem-solving, intrinsically adaptable organisms

While parents may “program” offspring through persistent epigenetic markers, another mechanism is plausible. Offspring will be shown to be able to detect signals from a parent during development (and afterward also) and make self-adjustments to their own traits per internal programming—just as a design-based, organism-focused adaptability explanation would affirm. ✎

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Q: Why Don't Poison Dart Frogs Poison Themselves?

A: Found in Central and South America, the poison dart frog uses its skin toxin for defense and its bright colors as a warning. Each tiny amphibian holds enough toxin in its skin to kill 10 people.¹ Its popular name came from native hunters who very carefully dipped the tips of their hunting darts in the frog's poison. A new study revealed how the frogs survive their own poison, and the answer points to God.

Over 150 years ago, Charles Darwin asserted that nature could select enough traits over time to change one animal kind into another. Could natural processes have accidentally constructed poison dart frogs step by step? If nature's first step was to make the frog's toxin, then what would stop that first batch of toxin from immediately killing the frog, thus ending its imaginary evolution?

Perhaps the frog developed immunity to the toxin first, and its sophisticated biochemical toxin production facilities emerged later so that the toxin could evolve without killing the frog. Does this sound reasonable?² Two big problems confront that idea.

First, natural processes do not anticipate future needs or desires. Nature never said, "Hmm, if I could just invent a toxin, it could be useful for future froggy defense."



The second problem reaches into the newly discovered details of poison frog immunity. Its toxin works by docking with a specific module of a sodium gate protein found on the outer surfaces of nerve and muscle cells. The toxin targets a module that has 1,836 amino acids, each precisely in its place like so many miniature engine components.³ The docked toxin blocks the victim's sodium gates from sending vital signals. This freezes muscle cells, thereby stopping the heart. Only when scientists changed the 1,584th amino acid found in most animals (asparagine) to the amino acid that the poison frogs have at that spot (threonine) did the toxin fail to dock. Rats with the



frog's version of this protein survived exposure to the toxin just fine.⁴

What are the odds that natural processes would have somehow specified that exact amino acid swap at that exact position, then spread this new version across all poison dart frog ancestors, all before the toxin ever became a glimmer in Mother Nature's imaginary eye?

In other words, which came first, the toxin or the frog's immunity to its own toxin?

A powerful Creator like the One the Bible describes would *not* have to build animals in steps. He could have created each original animal all at once, like Genesis says He did, to avoid all the "which part came first" problems.⁵ Plus, a wise Creator could (and a good Creator would) equip creatures with suitable solutions to needs He actually anticipated.

One may ask why a good God would create harmful toxins at all. Well, in addition to protecting creatures, toxins can become medicines when used in measured doses and specific applications.⁶ The Lord's wisdom, "beside Him as a master craftsman"⁷ from the beginning, anticipated both our research and possible medical interests and these frogs' needs when He—not nature—designed their toxic skin. ☞

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3. Nav_v1.4 (Na = sodium, and v = voltage) is really just one subunit of a larger, vital, voltage-gated sodium channel that helps send nerve impulses to muscles.
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Mechanical Multitasking on the *Mayflower*

For want of a nail, or a horseshoe, unforeseen consequential damages may follow.¹ For the Pilgrims aboard the *Mayflower*, however, it was a screw jack—not a nail—that provided providential protection.

Halfway through the Pilgrims’ journey across the Atlantic Ocean, an over-stressed beam bowed and cracked. The screw jack was used to “save the day.”² Think of how American history would have changed if the Pilgrims had all perished at sea, never to reach Plymouth in 1620.

Originally this giant screw device was used for clamping inked typesetting fonts onto printing press paper, but on the *Mayflower* it was re-tasked to raise a midship beam back into place after it had faltered, followed by buttressing the compromised beam with subjacent support.

[The *Mayflower*] encountered many times with cross winds and met with many fierce storms...and one of the main beams in the midships was bowed and cracked, which put them in fear that the ship could not be able to perform the [remainder of the] voyage....[So] there was a great iron screw the passengers brought out of Holland [i.e., the screw press Brewster used in Leiden], which would raise the beam into [its] place; the which being done, the carpenter and [ship] master affirmed [i.e., buttressed] that with a post put under it, set firm in the lower deck and other[wise] bound, he would make it sufficient.³

Available machinery capable of versatile applications, combined with quick-thinking Pilgrim passengers, solved a life-or-death crisis that the *Mayflower*’s professional crew hadn’t anticipated. This providential detail is part of the Pilgrims’ progress in America—and thus is something we can appreciate during the Thanksgiving season.

We can also appreciate how God has programmed so much of His great creation with versatile engineering traits, including multitasking features within our own bodies such as our appendix, nose, ears, and hair.⁴

Human inventors are routinely commended for devising versatile utility gadgets, like Swiss army knives that contain multipurpose features for accomplishing work in diverse contexts. Yet, consider how the human appendix helps the immune system as well as the digestive system. Consider also how the human ear provides hearing as well as our sense of balance. Noses both smell and breathe. Hair provides beauty while it simultaneously excretes toxins. Examples of God’s multitasking in human physiology are almost endless.

Likewise, we should revere God’s genius when we see it displayed in animals’ multitasking body parts.⁵ Even the inanimate sun, moon, and stars were made by God for multipurpose tasks (Genesis 1:14-18).

God’s bioengineering always outshines manmade mechanical marvels, so we should give God due credit for how He designed and constructed His diverse creation, especially ourselves, with multitasking



Fotolia © Jim Curran

potentials that show design genius far beyond mere “irreducible complexity.” As always, we have a lot to be thankful for, so let us be grateful to our God for His many providences, including those that provided political and religious freedoms and opportunities.

Know that the LORD, He is God;
It is He who has made us, and not we ourselves;
We are His people and the sheep of His pasture.
Enter into His gates with thanksgiving,
And into His courts with praise.
Be thankful to Him, and bless His name.⁶ ✠

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1. *British Columbia Saw-Mill Co. v. Nettleship*, L.R. 3 C.P. 499 (Eng. Q.B. 1868), alluding to a case “where a man going to be married to an heiress, his horse having cast a shoe on the journey, employed a blacksmith to replace it, who did the work so unskillfully that the horse was lamed, and, the rider not arriving in time, the lady married another; and the blacksmith was held liable for the loss of the marriage.”
2. What saved the day, mechanically speaking? It was a “great iron screw” (i.e., a screw press or screw jack) brought from Leiden, Holland, from William Brewster’s government-quashed printing press operation. “Certainly the screw itself, of which Bradford speaks...was used to raise the bending beam and bring it back into position, and would be removed as soon as the upright post was in its place....It was a screw-press or screw-jack: probably all that was left of Brewster’s printing house, after the types had been seized by the Leyden authorities.” Harris, R. 1920. *The Finding of the “Mayflower.”* London: University Press, 14-15. Posted on washington-mayflower.org.
3. Bradford, W. 1989. *Of Plymouth Plantation, 1620-1647*. S. E. Morison, ed. New York: Alfred A. Knopf, 58-59.
4. Psalm 139. See also Romans 1:20, cited in Guliuzza, R. 2010. Life’s Indispensable Microscopic Machines. *Acts & Facts* 39 (8): 10-11. Many manmade machines are designed for versatility, the flexible potential for “multitasking” services.
5. “Biologists [studying birds and flying insects] continue to uncover exquisite design in natural flight sensors—devices like *mechanoreceptors* that send sophisticated information to an insect’s brain about the visual field, airflow, inertia, and wing-load pressure. Investigations have revealed that most or perhaps all natural sensors multitask. A single biological sensor can detect, integrate, and send multiple messages to the creature’s brain,” citing Acts 17:24. Thomas, B. Birds Inspire Flight Sensor Inventions. *Creation Science Update*. Posted on ICR.org December 22, 2014, accessed September 20, 2017.
6. Psalm 100:3-4.

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LOADS OF BENEFITS

We all have so much to be thankful for. Even in an age of rising wickedness, God has been so very good to us, and we can only marvel at His infinite mercy and grace. Not only has He forgiven our sins, saved our souls, and promised us eternal life, but He also “daily loads us with benefits” (Psalm 68:19)! Indeed, the “LORD has done great things for us, and we are glad” (Psalm 126:3).

These marvelous benefits also extend to the work of the Institute for Creation Research. God has supplied for us in ways only He could do and has used ICR’s ministry to benefit many others in their walk and witness for Christ. I am reminded of this every time I review the notes and letters we receive. These are a great blessing to me personally, and I frequently share them with the ICR staff. In the spirit of Thanksgiving, it is my pleasure to share a few of His “benefits” to us.

Consider this testimony from a supporter originally from India: “Many years ago, before coming to this good country, a dear missionary gave me a copy of *The Genesis Flood*. I had recently accepted Jesus...and words cannot tell my profound joy as page after page confirmed my new faith. ICR is a great benefit to me, and I thank my Creator Jesus for you!”

From a scientist working in the oil and gas industry: “I have been a supporter of ICR since the early 1980s when I first heard your grandfather speak at a church in New Orleans and heard Dr. [Duane] Gish demolish a Tulane professor in a debate. That started me on a lifelong journey to pursue the evidence for a young earth and universe. I am deeply indebted to your grandfather and the ministry of ICR for their impact, research, and materials. We are praying for... ICR, the building of the Discovery Center, and are looking forward to visiting it soon.”

A long-time subscriber in Virginia writes: “I read *Acts & Facts* each month from cover to cover. Every issue has articles that to me are especially important. Thank you, and the other ICR staff, employees...for holding fast to God’s Word, for maintaining a Christian worldview, for your continuing Christian humility, for your continued genuine efforts to walk in the ways of the Lord, and for your attitude of gratitude. You all are a very clear example of the good tree bringing forth good fruit.”

In reference to our *That’s a Fact* online videos, a generous supporter sent this email: “Please pass on my thank you to all those involved in developing these short videos. They are awesome! I just looked at the first 10 [and] just forwarded your email...to my teenage grandchildren so that they too can be blessed by the facts of God’s creative power and truth. May God continue to bless everyone at ICR and all your ministries to the world about the truth of His Word!”

And finally, from a hurricane survivor in Houston: “I found a waterlogged copy of your [*Days of Praise*] booklet while clearing out the mess that ol’ Harvey left us. I was tired and needed a break...so I sat right down on a soggy couch and read a few devotionals. I don’t know who ‘HMM’ is, but OH MY! What timely refreshment to my soul! God is still running things, and He’ll take care of His own...and I can’t thank y’all enough. Keep the blessings coming!”

These represent a fraction of the many marvelous testimonies we receive, and I hope they bless you as much as they did me and will encourage you to keep praying and giving in support of our work. Truly, God “daily loads us with benefits,” and ICR thanks God daily for you. ✨

Mr. Morris is Director of Donor Relations at the Institute for Creation Research.



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I have an aggressively atheistic friend from high school who always hassles me (somewhat good naturedly) on the ICR posts I share. He argues they are two different things [the origin of life and evolution] as well. And I always think, “Of course you want to separate those two issues—the origin of life by evolution is impossible for you to explain!” **They don’t get to decide what’s on the table.** If they can’t explain life’s origin, they have no business boasting confidently in their knowledge of its diversity.

— C. H.

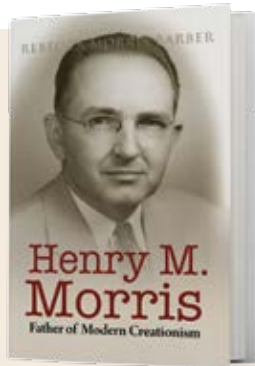


Professor Says He Can “Slam Dunk” Creationists
by Jake Hebert, Ph.D.
Editorial Board Member

Thank you so very much for the autographed copy of Rebecca’s Henry M. Morris biography [*Henry M. Morris: Father of Modern Creationism*]. I had planned to order one, but this gift-to-donor copy is especially appreciated. It couldn’t have come at a better time: Friday, September 15, as we were in recovery from the stress of Hurricane Irma. I live north of Tampa, and my area was without power for four days. **HMM was a great companion, and I read the whole book from Friday through Sunday.** It’s inspiring to read the details of how God guided HMM every step of the way. It’s also an encouragement to each Christian to patiently wait for God to open the doors of service that He would have us walk through.

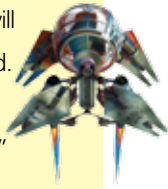
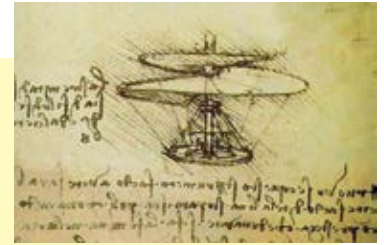
My compliments and thanks to Rebecca for undertaking this project and for crafting such an important and needed book. Her writing flows easily and makes the book highly recommendable for all, especially as an encouragement to young people who want to know how to listen to, and be led by, the Holy Spirit. I shall treasure this along with my 1961 edition, autographed by Dr. [John] Whitcomb, of *The Genesis Flood*.

— M. F.



Dr. Randy Guliuzza’s series on Engineered Adaptability is another valuable contribution to creation research. **Intelligent design is not enough.** An intelligent engineer must also create a workable prototype, determine how the product will be reproduced, where and how it will obtain energy, and how it can be maintained and repaired. Leonardo da Vinci “designed” a helicopter in the 1480s, but it wasn’t until the 1920s that one was “engineered.” Kudos to Dr. Guliuzza for this and his other fine work.

— J. C.



We attended your [Dr. Tim Clarey] lecture at Grand Canyon University on September 22. We learned about it from the ICR magazine [*Acts & Facts*]. We are so glad we did! We love reading the books and magazines ICR publishes, but it’s even more compelling to hear about creation research in person. Our only disappointment was that it wasn’t longer! We have attended similar events at churches over the years, and the audience response was all positive, encouraging, and like-minded. So, imagine our surprise when there were a couple of people that insisted on arguing with you and monopolizing the Q&A time. Well, we would expect that behavior from a secular audience, but I guess we had higher expectations from a Christian university. And then it dawned on us that this is what you, the other staff, and all creation scientists encounter on a daily basis. Wow. **What courage it takes to trudge on in the face of so much opposition.** We just wanted to give you a big dose of encouragement. You are making a difference. You are gifted with knowledge and the ability to teach. Thank you for using those gifts for the glory of God. Surely, God has a big smile on His face when He hears you talk about His intricate, masterful, beautiful creation!

We are so excited for the ICR Discovery Center and all of the things in the works. I hope we will be fortunate enough to see you speak again someday soon.

— S. and G. R.

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