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APRIL 2013

VOL. 42 NO. 4

## ADAM IN THE CITY

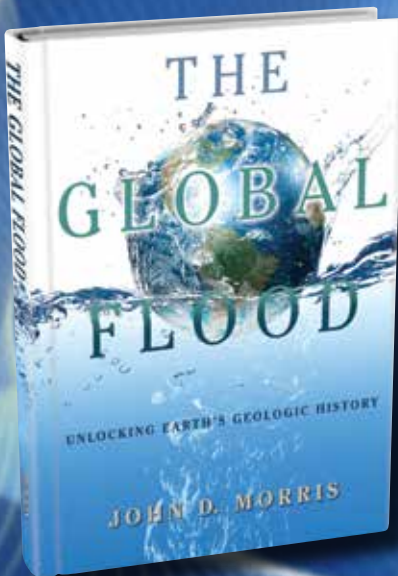
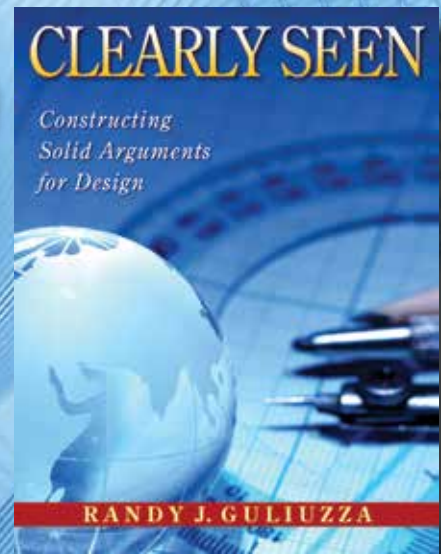
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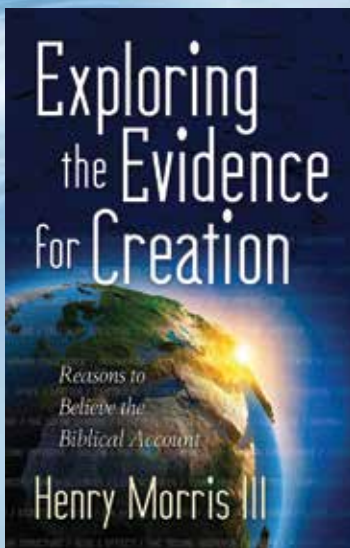
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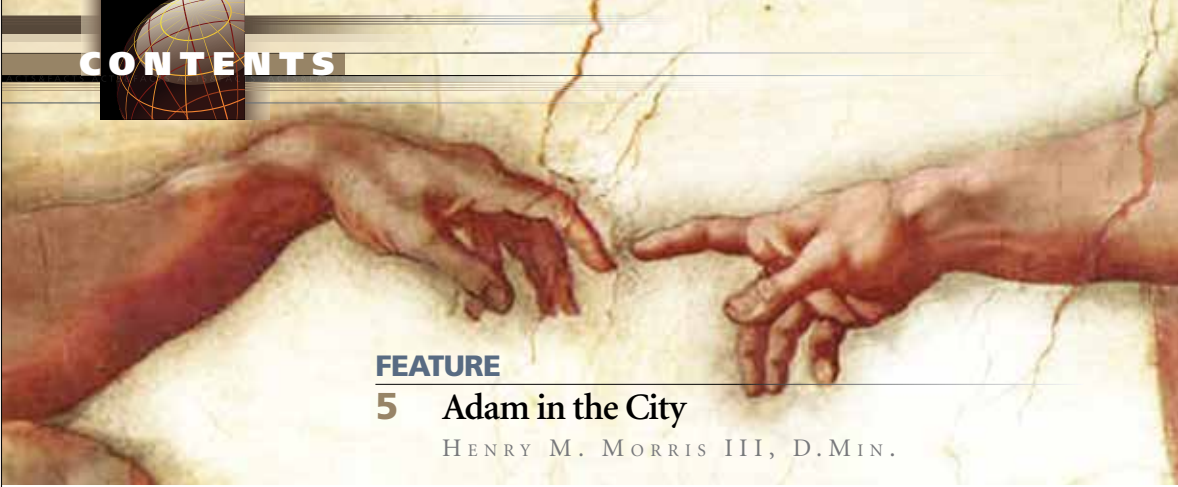
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Published by  
**INSTITUTE FOR CREATION RESEARCH**  
P. O. Box 59029  
Dallas, TX 75229  
214.615.8300  
www.icr.org

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## Digital Books: Another Way to Share Truth

Most bookworms know the feeling of curling up with a good book. We can imagine peaceful surroundings as we crack open the cover—a cup of tea steaming on a nearby side table, string music playing in the background, a fireplace casting a flickering glow across the room. We close our eyes, pull an imaginary blanket to our chin, and inhale the smell of ink on paper, anticipating the thrill of turning pages on our way to a new adventure.

And then our cozy world collides with the high-tech realm of digital publishing. Just as Gutenberg's printing press revolutionized the production of books in 15th-century Europe, the digital age is changing the way people read today. In the 1450s, the Gutenberg Bible became the first mass-produced printed book, and now virtually every version of the Bible is available in digital format.



Whether they are distributed on Kindle, NOOK, iPad, Kobo, or one of the dozen or so other digital options, e-books have impacted the lives of book lovers everywhere. And I have to admit, I was skeptical at first. But it took just one weekend flight with a new Kindle to convince me—I will never travel with a heavy book bag again. Blisters, be gone!

My Kindle has the Bible, several commentaries, my favorite devotionals, and tons of just-for-fun reading options. The digital books I purchase for Kindle are also accessible on my iPad. The fact that I could carry a light-

weight library of hundreds of books on one little device won me over initially, but a myriad of other benefits has me hooked for the long run.

Even local travelers have discovered the advantages of digital books. For people who spend more than their fair share of time on subways, buses, and other forms of mass transit, e-reading devices and smartphones allow them to tuck away another chapter or two of a great book during commutes to and from the office.

Most digital books are cheaper than the print versions, the shopping is convenient, downloads are almost immediate, and multiple books are instantly available on your device. You can customize your books and change the font size, type, and even the color, which helps readers who struggle with vision problems. Some tablets come with lighted backgrounds and audio options, allowing you to listen to your books while you're doing other things. You get the point—most of the top digital readers are high quality and worth the switch to the non-traditional side of the cozy bookworm corner.

With more and more information being tossed into the world at rapid speeds, the Institute for Creation Research has launched into the realm of digital publishing. You'll notice from the back cover of this issue that Dr. Henry Morris III's latest book *The Book of Beginnings, Volume Two* is now available in digital formats. His previous book in the series, *The Book of Beginnings, Volume One*, is also available digitally. Watch for other trusted ICR resources to become available for the Kindle and NOOK and in the iBookstore.

Of course, we'll continue to print "real" paper books. The digital books are simply an additional avenue for getting our message out to as many people as possible. Dr. Morris' article in this issue (pages 5-7) reminds us that the Adams and Eves of today are hungry for the truth. We now offer them one more way to read those words of truth.

**Jayme Durant**  
EXECUTIVE EDITOR

# ADAM IN THE CITY

HENRY M. MORRIS III, D. MIN.



*But from the beginning of the creation God made them male and female. (MARK 10:6)*

**O**ur Lord Jesus made this statement to the religious leaders of His day when they attempted to trip Him up with a trick question. Who were the “them” to whom He was referring? They could only be human beings (not animals), since the question from the Pharisees that prompted the response was about the permission to divorce. It also appears that Jesus was referencing the Genesis account, since He spoke of the “beginning of the creation.” One could therefore conclude that Jesus was speaking about a “historical” Adam and Eve.

Historical—that is the important point. God made a special garden for Adam and Eve to start their lives in. Somehow, in the minds of some, that seems to relegate Adam and Eve (and their real lives) to a rural, even fairytale, existence. But that’s not the case.

The real Adam is vitally important to those who live in the hectic, high-pressured, and intense cities of our world today. The whole of Scripture makes no sense if Adam is not a flesh and blood human being in real history. The “man” in the garden is the “Adam” in the city.

Some, however, would disagree.

Their objections constitute the latest tactic in the ongoing onslaught against a recent creation. At first, opposition was only levied against the science involved (specifically, the aspects of the creation account that contradict evolution). Then, various groups began proposing compromises to try to “harmonize” the creation account with evolutionary science—theistic evolution, progressive creation, day-age theory, gap theory, etc. More recently, attacks have focused on the “literalist” view, with varying levels of pity and/or scorn expressed about those “naïve” enough to believe that the history recorded in Genesis should be taken literally.

And now, critics malign specific details of the creation week, with the issue of a “real” Adam receiving the most hostility. It seems that the more “urbane” the opposition becomes, the more the commentaries diverge from what is actually presented in the biblical text.

“This is a fact: the idea of a historical Adam and Eve is *not true*.” So insists Fred Clark in a recent Patheos blog.<sup>1</sup> Bold denials of our Lord’s teaching have become more and more strident over the past few years. The common argument of such denials suggests that although the biblical text might present a particular event as though it actually occurred in the past, scientific evidence has clearly demonstrated that such a singular event did not occur.

Francis Collins (former leader of the Human Genome Project) and Karl Giberson dealt with this question more subtly in their bestselling book, *The Language of Science and Faith: Straight Answers to Genuine Questions*.

So how does this story fit into an evolutionary history where earth is billions of years old and humans originated hundreds of thousands of years ago in Africa? Is the story of Adam and Eve actual history or is something else going on here?... Literalist readings of Genesis imply that God *specialy* created Adam and Eve, and that all humans are descended from these original parents. Such readings, unfortu-

nately, do not fit the evidence, for several reasons.<sup>2</sup>

There is even a Historical Adam Society, an Internet blog and membership society founded “to advance the understanding of the relationships between science, history, and Christianity.”

“Historical Adam” is a Christian apologetic that embraces the Genesis narrative concerning Adam and his descendents, and operates completely within the bounds of scientific discovery and historical evidence. This position considers Adam to have been a real historical person.<sup>3</sup>

Sounds great, until one reads further into their position on *when* Adam came on the scene. “This position considers Adam... not to have been the biological progenitor of the entire human race since our species, *Homo sapiens*, is known from the fossil record to have been living 200,000 years ago.”<sup>4</sup>

This is very similar to Hugh Ross’ stated position on the Reasons to Believe website. Although they insist that they agree with historical Christianity’s position that “Adam and Eve were the first two humans,” their web page on this question goes on to cite the following:

Genetic, linguistic and pathogen studies support a historical Adam and Eve. This research indicates that humanity arose 1) recently (within the last hundred thou-

## THE REAL ADAM IS VITALLY IMPORTANT TO THOSE WHO LIVE IN THE HECTIC, HIGH-PRESSURED, AND INTENSE CITIES OF OUR WORLD TODAY.

sand years or so), 2) at a single location (close to where Bible scholars place the Garden of Eden), and 3) from a small population, arguably as small as a single pair.<sup>5</sup>

These and many other articles, books, and blogs attempt in various ways to either *add* credibility to the biblical account by citing scientific information that seems to support a “reasonable” interpretation (in their

view) of the Genesis record; or, more often, they *take away* from the Bible’s credibility by insisting that science has proven the Bible to be incorrect.

At the heart of all of these efforts is the assumption that the biblical story is not in sync with the scientific, historical, and archaeological evidence cited by the majority of scholars today. In all cases, that assumption marginalizes or disputes the biblical text, thereby undermining the basic premise that God is truthful, accurate, and clear in His revelation to us. Among all those who question the historicity of Adam and Eve, there is an overt denial of the possibility of a recent creation and of the planet-covering cataclysm of the Flood of Noah’s day.

How, then, are we to react to these attempts to explain away the text? Are there criteria by which we may evaluate these issues? What biblical information is available to us that will help us weigh the arguments?

### Jesus Is the Creator

This foundational truth may seem ancillary to the question, but the Bible is very clear. The same One who substituted Himself for our sin-debt on the cross and took His own life back from the grave is the One who spoke the worlds into existence (John 1:1-3, Colossians 1:16-17, Hebrews 1:2). Surely He would speak accurately about the events of creation.

As noted earlier, Jesus declared that He made Adam and Eve at “the beginning” (Matthew 19:4, Mark 10:6). Jesus also spoke of Noah in the same manner—as a genuine historical character (Matthew 24:37-38). If neither of these things were true—if these biblical characters were just myth or some kind of representation of “spiritual truth”—either Jesus was mistaken or was “accommodating” Himself to the deficient scientific literacy of those pitifully ignorant disciples. Either way, the words of the Lord Jesus must be dealt with. He was the Creator (and thus the omnipotent, omniscient God of

transcendent eternity), and therefore His understanding of events *should* take precedence over that of mere mortals.

### Scripture Should Not Be Altered

This is another fundamental teaching of the Bible. Jesus Himself said, “The scripture cannot be broken” (John 10:35). The book of Proverbs tells us “every word of God is pure....Add thou not unto his words, lest he reprove thee, and thou be found a liar” (Proverbs 30:5-6). “All scripture is given by inspiration of God,” Paul insists (2 Timothy 3:16). Surely we are all familiar with these instructions.

Jesus used a play on words from the Psalms to “prove” His deity (Matthew 22:42-46, citing Psalm 110:1), and the tense of the simple Hebrew verb “to be” to prove the resurrection (Matthew 22:29-32, quoting from Exodus 3:6). Earlier, in the famous Sermon on the Mount, Jesus insisted that the very letters of the text themselves were not to be tampered with because they were eternally correct (Matthew 5:18).

Please remember that this is the Lord of heaven and earth who is “interpreting” the Scripture. If He is that precise, what authority do sinful humans have to twist and deny that same Word?

### The Gospel Message Is Built on a Historical Adam

Nothing is more basic. The genealogy of Jesus Christ is traced from Adam (Luke 3:38), and the necessity of a sinless human substitute is prophesied and declared throughout Scripture (e.g., Isaiah 53; John 1; Hebrews 1, 9–10; etc.). The entirety of the need for the reconciliation of sin and death is tied to Adam’s rebellion and Christ’s death and resurrection (Romans 5:12-19).

No doctrine of Scripture is more clear and more replete throughout the Bible. Everything about our salvation hinges on the actual, historical event that is recorded in Genesis 3

and the required substitutionary atonement of our “brother” and “High Priest” (Hebrews 2:17). If Adam is not real, then Christ’s death on the cross was merely martyrdom by a well-meaning but totally confused messianic zealot.

Such a heresy should not be embraced by those who name the “name which is above every name” (Philippians 2:9). That’s why the

## IN ALL CASES, THAT ASSUMPTION MARGINALIZES OR DISPUTES THE BIBLICAL TEXT, THEREBY UNDERMINING THE BASIC PREMISE THAT GOD IS TRUTHFUL, ACCURATE, AND CLEAR IN HIS REVELATION TO US.

apostle Paul used such strong language to the Galatians when he warned them about a different gospel: “But though we, or an angel from heaven, preach any other gospel unto you than that which we have preached unto you, let him be accursed” (Galatians 1:8).

May our Lord’s mercy be granted to those who presume to place the word of secular scientists above that of His “only begotten Son.”

### What Should We Do?

Those who genuinely struggle with the conflict between what they read and hear from others and what the Bible says need to be treated with gentleness, “speaking the truth in love” (Ephesians 4:15). While we may feel strongly about the damage being done, the power of change lies with the Holy Spirit using the words of Scripture, not the debating skills of the human agent. Our job is to “sanctify the Lord God in your hearts: and be ready always to give an answer to every man that asketh you a reason of the hope that is in you with meekness and fear” (1 Peter 3:15).

There are many who are in churches or institutions that either do not teach these foundational issues or that are consciously being led astray by blatantly secular teachers who are hostile to the biblical message. For those in such straits, the instructions from Jude are

applicable: “And of some have compassion, making a difference: And others save with fear, pulling them out of the fire; hating even the garment spotted by the flesh” (Jude 1:22-23). This role is one of rescue rather one of patient discipleship.

But there are others who understand the words of Scripture, and yet have chosen to embrace some form of compromise in an attempt to be accepted by those who have “changed the truth of God into a lie, and worshipped and served the creature more than the Creator” (Romans 1:25). In such cases, the Bible’s instructions are more stern. We are told, “Now I beseech you,

brethren, mark them which cause divisions and offences contrary to the doctrine which ye have learned; and avoid them. For they that are such do not serve our Lord Jesus Christ, but their own belly; and by good words and fair speeches deceive the hearts of the simple” (Romans 16:17-18).

Some we are to patiently disciple. Some we are to urgently rescue. Some we are to actively avoid. In every case, however, our efforts must be guided by God’s Word as we “praise thy name for thy lovingkindness and for thy truth: for thou hast magnified thy word above all thy name” (Psalm 138:2).

The genes of the historical Adam are embedded in the “Adams and Eves” of today’s cities. More importantly, the sin of and judgment on the earthly Adam have been atoned for by the second Adam, the Lord Jesus Christ. Just as the historical Adam was “made a living soul; the last Adam was made a quickening spirit” (1 Corinthians 15:45). ●

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Dr. Morris is Chief Executive Officer of the Institute for Creation Research.



**ICR APRIL EVENTS**

■ **APRIL 6-7**

Arcadia, OK  
 First Southern Baptist Church  
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■ **APRIL 19-20**

Rochester, MN  
 Minnesota Association of Christian  
 Home Educators Conference  
 (MÂCHÉ)  
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■ **APRIL 21**

Fort Worth, TX  
 Glenview Baptist Church  
 (H. Morris III) 817.281.3361

■ **APRIL 10-14**

Redding, CA  
 Alpha and Omega Conference 2013  
 (J. Morris, N. Jeanson)  
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■ **APRIL 21**

La Crosse, WI  
 Bethany Evangelical Free Church  
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**SAVE THE DATE**

Your Origins Matter Conference

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Calvary Chapel  
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For more information on these events or to schedule an event, please contact the ICR Events Department at **800.337.0375** or [events@icr.org](mailto:events@icr.org).

# 2013 MÂCHÉ Conference

April 19-20, 2013 at the Mayo Civic Center - Rochester

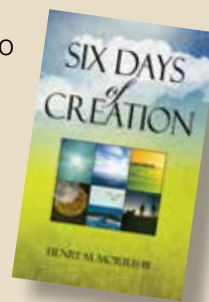
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# ICR LIFE SCIENCES RESEARCH: THREE YEARS IN REVIEW

NATHANIEL T. JEANSON, P.H.D.

What is the origin of species? This month marks the three-year anniversary of the ICR Life Science research initiative addressing this question.<sup>1</sup> Much has been accomplished since April 2010.

Over the past three years, our research has been guided by two overall goals—refuting the Darwinian explanation for the origin of species with science data and investigating the true origin of species within the parameters of Scripture. This research direction narrowed our focus to three specific questions: 1) What is the ancestry for each species?<sup>1,2,3</sup> 2) How did species diversify post-creation and post-Flood?<sup>4</sup> 3) Why is species' variation limited within the kinds mentioned in Genesis 1?<sup>5</sup>

Since our initial exploration into this research, we have added a few more questions. A fuller view of species' origins entails looking at both ends of the spectrum from origins to extinction. Hence, we are considering hypotheses on species' extinction—a question that has ramifications not only for creation/evolution, but also for conservation. Conversely, the question of species' age also plays a significant role in understanding species' histories. We are investigating signatures of recent creation at many levels of biology from populations to DNA.

Related to refuting Darwin's hypothesis, we are also exploring the question of biogeography—why species are distributed in the places that we currently find them. This key “evidence” of evolution will certainly be best understood in light of the Flood and subsequent migrations.

Finally, to understand the effects of the Curse (Genesis 3) on species, we are utilizing the skills of the newest member of our research team, parasitologist Frank Sherwin, to study the origin of biological “nasties”—pathogens, parasites, predators, and defense systems.

What have we accomplished since 2010? The research team's work has been quite prolific. In particular, Jeff Tomkins has been steadily chopping away at the evolutionary claim that humans and chimpanzees have a common genetic ancestry. He has demolished both icons of this evolutionary dogma—the supposed human chromosome 2 “fusion” and the purported 98 to 99 percent genetic identity between humans and chimps.<sup>6-12</sup> His latest findings suggest that this supposed genetic identity is as low as 70 percent.<sup>13</sup> Dr. Tomkins has also made significant contribu-



tions to our understanding of the intricate designs within every cell, with articles already published on this front.<sup>14, 15</sup>

What can we expect in the near future? Dr. Tomkins and I both have papers in the scientific peer review process dealing with new molecular findings. We'll tell you about them as soon as they are ready for publication. Exciting things are happening in the research department at ICR! ●

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Dr. Jeanson is Deputy Director for Life Sciences Research and received his Ph.D. in Cell and Developmental Biology from Harvard University.



# Real Freedom Only Comes from Real Truth

JAMES J. S. JOHNSON, J.D., T.H.D.

Imagine a courtroom where a litigating party tells the judge that different people have different truths. This situation actually occurred when a hostile witness accused a government contractor of wrongdoing during testimony. Notice how the contractor demonstrated his flimsy view of “truth” after the trial judge informed him of his right to cross-examine his adversary:

JUDGE: It’s now your turn to ask any cross-examination question of [the hostile witness] that you want to ask of him at this time.

CONTRACTOR: I don’t really have a question directed towards him, because...he has his own truth. I have my own truth.

JUDGE: Well, there’s a real truth out there, and that’s what I’m here for, is to try to find that.<sup>1</sup>

Did the contractor really think a judge would attempt to adjudicate a courtroom trial based upon the assumption that everyone has his or her own truth? Is real truth subjective? No, the judge was right: There’s a real truth out there, and that’s what we are here for—to try to find that truth.

The attitude that there is no objective truth—“you have your truth and I have my truth”—appears in many places today and sometimes even surfaces in learned journal articles authored by respectable scientists. The fancy name for this subjective attitude about truth is “postmodernism.” However, the attitude is not all that modern because even Pontius Pilate swept aside the notion of objective truth when he asked his infamously rhetorical question, “What is truth?”<sup>2</sup>

Something similar to Pilate’s truth-ignoring dismissiveness has mushroomed among postmodern thinkers. They deny confidence in absolute truth because their mindset at its core is humanistic, asserting that all truth originates from human experience. Postmoderns argue that human finiteness and fallibility prevent us from knowing anything with certainty. This is just another way of denying that God is powerful and intelligent enough to effectively communicate His truths to fallen humans. Like the Sadducees whom Christ rebuked, postmodern thinkers and teachers are blamably ignorant of both the Scriptures and the power of God.

And Jesus answering said unto them, Do ye not therefore err, because ye know not the scriptures, neither the power of God?  
(Mark 12:24)



Postmodern thinking has corrupted the promotion of truth about origins, including the teaching of basic truths about God's creation. How does this controversy—this choice between objective truth and subjective preferences—apply to the arena of biblical creation apologetics?

Postmoderns eagerly jettison objective truth for a counterfeit truth-substitute that “liberates” and allows them to escape accountability to God's absolute truth and authoritative morals. Consider this quotation from an article by New York University physicist Dr. Alan Sokal (which he later admitted was a nonsense-riddled parody that he submitted for publication just to prove the fallibility of peer review “quality control” journal practices):

Postmodern thinking has corrupted the promotion of truth about origins, including the teaching of basic truths about God's creation.

it cannot be your puppet; you cannot manipulate it to be what you want it to be. Attempting to control what is truth—rather than accepting God's objective truth—is really just another form of human-glorifying idolatry,

taught that *real liberty* comes from accepting *real truth*.

Then said Jesus to those Jews which believed on him, If ye continue in my word, then are ye my disciples indeed; And ye shall know the truth, and the truth shall make you free. (John 8:31-32)

Why do postmoderns close their Bibles and refuse to acknowledge authoritative, certain, objective truth? Because God's truth imposes accountability. When truth is absolute, it cannot be your puppet; you cannot manipulate it to be what you want it to be. Attempting to control what is truth—rather than accepting God's objective truth—is really just another form of human-glorifying idolatry, manufacturing a substitute for the real God. This is the original temptation the serpent offered earth's first human couple in Eden: “Ye shall be as gods.” When postmoderns invent counterfeit truths, such as theistic or atheistic evolution mythologies, they are guilty of the same ludicrous idolatry that Jeremiah decried more than 2,000 years ago, when people ascribed their origins to sticks and stones.<sup>4</sup>

The problem of questioning objective reality is not new. It was illustrated in a historic conversation almost 500 years ago when the Spanish conquistador Hernando Cortez confronted the Aztec emperor Montezuma about who really rules the heavens and the earth. In effect, Montezuma was satisfied with the Aztec religion and told Cortez to keep his own religion to himself. Montezuma was acting like the government contractor who told the judge, “He's got his truth, I've got my truth”—as if there is no objective truth.<sup>5</sup>

But real truth is not a tyranny we should run from, because real truth liberates (John 8:31-32). It is Jesus Christ, Truth incarnate, who alone gives us an abundant life of true liberty, for it is His Word that truly sets us free.<sup>6</sup> ●

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3. Sokal, A. 1996. Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity. *Social Text*, #46/#47 (spring/summer 1996), 217-252. After publishing his postmodernism-promoting “epistemology” article in *Social Text*, Sokal exposed his journalistic experiment in “A Physicist Experiments with Cultural Studies,” *Lingua Franca*, May/June 1996, pages 62-64, describing his successful experiment as publishing “an article liberally salted with nonsense...[that] sounded good and...flattered the editors' ideological preconceptions.” Embracing a hoax in order to embrace evolutionary assumptions is known to happen in paleontology as well. Dr. Timothy L. Cleary debunked the “Archaeoraptor” hoax (also known as the “Piltown bird”) that *National Geographic* fell for: Cleary, T. 2006. Dinosaurs vs. Birds: The Fossils Don't Lie. *Acts & Facts*. 35 (9). See also Austin, S. A. 2000. Archaeoraptor: Feathered Dinosaur From National Geographic Doesn't Fly. *Acts & Facts*. 29 (3).
4. Jeremiah 2:27-28. This epistemological controversy, at its most fundamental level, is a dispute about who God is and how He has communicated in words to mankind. In other words, is the real God accurately described in and by Genesis? Is Genesis a reliable record of who God is and what He has done? See Cooper, B. 2012. *The Authenticity of the Book of Genesis*. Portsmouth, UK: Creation Science Movement, 129-130, 328-333, 403-405.
5. Eidsmoe, J. A. 1992. *Columbus and Cortez, Conquerors for Christ*. Green Forest, AR: New Leaf Press, 202-203.
6. John 14:6, in light of John 10:10 and Galatians 5:13.

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Madsen and Madsen have recently given a very clear summary of the characteristics of modernist versus postmodernist science.... “A simple criterion for science to qualify as postmodern is that it be free from any dependence on the concept of objective truth.”... However, these criteria, admirable as they are, are insufficient for a liberatory postmodern science: they liberate human beings from the tyranny of “absolute truth” and “objective reality”, but not necessarily from the tyranny of other human beings. In Andrew Ross' words, we need a science “that will be publicly answerable and of some service to progressive interests” [i.e., promoting politically humanistic “progress” such as achieving so-called “liberation theology” agenda goals].<sup>3</sup>

Notice that “absolute truth” and “objective reality” are labeled as a form of “tyranny.” The article proposes that real truth is a terrible ruler, a dictator who deprives us of liberty and the pursuit of happiness! But Sokal's article also advocates a specific postmodern version of truth, a relativistic approach that favors a particular political agenda, such as Kelly Oliver's feminist agenda.<sup>3</sup>

The point here is not that Sokal is a postmodern. Sokal's hoax article proves a scarier point: Postmodern bias is so prevalent that a reputable journal promoted his nonsense as if it was serious science-based truth analysis. Even though Sokal's article was a hoax, he cited real sources, and the fact that a social science journal published it shows that denying the fact of objective reality is often considered to be scholarly.<sup>3</sup>

But does Sokal's readily accepted idea of “liberatory postmodern science” really answer our greatest need for genuine knowledge about life and the world in which we live, more so than objectively true science? Absolutely not. Postmoderns would likely disagree, hypocritically arguing that they know with absolute certainty that we cannot know anything with absolute certainty.

Now contrast the truth-rejecting disposition of the postmoderns with the authoritative teaching of the Lord Jesus Christ, who

## Rethinking Carbon-14 Dating:

# What Does It Really Tell Us about the Age of the Earth?

J A K E H E B E R T , P H . D .

**E**volutionists have long used the carbon-14, or radiocarbon, dating technique as a “hammer” to bludgeon Bible-believing Christians. A straightforward reading of the Bible describes a 6,000-year-old universe, and because some carbon-14 ( $^{14}\text{C}$ ) age estimates are multiple tens of thousands of years, many think that the radiocarbon method has soundly refuted the Bible’s historical accuracy.

However, these excessively long ages are easily explained within the biblical worldview, and  $^{14}\text{C}$  actually presents a serious problem for believers in an old earth.  $^{14}\text{C}$  has been detected in organic specimens (coal, wood, seashells, etc., containing carbon from formerly living organisms) that are supposedly hundreds of millions of years old—but no detectable  $^{14}\text{C}$  should be present in specimens that are even a little more than 100,000 years old! Nearly anyone can verify this for themselves using basic multiplication and division.

### Radiocarbon Basics

Carbon comes in three “varieties” or isotopes:  $^{12}\text{C}$ ,  $^{13}\text{C}$ , and  $^{14}\text{C}$ . Any carbon atom has six protons within its nucleus, but the different isotopes have different numbers of neutrons. In today’s world, only about one in a trillion carbon atoms is a  $^{14}\text{C}$  atom.

Cosmic rays (mainly high-energy protons) trigger a process in the atmosphere that changes atmospheric nitrogen into  $^{14}\text{C}$ . However, unlike the other two carbon isotopes,  $^{14}\text{C}$  is unstable and eventually decays back into nitrogen. The decay rate can be measured for a large number of these  $^{14}\text{C}$  atoms. Since this decay process slows as the number of  $^{14}\text{C}$  atoms decreases, it may be expressed best in terms of a half-life, which is

the amount of time for half of any given sample of  $^{14}\text{C}$  to decay back into nitrogen. Thus, after one half-life, 50 percent of the original  $^{14}\text{C}$  atoms will remain. After two half-lives, 25 percent of the original  $^{14}\text{C}$  will remain, and so on. Today’s measured half-life of  $^{14}\text{C}$  is 5,730 years.

Because carbon is expected to be thoroughly mixed throughout the biosphere, atmosphere, and oceans, living organisms (which continually “take in” carbon throughout their lifetimes) are expected to have the same  $^{14}\text{C}/\text{C}$  ratio as the environment, or about one  $^{14}\text{C}$  atom per trillion carbon atoms. Once they die, however, organisms no longer take in new carbon, and the amount of  $^{14}\text{C}$  in their bodies begins to decrease.

In principle, this decay rate may be used to “date” the time since an organism’s death. But the calculated dates will only be accurate if the assumptions behind the method are correct.

### Smallest Detectable Amount of Radiocarbon

Sensitive instruments called acceleration mass spectrometers (AMS) are used to count the  $^{14}\text{C}$  atoms within a sample of material. However, even the most sensitive AMS machines cannot detect fewer than one  $^{14}\text{C}$  atom per 100,000 trillion carbon atoms.<sup>1</sup> Since the amount of  $^{14}\text{C}$  in a sample decreases with time, no radiocarbon at all should be

detectable if the sample is sufficiently old.

The concentration of  $^{14}\text{C}$  (the number of  $^{14}\text{C}$  atoms per total number of carbon atoms) within a sample is indicated using a “percent of the  $^{14}\text{C}/\text{C}$  ratio in modern carbon,” or pMC notation. If a sample has one  $^{14}\text{C}$  atom per trillion carbon atoms, we would say that its concentration of  $^{14}\text{C}$  is 100 pMC, since this is 100 percent of the modern  $^{14}\text{C}/\text{C}$  ratio (one  $^{14}\text{C}$  atom per trillion carbon atoms). Likewise, one  $^{14}\text{C}$  atom per *two* trillion carbon atoms would be equivalent to 50 pMC.

Since one  $^{14}\text{C}$  atom per trillion carbon atoms is equivalent to 100 pMC, then one  $^{14}\text{C}$  atom per 100,000 trillion carbon atoms is equivalent to  $100 \text{ pMC}/100,000 = 0.001 \text{ pMC}$ . No instrument on earth can detect  $^{14}\text{C}$  in a sample whose  $^{14}\text{C}/\text{C}$  ratio is less than 0.001 pMC.<sup>2</sup>

Assuming the initial value was 100 pMC, how much time will have transpired before the  $^{14}\text{C}/\text{C}$  ratio in a sample drops below 0.001 pMC?

One can estimate this time by dividing 100 pMC by 2 repeatedly until the resulting number drops below 0.001 pMC. We find that about 18 such halvings are required for the pMC value to drop below 0.001 (Figures 1 and 2). (We could “round up” the value of 0.0007 pMC at 17 half-lives to 0.001 pMC, but the 0.00038 pMC at 18 half-lives is definitely below the detection threshold.) Since each half-life is 5,730 years, this means that no  $^{14}\text{C}$  at all would be detectable in a specimen that is older than about  $18 \times 5,730 \text{ years} = 103,140 \text{ years}$ .

### Dating Methods in Conflict

But researchers consistently detect  $^{14}\text{C}$  in samples thought to be tens of millions of years old.  $^{14}\text{C}$  has even been detected in diamonds, which some scientists claim are billions of years old! Radioisotope dat-

Elapsed Radiocarbon Half-lives	% Modern $^{14}\text{C}/\text{C}$ Ratio (pMC)	Calculated Years Before Present (YBP)
0	00.000000000	0
1	50.000000000	5,730
2	25.000000000	11,460
3	12.500000000	17,190
4	6.250000000	22,920
5	3.125000000	28,650
6	1.562500000	34,380
7	0.781250000	40,110
8	0.390625000	45,840
9	0.195312500	51,570
10	0.097656250	57,300
11	0.048828125	63,030
12	0.024414063	68,760
13	0.012207031	74,490
14	0.006103516	80,220
15	0.003051758	85,950
16	0.001525879	91,680
17	0.000762939	97,410
18	0.000381470	103,140

Figure 1. After 18 radiocarbon half-lives, the  $^{14}\text{C}/\text{C}$  ratio has definitely dropped below the AMS detection threshold of 0.001 pMC, as can easily be verified with a pocket calculator.

ing methods involving the heavier, longer-lived isotopes (methods such as uranium-lead, potassium-argon, etc.) are one of the main justifications that evolutionists use to argue for such vast ages. Because these radioisotope methods yield age estimates of many millions of years for igneous rocks, it is thought that sedimentary rocks are also millions of years old, as well as the organic remains found within them. Yet this assumption leads to a contradiction: If these organic samples really are many millions of years old, then they should be radiocarbon “dead.” But they aren’t!

### Contamination?

Evolutionists have attempted to blame these surprising results on a number of mechanisms.<sup>3</sup> They often invoke “contamination” that occurred either *in situ* (on site in the earth) or during the radiocarbon testing process itself. However, the consistency with which  $^{14}\text{C}$  is found in these samples makes it difficult to argue that such results are *all* the result of *in situ* contamination. Moreover, diamond is extremely resistant to “natural” contamination by external  $^{14}\text{C}$  atoms.

Furthermore, laboratories take great pains to keep contamination to a minimum, and researchers have found that, provided a sufficiently large testing sample is used (in the ballpark of 100 milligrams or so), the amount of such possible lab contamination is negligible compared to the  $^{14}\text{C}$  already present within the specimen.

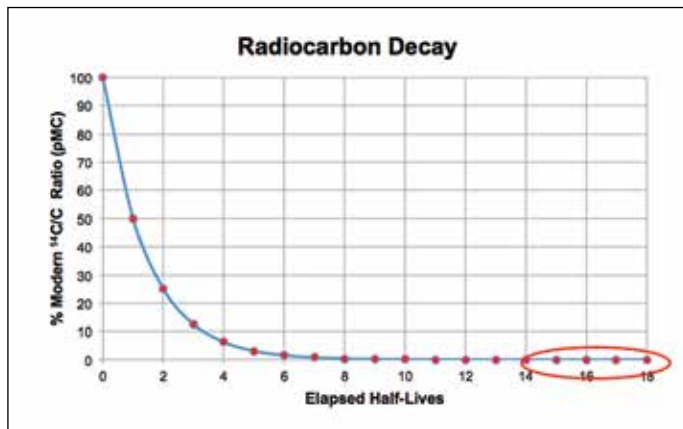


Figure 2a. Because of its short half-life, radiocarbon decays very rapidly. The encircled part of the graph is enlarged in Figure 2b.

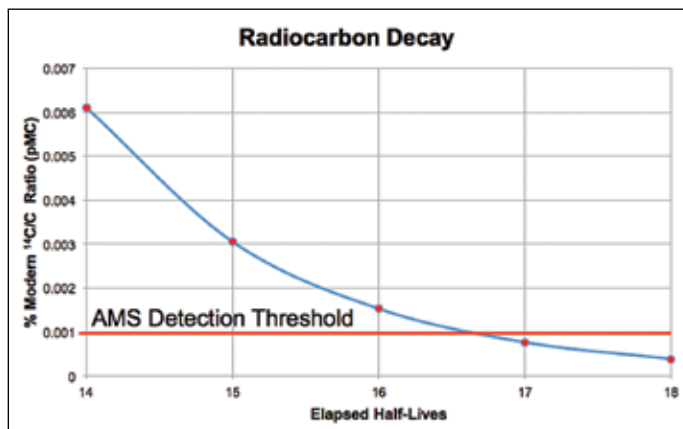


Figure 2b. Close-up view of the encircled part of the graph in Figure 2a.

Finally, although contamination can sometimes occur, it should not be assumed in a particular instance unless there are good reasons to believe that it has. And a radiocarbon result that contradicts old-earth dogma is not a good enough reason by itself to invoke contamination!

### Assumptions...Assumptions

Instead of arbitrarily blaming these anomalous results on contamination, a far better (and more scientific) approach would be to question the correctness of the assumptions behind radioisotope dating methods.

One of these assumptions is that nuclear decay rates have always been constant. Although <sup>14</sup>C decays fairly quickly, heavier isotopes (such as uranium-238) decay much more slowly. Because the present decay rates of these heavier isotopes are so small, the assumption that these rates have always been constant naturally leads to age estimates of millions and even billions of years.

Interestingly, however, some radioisotope methods tend to consistently yield younger age estimates than others, even when the techniques are used on the same rock units.<sup>4</sup> Could this be a clue that radioisotope “clocks” might have “ticked” at different rates in the past, and that this variation in “ticking” is different for different radioisotopes?

If so, this would explain the discrepancy between the radiocarbon method and other radioisotope techniques. When today’s rates are used to calculate ages from certain radioisotope ratios, the results indicate that billions of years’ worth of nuclear decay of the heavier radioisotopes has occurred. But there is evidence that this decay occurred in accelerated “spurts,”<sup>5</sup> which means the assumption that decay rates were always constant leads to age estimates that are much too high. This is the reason that <sup>14</sup>C is still detectable in these “ancient” organic specimens—the specimens simply *aren’t* millions of years old! Furthermore, because the past variations in “ticking” were different for different radioisotopes, <sup>14</sup>C did not experience as much accelerated decay as did the heavier radioisotopes. This is why the past episodes of accelerated decay did not completely eliminate the world’s <sup>14</sup>C that existed before these episodes occurred.

Thus, although this is still an ongoing area of research,<sup>6</sup> the presence of <sup>14</sup>C within supposedly extremely “old” specimens is just one of several indicators of past accelerated nuclear decay.<sup>7</sup>

### Why the High Radiocarbon Age Estimates?

Virtually all fossils found within sedimentary rocks are the remains of creatures that perished during the Genesis Flood about 4,500 years ago. Yet a skeptic might point out that the amounts of <sup>14</sup>C found in these organic samples are smaller than what one might expect if they are only about 4,500 years old. And 4,500 years is less than one radiocarbon half-life, so from Figure 2 we might expect 4,500-year-old samples to have <sup>14</sup>C/C concentrations greater than 50 pMC. Yet the <sup>14</sup>C found within organic samples thought to date from the time of the Flood is generally only about 0.1 to 0.5 pMC. From Figure 1, a value of 0.098 ≈ 0.1 pMC corresponds to 10 half-lives, or about 57,000 years. Are these high radiocarbon “ages” a problem for the biblical worldview?

No. First, remember that no detectable <sup>14</sup>C *at all* should be present within these samples if they really are millions of years old. Despite this apparent difficulty for the recent-creation view, this is, in fact, a much more serious problem for the old-earth view!

Second, such large calculated ages are based on the *assumption* that the <sup>14</sup>C/C ratio has remained unchanged for tens of thousands of years.

A global flood like the one described in the Bible would invalidate this assumption. Creation scientists have estimated (based upon the amounts of organic matter thought to be contained within the sedimentary layers) that the carbon in the pre-Flood biosphere may have been 300 to 700 times greater than what is present in today’s world.<sup>8</sup> Thus, the <sup>14</sup>C/C ratio in the pre-Flood biosphere was hundreds of times smaller than today’s value.

A simple “thought experiment” illustrates why assuming a constant <sup>14</sup>C/C ratio yields inflated radiocarbon ages. Suppose a time-traveling scientist journeys to the day before the Flood started (don’t worry; he’ll return *before* the Flood begins!) and radiocarbon-tests the remains of an animal that has just died. If the pre-Flood <sup>14</sup>C/C ratio was 500 times smaller than today’s value, this would be equivalent to 100 pMC/500 = 0.2 pMC. This value of 0.2 pMC is very close to the value of 0.195 pMC found within Figure 1. About nine half-lives would have to elapse for a starting value of 100 pMC to decrease to 0.2 pMC. If the scientist did not realize that the pre-Flood <sup>14</sup>C/C ratio was hundreds of times smaller than today’s value, he would calculate the animal’s age to be approximately 9 × 5,730 years = 51,570 years old—even though it had just died! Of course, he would realize that this age was nonsense, because he saw the fresh carcass. But if a scientist in the present did not have this firsthand knowledge and attempted to date the fossil remains of this very same animal (assuming it was fossilized during the Flood), he would conclude that the animal was 52,000—not 4,500—years old.

Thus, these “inflated” ages are not a problem for the biblical creationist, but the presence of detectable <sup>14</sup>C in supposedly ancient organic specimens is a substantial problem for those who believe in an old earth. ●

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1. In scientific notation, 100,000 trillion is 10<sup>17</sup>.
2. For technical details of the information in this article, see Baumgardner, J. 2005. Carbon-14 Evidence for a Recent Global Flood and a Young Earth. In *Radioisotopes and the Age of the Earth: Results of a Young-Earth Creationist Research Initiative*. Vardiman, L., A. A. Snelling, and E. F. Chaffin, eds. San Diego, CA: Institute for Creation Research and Chino Valley, AZ: Creation Research Society, 587-630.
3. For example, evolutionists have attempted to explain that the <sup>14</sup>C present in diamonds was caused by thermal neutrons within the earth’s interior. However, calculations show that this explanation doesn’t work (*Radioisotopes and the Age of the Earth: Results of a Young-Earth Creationist Research Initiative*, 614-616).
4. Snelling, A. A. 2010. Radiometric Dating: Making Sense of the Patterns. *Answers*, 5 (1): 72-75.
5. See chapters 2, 3, 4, and 7 in *Radioisotopes and the Age of the Earth: Results of a Young-Earth Creationist Research Initiative*.
6. One apparent problem with episodes of accelerated nuclear decay is the enormous amounts of heat that would be generated—heat that would seemingly be fatal to life on earth. Since an alteration of nuclear decay rates may have been a miracle, God could have supernaturally dissipated this excess heat, and one respected creation physicist has proposed a mechanism for this. See Russell Humphreys’ discussion in Vardiman, L., A. A. Snelling, and E. F. Chaffin, eds. 2000. *Radioisotopes and the Age of the Earth: A Young-Earth Creationist Research Initiative*. San Diego, CA: Institute for Creation Research and Chino Valley, AZ: Creation Research Society, 369-373.
7. Creationists believe that this accelerated nuclear decay likely occurred early in the creation week and during the Flood. See *Radioisotopes and the Age of the Earth: A Young-Earth Creationist Research Initiative*, and *Radioisotopes and the Age of the Earth: Results of a Young-Earth Creationist Research Initiative*.
8. *Radioisotopes and the Age of the Earth: Results of a Young-Earth Creationist Research Initiative*, 617-620.

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# Have Sodom and Gomorrah Been Discovered?

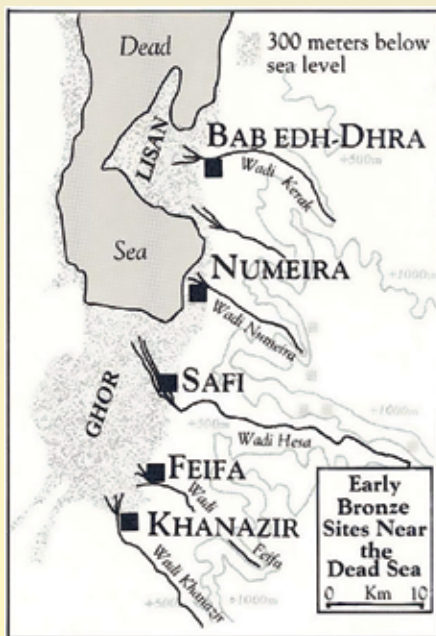
Scripture contains several “stories” that have been ridiculed more than others. Of these, the six-day creation, the global Flood, the parting of the Red Sea, the virgin birth, the resurrection of Christ, and other spectacular works of God receive special criticism. Another mighty act of God that tends to be disbelieved is the destruction of Sodom and Gomorrah.

Scoffers, both Christian and secular, have a field day with this biblical event because it not only involves God’s supernatural workings and cataclysmic acts of nature, it also represents God’s righteous judgment of sin. This is hard for people to think about, especially today when the specific sin being judged is homosexual behavior. Did the destruction of these cities really happen? Is there archaeological and geological evidence to support it? Do other ancient writings mention it? Yes, to all.

The destruction of Sodom and Gomorrah is a certain fact of history. The Genesis account is written in narrative form and alluded to by several other Old Testament writers. Jesus Himself obviously believed it and in fact was an eyewitness as the pre-incarnate Lord. Extrabiblical writings (including tablets unearthed at Ebla) mention Sodom and even give specific references to its location along the Jordanian shore of the Dead Sea.

Genesis uses Hebrew action verbs such as “destroy” and “overthrow” to describe the destruction. This does not necessarily infer total annihilation, and thus some remains might have survived. In the early 1970s, Jordanian authorities noticed well-preserved artifacts

from ancient times flooding the black market. An investigation led them to an Early Bronze Age graveyard on the southeastern side of the Dead Sea that was in the midst of being plundered. Along five “wadis” (dry riverbeds) flowing westward into the southern Dead Sea, an archaeological survey identified five ruined cities that appear to be the cities of the plain mentioned in Genesis 14:8. The most prominent and northerly one was in ancient times called Bab edh-Dhra, which seems to be the Arabic rendering of Sodom. Next in line was Numeira (Gomorrah), then the modern city of Safi (Zoar or Bela, to which Lot fled and which was not destroyed), then Admah and Zeboiim. The key was finding Zoar. Mentioned in other Scriptures and ancient maps, it led to the discovery of the other nearby ruins.<sup>2,3</sup>



These five cities had all been situated along the Dead Sea Rift, a major plate boundary. At God’s command the rift ruptured, spewing great quantities of liquid and gaseous hydrocarbons high into the atmosphere. These ignited, setting the whole region ablaze and covering it with “fire and brimstone.” Abraham saw the conflagration from Mamre, about 20 miles away. The fiery mixture almost certainly didn’t come from a point source, such as a volcano, but destroyed the whole area along the linear fault. The cities were crushed and burned, just as the Bible describes. The city of Sodom actually straddled a fault, causing half of it to fall about 100 meters. No one survived. Today, numerous bodies remain trapped in the rubble.

Biblical archaeologist Dr. Bryant Wood of Associates for Biblical Research located city gates, crushed graves, towers, a temple, the water supply, and thick city walls. Uninhabitable since the destruction, the remains were identified by Dr. Wood as Sodom and Gomorrah. Creation geologist Dr. Steve Austin studied the geological evidence, including the fault zone, the burn layer, the bitumen that erupted, and the city’s calamitous fall to its ruin. Together, they have confirmed the truthfulness of the Genesis account. ●

**References**

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2. Wood, B. 1999. The Discovery of the sin cities of Sodom and Gomorrah. *Bible and Spade*. 12 (3): 67-80.
3. Austin, S. A. Sodom & Gomorrah Parts 1 & 2. *Origins*, produced by Cornerstone TeleVision Network.

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# Complex Bioengineering in Blooming Flowers

J E F F R E Y T O M K I N S , P H . D .

Have you ever wondered how a plant knows when it's time to flower? How does it know it needs to bloom and reproduce to perpetuate itself for future generations? Unlike animals, plants cannot get up and move around as a means to adjust to their environment. They have to respond to their surroundings, essentially, where they are planted. They need to have systems that sense and respond to important environmental signals such as day length, light quality, temperature, water availability, and even chemical signals emitted by other organisms.<sup>1,2</sup>

We live in a world of seasonal fluctuations. When it comes to flowering and producing seed, timing is everything for a plant. In many climates, there are only certain times of the year when this process can occur effectively. Plants respond to both day length and temperature via an elaborate network of photoreceptors and temperature-sensing systems. These environmental response systems are further integrated into the complex internal interaction between plant hormones and carbohydrate (sugars and starches)-sensing networks.<sup>1,2,3</sup>

Spring's longer days and warmer tem-

peratures signal a variety of receptor proteins in the plants' leaves.<sup>4</sup> This process turns on a suite of flowering genes that produce proteins called "florigens." These act as long-distance signals to the growing tips of the shoots, triggering flower formation.<sup>1,2,3</sup>

While scientists have made extensive progress in understanding the key factors and elements of the photoreceptor and hormone pathways and their roles in flowering, much less is known about the role that carbohydrates play in this process. Interestingly, recent research has shown that mutations in key genes that code for a variety of enzymes involved in sugar and starch metabolism affect a variety of developmental processes, including flowering.<sup>5</sup> The emerging picture of bio-complexity in this field is incredible.

It is noteworthy that the carbohydrate-signaling and control system are not performed in isolation, but co-processed in complete integration with the photoreceptor, temperature, and hormone sensory signals. Amazingly, these complicated and integrated biochemical networks are deployed without the use of a central nervous system like those found in many animals.

The combination of various sensory communication and processing systems in plants, such as those involved in flowering, are a clear example of an all-or-nothing set of features. Plants would effectively fail to interface with their environment and survive if any one of these features was removed.

These new discoveries in plant biology are convincing testimonies to the intelligence of the powerful Creator who engineered these remarkable living systems. Scientific discovery increasingly exposes their complexity, which utterly defies traditional evolutionary dogma. ●

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Three of my daughters took a night swim in a bioluminescent bay during a mission trip to Puerto Rico in 2012. They splashed water on their heads and watched their hair glow green from countless tiny shining dinoflagellates. It was a once in a lifetime experience!

If just one animal on earth had the ability to generate its own light, then we should praise the Lord for designing such a wonder. But dozens of different kinds of animals can bioluminesce, multiplying the Maker's glory. Most of the scientists who study bioluminescence wrongfully divert that praise from God to nature. They tell stories of how natural processes supposedly constructed the complicated bio-machinery that so efficiently produces cold light in living cells. However, one review study of bioluminescence encountered two obstacles that force evolution's story to steer in circles.<sup>1</sup>

The list of bioluminescent species includes bacteria, fungi, jellyfish, sea worms, sea slugs, clams, squid, roundworms, beetles, isopods, ostracods, copepods, shrimp, centipedes, millipedes, sea stars, crinoids, fish, sharks, tunicates, and many other less familiar living things. Scientists continue to discover more bioluminescent species.

Evolutionary researchers organize all of these basic forms onto a preconceived "tree of life" that supposedly shows how closely related each form might be to another, assuming all creatures share common ancestry.<sup>2</sup> Evolutionists expect one creature to have evolved bioluminescence and then to have passed that trait along to its descendants. However, the researchers do not find this or any other evolutionary pattern. Instead, bioluminescence is scattered willy-nilly among dozens of totally different life forms.

The study authors, publishing in the *Annual Review of Marine Science*, wrote, "The distribution of bioluminescence across the major taxonomic [animal] groups does not appear to follow any obvious phylogenetic [evolution-

## The Unpredictable Pattern of Bioluminescence

B R I A N T H O M A S , M . S .

ary] or oceanographic constraint."<sup>1</sup> This mismatch between theory and reality presents the first obstacle evolutionists face.

Some animal groups are mostly bioluminescent but include a few "dull" members. Other groups are mostly non-luminous but have a handful that shine just fine. These "unpredictable patterns are found within many phyla." Evolutionists must desperately cling to the unlikely "estimate that bioluminescence has evolved a minimum of 40 times, and likely more than 50 times, among extant organisms."<sup>1</sup>

Similarly, a separate study mapped mammals with an appendix, a small organ attached to intestines. The evolutionists "found that the 50 species [with an appendix, out of 361 mammals] are scattered so widely across the tree that the structure must have evolved independently at least 32 times, and perhaps as many as 38 times."<sup>3</sup> These scattered patterns readily fit into the biblical account of creation. The Creator built bioluminescence, as well as an appendix, into just those bodies that He wished.<sup>4</sup> If bioluminescence evolved so often in the past, then why is it not evolving today?

In addition to their failure to explain which animals should glow, evolutionists encounter a biochemical problem—the second obstacle. Each bioluminescing animal appears

to use unique specifics in its light production, and all of them require precise molecular machine parts. A vitamin-like molecule called a "luciferin" emits a photon of light when it reacts with oxygen. An enzyme controls this reaction as its specific luciferin docks into a fitted pouch. The enzymes also have on-off switches. Many animals turn off banks of enzymes to dim their lights. If unregulated, animals could conceivably glow themselves to death!

Engineers envy the efficiency of bioluminescence.<sup>5</sup> Whoever designed its differing strategies outperformed human engineers on all 40-plus attempts. Evolutionary stories about bioluminescence have far too difficult a task surmounting these two scientific obstacles for them to stand in the way of the brilliant Creator getting the credit He deserves. ●

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Mr. Thomas is Science Writer at the Institute for Creation Research.



# Creation Seminar Series at Prestonwood Baptist Church

CHRISTINE DAO

Prestonwood Baptist Church in Plano, Texas, hosted a series of creation science talks in January 2013 featuring experts from the Institute for Creation Research.

ICR Director of Research Dr. Jason Lisle kicked off the first of three talks on January 9 by treating attendees to a discussion on how astronomy reveals God's creation. Stunning NASA images highlighted his presentation as he demonstrated how certain features in space show that the creation account in Genesis is accurate.

Professional engineer, medical doctor, and ICR National Representative Dr. Randy Guliuzza followed on January 16 with his presentation "Behold His Beauty: Darwin or Design?"

"We used the human visual system to illustrate two important concepts," Dr. Guliuzza said. "First, both biological complexity and man-made complexity consist of multiple parts functioning together for a purpose. A real designer is the best and most consistent explanation for their origins. Second, worship should be the normal response to true science. The overwhelming response of praise from so many folks at Prestonwood to the awe-inspiring design of the visual system was an encouragement to everyone and truly honored the Lord."

Wrapping up the series was ICR Research Associate Dr. Jake Hebert, who on January 23 talked about dinosaurs and the Bible.

"Many Christians are somewhat uncomfortable with dinosaurs because they realize, deep-down, that secular claims about dinosaurs don't 'square' with the plain teaching of Scripture," Dr. Hebert said. "However, if we take off the evolutionary worldview 'glasses' and simply take the Bible at face value, we see that the Bible makes perfect sense of dinosaurs."

After Dr. Hebert presented, he and ICR Deputy Director for Life Sciences Dr. Nathaniel Jeanson hosted a Q&A session. "Questions from a couple of people were somewhat hostile, but I would say that the talk was generally very well-received," Dr. Hebert said.

"The presence of hostile attendees at a talk often signifies the importance of the message delivered," Dr. Jeanson added. "That one vocal attendee at the final talk demonstrated the continuing need for the young-earth creation message even in the midst of the 'buckle' of the Bible belt. I was glad to see that our opponents felt that our work was significant enough to oppose it publicly."

Over 600 people attended each of the sessions with Drs. Lisle and Guliuzza, and about 750 attended the final session and Q&A with Drs. Hebert and Jeanson.

ICR actively participates in conferences, seminars, and other events to communicate the scientific evidence that shows the authority and accuracy of Scripture. For information on upcoming events or hosting an event in your area, contact us by calling 800.337.0375 or by visiting [www.icr.org](http://www.icr.org).



Ms. Dao is Editor at the Institute for Creation Research.





# Q: Does “Junk” DNA Exist?

NATHANIEL T. JEANSON, P.H.D.

**A:** The theistic evolutionary organization BioLogos recently and publicly challenged creationists to explain specific examples of “junk DNA.”<sup>1</sup> This “gauntlet” provides a unique opportunity to recognize and understand some of the evolutionists’ tactics.

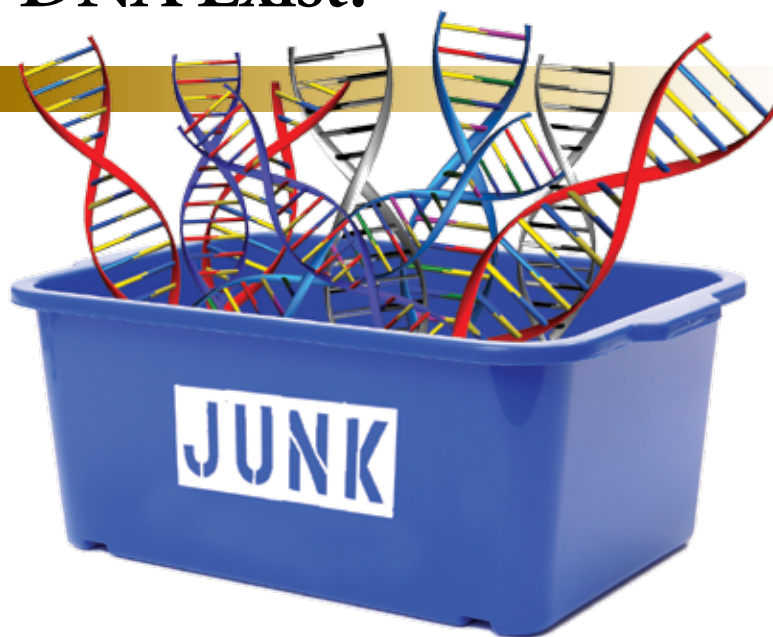
The claim of junk DNA is not new. The founder of BioLogos, Francis Collins, made the argument in 2006 in his book *The Language of God* that “roughly 45 percent of the human genome is made up of...genetic flotsam and jetsam.... This kind of recent genome data thus presents an overwhelming challenge to [creationism].... Of course, some might argue that these are actually functional elements placed there by a Creator for good reason, and our discounting them as ‘junk DNA’ just betrays our current level of ignorance. But certain examples severely strain the credulity of that explanation.”<sup>2</sup>

What examples? Two were recently offered by Dennis Venema, one of the regular bloggers for BioLogos. He cited the existence of the *vitellogenin* “pseudogene” and the presence of large amounts of repetitive sequence in the DNA of the onion as difficult to square with special creation.<sup>1</sup>

Have the evolutionists found a hole in the biblical model?

Both Collins’ and Venema’s claims miss the larger picture. While Collins acknowledged ignorance as a possible (albeit unlikely) explanation for the existence of junk DNA, he didn’t grasp the depth of the chasm in our knowledge. Neither did Venema. Since Venema put the burden of proof for “function” on creationists, he implied that the evidence for non-function was substantial—or “overwhelming,” to borrow Collins’ expression. In fact, the opposite is true.

To conclude that a DNA sequence has no function (i.e., that it is “flotsam and jetsam”



or “junk”), a scientist must have tested every base pair (the four DNA base pairs are A, T, G, and C) in the human genome (the totality of our DNA sequence) for function. This is an impossible task.

Simple math demonstrates why. The human genome is about 3,000,000,000 DNA base pairs long. This long stretch of molecular code is responsible for the development—initially over a period of nine months and then decades in totality—of the trillions of the adult cells that make up the human body. Clearly, it is impossible for any scientist or even a worldwide consortium of scientists to have tested, one by one, all of these DNA base pairs in all of these cells at all of these points in time.

Thus, the burden of proof for the assertion of “non-function” actually rests on those proposing this hypothesis. When Venema cited two isolated examples of supposed non-function, he didn’t discover a problem for the creation model; he found two new hypotheses to test. He argued from assumption, not from evidence—an argument no one should take seriously.

Will more experiments confirm the BioLogos assumption? The track record of research on “junk” DNA suggests otherwise. Just 12 years after the initial publication of the human genome, scientists have discovered pre-

liminary evidence for function for 80 percent of the genome.<sup>3</sup> Despite falling woefully short of testing every base in every cell at every point in time, this study is the most comprehensive to date. More experiments such as this will likely hurt the BioLogos position, not help it.

Venema is aware of these results. In fact, his public challenge to creationists was in response to these data. Yet, instead of acknowledging the premature nature of the junk DNA assertion, Venema responded by refining his definition of “function” and then challenging creationists to experimentally prove “function” for the two “non-functional” examples. These sorts of rhetorical devices are common in the origins debate and on the BioLogos website. No believer should be intimidated by them.

Genetic evidence continues to confirm the biblical account. “Junk DNA” does not exist—except in the mind of the savvy evolutionary debater. ●

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*Dr. Jeanson is Deputy Director for Life Sciences Research and received his Ph.D. in Cell and Developmental Biology from Harvard University.*

# Biblical “Descent and Distribution”

H E N R Y M . M O R R I S I V

The illustrious Benjamin Franklin once wrote that “in this world nothing can be said to be certain, except death and taxes.”<sup>1</sup> No doubt many of our readers, like me, have grumbled about the truth in his statement as they wrestle with their tax filings each year. But taxes can’t be equally compared to death—the one true enemy of all mankind. For “by one man sin entered into the world, and death by sin” (Romans 5:12), and God’s once-perfect creation has groaned under the curse of decay and death ever since (Romans 8:22).

Yet for those who have been redeemed and forgiven by Christ, death is merely an entrance into the joyful presence of our Savior. While the sorrow of the moment may be heavy at times, we can celebrate a life lived for Christ and look forward with joy to that great day when we will be reunited in heaven. What a blessing believers have in Jesus, knowing that death is but a temporary separation for those who know the Lord (1 Thessalonians 4:13-18).

Many of our readers have no doubt experienced the home-going of friends or loved ones and afterwards reflected on their own circumstances. For committed Christians, this is often a reminder from the Lord to readjust our focus back onto things of eternal value. But without proper planning, the resources God has granted us in life may not be distributed appropriately after we go home to heaven.

The first line of defense is to have a valid written will that provides for the Kingdom. Re-

grettably, studies have shown that more than half the people who pass away do not have one. Some believe they do not own enough property, while others believe their spouse and intended beneficiaries will inherit everything automatically. But most simply procrastinate, and the results can be alarming.

Without a valid will in place, state laws of “descent and distribution” essentially create a state-written will for you. The state decides who administers your estate and who functions as the guardian of your minor children. In many cases, these actions deplete your estate with unnecessary expenses. And state-written wills don’t allow tax-saving bequests of any kind—to your friends, your church, or to ministries like ICR that honor the Lord Jesus Christ.

Scripture teaches a simple but effective model to distribute remaining earthly assets for the good of the Kingdom. In short, we are commanded to:

- Take care of our families (1 Timothy 5:8)
- Provide for our churches (1 Corinthians 16:2)
- Support Christian ministries (1 Timothy 6:17-19)
- Share in general charity (2 Corinthians 9:8-9)

Without a will, your remaining assets may not be disbursed in a truly biblical manner. In obedience to the Lord, please do not allow this to happen to you.

ICR’s Planned Giving website (go to

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[www.icr.org/donate](http://www.icr.org/donate) and click on the Planned Giving link) contains highly interactive modules to assist you in crafting a well-planned will. ICR can also provide samples of well-written wills and helpful brochures on proper will preparation. Most wills can be prepared relatively inexpensively by a knowledgeable attorney, and ICR can recommend one in your area. And if you wish to support ICR, it’s easy to include a simple bequest to ensure a portion of your assets are shared with our ministry. We promise to put it to prayerful use in our work to honor our Creator.

Be prepared for your home-going. Provide for your family. Protect your God-given resources. Share them with the Kingdom. ICR can help—please visit [icr.org/donate](http://icr.org/donate), or contact us today at 800.337.0375 or [stewardship@icr.org](mailto:stewardship@icr.org). ●

#### Reference

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



Dr. John Morris' article "Geologic Changes to the Very Good Earth" is absolutely outstanding. I have his new *Global Flood* book (signed by him) and have given two other copies as gifts. Dr. Randy Guliuzza's article ["Design and the Doctrine of God"] is also excellent. Keep up the wonderful work. This world really needs ICR. I am so glad to have the privilege of providing what support I can.

— M.H.



Your article today, "New Technology Reveals More Genome Complexity," by Jeffrey Tomkins, Ph.D., was excellent—the world can read of the many proofs that the single cell contains irreducibly complex design that clearly points to a Creator of great wisdom and power.

— W.B.

Your magazine has been a large blessing to me and is helping me arm myself for battle. This last issue is packed—the [articles about the] Cambrian invertebrates and radioisotope dating...this kind of stuff provides useful input for conversations with advocates of Darwin. One of the apostles instructs us to make a "defense" of the faith that is within us.

— D.K.

We just wanted to thank you for all you do and especially for *That's a Fact*.

— R.J.

As a wife and a homeschooling mother, I am a firm believer and follower of our Lord and Savior Jesus Christ and a staunch reader of Dr. Henry Morris's articles throughout the years. How I appreciate the work done at the Institute for Creation Research and hope for many more years of your teaching our culture biblical truths.

— I.W.



I was not the least bit surprised by your anecdote of a seminary-trained minister who

didn't know what he believed about creation (J. Durant, "A Call for Creation Basics," February 2013 *Acts & Facts*). A great many Christians, ministers and laymen alike, are not only ignorant of the topic, but hostile to biblical creationism. ICR's mission is critical to calling back the church to her biblical roots—keep up the hard work!

— D.C.

I just wanted to say thanks for your tremendous work. What a blessing over the past 20-plus years that I have been receiving your materials. It has been a source to keep me going on the straight and narrow path. Little did I know that the path is narrow, especially with what's going on in the church today. I look forward each morning to reading your *Days of Praise*...I support you on a monthly basis. Money well spent.

— R.B.



I was only 12 years old when I learned about you. I was in grade six when one of your staff visited our local church. Then I got your *Days of Praise* devotional guide and *Acts & Facts* magazine. I enjoyed using these materials that helped me understand a lot of things about our Creator's amazing creation. I am using the *Days of Praise* e-mail every day in my personal devotion. Now I am preparing some printouts from your website for our church Sunday school, since I was given a task to present about Noah's Ark and the great Flood topics. Your website is a big help to enforce our better understanding about this great event in the Bible and in our world. Keep on!

— M.M.



I just finished *Clearly Seen* and, as usual, your [Dr. Randy Guliuzza's] books, lectures, and papers are always extremely refreshing and unique. You are such a blessing. I understand you have debated evolutionists as well as spoken in hostile venues.

I have attended debates in the decades of the seventies and eighties. These exchanges always gave me confidence concerning Scripture, as well as exposing the weakness of the evolutionist position. The debates were always encouraging to students....Your combined engineering-medical insights are truly having an impact on creationists throughout the world. Thank you and ICR for all you do.

— C.M.



I have always been a follower and admirer of the ICR and its unapologetic stand against evolutionism. Recently, I ordered your publication entitled *The Design and Complexity of the Cell*. It was a marvelous read! I majored in biology back in the seventies, but the information in this book and the way it was presented mesmerized me. Every parent who has young children at home should make this book a part of his or her library. Because of the format, easy-to-read text, and beautifully illustrated presentations, I have returned yet again to the ICR bookstore and ordered two new publications: *The Global Flood* and *The Young Earth*. Both of these hardcover books are printed to the same format and design as *The Design and Complexity of the Cell*. Please! Produce more titles in these large hardcover formats. I love them! And I assure you my nephews and nieces will love them, too! Thanks for these magnificent science books that support the Genesis creation and our beloved God of the universe.

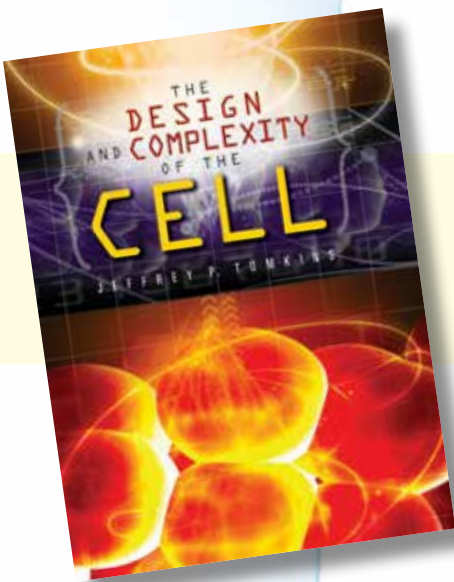
— R.S.

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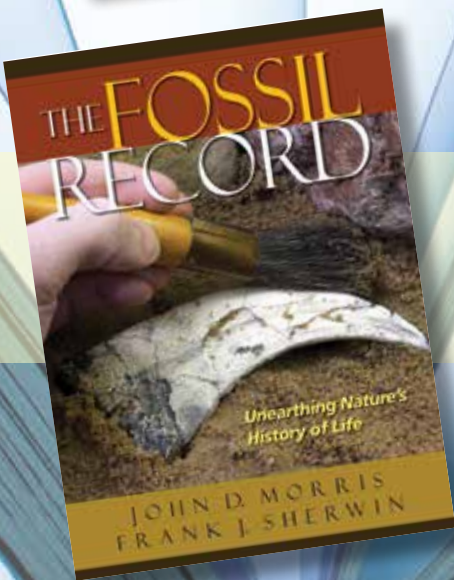


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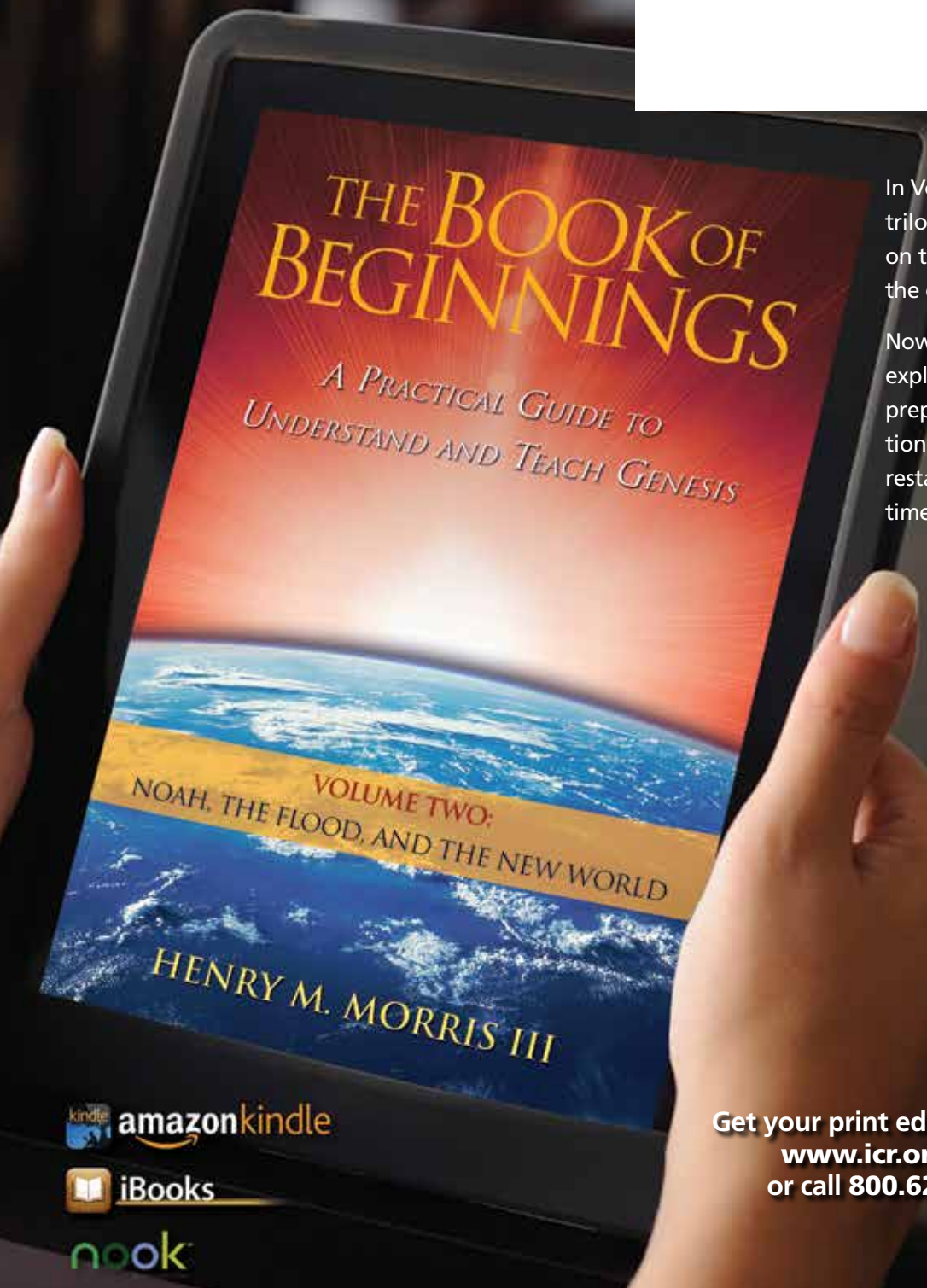
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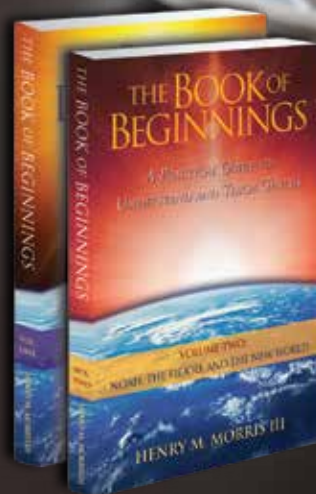


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