

# ACTS & FACTS

The background of the cover features a vibrant, colorful image of the Earth from space, showing continents and oceans. A large, semi-circular scale with Roman numerals (I through X) is overlaid on the globe, suggesting a timeline or measurement of time. The scale is positioned around the equator of the Earth.

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MARCH 2014

VOL. 43 NO. 3

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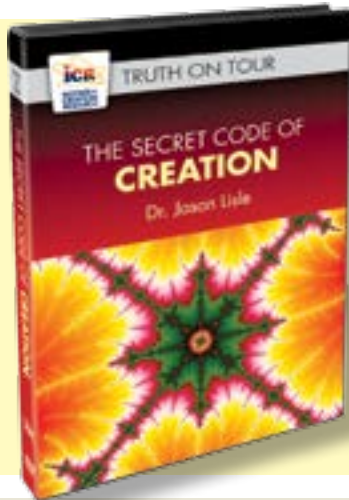
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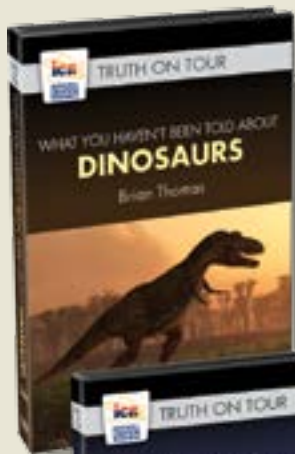
## *The Secret Code of Creation*

Dr. Jason Lisle

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Brian Thomas

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Where did dinosaurs come from? When did they live? Why did they go extinct? According to evolution, dinosaurs evolved and died out 65 million years ago. According to biblical history, dinosaurs were created only thousands of years ago. Which history is right? ICR Science Writer Brian Thomas examines five clues from science, history, and Scripture as he answers the biggest dinosaur questions—concluding that the evidence of dinosaurs defies evolution but fits biblical history. (59 minutes)

## *Astronomy Reveals Creation*

Dr. Jason Lisle

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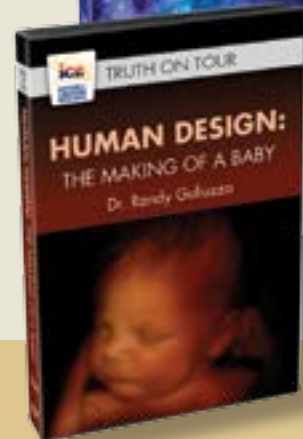
What does astronomy say about the truth of the Bible? Many people use astronomy to challenge Scripture, but what do the heavens actually reveal? Dr. Jason Lisle, ICR Director of Research, explores five “secrets of the cosmos” to prove the Bible is right when it talks about astronomy, the age of the universe, the uniqueness of Earth, and the issue of distant starlight. When we understand the Bible and the universe, we find the scientific evidence lines up with Scripture. (62 minutes)

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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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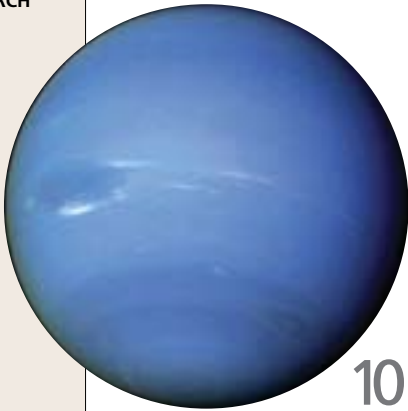
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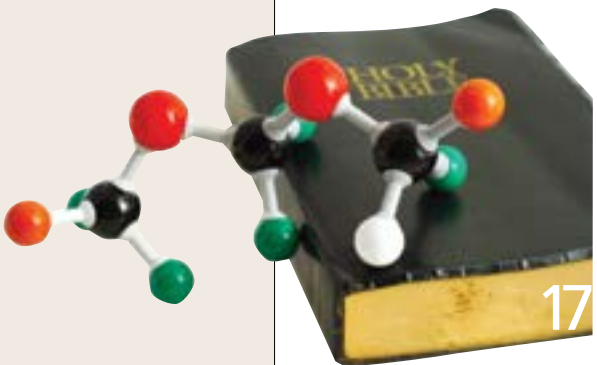
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# Become a Creation Advocate

According to Dr. Henry M. Morris III, about 6,127 years have passed since creation. On page 93 of his new book, *The Book of Beginnings*, Volume Three, he explains:

Using the widely accepted secular date of 2165 B.C. as the date for the birth of Abraham, we can place the death of Sarah at ~2030 B.C....Sarah died 2,083 years after creation.... Therefore, add 2,083 and 2,030 to 2014 A.D. and the sum is 6,127.

According to these dates, creation took place not much more than 6,000 years ago. This new resource reminds us that the earth is not nearly as old as our evolutionary science teachers would say. Dr. Morris emphasizes, "Not that long ago! Certainly not millions or billions of years."

And science confirms what the Bible teaches.



In his feature article this month, Dr. Morris tells us *why* the age of the earth is a critical issue for Christians to consider: "If one allows science, philosophy, archaeology, or theology to overrule Scripture, the effect is to place the understanding and expectation of man over the revealed Word of God and subjugate God to man's scholarship" ("How Old Is Our Planet?," page 7). What we believe about the age of the earth matters!

Many of you who receive *Acts & Facts* are familiar with the principles of recent creation and the science behind it. You've learned

from ICR in a variety of ways—through conferences, books, devotionals, online articles, videos, radio programs, debates, friends of our ministry, Facebook, Twitter, and other platforms. You may have even met our founder, Dr. Henry Morris. You know our basic tenets. Maybe you've read the foundational book *The Young Earth* by the son of ICR's founder, President of ICR Dr. John Morris. You know the problems of evolutionary theory, and you are able to address some of the questions that arise from Darwinian thinking. If so, we have a challenge for you. Become a creation advocate. Get the word out—tell others what you know. Share the creation message.

Some of you, though, may be in a different position. You desire to share the truth about creation, and you know the Bible can be trusted and that it teaches a six-day creation. You don't believe molecules-to-man evolution and you want to dispel the myths surrounding the topic of origins, but you're not sure how to approach the issues—you don't feel equipped to handle the tough questions that may come your way.

We can help. Our website [www.ICR.org](http://www.ICR.org) contains thousands of articles, and our online store offers educational resources from experts in a variety of scientific disciplines. We continue to seek ways to make it easier for you to understand and share the creation message with others. We have a special burden to reach the younger generations. As Henry Morris IV says on page 22, "Through our nationwide speaking ministry, ICR has seen firsthand the gradual exodus of young people from the church." To help combat this exodus, we're developing a 12-DVD series, *Unlocking the Mysteries of Genesis*, to answer the questions that millennials face. This series—which should be available in May—addresses the time issue, spending two full episodes on the age of the earth and the age of the universe.

Anyone can become a creation advocate. Share the truth with your family, your friends, your community, and the world! Go to [www.UnlockingTheMysteriesOfGenesis.org](http://www.UnlockingTheMysteriesOfGenesis.org) to learn more about this upcoming DVD series and how you can play a part in spreading the truth about our origins.

**Jayme Durant**  
EXECUTIVE EDITOR

# How Old Is Our Planet?

HENRY M. MORRIS III, D.M.I.N.

The age of the earth is hotly debated among Christians today. This issue is not really whether God created Adam but whether our planet is as old as most secular scientists insist. The conflict is that the text of Scripture does not appear to allow for anything like millions or billions of years—and if the scientific dating techniques are as accurate as portrayed, then it is difficult to take the book of Genesis at face value.

ICR teams have conducted thorough technical research on the dating processes, and there is plenty of scientific evidence indicating our planet is much younger than the supposed 4.6 billion years secular naturalism suggests.<sup>1,2</sup>

The focus of this article is to challenge Christians to trust the integrity and accuracy of God's revealed Word *over* the interpretative suggestions of secular scholars and scientists.

## Dating the Events in Scripture

There are many events recorded in the Old Testament that help us date the sequence and timing of its history.<sup>3</sup> Whether it is a notation of a father's age at the birth of an heir or the time of an earthquake, there is no difference in the language in over 150 usages. The various lineage tables in Genesis 5, 10, and 11 all use the same terms. The corresponding lineage tables in 1 Chronicles 1:1-4 and Luke 3:36-38 repeat the same names. There is no difference in the type of prose from Genesis to Chronicles. It appears God went out of His way to help us date the oldest portions of history, and all of these dating aids help us identify the historical accuracy of Scripture.

Why do some Christians consider everything from Genesis 12 onward as events from which we can deduce historical timing and then ignore those same event calculations in the first 11 chapters? If we add up the *events* described in Genesis 1-11, the time involved is a little less than 1,700 years. The subsequent events described in the remaining Old Testament add up to some 2,500 years. Most Christians generally accept the 2,500 years, but many do not accept the preceding 1,700 despite there being no difference in the language, text, or prose. The only reason to reject the pre-Flood events appears to be the desire to allow for the supposed billions of years that secular science demands to fit an evolutionary scenario.

## Attempts to Accommodate Ages

Several generations ago, dispensational scholars promoted the gap theory to house the supposed ages Darwinism demands. The scientific community of the 1920s castigated the famous Scopes Trial because William Jennings Bryan used the day-age theory (a common version of theistic evolution) to support creation and was justifiably scorned. These early theories

were an outgrowth of a trend begun in the late 1800s that suggested God somehow “employed” evolution to create. This led to a sequence of hybrid teachings that interpreted the Genesis text to accommodate evolutionary philosophy.

All hybrid theories that attempt to adapt the supposed long ages of the formation of the universe and our planet—which is *all* of them by definition—support countless ages of death and natural selection. There are no exceptions. Those who insist they are not evolutionists may be attempting to side with a creationist perspective, but every one of the hybrid theories also holds to a natural development of life from simple to complex over eons of time. This “natural selection” requires eons of physical death to develop new species and new kinds of creatures prior to Adam’s creation and subsequent rebellion in Genesis 3. Thus, those who adhere to the hybrid theories have painted themselves into a corner and must claim physical death was a natural God-ordained operational process from the beginning.

Furthermore, all these accommodating theories include some form of non-catastrophic, non-global flood—because if the Flood of Noah’s day covered the entire planet for one year as is described in detail in Genesis 6–8, then the existing geological record (fossils, rock layers, canyons, volcanoes, ocean basins, etc.) would have been *caused* by the Flood and is not the result of eons of slow and gradual processes.

Many of the hybrid theories suggest that the “days” of Genesis 1 should be considered “ages” because God rested on the seventh day and that rest continues today since God is no longer creating anything. Hebrews 4:1–10 is often used to justify this view, particularly verse 4: “God rested on the seventh day from all His works.” The textual problem is that Hebrews 4 is comparing Israel’s 40-year wandering and its rest after entering the land of Canaan with the eternal rest of salvation. Psalm 95:10–11 clearly identifies this rest as the end of the 40-year wandering (also cited in Hebrews 3:11).

Exodus 20:11 specifies that God created in six days and rested on the seventh.<sup>4</sup> This verse is the reason for the fourth commandment and the explanation for the need of the “Sabbath” rest day. In the context, this could only mean straightforward 24-hour days, and the seventh day can only be understood to be the same length as the other six. Even if we allow for the other six days of Genesis 1 to be ages, no scholar takes them to be eternal or ongoing.

### Creation *Ex Nihilo*

Some adherents of the hybrid systems make the qualification that they believe God created Adam and Eve sometime in the last 10,000 years. On the surface that sounds accommodating, but their focus is on the creation of Adam and Eve *ex nihilo* (“out of nothing”) while all the rest of the planet and the universe developed over eons

through death and natural selection—meaning evolution. In most cases, these proponents insist the rest of creation has been around for millions of years, developing by natural processes (including hominid creatures without souls), and sometime in the recent past God created Adam and Eve as the Bible defines them—fully human with an eternal soul—and placed them on the waiting earth.

The question then largely boils down to: What does the Bible mean by creation? What did God “create”?

[Jesus Christ,] whom heaven must receive until the times of restoration of all things, which God has spoken by the mouth of all His holy prophets since the world began. (Acts 3:21)

Peter is speaking of the restoration of all things—a clear reference to all of creation, not just people. The Old Testament prophets spoke of “all things” as including animals (Isaiah 11:6–10; 35:1–10; 65:24–25; Ezekiel 34:23–32), which will be restored to the perfect primeval condition, making them no longer carnivorous or dangerous to man.

We also are men with the same nature as you, and preach to you that you should turn from these useless

things to the living God, who made the heaven, the earth, the sea, and all things that are in them. (Acts 14:15)

The Greek phrase “made the heaven, and earth, and the sea, and all things” is precisely the same as the Greek translation of Exodus 20:11. There can be little doubt that Paul is identifying the creation as everything on and in our planet.

God, who made the world and everything in it...He gives to all life, breath, and all things. (Acts 17:24–25)

In the classic passage Romans 1:18–25, Paul insists that God made everything in the world and that all people realize it even if their knowledge is suppressed. Mankind and the earth are the same age. Anyone who denies this truth has “exchanged the truth of God for the lie” (v. 25).

Several other New Testament passages use similar language that connects the creation of the initial foundation of the earth (Day One) to the entire spectrum of living things (Hebrews 9:25–26; 2 Peter 3:5–8; Revelation 14:6–7; 21:1–5; 22:2–3). All these verses deal with the initial creation or the restoration of the creation to a pristine condition. Psalm 33:6 and 148:5

**Those who insist they are not evolutionists may be attempting to side with a creationist perspective, but every one of the hybrid theories also holds to a natural development of life from simple to complex over eons of time.**

and the seven great miracles in John's gospel all speak to "instant" fiat creation.

### Death Before Sin

Of all the conflicting issues between the hybrid theories and the biblical text, death before sin is the most critical. If physical death is the *result* of Adam's sin, as Romans 5:12 and other passages insist, then all death clearly came after Adam was created and was a *judgment* by God because of that sin. If physical death existed long before Adam sinned, then the death spoken of in Romans 5 *must* be some other kind of death—something else besides physical death.

Oddly enough, to the evolutionist death is a *good* thing. Death allows for the inferior species to be weeded out over time and permits natural selection to facilitate the survival of the fittest. But in the Bible, death is clearly a *bad* thing. It is the "last enemy" that will be destroyed (1 Corinthians 15:26) and is the great weapon of Satan. These two views are incompatible.

Therefore, just as through one man sin entered the world, and death through sin, and thus death spread to all men, because all sinned—For until the law sin was in the world, but sin is not imputed when there is no law. Nevertheless death reigned from Adam to Moses, even over those who had not sinned according to the likeness of the transgression of Adam, who is a type of Him who was to come. (Romans 5:12-14)

Verse 12 is precisely worded. Death came by sin and then spread to all mankind. Verses 13-14 insist that sin existed before "the law," but "death reigned from Adam to Moses" (from creation to the giving of the law). Death began at Adam's sin and continues to reign today. If this were the only passage that speaks to this event, then one might justifiably conclude that this is only a human phenomenon.

However, Romans 8:19-23 specifically identifies the "whole creation" as being under the judgment of death:

For the earnest expectation of the creation eagerly waits for the revealing of the sons of God. For the creation was subjected to futility, not willingly, but because of Him who subjected it in hope; because the creation itself also will be delivered from the bondage of corruption into the glorious liberty of the children of God. For we know that the whole creation groans and labors with birth pangs together until now. Not only

that, but we also who have the firstfruits of the Spirit, even we ourselves groan within ourselves, eagerly waiting for the adoption, the redemption of our body.

Paul identifies three aspects in this very precise passage: the past curse, the present suffering, and the future restoration. All of creation groans because of the bondage of corruption.<sup>5</sup> The unsaved will not be "delivered from the bondage." Neither are the saved being identified since Paul is comparing and contrasting the creation with the believers. The only conclusion warranted by the language is that the creation (Greek *ktisis*) Paul is speaking of is the sub-human creation. The *death* of all the physical elements in the entire universe is in view here.

The Second Law of Thermodynamics (entropy) tells us everything is winding down, degrading, and dying. The Romans text insists that "the creation [*ktisis*] was subjected to futility, not willingly...." This groaning of the creation came about only when man sinned. There is no room here for a spiritual application. The passage is specifically talking about the judgment of death that came on the creation because of Adam's sin.

**If one allows science, philosophy, archaeology, or theology to overrule Scripture, the effect is to place the understanding and expectation of man over the revealed Word of God.**

### Conclusion

All of these key biblical elements are foundational to the inerrancy and authority of the text. To reject or interpret them to fit something that the Bible does not describe is essentially a rejection of the inspired Word of God. If one allows science, philosophy, archaeology, or theology to overrule Scripture, the effect is to place the understanding and expectation of man over the revealed Word of God and subjugate God to man's scholarship.

Although Scripture is never intended to be a textbook on the processes of science or technology, the omniscient Creator records His work accurately whenever He speaks of the processes of creation. To suggest that the corrupt intellect of man should override or overrule the inerrant Word of God is more than this writer or any Christian should presume to do.

The Bible is clear. Our planet is young. God spoke everything into being during the creation week. "For He spoke, and it was done; He commanded, and it stood fast" (Psalm 33:9). ●

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2. Snelling, A. A. 2009. *Earth's Catastrophic Past: Geology, Creation & the Flood*. Dallas, TX: Institute for Creation Research.
3. For example, see Johnson, J. J. S. 2008. How Young Is the Earth? Applying Simple Math to Data in Genesis. *Acts & Facts*, 37 (10): 4.
4. God is creating today. Every new believer is a "new creation" (2 Corinthians 5:17) and is created in righteousness and true holiness (Ephesians 4:24). Although God is not creating any new matter/energy—except in the miracles of Jesus Christ as recorded in the gospels, e.g., turning the water into wine—He is creating the new man every time someone is twice-born. Jesus explained, "My Father has been working until now, and I have been working" (John 5:17).
5. This creation does not involve the angelic creation since the fallen angels cannot be redeemed as can this creation.

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



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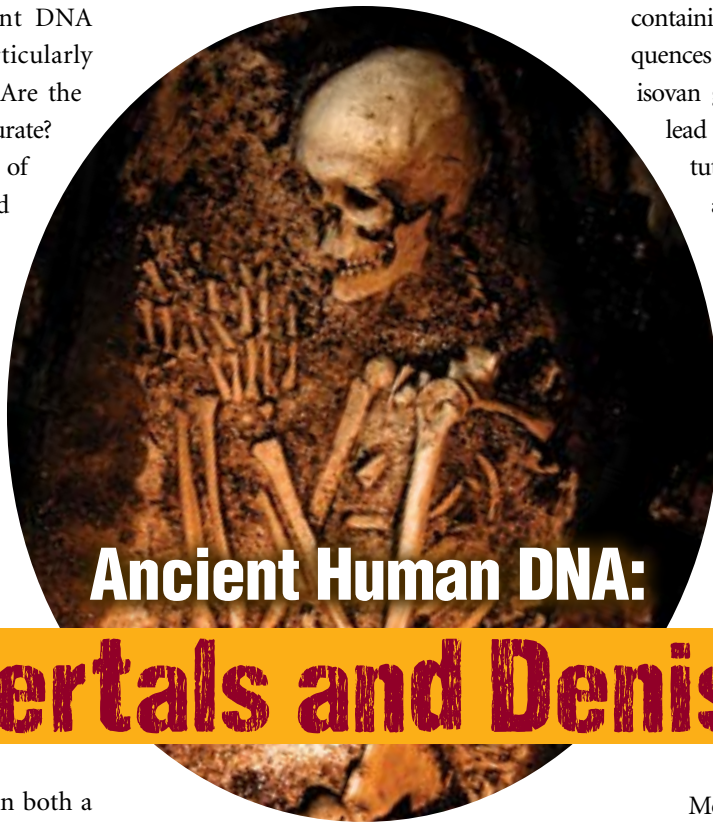
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**Q**uestions about ancient DNA (aDNA) abound—particularly ancient human DNA. Are the data real? Are they accurate?

Are the newly published genomes of the Neandertals, Denisovans, and others being sequenced similar to modern humans, or do they represent forms of evolutionary pre-humans? To answer these questions, researchers at ICR are currently analyzing the scientific literature and working with publically available aDNA sequence data. Our goal is to use the results of this research to help



## Ancient Human DNA:

# Neandertals and Denisovans

provide informed answers within both a scientific and a biblical framework.

Of particular interest in this field is the increasing amount of aDNA sequence being generated for ancient humans from samples recently extracted from bones and even frozen tissues. Some of these samples are allegedly from humans who lived about 4,000 to 10,000 years ago (termed Neolithic), while others are claimed to be from individuals who supposedly lived over 40,000 years ago such as Neandertals and Denisovans.

The field of aDNA sequencing for archaic human genomes has exploded during the past few years as technologies have greatly improved. However, many problems and caveats still plague this research and must be considered when attempting to interpret the data. One of the main problems is the pervasive contamination of samples with modern human DNA. A recent review on the subject noted that “Neanderthal skeletal remains are contaminated with modern human DNA derived from the handling and the washing of the specimens during excavation” and “the human contaminants can often outnumber the endogenous DNA.”<sup>1</sup>

In the most recent publication of

Neanderthal genome sequence, the researchers claim to have reduced the modern human contamination levels to only one to five percent by evaluating different types of “diagnostic sites” across the genome.<sup>2</sup> However, their first public posting of data prior to publishing their results for one of the genomes contained a Y-chromosome. Scientists later removed the Y-chromosome and published the genome stating it was female. Clearly something was amiss. While the researchers later claimed that this anomaly was due to a few misplaced sequences, the fact remains that nearly an entire human Y-chromosome was present at one point in the project, not just a few errantly placed genes. So how did their male Neanderthal morph into a female? The likely answer is that the Y-chromosome sequence was from modern male human contamination—illustrating that the process is far from perfect.

Nevertheless, we can only work with whatever data are publicly available despite the apparent questions about contamination and accuracy. In a preliminary study, this author downloaded multiple data sets

containing millions of individual DNA sequences from both the Neanderthal and Denisovan genome projects from one of the lead research centers (Max Planck Institute). On average, the sequences were about 75 bases in length and found to be 99.7 to 100 percent identical to modern human for both Neanderthal and Denisovan. If we assume that these data are accurate despite the questionable quality issues, then these DNA sequences clearly represent ancient humans—not some sort of inferior pre-human evolutionary ancestor.

Most importantly, research studies on the breakdown of DNA in the environment over time suggest that the hypothetical ages being applied to many of these ancient human bone fragments are greatly exaggerated.<sup>3</sup> Because the bones being recovered are typically found in burial sites and not flood deposits, a post-global-Flood biblical timeline of not more than about 4,400 years provides a much better fit to the scientific data for DNA decay. The study of ancient DNA confirms that it is consistent with God creating man about 6,000 years ago and demonstrates that humans have not evolved from supposed pre-humans.<sup>4</sup> ●

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4. In fact, the genome of mankind is actually devolving or degrading over time—a concept referred to by scientists as “genetic entropy.” See Sanford, J. C. 2008. *Genetic Entropy and the Mystery of the Genome*. Waterloo, NY: FMS Publications.

Dr. Tomkins is Research Associate at the Institute for Creation Research and received his Ph.D. in genetics from Clemson University.



# The Solar System: Neptune

J A S O N L I S L E , P H . D .

Image credit: NASA

The year was 1989. A small, unmanned space probe rapidly approached the mysterious and unexplored planet Neptune. Launched in 1977, the *Voyager 2* spacecraft had already visited Jupiter, Saturn, and Uranus, imaging each of these beautiful worlds in unprecedented detail. A rare alignment of the outer four planets made this Planetary Grand Tour possible as NASA scientists were able to use the gravity of each planet to “slingshot” the craft outward to the next world.<sup>1</sup> *Voyager 2* had traveled over four billion miles during its 12-year mission and was about to become the only spacecraft to

visit distant Neptune. This encounter would mark the end of an era of planetary space exploration since Neptune was the one remaining planet unvisited by space probes.<sup>2</sup> Astronomers all over the world waited eagerly for the first high-resolution images. What wonderful secrets would be revealed?

### A Triumph of Newtonian Physics

Neptune is the only planet in our solar system that was known to exist *before* it was visually discovered. The counterintuitive story begins with the creation scientist Sir Isaac Newton, who formulated the laws of

motion and gravity in the latter half of the 17th century. Newton mathematically demonstrated that the motion of planets could be explained by the sun’s force of gravity deflecting their momentum into an elliptical path. This accounted for Kepler’s laws.<sup>3</sup> But it also allowed astronomers to refine their calculations of planetary orbits to include the gravitational influence of other planets—something Kepler’s laws simply could not do. The new physics worked perfectly, correctly predicting the precise position for every planet...except Uranus.

By 1845, the planet Uranus had traversed three quarters of its orbit around the

sun since its discovery in 1781, so its path was well known. Its orbital motion nearly matched the mathematical predictions from Newton's laws. But it was not a perfect fit even when the gravitational perturbations of the other known planets were included. What was going on? Were Newton's laws incorrect at such extreme distance? Or was there another planet—an unknown planet—pulling on Uranus?

Urbain Le Verrier, a French mathematician, began considering the latter possibility. After many months of intense calculations, he mathematically computed the position that the unknown planet must have in order to explain the discrepancies in the orbit of Uranus. Le Verrier mailed his findings to Johann Galle of the Berlin Observatory. Galle received the letter on September 23, 1846, and, with the help of Heinrich d'Arrest, visually located Neptune that very evening. The new planet was within one degree of the position predicted by Le Verrier.

This remarkable achievement led physicist Francois Arago to refer to Le Verrier as the man who “discovered a planet with the point of his pen.”<sup>4</sup>

Some people suggested naming this new world “Le Verrier's planet.” But, William Herschel's failed attempt to name Uranus after King George III had established that planets may not be named after people—at least not directly. Le Verrier insisted that he had the right to name the new planet. Following traditional nomenclature, he christened the new world “Neptune” after the Roman god of the sea. The name fits the sea-blue color of the planet and indirectly pays homage to Isaac Newton by sharing the first two letters of his name.

### Properties

At an average solar distance of 2.8 billion miles (over 30 times farther out than Earth), Neptune is the most distant planet of the solar system.<sup>5</sup> This makes it a difficult world to study. It is too faint to be seen with the unaided eye under any circumstances but can be detected in binoculars and is eas-

ily visible in a backyard telescope. In fact, it is likely that Galileo saw Neptune hundreds of years before its official discovery. This was purely by accident during one of his routine observations of Jupiter. On January 4, 1613, Jupiter passed directly in front of Neptune for several hours.<sup>6</sup> While Galileo's telescope was meager by today's standards, Neptune would certainly have been visible for many nights before and after this event, though it would have been indistinguishable from background stars. Today, Neptune appears as a tiny, solid-blue sphere in even the most powerful Earth-based telescopes. Atmospheric features, such as white clouds, are occasionally visible—but just barely.

**The new planet was within one degree of the position predicted by Urbain Le Verrier. This remarkable achievement led physicist Francois Arago to refer to Le Verrier as the man who “discovered a planet with the point of his pen.”**

Neptune takes 164.8 years to orbit the sun. It has completed only one orbit since its discovery and only 36 orbits since its creation. Physically, Neptune is a virtual twin of Uranus. Both worlds are four Earth-diameters in size and have similar compositions: an icy core surrounded by a thick atmosphere of hydrogen, helium, and small amounts of methane. The methane causes the blue color of both planets.

Neptune's largest moon is named Triton.<sup>7</sup> English astronomer William Lassell discovered this moon only 17 days after the discovery of Neptune itself. Triton is 23 percent smaller in diameter than Earth's moon, making it the seventh-largest moon in the solar system. In contrast to all other large moons, Triton's orbit is retrograde—opposite the direction that the planet spins. Large moons generally orbit in the plane of their planet's equator, but Triton breaks this rule as well and orbits at an angle of 23 degrees.<sup>8</sup>

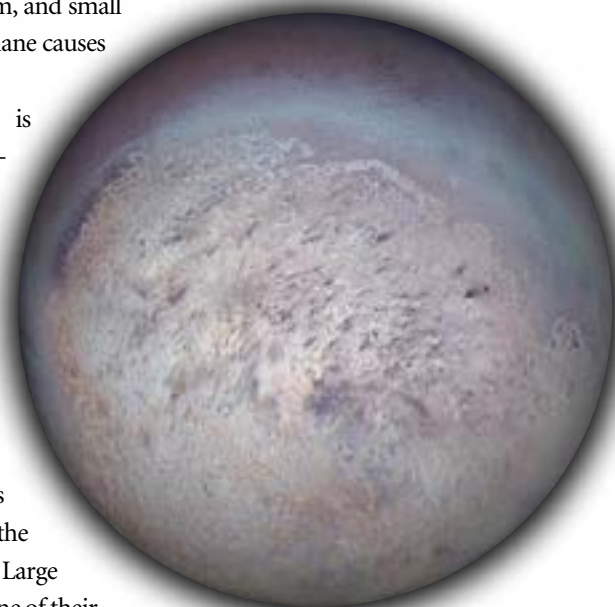
It is only because Triton is so large that it could be easily discovered at such a distance with 19th-century telescopes. All of Neptune's other moons are much smaller and evaded detection for over a century. Nereid, a small moon—just over 100 miles in diameter—with a highly eccentric (elliptical) orbit, was discovered in 1949.<sup>9,10</sup> It comes within 853,000 miles of Neptune but then swings out to a distance of nearly six million miles. A third moon, Larissa, wasn't detected until 1981. The rest remained hidden until the *Voyager 2* encounter.

### The Science of *Voyager 2*

Our understanding of Neptune took a leap forward when *Voyager 2* arrived. One of the first discoveries was the detection of a system of rings. The existence of Neptune's rings had been suspected based on previous research, but *Voyager 2* was the first to directly image them. At first, the rings appeared as arcs, only partially encircling the planet. But as *Voyager 2* drew closer, the rings were found to be complete, though thicker in certain places, which accounted for the arcs.

Neptune has five major rings. They seem to be a mosaic of the types of rings en-

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*Triton is the largest of Neptune's 14 moons, but it is still smaller than Earth's moon.*

Image credit: NASA

circling the other Jovian (gas giant) planets. Three of them are thin threads, like the rings of Uranus; the two others are broad sheets, like Saturn's rings, but are thin like Jupiter's. The rings are named for people who were involved in some way with the planet's discovery: Galle, Le Verrier, Lassell, Arago, and Adams.

*Voyager 2* also discovered five new moons orbiting close to Neptune. They are all small, less than 300 miles in diameter, with circular, prograde orbits in the plane of Neptune's equator.<sup>11</sup> With technological breakthroughs in ground-based imaging, several additional moons were discovered in the years following the *Voyager 2* encounter. These bring the total known moons of Neptune to 14.

**Neptune takes 164.8 years to orbit the sun. It has completed only one orbit since its discovery and only 36 orbits since its creation.**

Another fantastic surprise revealed by *Voyager 2* was the discovery of a large dark spot in Neptune's southern hemisphere. It is an anticyclone comparable in size to the earth and qualitatively similar to Jupiter's Great Red Spot. But, whereas Jupiter's red spot is relatively permanent, Neptune's dark spot was short-lived. In 1994, the Hubble Space Telescope revealed that the spot had disappeared and, surprisingly, a new dark spot had formed in Neptune's northern hemisphere. It, too, was short-lived and has long since disappeared.

*Voyager 2* also examined the surface of Triton in superb detail. The images revealed another scientific discovery—numerous horizontal, dark streaks in Triton's southern hemisphere. These were found to be “geysers” of nitrogen gas caused by solar heating of the frozen surface. Though the gas is transparent, the geysers pick up dark surface dust and launch it into Triton's tenuous nitrogen atmosphere. Eastward winds carry the dust many miles, accounting for the dark, horizontal streaks.

**Confirmation of Creation**

Unlike Uranus, Neptune has considerable internal heat, radiating more than twice the energy it receives from the sun. It is hard to imagine how such a process could last for billions of years, but is not a problem for the biblical timescale. In addition, it is curious that Uranus lacks any internal heat, despite being nearly identical to Neptune in every other way. How can an evolutionary scenario make sense of this? Yet, this similarity-with-differences is a common characteristic that the Lord built into the universe. Diversity with unity is part of what makes science possible and is what we expect from the triune God.

*Voyager 2* also measured the magnetic field of Neptune and found it to be similar in strength to that of Uranus. This is consistent with Neptune's biblical age of about 6,000 years but is far stronger than what we would expect if the planet were billions of years old since magnetic fields decay with time.<sup>12</sup> As with its twin Uranus, Neptune's magnetic field is not even remotely aligned with the rotation axis and does not pass through the center of the planet. Such facts are consistent with the creative diversity of our Lord but are difficult to account for in secular dynamo models.<sup>13</sup>

**Conclusion**

The most distant planet of our solar system remained hidden from humanity for nearly 6,000 years. Only with the recent advances in technology have scientists been able to learn some of the secrets of Neptune. Most of these discoveries were made possible by the *Voyager 2* mission—the only spacecraft to visit this fascinating world.<sup>14</sup> As with the other planets, Neptune gives us a glimpse of the glory of the Lord.<sup>15</sup> ●

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1. Such an alignment occurs approximately once every 175 years.
2. At the time, Pluto was classified as a planet. However, the trajectories of *Voyager 1* and *2* were not suitable for a Pluto flyby. Since Pluto was reclassified as a dwarf planet in 2006, Neptune was the last of the eight planets to be explored. The

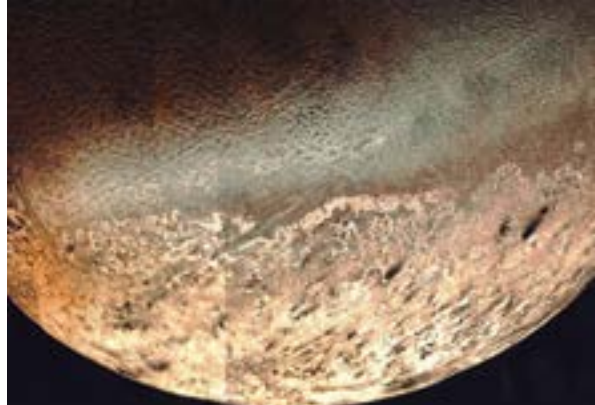


Image credit: NASA

The dark, horizontal streaks are Triton's nitrogen geysers.

*New Horizons* spacecraft is scheduled to fly by Pluto in July 2015.

3. Johannes Kepler had previously shown (1) that planets orbit in ellipses with the sun at one focus, (2) that planets sweep equal areas in equal times, and (3) that the period squared of a planet is proportional to the cube of its average distance from the sun. But Kepler had no idea why planets followed such rules. Newton was able to show that these rules can be mathematically derived from the laws of motion and the force of gravity from the sun. Essentially, Newton's laws are the reason why Kepler's laws work.
4. Though Le Verrier is credited with the discovery of Neptune, John Couch Adams had independently computed its position around the same time as Le Verrier. Many astronomy books credit Adams as a co-discoverer. But it was Le Verrier who first published his results and whose discovery led to the visual detection of Neptune. Johann Galle is rarely credited, even though he and Heinrich d'Arrest were the first to actually see Neptune and recognize it as a planet.
5. Neptune was the most distant planet of the solar system during the *Voyager 2* flyby in 1989. It is also the most distant planet today but for a different reason. Most schoolchildren in the 20th century learned that Pluto was the most distant planet. However, the elliptical orbit of Pluto occasionally overlaps that of Neptune such that Pluto is closer to the sun than Neptune for certain periods of time. This was the case between 1979 and 1999. Today, Pluto is more distant than Neptune but has not been considered a planet since its reclassification in 2006.
6. An *occultation* (occult, as a verb, means “to cover”) is when a larger celestial object passes directly in front of a smaller one. Conversely, when a smaller object passes in front of a larger one, the event is called a *transit*. The moon often occults bright stars and sometimes planets. But mutual planetary occultations and transits are *extremely* rare. Jupiter would occult Neptune again in 1702, but no further occultations of these two planets have taken place since and will not happen again until the year 3428!
7. Triton should not be confused with Titan, Saturn's largest moon.
8. The only other large satellite that does not orbit in its planet's equator is Earth's moon. It deviates from the equator by 23.4 degrees on average—about the same amount as Triton.
9. Eccentricity is a measure of how elliptical an orbit is. An orbiting object can have an eccentricity as low as zero (denoting a perfectly circular orbit) or up to, but not including, one. An eccentricity of one or higher means the object is travelling at or faster than escape velocity and will never return to complete an orbit.
10. Nereid has an orbital eccentricity of 0.75—the second-highest of known moons. Only Saturn's moon Bestia has a higher eccentricity at 0.77.
11. The term *prograde* means that the moons orbit in the same direction that the planet rotates.
12. See my article on Uranus in the February 2014 issue of *Acts & Facts* for more information on magnetic fields as an indication of the youth of the solar system.
13. Dynamo models were invented as a way to continuously recharge planetary magnetic fields so that they can allegedly last for billions of years. These models have been so far unsuccessful, not only on the theoretical level but in terms of observations as well.
14. *Voyager 2* has since left the solar system and is now three times farther from the sun than Neptune. Its radioisotope battery is nearly depleted, but the craft will continue to coast silently through the void.
15. Psalm 19:1.

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Supposedly, dinosaurs lived during an “Age of Reptiles” when many of today’s creatures had not yet evolved. Museums and textbooks typically display fossil dinosaurs in isolation, and many modern paintings even depict dinosaurs alone except for a few ferns. Yet, secular researchers George Poinar, Jr. and Ron Buckley collected and studied fossils from Burmese amber, or Burmite, that hold evidence of a different history.<sup>1</sup> This amber—hardened tree resin—preserved parts of modern-looking birds, reptiles, fish, clams, plants, and mammals in strata near or below dinosaur fossils. Should the Age of Reptiles be renamed for a more accurate description?

The evolutionary timescale maintains these amber fossils were deposited about 35 million years before the last surviving dinosaur died.<sup>1</sup> If this is true, then the fossils should include numerous evolutionary precursors of contemporary plants and animals—but they don’t. Instead, the Burmite contains modern look-alikes, as well as extinct varieties.

Occurring near coal deposits, these remarkable specimens from Burma (present-day Myanmar) bear an assigned age of 100 million years.<sup>1</sup> Apparently, a whole forest with damaged kauri trees—representatives of which grow and produce useful resins today—exuded copious amounts of resin years ago when their limbs and trunks were torn asunder. Soon after, water action separated the tree parts into layers and washed sediments between them. This aligns with a recent report on Burmite flowers, which stated that “the amber occurs in marine sedimentary rocks.”<sup>2</sup> Such evident widespread watery violence clearly implies a massive flood event.

With further burial and heating, the



## Amber Fossils Redefine “Age of Reptiles”

BRIAN THOMAS, M.S.

tree bark turned into coal—a process that can be duplicated in a single day.<sup>3</sup> The resin, situated separately but nearby, then hardened into amber—a process requiring weeks to decades, depending on factors like sample thickness, type of resin, and temperature.<sup>4</sup>

One unique Burmese amber nodule contains a mushroom fossil being eaten by a second fungus, which was being eaten in turn by a third fungus.<sup>5</sup> They show that, just like today, ancient fungi parasitized other fungi. Some Burmite even contains fern and bamboo bits, indicating that a wide variety of flowers and grasses should be displayed in dinosaur dioramas.<sup>6,7</sup>

The Burmite fossil insects are spectacular and rare among ambers of the world. Several unfamiliar forms, like one unusually shaped type of fly, probably went extinct, but they represent basic kinds that still resemble extant varieties. Other familiar forms

found in Burmite include a click beetle, weevil, moth, grasshopper, mayfly, caddisfly, lacewing, cockroach, bark beetle, walking stick, cicada, plant bug, bee, long horn beetle, ichneumonid wasp, gnat, midge, queen ant, praying mantis, and more. Some specimens also contain a centipede, millipede, jumping spider, tick, scorpion, many different garden spiders, a bark louse, leaf bits, nematodes, and a snail shell. The majority of these tiny entombed relics of the past look just like today’s versions.

Perhaps the most fascinating inclusions hint at larger creatures. One holds a small lizard’s foot, while another contains two flight feathers from a fully modern bird. This exposes the irrelevance of a 2011 report by the journal *Science* that claimed fibers from supposedly 65-million-year-old amber were dinosaur protofeathers. They could have been hairs or plant fibers.<sup>8</sup> And some Burmite apparently does include hair.<sup>1</sup> The supposed Age of Reptiles is quickly earning a description more like the “age of reptiles, mammals, birds, insects, and plants resembling modern varieties, plus a few that have since gone extinct.” ●

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# RAPIDLY FORMING OIL SUPPORTS FLOOD TIMEFRAME

T I M C L A R E Y , P H . D .

**M**y earlier *Acts & Facts* article “Oil, Fracking, and a Recent Global Flood” dealt with the origin of hydrocarbons and the oil generation process.<sup>1</sup> This article will examine the timing of oil and gas generation and their migration into reservoirs. Unfortunately, the scientific information communicated to the public is slanted by pro-evolutionary rhetoric. The occurrence of oil is even used as an argument against a recent global flood. Evolutionist David Montgomery insists all sedimentary rocks could not have formed during the year-long Flood, arguing that “a literal reading of the Bible requires that such rocks already existed at the time of the Flood because bitumen, the pitch or tar Noah used to caulk the ark (Genesis 6:14), comes from sedimentary rock.”<sup>2</sup>

However, as Dr. Henry M. Morris III pointed out, the Hebrew word used in this verse, *kopher*, doesn’t literally translate as “pitch.” He stated, “The word is used 17 times in the Old Testament, and is translated ‘pitch’ only in Genesis 6:14. Most of the time, *kopher* is translated with some term that represents money.”<sup>3</sup> It seems that *kopher* was some sort of expensive (hence the possible reference to money) sheathing or covering that was placed over the wood of the Ark. Dr. Morris added that “the *kopher* that sheathed or coated the Ark is not specified....The idea that *kopher* was liquid is merely assumed....Even if the material was a liquid coating, the development of resins or other non-petroleum coating materials has long been known to man.”<sup>3</sup>

Once the floodwaters drained off the continents, deeply buried marine algal and planktonic deposits that were disseminated in the sediments (source rocks) began to heat up, reaching the geothermal gradients we observe today. How quickly did this heating occur, and how rapidly was oil generated?

Let’s first look at the biblical record. In Genesis 11:3 in the narration about the building of the Tower of Babel, God says, “They had brick for stone, and they had asphalt for mortar.” The Hebrew word for asphalt is *chemar*, which is sometimes translated as bitumen, cement, or slime. So here, unlike the use of the Hebrew word *kopher*, the Bible is describing a tar or bitumen product, essentially a hydrocarbon.

Although the Bible doesn’t give us the specific number of years between the Flood and the Tower of Babel, we do have some time constraints. In Genesis 10:25 we read that the earth was divided in the days of Peleg. Assuming the word “divided” meant the division of

the languages at Babel, Dr. Morris wrote, "Since he [Peleg] was born 101 ( $\pm$ 4) years after the Flood and lived 239 years (Genesis 11:18-19), that gives a range of around 100 to around 340 years after the Flood during which the division could have taken place."<sup>4</sup> This gives us a relatively narrow time window of under 400 years for oil to have generated from the Flood sediments.

Is this too short a timeframe for oil to form? Not at all, as it's been known for decades that crude oil porphyrin (one of the common chemicals in crude oil) can be generated in a laboratory setting in as few as 12 hours.<sup>5,6</sup> And late in 2013, engineers at the U.S. Department of Energy's Pacific Northwest National Laboratory reported they were able to transform harvested algae into crude oil in less than one hour!<sup>7</sup> There is no reason to think this process could not have occurred naturally in as few as 100 years after the Flood.

What about oil migrating to the earth's surface? In all likelihood, oil bubbled out of seeps at the surface near the Tower of Babel in quantities generous enough to be utilized as mortar. Moreover, Genesis 14:10 references other oil seeps during the time of Abram in an area near the cities of Sodom and Gomorrah where "the Valley of Siddim was full of asphalt pits." Based on biblical genealogies (Genesis 11:10-28), these seeps developed in less than 500 years after the Flood.<sup>8</sup>

Unfortunately, little is known about oil migration from source rock to reservoir. A recent *AAPG Bulletin* article began by stating, "Hydrocarbon migration is by far one of the most important and yet least understood topics in petroleum geology."<sup>9</sup> Oil migrates as a fluid through small openings (pore spaces) in the rock layers much like water, and its flow rate is governed by the same fluid dynamics as water. Groundwater moves, on average, about 50 feet per year, but oil is a larger molecule than water and therefore struggles to pass through small openings. Although the migration of oil is relatively slow, biblical history shows oil made it to the surface within just a few centuries after deposition of the source rocks.

Oil quickly degrades from bacterial action since it is an organic compound, unable to survive for millions of years.<sup>1</sup> Biodegraded oils are common in reservoirs around the world, including the North Sea, the Gulf of Mexico, offshore Nigeria, and the tar sands in Alberta.<sup>10</sup> Other shallow reservoirs seem to be unaffected by biodegradation.

Although secular scientists admit these non-biodegraded oils may be the result of recent recharge, they consider this process unlikely because they insist many of these oils are millions of years old.<sup>10</sup>

Uniformitarian geologists attempt to explain "ancient oil" in reservoirs by invoking an unusual process known as "paleosterilization"

to prevent oil from biodegrading.<sup>10</sup> They hypothesize that bacterial action in oil reservoirs ceases at temperatures above 176°F, thereby preventing bacterial action in the rocks containing the oil. If reservoir rocks exceed this threshold temperature, they argue, bacterial action not only ceases but remains inactive for millions of years.<sup>10</sup>

However, uniformitarian scientists forget bacteria thrive in even the most extreme conditions, such as the geothermal waters at Yellowstone National Park and hydrothermal vents in the oceans where thermophilic bacteria flourish at temperatures of 113°F to 252°F. And even if the rocks were "sterilized," groundwater would quickly transport an influx of new bacteria to replenish the "dead" zone. Therefore, any non-biodegraded oil reservoirs in the world today must be recently generated and freshly recharged.

Finally, how long would it take to fill the numerous reservoirs that hold vast quantities of oil today? Much depends on the size of the trap that holds the oil, the amount of organic material in the source rocks, and the development of pathways (pores, fractures, and faults) to the reservoir beneath the trap. One of the few studies that tried to quantify this process was conducted in the Gippsland Basin, Australia.<sup>11</sup> Andrew Snelling summarized the research results, explaining

**In all likelihood, oil bubbled out of seeps at the surface near the Tower of Babel in quantities generous enough to be utilized as mortar.**

that "it has been concluded that petroleum generation must still be occurring at the present time, with the products migrating relatively rapidly either into traps or even to the

surface."<sup>12</sup> It is therefore likely that many other areas are still generating oil and it is actively migrating to traps even today. This presents the possibility that some depleted oilfields may partially refill over the next century. Recent generation also explains the non-biodegraded oils that are found across the globe. Thus, the processes of oil generation, migration, and entrapment easily fit within the time that has elapsed since the Flood less than 4,500 years ago, even at the slow percolation rates in the subsurface. ●

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# Catastrophic Deposition of Megabreccias

J O H N D . M O R R I S , P H . D .

Sometimes sedimentary deposits contain large cobbles or boulders known as *clasts*, which were somehow transported to their present locations. Moving water is required to transport sand grains, and the larger the granule the more force is needed (i.e., hydraulic force). But what do we make of very large clasts found in the geologic record? Some individual clasts have areas measured in square miles! How did they get there?

There are several known mechanisms to move large rocks, some intuitive and some rather surprising, but all require at least a local catastrophe.<sup>1</sup> The first is by turbidity currents, known primarily from one historical example. In 1929, the underwater continental slope off Grand Banks, Newfoundland, became unstable and slid downhill over an incline of less than three degrees. The saturated sediment avalanched at initial speeds of over 60 miles per hour. Clasts of various sizes were suspended in the turbulent flow and prevented from settling until the water slowed. We know the speed of the slide because numerous telephone cables crossed the Atlantic in those days, and as each cable broke due to the force, the time was recorded. Before the slide was over it extended out 430 miles and deposited a relatively thin sedimentary bed, two to three feet thick, over 40,000 square miles of ocean floor. No one knew exactly what had happened because it was an underwater event—out of sight.

Decades later, submarines and underwater cameras ventured to the slide site and geologists plotted the size and character of the deposit. They labeled this new type of deposit a *turbidite*, one formed by turbulent waters. Much to their surprise, the new, nearly instantaneously formed turbidite had exactly the same features as many known deposits in the Appalachian Mountains that had been interpreted as products of slow and gradual deposition. Eventually, the new concept forced a reinterpretation of up to 30 percent of the sedimentary deposits presently found on the continents as ancient underwater turbidites, and more are being reinterpreted all the time.

Turbidites primarily consist of fine-grain mud and sand, but very large clasts are found in some turbidite deposits. If large boulders are movable with the local catastrophes of today, what would be the cause of much larger boulders found in the geologic record?

Several possible mechanisms for moving granular materials have been recognized, including debris flows and landslides in which massively large boulders have been moved. Such events may occur today, whereby the resulting deposits are local in scale, with the moved material derived from a local source. What then do we make of rock units consisting of huge boulders and slabs from faraway sources that were transported over very gradual slopes? Clearly, these boulders hadn't simply tumbled off a nearby cliff

face but arrived by way of a different process.

*Megabreccias* are defined as sedimentary deposits containing conspicuous angular fragments of rock in excess of one meter in diameter. They can be produced not only by turbidites but also by debris flows and gravity slumps. Sometimes whole geographic areas are covered by these large “unmovable boulders.” Cornelius Van Wingerden and Roger Sigler, both graduates in geology from the ICR Graduate School, conducted an investigation of strata in the Mojave Desert of California.<sup>2</sup> Enormous deposits of megabreccias, boulder breccias, diamictites, pudding-stones, and associated slide blocks and gravity flows of Upper Proterozoic strata have been studied there.



Titus Canyon, Death Valley  
Image credit: National Park Service

These monumental deposits are usually assigned by creationists to the initial bursts of the great Flood. Waves of unimaginable size and force were produced when the “fountains of the great deep” broke open.<sup>3</sup> Our planet's past has been catastrophic, indeed. Only when we consider the great Flood of Noah's day as the cause does this evidence make sense. ●

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# Genesis Science Is Practical, Not Just Academic

“It doesn’t really matter, in the real world, what you believe about creation or evolution,” the college student glibly challenged me. “Whether the evolutionists are right or whether Genesis is right makes no practical difference in how science works or in how people live their lives.” With a grin and a wave of his hand, the sophomore dismissed the real-world relevance of biblical creation as if it were no more *practical* than evolutionary myths.

Was he correct? Is the Genesis record of God’s creation (and its post-Fall groaning condition, the global Flood, etc.) really that irrelevant to how science works and how people live?

No. There are many practical proofs that refute his reckless conclusion.<sup>1,2</sup> Here is just one: True science is habitually handicapped (and at times even sabotaged) by evolutionary thinking because false foundations are scientific stumbling blocks. Real scientific progress, in ways that apply to daily life, has been both hindered and harmed by evolutionary thinking.

The delay in studying soft tissue (such as blood, collagen, and DNA fragments) in dinosaur fossils is due to the evolutionary assumption that dinosaurs went extinct so many millions of years ago that their bones could not possibly contain soft tissue today.

Scientists’ reluctance to investigate carbon-14 in diamonds and dinosaur bones is also due to evolutionary thinking; if their assumptions were correct, there should be no carbon-14 in any of these specimens. But, of course, scientists have found carbon-14 in both places.

Evolutionary myths impact our daily lives—even influencing the foods we eat. Brian Thomas has exposed how Darwin’s smug defender, Thomas Huxley, recklessly applied evolutionary thinking to the population dynamics of North Atlantic codfish during Darwin’s own lifetime, with disastrous re-

sults.<sup>3</sup> Huxley used his political post at the British Royal Commission to advance Darwinian dogma. One result was that British fishermen were approved to essentially fish without restraint because he proclaimed only the less-fit-to-survive cod would be caught and the resilient remainder would “continue to evolve” into more-fit codfish!

Huxley was wrong about fish survival because he was wrong about where fish came from. What masqueraded as “science” was actually Darwinian philosophy, and it matched neither ecosystem and population dynamics, nor codfish design limitations.<sup>3</sup>

Even though Huxley’s erroneous ideas clashed with the realities of the Atlantic Ocean, the British government acted on his advice. The North Atlantic cod population became—and remains—pillaged, populationally speaking, due to wanton overfishing. Huxley’s imagined magic of “natural selection” did not protect them, with bad results for codfish, fishermen, and future generations of cod consumers.<sup>4</sup>

In this example, evolutionary thinking clearly handicapped the food supply—that’s practical, not just academic.

The same is true for the so-called “vestigial organs” like tonsils and appendices that evolution-trusting surgeons removed

as evolutionary leftovers from patients who could have benefited from their immune system-enhancing services.<sup>2</sup> Having a healthy immune system is practical, not just academic.

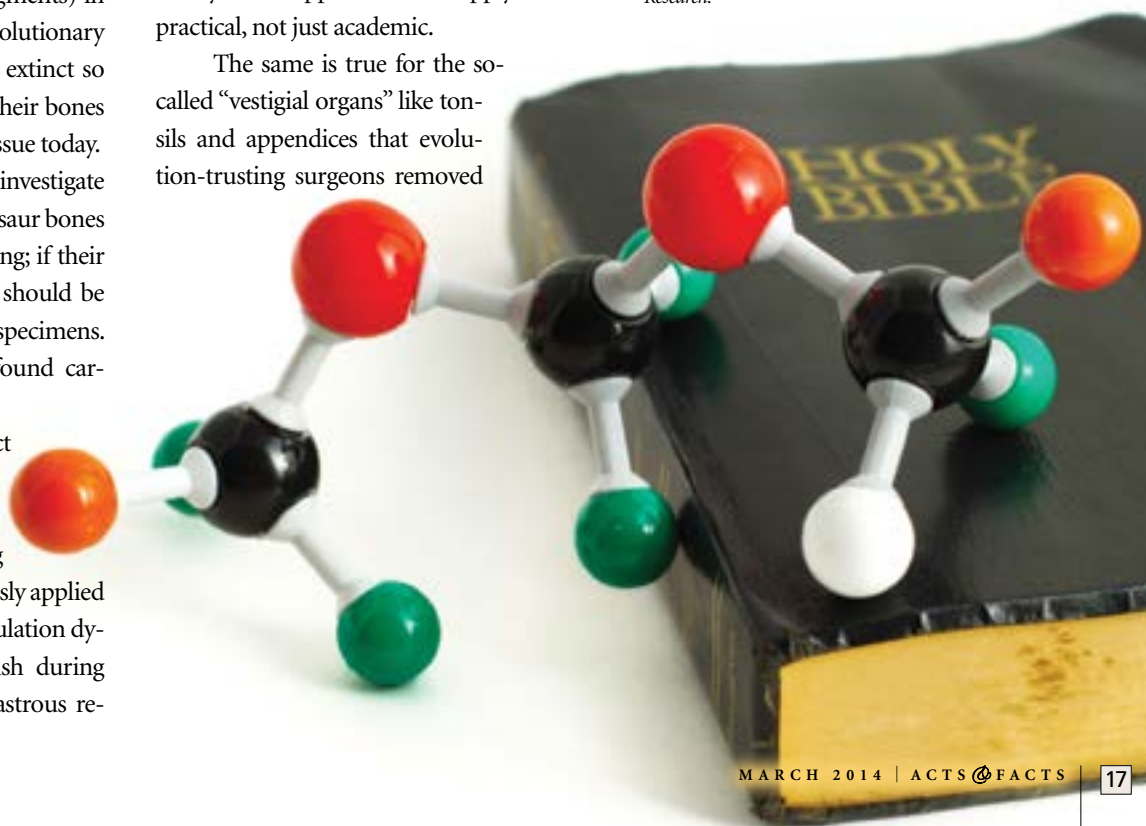
Also, dark-skinned people have been mistreated, and sometimes even killed, because racist evolutionists promulgated the doctrine that dark-skinned humans were evolutionary inferiors. Nazi ethnic policies relied heavily on evolutionary “science.”<sup>5</sup>

It’s not just academic—Genesis-based science is practical. ●

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# New Genetic Findings Tackle the Toughest Evolutionary Questions

NATHANIEL T. JEANSON, P.H.D.

Which creature would you expect to be genetically closer to a common wombat—a cane rat or a kangaroo (Figure 1A)? What about a southern marsupial mole? Would you expect it to be more genetically related to other moles or to kangaroos (Figure 1B)? Would you predict banded anteaters to be genetically closer to other types of anteaters or to kangaroos (Figure 1C)? Since genetics is the blueprint for a creature's form and function, you might intuitively suppose that creatures that are outwardly similar are also genetically similar.

Surprisingly, this seemingly uncontroversial expectation is implicitly based on a creationist origins position. Evolutionists propose a substantially different origin for these creatures than creationists do, and the actual genetic differences among these creatures reveal one of the strongest arguments for evolution and one of the most challenging puzzles for creation to date.

The evolutionary predictions for genetic similarity among these creatures derive from the evolutionary understanding of both the fossil record and of continental drift. The southern mole, the common wombat, the banded anteater, and the kan-

## Can You Predict the Closest Genetic Match?

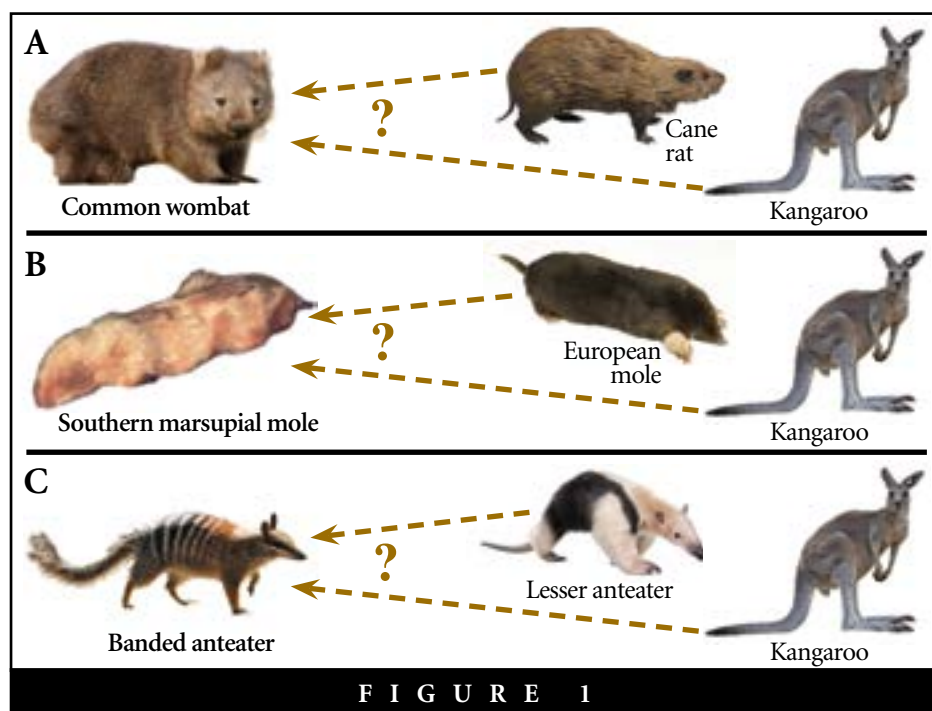


FIGURE 1

garoo are all classified as marsupials, and according to the dates that evolutionists assign to the marsupial fossil record, their ancestors existed in North America about 80 million years ago. The descendants of these creatures moved down through South America and across Antarctica around 35 million years ago, when the latter two continents

were still connected, and finally crossed over to Australia about 10 million years ago when Australia and Antarctica were still linked. Since their arrival, these marsupial ancestors supposedly evolved into today's wombats, marsupial moles, banded anteaters, kangaroos, and all other marsupial species that exist in Australia today (Figure 2).<sup>1</sup>

## Evolutionary Model:

*DNA differences reflect time since common ancestor*

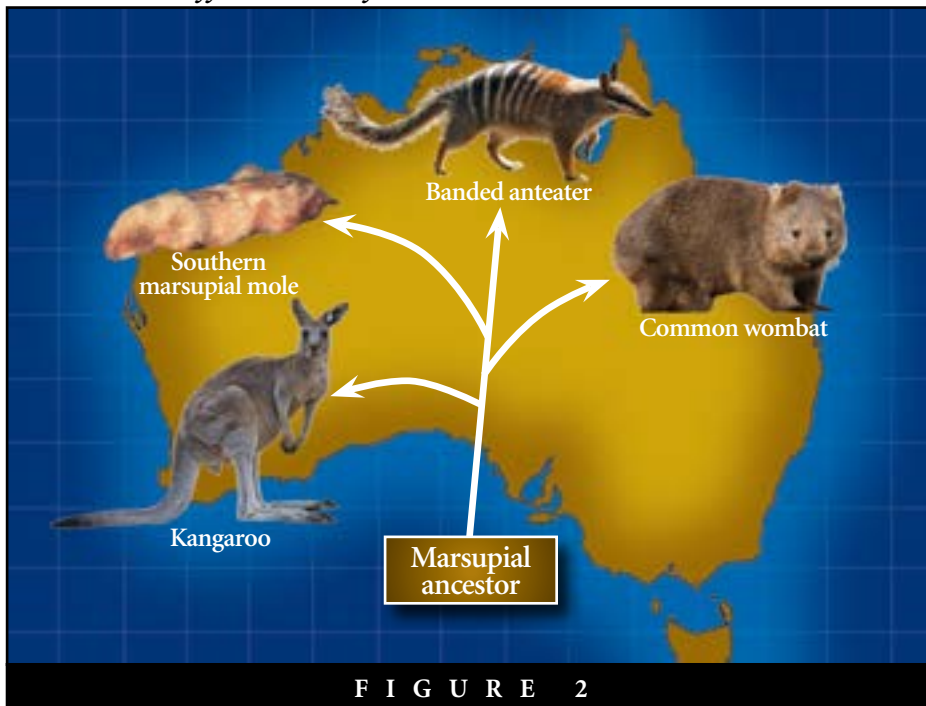


FIGURE 2

In light of this version of history, evolutionists expect Australian marsupial species to be genetically closer to one another than to any other species on Earth. The biological basis for this view is straightforward. At conception, when sperm meets egg, each cell contributes a copy of its DNA to the new life, but the process of transmission happens imperfectly, and consequently, genetic errors occur. Thus, each generation grows more genetically distant from previous generations as each new fertilization event contributes more genetic mistakes to the lineage. Therefore, if two individuals share a recent common ancestor, they will possess fewer genetic differences.

Since evolutionists postulate that marsupials share their nearest kinship with other marsupials, they expect genetics to clearly reflect this ancestry. For example, they would predict wombats to be genetically closer to kangaroos and marsupial moles than to cane rats or any other rodents. They would also anticipate a closer genetic relationship between banded anteaters and kangaroos than between banded anteaters

and non-marsupial anteaters.

The actual genetic similarities among these creatures match these evolutionary expectations. Though the entire DNA sequence for each creature has not yet been elucidated, the DNA sequences that have been obtained—those that encode mitochondrial proteins—and the protein sequences derived from these DNA sequences

**This negative result was actually the first step toward discovering new insights into DNA function, and it turned the tables on the evolutionary argument. By eliminating the hypothesis of functionally neutral change over time, I was able to clearly identify the hole in modern molecular biology thinking.**

demonstrate a close genetic match among these marsupials and a distant genetic match between the marsupial species and their non-marsupial counterparts. For example, for the mitochondrial energy protein termed ND6, wombats are 80 percent identical to kangaroos but only 38 percent identical to cane rats. Marsupial moles are 68 percent identical to kangaroos but only

45 percent identical to other moles. Banded anteaters show a similar pattern—82 percent identity with kangaroos but only 52 percent with other anteaters.

How would you, as a creationist, respond to these data that appear to support the evolutionary model? You might be tempted to invoke a functional explanation for the similarities. Perhaps wombats and kangaroos are similar at the protein level because the sequences that were compared between these two species play a role in marsupial physiology.

The problem with this hypothesis is that these protein sequences perform the same task in each of these creatures—energy transformation inside the cell. Conventional molecular biology wisdom sees no reason for these proteins to have different sequences if they perform exactly the same function. It's like comparing the light switches used in a house, a barn, a factory, and an office; there is no reason to reinvent the basic design if the switch functions the same way in each location.

In view of these facts, you might propose a different hypothesis. Creatures are not inanimate light switches; species change over time in a heritable manner. Perhaps God supplied all of these creatures with the same DNA and protein sequences at creation, and since then each of these creatures

might have randomly mutated at different rates. This process would produce a hierarchy of sequence differences, perhaps quite similar to the ones we actually observe.

How might you test this hypothesis? The history recorded in Genesis puts very clear constraints on the genealogy and genetic history of each modern species. Given this history, perhaps you could predict which

genetic patterns are possible and identify the best explanation by process of elimination.

I employed this method to find the underlying reason for the genetic patterns among species like the marsupials we discussed above. I carefully derived a mathematical model to test the hypothesis of random change over time from an identical starting sequence. This model predicts that if two species were created with identical DNA sequences and if they both randomly mutated/changed over time after creation, then these two species should continually have grown more genetically distant, not closer.

However, comparing the protein sequences across thousands of animal species revealed thousands of deviations from this prediction.

How would you respond to this unsettling discovery? What other hypotheses could you invoke? Does the creation model have any plausible explanation left?

This negative result was actually the first step toward discovering new insights into DNA function, and it turned the tables on the evolutionary argument. By eliminating the hypothesis of functionally neutral change over time, I was able to clearly identify the hole in modern molecular biology thinking. Though each protein has historically been thought to perform a *single* function inside the cell—like energy transformation—these negative results required a modification to this rule. Combined with preliminary data from the secular literature, these results suggest that each protein might perform several functions. For example, proteins involved in energy transformation in fish might also play a role in fin formation and underwater respiration. It's as if a light switch were designed not only to control electricity but also to simultaneously support the ventilation system, maintain the foundation, and repair the roof.

Hypothesizing multi-functional proteins stretches the imagination and even seems to strain credulity. But the Master Designer has no such intelligence limitations, and He appears to have designed numerous proteins for multiple purposes.<sup>2</sup>

These conclusions were strengthened when these same protein comparisons across thousands of species showed a strong correlation with traditional classification rank and category. Since these rankings are based on each group's functional characteristics—*anatomy, physiology, and development*—this correlation provides further evi-



**Protein similarities and differences among diverse species seem, at first glance, to support Darwin's "tree of life." But our team's results reveal that this inference is based on faulty ideas about how each protein actually functions.**

dence for a multi-functional role for these protein sequences. Together, these results suggest that God created mitochondrial protein sequences unique to each "kind" for hitherto unanticipated biological purposes.<sup>3</sup>

Practically, this finding reveals new insights into the puzzle of protein similarity among marsupials. At first pass, the high similarity among marsupials and the low similarity between marsupials and their non-marsupial counterparts appear to reflect evolution, but these same data can be explained equally well by multi-functional design. It seems that these mitochondrial energy proteins function not only in energy transformation but also in some aspect of marsupial physiology or development.

If both creation and evolution explain the same data equally well, which one is correct? In the future, both of these explanations can be tested head-to-head in the

laboratory since each makes very different predictions. According to evolution, modern genetic differences among marsupials and non-marsupials reflect functionally neutral changes since these species last shared a common ancestor—they do not reflect some higher-order design paradigm. In contrast, our creation model suggests that the genetic differences primarily reflect differences in multi-level function. The hypotheses of multi-function and single function are both amenable to experimental verification.

In summary, I—with help from other members of ICR's BioOrigins team—have discovered a new answer to one of the most perplexing evolutionary challenges to date.<sup>4</sup> Protein similarities and differences among diverse species seem, at first glance, to support Darwin's "tree of life." But our team's results reveal that this inference is based on faulty ideas about how each protein actually functions.

The findings discussed in this article apply mainly to comparisons of one kind of creature to another kind. Genetic differences also exist within a kind—for example, among the cats that descended from a common ancestor on board the Ark and among the equids (donkeys, zebras, horses) that descended from their common Ark ancestor.<sup>5</sup> In a future issue we'll tell you about a startling discovery we made when comparing genetic similarity among members of the same kind. ●

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Dr. Jeanson is Deputy Director for Life Sciences Research at the Institute for Creation Research and received his Ph.D. in cell and developmental biology from Harvard University.





## What Is the Origin of Life?

FRANK SHERWIN, M.A.



One roadblock secular science faces is the origin of anything...and everything. For example, how did the primeval Big Bang originate? Materialists do not know and rarely even speculate. In 1859, Darwin didn't actually address the origin of the species even though it was the title of his book. Over a century later, an evolutionist stated in a well-respected science magazine, "The origin of animals is almost as much a mystery as the origin of life itself."<sup>1</sup>

For evolution to be true, before the origin of plants, animals, and people—before any of these life forms ever existed—there had to be some kind of transformation of inorganic non-life into organic (carbon-based) life. Supposedly happening naturalistically over four billion years ago, this emergence of life from non-life has been a frequent and irritating question for evolutionists.

Secular scientists must start with a sterile planet composed of red-hot rock, an Earth with no atmosphere and no water. From this forbidding environment all life forms, from amoebas to zebras, must have arisen. In fact, "the mystery of how living organisms sprung out of lifeless rock has long puzzled scientists."<sup>2</sup>

The law of biogenesis states that life only comes from life. In conducting his brilliant swan-necked flask experiment, French chemist Louis Pasteur was able to cast sig-

nificant doubt on the theory of spontaneous generation (e.g., mice manifesting from dirty rags or maggots emerging from putrefying meat). Today evolutionists state spontaneous generation was just superstition and instead discuss abiogenesis or chemical evolution—the development of living creatures from nonliving material. But is it not essentially the same thing—the claim that life came from non-life?

In their attempt to salvage an unscientific situation, evolutionists state that living things are simply made of nonliving chemicals. But animals and people somehow have that additional, unique trait called life. In the distant, unobserved past, they maintain, these nonliving chemicals happened to hit upon the right ratio, balance, and temperature, somehow organized themselves in the most profound way imaginable, and then somehow became alive. And there's the rub. No matter how hard secular scientists try, they are unable to step off of the first square in their naturalistic quest for life's origin. This is why most evolutionists would rather ignore the origin of life (OOL) question altogether.

Life is perhaps the most impossible event in the universe for them to explain. Evolutionary reporter Susan Mazur interviewed Steve Benner of the Westheimer Institute of Science and Technology regarding an OOL Gordon Research Conference held in Galveston, Texas, in January. Benner states:

We have failed in any continuous way

to provide a recipe that gets from the simple molecules that we know were present on early Earth to RNA. There is a discontinuous model which has many pieces, many of which have experimental support, but we're up against these three or four paradoxes, which you and I have talked about in the past.<sup>3</sup>

RNA is ribonucleic acid, which is found throughout the living world. Evolutionists suppose it was one of the first biomolecules on early Earth. But later in the interview Benner says, "You have a paradox that RNA enzymes, which are maybe catalytically active, are more likely to be active in the sense that destroys RNA rather than creates RNA."<sup>3</sup>

Every time secular scientists attempt to produce a "primal environment" containing critical OOL elements in a flask, they end up with a toxic tar coating the container walls. Nothing close to life has ever been produced. The generations of scientists since Darwin's day who've attempted to explain the origin of life have remained at a complete impasse.

What is the origin of life? Creation scientists state that life only comes from life, specifically the Source of all—the Giver and Sustainer of Life (John 14:6). ●

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Mr. Sherwin is Research Associate, Senior Lecturer, and Science Writer at the Institute for Creation Research.



# SOWING WITH SHEPHERDS

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

Through our nationwide speaking ministry, ICR has seen firsthand the gradual exodus of young people from the Church. There are many explanations for this phenomenon, and researchers have written numerous books on the subject.

Based on our experience, however, we are convinced that one of the more critical causes for this exodus is the absence of solid teaching on the foundational truths in Genesis, particularly on subjects that concern origins and science.

Many pastors and teachers largely ignore Genesis because they feel ill-equipped to address matters related to science. Some avoid it for fear of controversy within their own congregations. As a result, growing numbers of Christians do not know God's clear revelation about our beginnings and the science that strongly affirms the biblical account. Sadly, many are left with no other recourse than to accept some form of evolutionary explanation for our origins, and this can only weaken the authority of Scripture.

When you then consider the unprecedented level of worldly influence that bombards young people today, it is little wonder this generation is susceptible. Armed with smartphones, they are able to view just about anything that exists on the Internet or in the media. Much of what they see and hear on issues that deal with science, creation, and the Bible undermines a biblical worldview. Their questions are often left unanswered, and many walk away from church altogether.

ICR is developing *Unlocking the Mysteries of Genesis* to help the Church an-

swer these questions in a way that appeals to younger generations and honors the Creator and His Word. As I write, three episodes of this 12-part DVD series are finished and another three are nearly complete. We still have a few exciting sequences to film—one of them on the chilly glaciers in Alaska this month—but solid progress is being made on all fronts. Lord willing, the entire series will be available early this summer. Now it's time to get the word out!

ICR is promoting the DVD series at several major pastor conferences this year. And due to the faithful support of many donors, we are giving a complimentary copy of episode one—*Chaos or Creation?*—to all interested pastors who attend. We feel a burden for small-to-mid-size churches especially, many of which cannot afford to have a live ICR speaker come to their congregations. However, they *can* invest in an innovative DVD series designed to engage young people with stunning visuals and solid science that dispel evolutionary myths and affirm the biblical account of creation.

Knowing ICR can't reach every church, you can help us equip pastors by becoming a creation advocate. Ask your pastor to visit [www.UnlockingTheMysteriesOfGenesis.org](http://www.UnlockingTheMysteriesOfGenesis.org) to learn more about the series and view the short video designed especially for him. Pray for your pastor, let him know you have a burden for this important issue, and encourage him to seriously consider using this DVD series as a comprehensive resource to reach younger people with creation truth.

Our prayer is that godly shepherds everywhere will get excited about the series,

share it with other church leaders they know, and show it to their congregations to sow the Creator's message in the next generation.

ICR truly believes this remarkable DVD series meets an urgent need in the Church today for both pastors and laypeople, and your generous partnership has been a great blessing in helping finish the course. But there is still much work to do! Please keep on praying and giving as the Lord enables you to "do good to all, especially to those who are of the household of faith" (Galatians 6:10). ●

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



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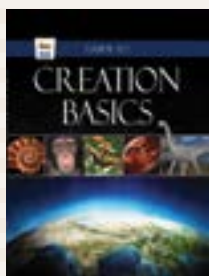
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Your creation ministry has blessed my life. I especially liked the *Guide to Creation Basics* you published last year—it was very helpful in talking to my 4th-grade son.

—D.N.

We would like to thank you for staying in the battle for the truth. Much of America and the world has lost its way because the truth of God's Word has been covered up with half-truths that are only lies. We must know the truth in order to be set free, and you do a good job for that cause with your work and outreach. Keep up the good fight and we will continue praying for your outcome to glorify God. I really enjoy *Acts & Facts* and so does my grandson.

—M.C.

We really enjoy reading your publications and devotionals. The Lord has placed you in a key place at this time in America. We are going through some tough times and cultural changes, which are sifting the chaff from the wheat. The Lord's return is nigh and we, as believers, need to exhibit His standards. ICR is doing that, and we commend you for your stand. Thank you so much for the work you are doing and for the great literature you offer. May the Lord continue to bless you and keep you safe until He returns.

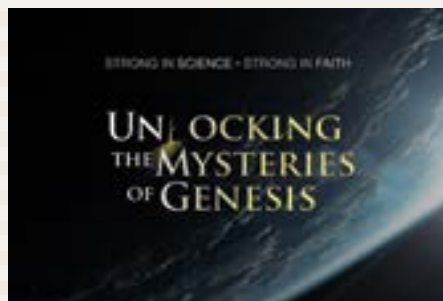
—J.S.

I just want to say how helpful your website has been. It is one of the primary resources



I use to address atheists and evolutionists. I recently watched a debate between Dr. Randy Guliuzza and Dr. Karl Giberson at the SCS Center for Creation Studies. I have also seen Dr. Jason Lisle's [DVD] *The Ultimate Proof of Creation* [and] am enjoying *Acts & Facts* and *Days of Praise*. I am merely a high schooler, but your resources have helped me to overcome my atheistic peers. Thank you for your help in growing my knowledge.

—J.C.



Your new publications such as *Guide to Creation Basics* and the [upcoming] DVD series *Unlocking the Mysteries of Genesis* are an indication of the progress you are making in getting the word out about true scientific research and how God's creation functions. And your efforts aimed at reaching this generation using modern technological methods are great news.

—J.G.

Thank you for *Days of Praise* and *Acts &*



*Facts*. What a blessing they are, especially in the days that God said would come. It's such a blessing to see the great abilities God has given to these brilliant men who have bowed the knee to the God of creation. May He bless you all mightily as you spread the wonders of His creation to a sin-sick world. Thank you.

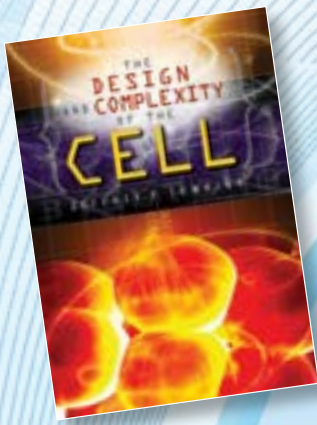
—R.B.

Dr. [Henry M.] Morris, I received yesterday volume three of *The Book of Beginnings*. I am up this morning using it already. This to me is your finest work. Thank you from a pastor for your contribution to my library and to my preaching out of this great book of Scripture [that is] so foundational to the rest of God's Word. I'm your biggest fan!

—Pastor M.B.

Dear ICR Friends,  
What a blessing! My daughter and I would like to thank each of you for hosting our Christian school. We were intrigued and have an appreciation for all you are accomplishing there. Your publications and DVDs were amazing. We enjoyed all of the speakers and presentations.

—E.P.

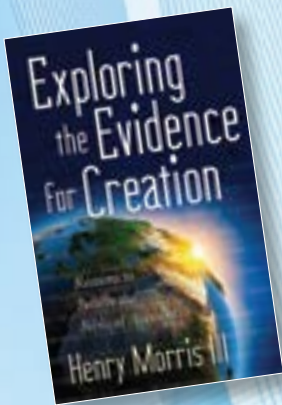


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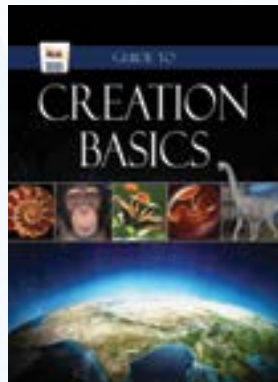
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