

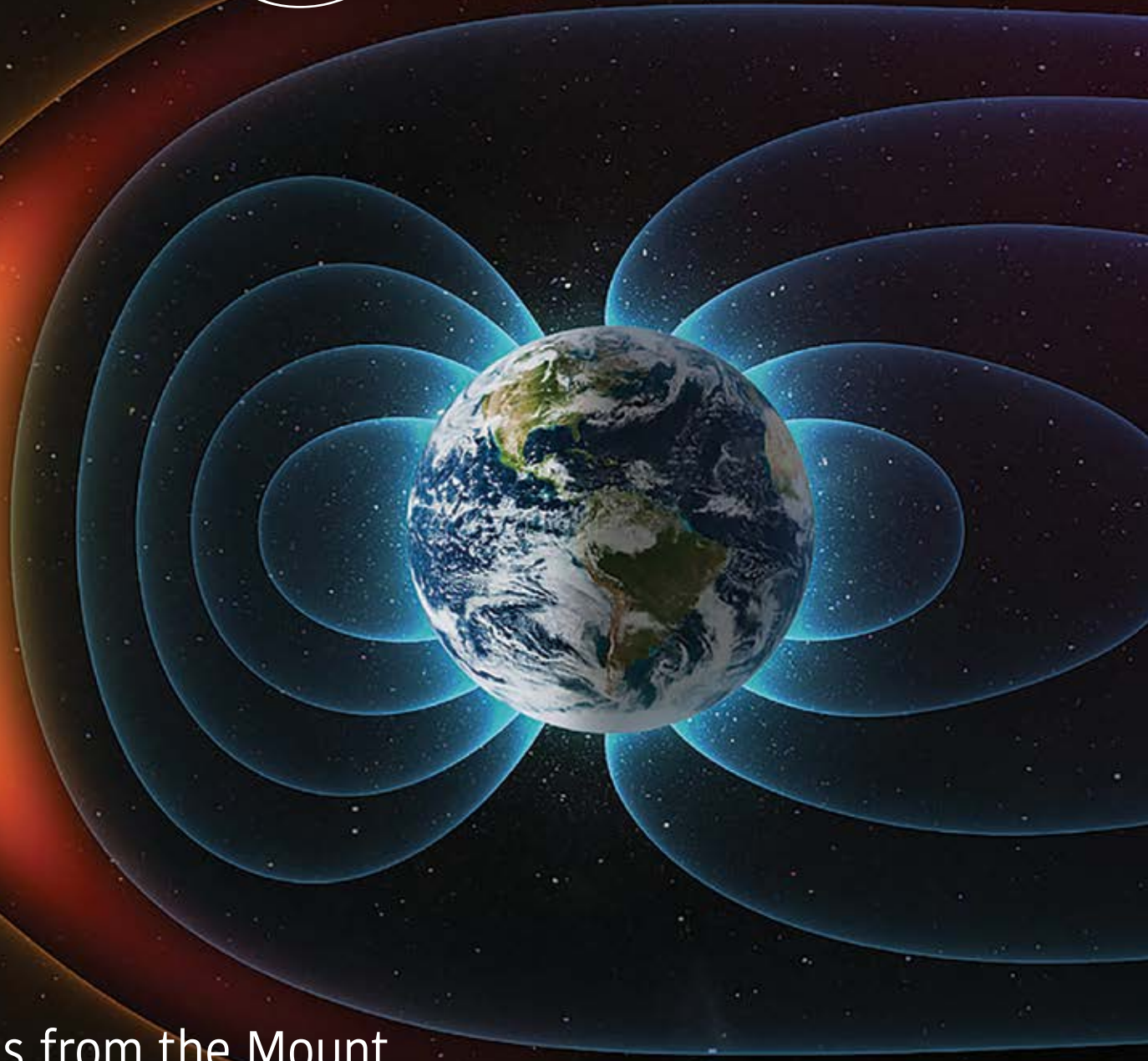
# ACTS & FACTS

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CREATION RESEARCH

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St. Helens Eruption

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# Detailing the Impact of ICR's Creation Science Research

Welcome to this special research edition of *Acts & Facts* where we synopsize the powerful impact of ICR's creation science research over the past half-century. We asked ICR's principal researchers to summarize the objective of their major projects and how their findings opened new avenues for creationist thinking and radically altered our scientific explanations. We received some fascinating reports, and our science staff filled in any holes.

ICR's eminence as a research institute traces back to Drs. Henry M. Morris and John C. Whitcomb's release of *The Genesis Flood* in 1961, in which they provided a far more compelling way to interpret Earth's geology based on the catastrophe of the worldwide Flood (page 4). As you'll see, today's research is as powerful as ICR's prior RATE, FAST, CPT, and Mount St. Helens projects in building solid scientific and

biblically consistent explanatory models.

In these pages, we highlight past and current scientists who've demonstrated a long, unbroken legacy of high-quality research. These scientists respond to evolutionist claims (pages 5, 7-8, 14, and 19), demonstrate how science confirms Scripture (pages 6, 12, and 17-18), build upon and strengthen their research (pages 16 and 20), and develop new theories to explain natural phenomena (pages 21-22). These help us better understand and appreciate the magnificence and provision of our Creator.

ICR's mission to showcase Christ's handiwork through our CET research is making an enormous difference in how others view His marvelous work. We anticipate seeing incredible contributions from our current science staff and are grateful for all of ICR's pioneers in creation science research. Their legacy lives on!

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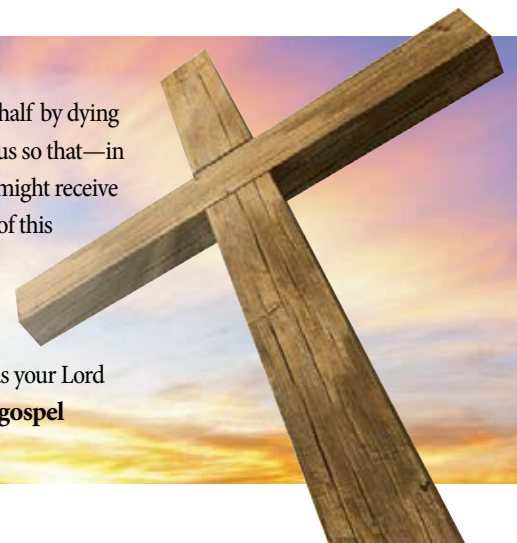
**Creation.Live.** ICR scientists meet with special guests to discuss current issues that impact how science points to our Creator, Jesus Christ. New episodes on the fourth Friday of every month!



**Days of Praise.** Daily devotions from ICR's quarterly booklet. Start your morning with devotional readings to encourage and strengthen your faith.

You are deeply loved by God! This certain truth is expressed in a Scripture that sums up the gospel of Jesus Christ: "For God so loved the world that He gave His only begotten Son, that whoever believes in Him should not perish but have everlasting life" (John 3:16). We all need Jesus as our Savior because we are all sinners and can't by our own efforts fulfill the requirements of God's justice. But Jesus Christ, our Creator, could satisfy the Father's holiness, so He

suffered the punishment for sin on our behalf by dying on the cross. Jesus was made to be sin for us so that—in the most remarkable exchange ever—we might receive the righteousness of God. We can be sure of this because Jesus rose again from the dead. What a gift of love! You can have the promise of everlasting life when you turn from your sin and believe in Jesus Christ as your Lord and Savior. To learn more, visit [ICR.org/gospel](https://www.ICR.org/gospel)



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#### DESIGNER

Dennis Davidson

[Jesus Christ] is the image of the invisible God, the firstborn over all creation. For by Him all things were created that are in heaven and that are on earth, visible and invisible, whether thrones or dominions or principalities or powers. All things were created through Him and for Him. And He is before all things, and in Him all things consist. And He is the head of the body, the church, who is the beginning, the firstborn from the dead, that in all things He may have the preeminence. For it pleased the Father that in Him all the fullness should dwell, and by Him to reconcile all things to Himself, by Him, whether things on earth or things in heaven, having made peace through the blood of His cross.

(Colossians 1:15-20)

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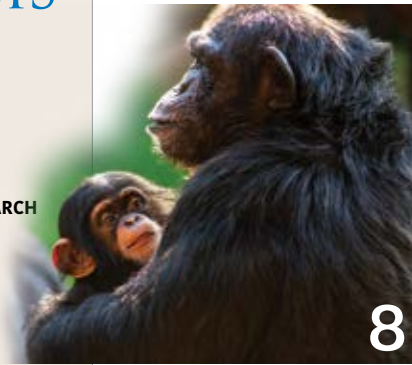
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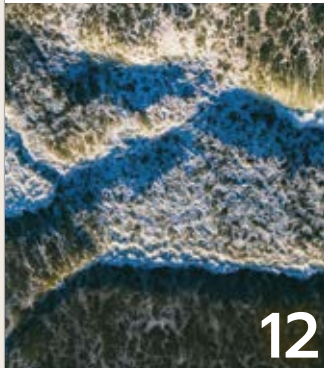
All Scripture quotations are from the New King James Version unless otherwise indicated.



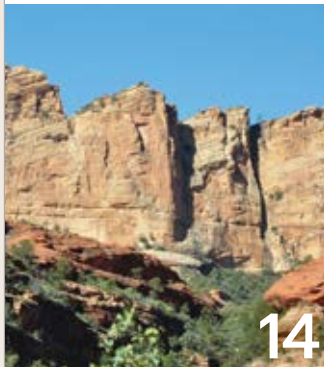
Front cover: Planet Earth's magnetic field against Sun's solar wind  
Image credit: BigStock | koya79



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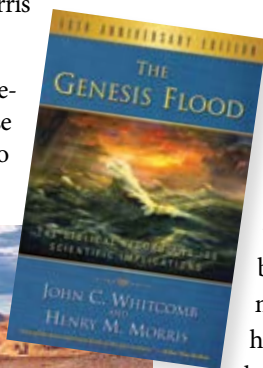
# The Genesis Flood: Upheaval in Uniformitarian Geology

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

## Purpose

The publication of *The Genesis Flood* by Drs. John C. Whitcomb and Henry M. Morris in 1961 revolutionized and invigorated modern creation science. Their book exposed the dilemma Bible-believing Christians face—whether to accept conventional geologists’ verdict of a billions-of-years-old Earth or the biblical account of a global flood just thousands of years ago.<sup>1</sup> As Whitcomb and Morris noted:

The decision then must be faced: either the Biblical record of the Flood is false and must be rejected or else the system of historical geology which has seemed to discredit it is wrong and must be changed.<sup>2</sup>



To resolve this dichotomy, they argued that Christians must “re-study and re-think the great mass of geologic and paleontologic data” with the goal of outlining a new, biblically based geological model for the global Flood.<sup>3</sup>

## Methods

Whitcomb and Morris undertook a massive literature review with the goal of identifying inadequacies in conventional geological explanations. Their second goal was to construct a new framework for historical geology that “would serve as a better basis of correlation for the available scientific data than does the present one.”<sup>3</sup> To do this, they drew upon the work of earlier creationists such as George McCready Price and Walter E. Lammerts. But first and foremost, their interpretations were founded on the historical reality of the global Flood.

## Results

The immediate result was the revitalization of biblically based science. Whitcomb and Morris created a new narrative by reinterpreting the available geological data, suggesting that the vast majority of fossiliferous sedimentary rocks was the product of the year-long

Flood. In effect, they built a model that better explained the geology we observe.

Whitcomb and Morris began by assuming that most Precambrian rocks were formed by the events on Day 3 of the creation week (Genesis 1:9-13). They suggested that the bursting of the “fountains” on the first day of the Flood (Genesis 7:11) was accompanied by massive releases of both magma and water. Furthermore, they envisioned that early Flood crustal displacements would have produced devastating tsunamis that raced across the oceans. These waves would have picked up and carried sediment and marine organisms, depositing them as the rocks and fossils of the earliest Flood (Paleozoic).


Later, plants and land animals would have been sequentially buried as the Flood continued to rise. Their particular burial order was based on three factors: (1) mobility of the animal, (2) density and hydrodynamic factors, and (3) elevation of habitat. As the authors explained, “The order is exactly what is to be expected in light of the Flood account.”<sup>4</sup>

Whitcomb and Morris also placed the Flood/post-Flood boundary near the top of the Tejas Megasequence (Tertiary), just below the Ice Age deposits. And this is where ICR scientists still place the upper Flood boundary.<sup>5,6</sup>

## Impact

Although *The Genesis Flood* was written before the modern theory of plate tectonics and catastrophic plate tectonics,<sup>7,8</sup> its geological insights were truly remarkable. This one book sparked the modern creation movement and revived faith in the trustworthiness of the Bible.

Dr. Henry Morris went on to establish the Institute for Creation Research in 1970 and wrote a total of 66 books. Much of what he wrote is still valid and widely accepted by the creation science community. Most of his predictions and insights have stood the test of time, with only a few that needed adjustment as more data were unveiled.

In testament to its lasting value, *The Genesis Flood* is still required reading for anyone interested in a scientific and biblically based alternative to evolutionary dogma. 

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Dr. Clarey is Director of Research at the Institute for Creation Research and earned his Ph.D. in geology from Western Michigan University.



## Purpose

Nothing put a damper on uniformitarianism like the Mount St. Helens eruption did on May 18, 1980. Prior to this eruption, strict uniformitarianism reigned supreme in geology. The influence of James Hutton and his concept of deep time had trickled down to the smallest details.<sup>1</sup> But the results of the Mount St. Helens catastrophe changed all of that, and ICR scientists were there leading the charge.

## Methods

ICR's research method involved making direct field observations. ICR scientists, led by geologist Dr. Steve Austin, visited Mount St. Helens several times following the initial eruption in 1980 and again after the smaller 1982 eruption. They even dove into Spirit Lake to study the post-eruption log mat.

## Results

The ICR scientists' results demonstrated that up to 400 feet of new strata formed at the volcano during the 1980 eruption.<sup>2</sup> These deposits originated from air fall, pyroclastic flows, landslides, and even stream water. Dr. Austin and his team discovered that finely laminated deposits can be produced in a very short time period. Previously, laminated strata were thought to take many years to form, with possibly one layer laid down every year. Instead, ICR scientists found that a 25-foot-thick, finely laminated unit was deposited in a matter of hours.<sup>2</sup>

Secondly, the scientists observed that erosion can occur quickly. Scour from the steam blast, ash flows, and mudflows rapidly reshaped the landscape surrounding the volcano and its waterways. The North Fork of the Toutle River changed course following the 1980 eruption because it was blocked by nearly a cubic mile of debris.<sup>2</sup>

After another smaller eruption on March 19, 1982, a mudflow from melted snow and ice carved a new 140-foot-deep canyon down the flank of the volcano.<sup>2</sup> This "Little Grand Canyon" is an approximate 1/40th-scale version of Grand Canyon, demonstrating the scouring power of water. Creation geologists frequently use this as an analogy to explain

# Lessons from the Mount St. Helens ERUPTION

TIM CLAREY, P.H.D.

the rapid formation of the larger Grand Canyon. Erosion can be fast under the right conditions. The global Flood provided ample water to carve canyons and erode mountains in a short amount of time.

ICR scientists also noted that the massive landslide that initiated the eruption in 1980 sent about 680 million cubic yards of material into nearby Spirit Lake. This caused a gigantic tsunami that ripped across the hillsides north of the lake.<sup>3</sup> The water wave

sheared off an estimated one million fully grown trees near their bases, transporting the logs back to the lake as the water receded.

Many of these trees were found floating upright with the heavier ends down. In 1985, it was estimated that more than 19,000 upright logs had settled on the floor of the lake.<sup>2</sup> Dr. Austin dove into the lake and discovered that many of the trees were standing at various levels in the mud, giving the appearance of deposition at different times. But all of these trees were washed into the lake at the same moment. These observations explain the multiple layers of upright petrified trees found at different stratigraphic levels at Specimen Ridge in Yellowstone National Park.<sup>3</sup> The trees at Spirit Lake demonstrate that all of these petrified trees could have formed at about the same time, merely sinking into different layers.

## Impact

Mount St. Helens has provided over 40 years of empirical data that support catastrophism and refute uniformitarianism. The eruptions have changed the way evolutionary scientists view Earth's geologic processes by making them more accepting of catastrophism. And creation scientists can still use Mount St. Helens as an outdoor laboratory to explore the more extensive processes and results of catastrophic events such as the global Flood. 🌊

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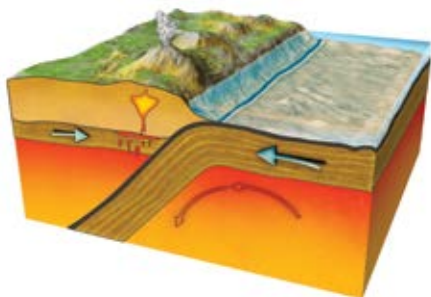
## Purpose

In Western culture during the first few decades of the 19th century, the uniformitarian interpretation of the earth's physical history supplanted the Bible's account of that history. One reason for this was simple. Staggering thicknesses of fossil-bearing sediment layers cover much of the earth's continental surface. The defenders of the biblical view could not provide a credible conceptual picture of how the Flood cataclysm could possibly have generated these layers within the time constraints of the Genesis text. Sadly, the inability to answer this vicious assault on biblical authority continued well into the 20th century.

## Methods

Discoveries from the ocean bottom during the 1950s and 1960s, enabled by sonar technology from World War II, opened a door to fresh possibilities. This technology provided detailed topography of the world's ocean floor for the first time. It revealed an underwater mountain chain some 40,000 miles long as well as deep trenches of approximately the same total length.

A flurry of ocean bottom explorations during the 1960s led to further momentous findings, including the fact that all of today's igneous ocean crust is younger than all the sediments on the continents classified as Paleozoic. By the early 1970s, these discoveries precipitated a shocking scientific revolution, with the framework known as plate tectonics replacing earlier ideas.



# Catastrophic Plate Tectonics

JOHN BAUMGARDNER, PH.D.

## Results

In spring 1978, I was engaged in creation apologetics as a Campus Crusade for Christ staff member. I delved into the question of how the findings that undergird plate tectonics might relate to the Genesis Flood. I was almost overwhelmed by the realization that because all of today's igneous ocean floor is younger than much of the fossil-bearing sediment record, all the basaltic crust of today's ocean floor must therefore have been erupted and cooled during the Flood.

This implied that the Flood, in significant measure, logically must have been a tectonic cataclysm involving processes in the earth's interior. Seeking God's direction in how to respond to this realization, I left Campus Crusade and that fall began graduate studies in geophysics at the University of California, Los Angeles. My goal was to acquire the training needed to investigate this topic at a professional scientific level.

At UCLA, God opened amazing doors to me, including the opportunity to develop a 3-D numerical model of flow of rock inside the earth that was suitable for exploring the physics behind an episode of very rapid plate tectonics. He also enabled me to earn a Ph.D. and begin a professional career as a computational scientist at Los Alamos National Laboratory.

Already at that time, mineral physics experiments were demonstrating that silicate minerals weaken dramatically under shear stress conditions that can arise inside the earth. Subsequent numerical studies revealed that the extreme sensitivity of mantle rock strength to increasing stress and temperature means that a catastrophic mantle overturn and a complete resurfacing of the planet can truly occur. Determinations of the age of the ocean floor relative to the continental sediments combined with the Bible's clear testimony concerning the Flood provide the secure logical basis for catastrophic plate tectonics (CPT). And the laboratory experiments and numerical simulations supply many of the details concerning the physical processes involved.<sup>1</sup>

## Impact

Another major piece of the puzzle has come into place during the past 10 to 12 years with the realization that the rapid recycling of the ocean floor into the earth during the Flood generated vast numbers of giant tsunamis. A global numerical model that incorporates this tsunami generation process, along with cavitation erosion of continental bedrock and transport and deposition of sediment by turbulent water, shows that CPT-generated tsunamis can indeed erode, transport, and deposit the amount of sediment observed on today's continents during the timespan of the Flood. Moreover, the resulting sediment distribution pattern matches the observed pattern to a remarkable degree.<sup>2</sup> To God be the glory! 🙏

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Dr. Baumgardner earned his Ph.D. in geophysics and space physics from UCLA.



# RATE Summary

D O N D E Y O U N G , P H . D .



Coal with measurable C-14

## Purpose

The RATE (Radioisotopes and the Age of the Earth) project from 1997 to 2005 examined and then refuted the claim that radioisotope dating proves the earth is multiple millions of years old. This research program was jointly supported by the Institute for Creation Research, Answers in Genesis, and the Creation Research Society. ICR coordinated the entire project and hosted the RATE team<sup>1</sup> during working sessions. This included logistics, budgeting, publications, and chairmanship by ICR's Larry Vardiman.

## Methods

Several research initiatives explored the radioisotope dating of earth materials within the worldview of a recent supernatural creation. The RATE work included radioisotope dating of numerous rock samples. These efforts explored the reliability and limitations of multiple dating methods. Beyond the geology activity, linguistic studies were applied to the book of Genesis, showing that the biblical creation account is literal narrative history.



Zircon crystal

## Results

Carbon-14 dating is traditionally limited to relatively recent samples because of the 5,730-year half-life of C-14. However, there are many reports of C-14 detection in materials thought to be ancient and therefore

supposedly free of this isotope.

The RATE team obtained multiple samples of coal and diamond for C-14 study. A professional laboratory was contracted to analyze the samples to avoid any perceived RATE bias. All the samples do indeed reveal C-14 content. Data analysis by the RATE team shows that the age of coal and diamond samples can fit the young-earth timescale. In particular, diamonds may date from creation and coal formation from the Genesis Flood event.

Helium retention studies challenge the assumption of great age for granite batholiths. RATE research concentrated on granite samples from a 1974 government deep-drilling project in New Mexico. Uranium and thorium isotopes produce helium atoms (alpha particles) in zircon crystals, themselves formed within granite. On a geologic timescale, this helium should escape; however, it is found to persist within the zircons. The RATE team commissioned high-precision measurements of helium diffusion in zircon crystals. With these results and theoretical modeling, the case was made for worldwide granite formation on the timescale of biblical creation.

Radiohalos and fission tracks are distinct crystal defects resulting from radioactive decay within crystalline rocks. The RATE team analyzed these radioactive markers in hundreds of rock samples from worldwide locations, which is likely the most extensive such survey yet undertaken in geology. Of special interest, there is evidence of extensive radioactive decay within rock formations dating from two distinct time periods, the creation week and the Genesis Flood event.

RATE verified 500 million years' worth of radioactive decay in Earth rocks.

Within the constraint of a recent supernatural creation, the team proposed past episodes of accelerated radioactive decay. This is an extraordinary challenge to the standard view of radioactivity as being independent of external factors. Initial theoretical work followed on possible mechanisms for accelerated decay involving adjustments of nuclear forces and related variables. Beyond an explanation for accelerated decay, the RATE team also considered the protection of life aboard the Ark from the potentially increased radiation. Preliminary thought was given to a further challenge to accelerated decay—the dissipation of vast quantities of generated heat.

## Impact

Throughout the project, the RATE team made every effort to display courtesy for contrary views of Earth history. The project clarified several radioisotope dating issues and suggested further research directions. Several RATE publications and conferences encouraged audiences that the earth-age issue is being addressed professionally. The conservative Christian community seeks answers to the vital issue of the earth's age. The RATE team's goal was to provide credible, compelling answers based on physical data.<sup>2</sup> And we did. 🙏

## References

1. The RATE team consisted of geologist Steven A. Austin, geophysicist John R. Baumgardner, Hebraist Steven W. Boyd, physicist Eugene F. Chaffin, physicist Donald B. DeYoung, physicist D. Russell Humphreys, geologist Andrew A. Snelling, and atmospheric scientist Larry Vardiman.
2. For more information, visit [ICR.org/RATE](http://ICR.org/RATE).

Dr. DeYoung earned his Ph.D. in physics from Iowa State University.



# Human-Chimp DNA Similarity Research Refutes Evolution

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

## Purpose

An oft-repeated claim of evolutionary propaganda is that the DNA of chimpanzees and humans is 98.5% identical. This high level of DNA similarity is required to bolster the hypothesis that humans and chimps shared a common ancestor three to six million years ago. Based on theoretical models of human evolution and known mutation rates in both humans and chimps, anything significantly less than a 98.5% DNA similarity would destroy the foundation of the entire model.

## Methods

When I began reviewing the scientific literature on the subject, I realized there were serious problems with research that claimed human DNA and chimp DNA are nearly identical. In every publication I studied, it became clear that evolutionary researchers had cherry-picked highly similar DNA sequences that support evolution and omitted data that were dissimilar.<sup>1</sup> Following this original discovery, I then performed a variety of my own studies in which I downloaded chimpanzee DNA and compared it to human.

## Results

I recalculated DNA similarities in a number of evolutionary studies by including discarded data and obtained much lower levels of human-chimp DNA similarity, ranging between 66% and 86%. Another major problem I encountered is that the chimpanzee genome was literally pieced together to resemble the human genome.<sup>2</sup> This was accomplished by taking the small snippets of chimp DNA sequence and assembling them onto the human genome as a scaffold. As a result, the chimp genome became artificially humanized.


Despite these issues of evolutionary bias, improvements in DNA sequencing technology are slowly bringing the truth to light. The newest version of the chimpanzee genome was completed in 2018, and the results not only validate my past research but also spectacularly confirm new research I published in 2018 using the new chimp genome data.<sup>3</sup>

The *Science* research paper published in conjunction with the 2018 chimp genome completely side-stepped the issue of chimp DNA similarity with humans.<sup>4</sup> Nevertheless, University of London evolutionist Richard Buggs analyzed the results of a comprehensive comparison of the new chimp genome with the human genome and posted his shocking anti-evolutionary findings. He stated, “The per-

centage of nucleotides in the human genome that had one-to-one exact matches in the chimpanzee genome was 84.38%.”<sup>5</sup>

What makes Dr. Buggs’ analysis more amazing is the fact that my own published research using a different algorithm gave the same results. In my study, I aligned 18,000 random pieces of high-quality chimp DNA about 31,000 DNA letters long (on average) onto human and several different versions of the chimp genome. Not only did my data show that the older version of the chimp genome (PanTro4) that had been used to support evolution was deeply flawed and humanized, but my research also showed the aligned segments of chimp DNA onto the human genome were on average only 84.4% identical to human—the same level of similarity reported by Dr. Buggs.

## Impact

These new results by both myself and Dr. Buggs also confirm a 2016 study I published that indicated the overall human-chimp DNA similarity was likely no more than 85%.<sup>6</sup> Based on the most recent research, the difference between the human and chimp genomes is estimated to be a maximum of 15%—a number that does not include the regions that are too different to even compare. Not only are human and chimp DNA not 98.5% identical, they’re too dissimilar to share a common evolutionary ancestor. This result refutes evolution and affirms the biblical account of creation. 

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





**OCTOBER 1, 8, 15, 22, 29;  
NOVEMBER 5**

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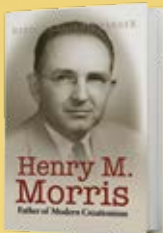


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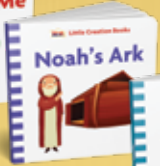


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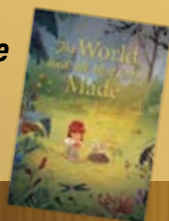
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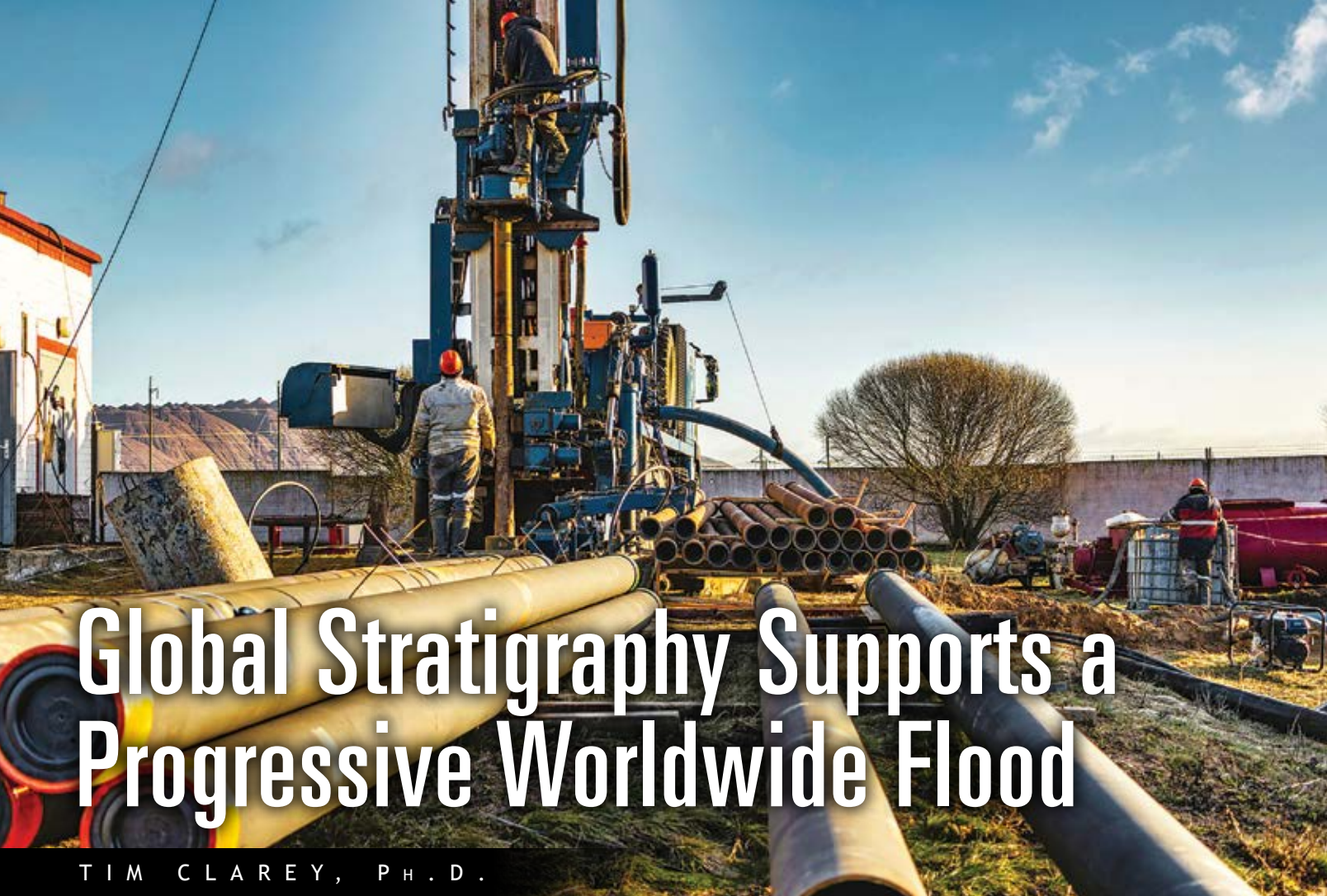
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# Global Stratigraphy Supports a Progressive Worldwide Flood

TIM CLAREY, P.H.D.

## Purpose

Is there geological evidence for a global flood? Is there evidence that the waters rose and peaked on Day 150 as recorded in Genesis 8? And at what level in the geologic record did it peak? ICR's current geological research team has made one of the first attempts to map the true extent of the sedimentary rocks across all of the continents and provide answers to these questions.

The fossil-bearing sedimentary rocks of the earth can be divided into six megasequences, or discrete packages of sediment (Figure 1).<sup>1</sup> Megasequences can be thought of as massive pulses of waves that pushed across the continents during the Flood year. Each major pulse was followed by a minor withdrawal. The advance and withdrawal of each megasequence caused erosion at both the top and bottom of the cycle.

## Methods

We have compiled over 3,000 stratigraphic columns from published outcrop data, oil well boreholes, cores, cross-sections, and/or seismic data tied to boreholes across North America, South America, Asia, Africa, and Europe. These data were input into a commercial software program that allows easy manipulation and compilation of the data set.

## Results

Our results support a single, progressive global flood as described in Genesis. Individual megasequences reveal the exact step-by-step progression of the floodwaters. The rocks on every continent exhibit similar patterns of water-based deposition at about the same time, with even the fossils deposited in a very similar order.

The rock data show only limited flooding of the continents during the earliest three megasequences (Sauk, Tippecanoe, and Kaskaskia).<sup>2</sup> The later three megasequences (Absaroka, Zuni, and Tejas) show much more surface coverage and volume of sediment deposited across each continent, indicating greater flooding. These data support that the Flood was progressive, peaking in the Zuni (exhibiting the most volume and surface extent) and receding in the Tejas.<sup>3</sup> In terms of stratigraphy, the maximum flood level falls near the end of the Cretaceous (Figure 1). This global high-water level is interpreted as Day 150 in the Flood year.

The Tejas contains the second-most sedimentary volume of any Flood megasequence, representing 32.5% of the total volume of rock deposited (Figure 2). We interpret the Tejas Megasequence as the rocks of the receding phase of the Flood, with much of this volume deposited along the continental margins. It includes the rocks formerly known as Tertiary (Paleogene and Neogene).

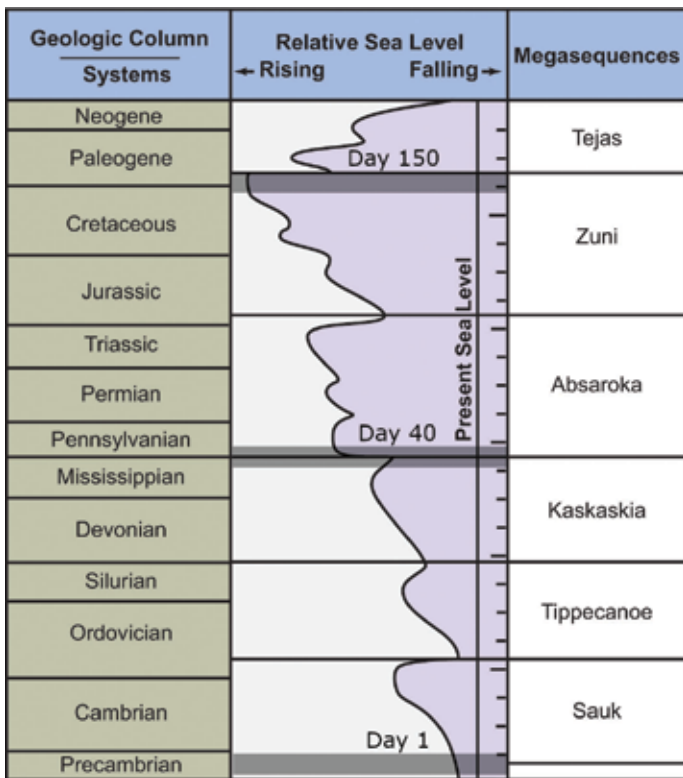


Figure 1. Data-based sea level and megasequence/geologic column chart

**Impact**

The consistency of the rock data across five continents confirms God's Word.

The waters prevailed and greatly increased on the earth, and the ark moved about on the surface of the waters. And the waters prevailed exceedingly on the earth, and all the high hills under the whole heaven were covered. (Genesis 7:18-19)

The stratigraphic columns across each continent show a clear

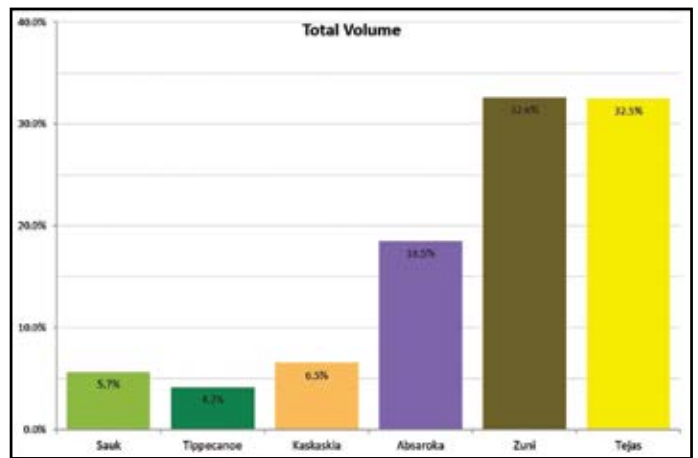


Figure 2. Worldwide sediment volume breakdown by megasequence. From left to right is the Sauk, Tippecanoe, Kaskaskia, Absaroka, Zuni, and Tejas. Note that the global peak in sediment volume is in the Zuni, the likely high point of the Flood.

progression of the floodwaters, just as Genesis 7 describes. All of the continents exhibit limited amounts of flooding in the early Flood stages and then show progressively more and more deposition. The waters peak at nearly the same time and finally recede simultaneously (Figure 2).

There is no other reasonable way to explain these data. Simultaneous sedimentary patterns across five continents are strong evidence of the global Flood recorded in Genesis.

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Dr. Clarey is Director of Research at the Institute for Creation Research and earned his Ph.D. in geology from Western Michigan University.



## Purpose

The Coconino Sandstone is one of the most well-known formations in Grand Canyon. The blond-colored sandstone, just three layers down from the rim, forms a distinctive cliff that can be traced as far as the eye can see. It is noted for its large, angled cross-beds that many scientists believe represent ancient desert sand dunes. In fact, some have said that this formation alone is sufficient to prove the Bible is wrong about Noah's Flood. Arthur Strahler claims, "In itself it [the windblown origin of the Coconino] is sufficiently weighty to totally discredit the biblical story of the Flood of Noah as a naturalistic phenomenon occurring in one year."<sup>1</sup> Strahler correctly reasoned that you cannot have a desert during Noah's Flood.

## Methods

As part of ICR's FAST (Flood Activated Sedimentation and Tectonics) project, Paul Garner, Ray Strom, and I sought to

overturn the reigning conventional desert paradigm for the Coconino. The project was funded by ICR, Cedarville University, Calgary Rock and Materials Services Inc., and some private individuals. It involved many years of field work, sample collection, library study, and laboratory work. The results were presented to both the conventional and creation science communities as abstracts and papers.

When we first started this project, the task was daunting. How could we ever find evidence to overturn a paradigm that had been well-established for over 75 years? What we found was surprising—the rocks had not been carefully studied in outcrop or under the microscope, and no significant work on the formation had been completed in decades.

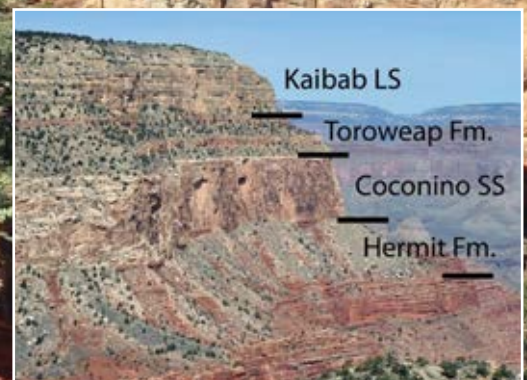
## Results

Here is a summary of our most significant findings.<sup>2</sup>

- Cross-bed angles. Modern dunes contain a wide range of angled beds,

# The Coconino Sandstone Water, not Wind

JOHN H. WHITMORE, PH.D.



*The Coconino Sandstone is about 300 feet thick and is the third formation down from the rim of Grand Canyon. Many claim the formation originated as desert sand dunes, thus disproving the reality of Noah's Flood.*

Image credit: John H. Whitmore

from a few degrees to about 40°. Our hundreds of Coconino cross-bed measurements cluster around 20°, with both high and low angles conspicuously missing. This is contrary to what many have claimed (“steep cross-bed dips”) but have never documented with actual measurements.

- Rounding and sorting. Wind causes desert sand grains to become round and sorts the sand grains so that they are all about the same size. For decades, claims have been made that this is what the Coconino was like, too—but no one looked at its sand grains under the microscope until we did. The Coconino has subangular grains and is moderately sorted (like sand found in the ocean), contrary to conventional expectations.
- Dolomite. The mineral dolomite occurs as clasts, rhombs, ooids, beds, and cement widely throughout the Coconino. Dolomite is a marine mineral and would not be expected to form in arid conditions.
- Mica. The mineral muscovite is a soft type of mica that we observed in almost every rock thin section under the microscope. Muscovite is normally destroyed by the abrasive action of the wind in deserts but is an abundant mineral in all kinds of aqueous settings.

- Extent. It was found that the Coconino forms a thin but continuous sheet extending from California to the Dakotas.
- Parabolic recumbent folds. Guy Forsythe found these unusual types of folds in Sedona, Arizona. They can only be formed by strong water currents.

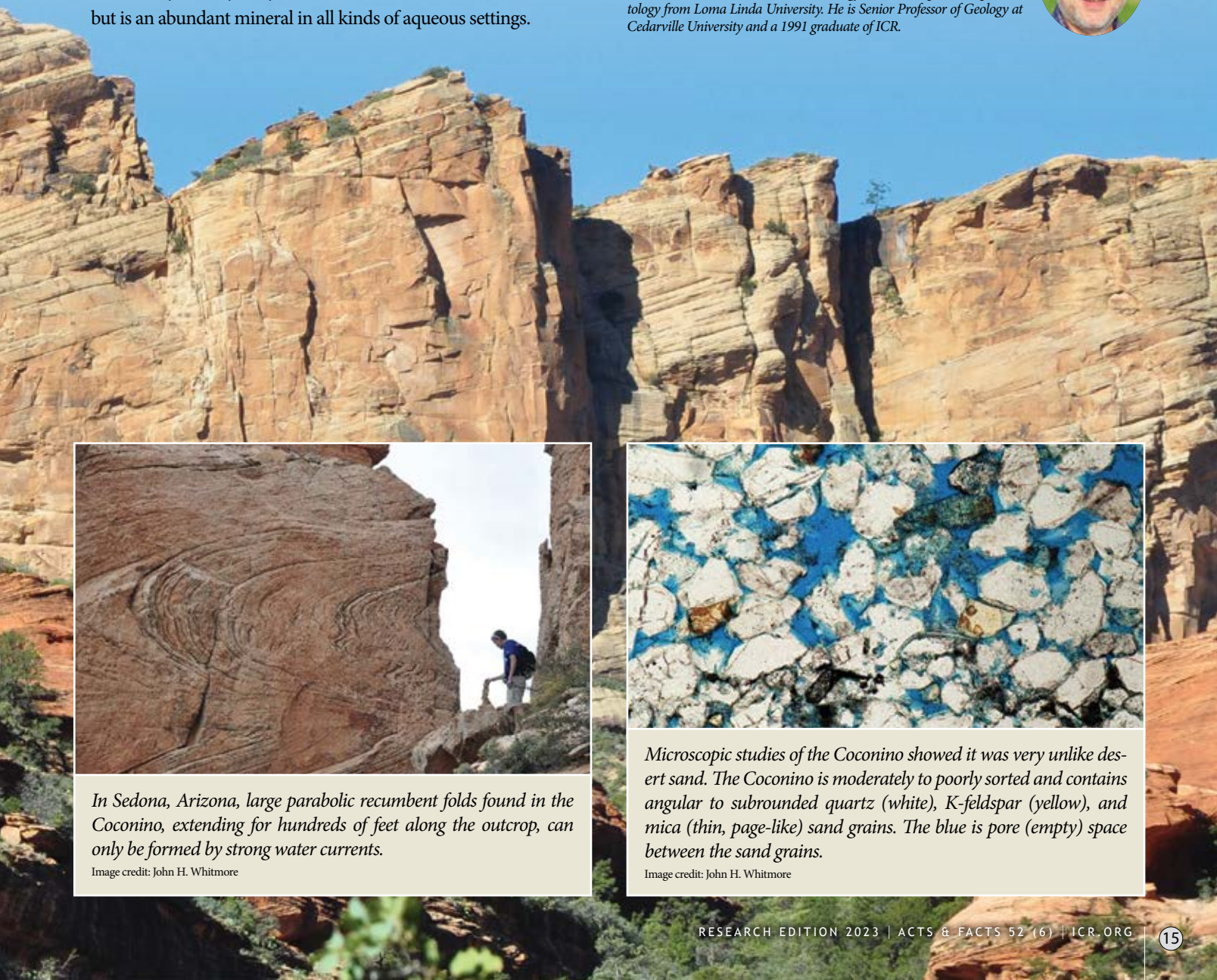
## Impact

Much more can be said about the sedimentology, paleontology, and stratigraphy of the formation that all conclusively point to an underwater origin. The project demonstrates that creationists should not be afraid to scientifically investigate well-established paradigms that challenge biblical views. Many surprises await! 📖

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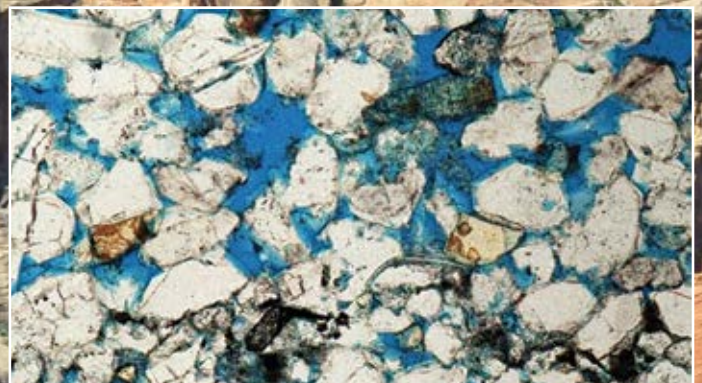
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*Dr. Whitmore earned his Ph.D. in biology with an emphasis in paleontology from Loma Linda University. He is Senior Professor of Geology at Cedarville University and a 1991 graduate of ICR.*



*In Sedona, Arizona, large parabolic recumbent folds found in the Coconino, extending for hundreds of feet along the outcrop, can only be formed by strong water currents.*

Image credit: John H. Whitmore



*Microscopic studies of the Coconino showed it was very unlike desert sand. The Coconino is moderately to poorly sorted and contains angular to subrounded quartz (white), K-feldspar (yellow), and mica (thin, page-like) sand grains. The blue is pore (empty) space between the sand grains.*

Image credit: John H. Whitmore

# COSMOLOGY RESEARCH

D . R U S S E L L H U M P H R E Y S , P H . D .

## Purpose

Taking the Hebrew text of Scripture at face value without inserting gaps or revising the meanings, the universe is only about 6,000 years old. Creationists have proposed various theories to explain how we can see distant heavenly bodies with such a short time available for the light to get here. Creationist cosmologies should also explain three other observed features of the universe: (1) the increasing red shift of light with increasing distance, (2) the cosmic microwave background radiation, and (3) the seemingly great age of the distant cosmos. Some creationist theories only explain a few of these additional features.

Many of the recent theories build upon Einstein's general theory of relativity, particularly the idea of gravitational time dilation. I have offered two such theories, one in 1994<sup>1</sup> and one in 2008.<sup>2</sup> But I have never been satisfied with such theories, even my own, because they did not rest upon a firm biblical foundation. Most of the authors, including myself, seem to have first gotten a physics idea and then tried to see if the idea could fit into Scripture. I wanted to find a more scriptural explanation.

## Methods

In search of this, I studied Scripture, prayed, and made some theoretical calculations with pencil and paper.

## Results

I noticed that Genesis 1 contains three strong clues that the speed of light *in the heavens* was extremely high during the first four days of creation. Relativity says the speed of light controls the speed of time. Earth days were of normal length (Exodus 20:11), so the speed of light on Earth was normal.

The high speed of light in the heavens means that billions of years' worth of events would occur there before the end of the fourth day on Earth. Also, light from the most distant galaxy would arrive on Earth within that day. If at the end of the fourth day the speed of light in the heavens dropped suddenly to normal, then we would see no difference between things closer or farther than 6,000 light-years away. Events would happen at their normal rate but would also look as if they had been happening a long time.

In a recent paper, I pointed out the above.<sup>3</sup> I did not develop the physics (if it was not completely miraculous) of how God did what He said, so I am looking into that question. I have a scripturally based idea about the physics behind those things and hope to publish it soon. Some elements of my first two cosmologies remain, including the idea that the earth is approximately at the center of the cosmos. Some creationists are calling this work *Starlight and Time 3.0*.

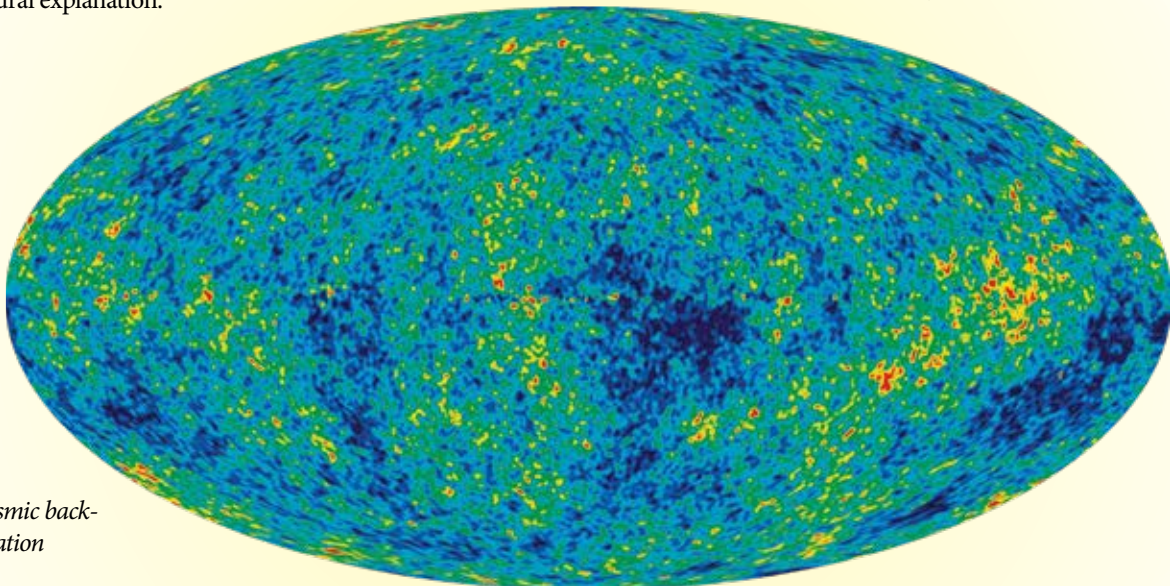
## Impact

I hope my work will increase understanding of how God got the light from distant galaxies to the earth by the end of the fourth ordinary-length day of creation as well as how the universe could appear to be old while really being young. It should increase faith in the Word of God. 🙏

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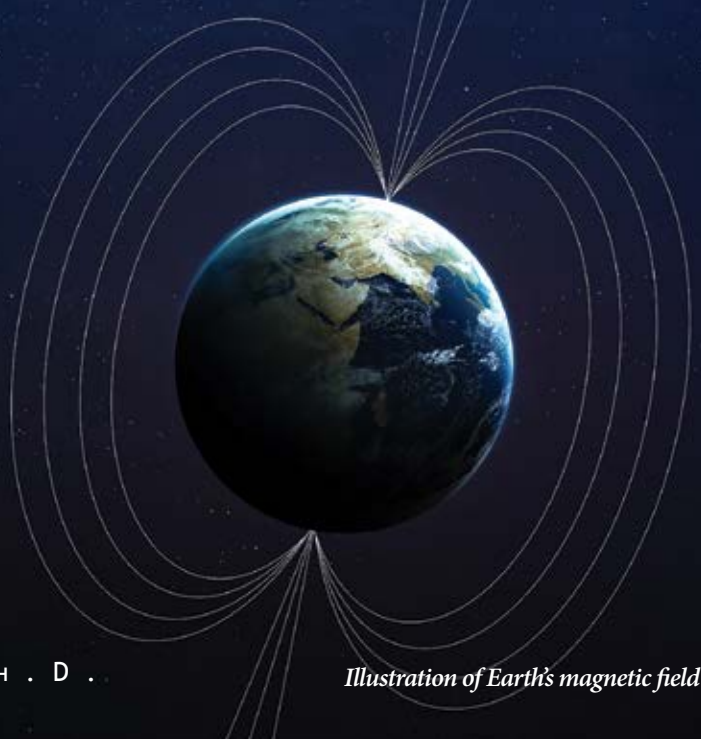
Dr. Humphreys earned his Ph.D. in physics from Louisiana State University.



A map of cosmic background radiation



# PLANETARY MAGNETISM



D . R U S S E L L H U M P H R E Y S , P H . D .

*Illustration of Earth's magnetic field*

## Purpose

In 1971, Dr. Thomas Barnes publicized a then “trade secret” of scientists studying the earth’s magnetic field, which is that the main part of the field has been decaying steadily at about 7% per century since it was first measured globally in 1829.<sup>1</sup> He showed how the decrease would be caused very simply by a decrease in the electric current in the earth’s core due to its electrical resistance. He also showed that the rate of decrease was fast enough to prohibit the current from having started more than a few dozen millennia ago, implying that the earth is young.

However, he did not show how to determine the initial amount of current in the core so we could determine the date of creation more exactly. Also, he did not explain how the current and field reversed direction many times during the year of the Genesis Flood, nor why the field fluctuated strongly up and down during the millennium after the Flood.

Lastly, he did not try to extend the theory to the other bodies in the solar system that either have a magnetic field now or had one in the past. So, I set about a decades-long program of research to try to answer these questions.

## Methods

In my research, I used the study of Scripture, collection of data from publications, and theoretical calculations with pencil and paper.

## Results


In 1984, I published a theory on how God started up the magnetic fields of the sun, moon, and planets.<sup>2</sup> I used the theory to explain the then-measured fields of some of the solar system bodies, and I made quantitative predictions about the fields of bodies yet to be visited by space probes.

The theory could only work if the solar system were the biblically prescribed age of about 6,000 years and the planets were made of the biblically suggested initial material—water, which was itself created. Over the next few decades, space probes verified all the predictions, the last one in 2012. This prediction was that Mercury’s crust would have been strongly magnetized by its then-strong field at creation.<sup>3</sup>

At the 1984 International Conference on Creationism, I offered a theory on how God reversed the magnetic field of the earth many times during the Genesis Flood.<sup>4</sup> It also explained why the field would fluctuate strongly in the following millennium. I made a prediction that thin layers of basalt could have captured portions of reversals occurring as the basalt cooled after deposition as lava. This was verified in 1988 and afterward.<sup>5,6</sup>

Mark De Spain and I wrote a little book, with no equations but a lot of color graphics, describing all the above research and more, compressing decades of technical papers into something a non-scientist college student should find readable and entertaining.<sup>7</sup>

## Impact

My hope is that this research will increase the confidence of believers in the accuracy of Scripture as science continually affirms the biblical record. 

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*Dr. Humphreys earned his Ph.D. in physics from Louisiana State University.*

# ICR and Explaining the Ice Age

LARRY VARDIMAN, PH.D., AND MICHAEL J. OARD, M.S.

## Purpose

There is strong geological evidence for an Ice Age, so the Institute for Creation Research (ICR) has always been interested in explaining it within a biblical framework. ICR founder Dr. Henry M. Morris briefly alluded to the Ice Age in his and John Whitcomb's groundbreaking book *The Genesis Flood*.<sup>1</sup>

In 1990, ICR published a theoretical explanation for the Ice Age in *An Ice Age Caused by the Genesis Flood*, now out of print, written by former National Weather Service meteorologist Michael Oard.<sup>2</sup> In this book, he used two mechanisms suggested by other creationists to explain how the Ice Age could occur after the Flood. One of the mechanisms was that volcanic aerosols trapped in the stratosphere after the Flood and replenished by post-Flood volcanism cooled the continents during the summer. The second mechanism was the warm ocean water after the Flood from pole to pole and top to bottom. Details can be found in *Frozen in Time*.<sup>3</sup>

## Methods

ICR atmospheric scientist Dr. Larry Vardiman and computational engineer Dr. Wes Brewer conducted computer simulations to see whether Michael Oard's proposed mechanism (warm oceans) could explain how thousands of feet of ice would accumulate within a biblical time frame. Through gifts from donors, a computer was built at ICR that had the power of a small Cray supercomputer. A computer model used by the National Weather Service was adapted to run on the ICR computer to forecast precipitation, wind speed, and storm patterns. Storms over the western U.S., in the Gulf of Mexico, along the East Coast, and in the Arabian Sea were simulated for higher ocean temperatures and compared with known storms.<sup>4,5</sup>

## Results

Warm ocean temperatures were found to energize storms and produce stronger winds, faster updrafts, and more precipitation. Warm oceans also caused more rainfall at middle latitudes. In the simulations, ice sheets and glaciers grew in high latitudes, some middle-latitude areas, and in mountainous areas within centuries, not hundreds of thousands of years. These were encouraging results because Michael Oard had estimated, based on heat balance equations, that the Ice Age probably lasted 700 years.<sup>2</sup>

Additional work explored the vast ages assigned to Earth's thick ice sheets. Michael Oard spent three months at ICR working on a



Greenland ice sheet

book refuting skeptics' claims that the deep ice cores of Greenland and Antarctica are millions of years old.<sup>6</sup> And Dr. Vardiman published a basic analytical model for the rapid growth of a post-Flood ice sheet.<sup>7</sup>

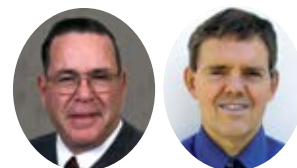
## Impact

The Genesis Flood's ability to plausibly explain the Ice Age is one of the strong points of the creation model of Earth history. Many have enjoyed the video documentary of Dr. Vardiman's explanation of a biblical Ice Age from atop Mt. Baker in Washington State with a view of a glacier in the background.<sup>8</sup> Visitors to both the original ICR museum in Santee, California, and the ICR Discovery Center in Dallas, Texas, are often excited and encouraged to see how the Bible makes sense of this ancient climate mystery. And these results continue to inspire additional work by other creation researchers. 🙏

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Dr. Vardiman earned his Ph.D. in atmospheric science from Colorado State University. Michael Oard earned his M.S. in atmospheric science from the University of Washington.



# Debunking an Iconic Uniformitarian Ice Age Theory

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

## Purpose

The Milankovitch, or astronomical, theory holds that the timing of Ice Ages is controlled by slow changes in Earth's orbital and rotational motions that vary the way sunlight falls on the earth. A famous 1976 paper in *Science* titled "Variations in the Earth's Orbit: Pacemaker of the Ice Ages" seemed to confirm the theory.<sup>1</sup>

An arbitrary "wiggly" pattern can be constructed by adding together, in just the right combination, waves of different frequencies and amplitudes. A graph called a power spectrum shows the frequencies of the waves that make the biggest contribution to such a pattern. If the astronomical theory is correct, one might expect power spectra of climate data to show strong peaks at frequencies predicted by the astronomical theory. This was the case in the 1976 paper and was seen as strong evidence for the theory.

These results depended critically upon an assumed age of 700,000 years for the most recent reversal of Earth's magnetic field. Yet, conventional scientists now claim this magnetic reversal occurred 780,000 years ago.<sup>2</sup> What did this age revision do to the evidence for the Milankovitch theory?

## Methods

I was unable to find the original, unaltered climate data used in the Pacemaker paper. So, using the figures in the paper, I very carefully reconstructed these data sets. I used the magnetic reversal to assign ages to the data the same way the Pacemaker authors did. I then successfully reproduced the power spectra in the Pacemaker paper. Finally, I redid these calculations using the new age assignment of 780,000 years.

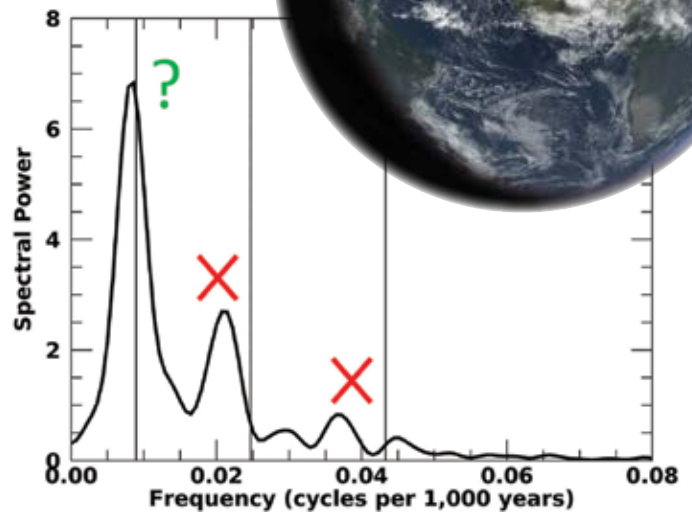
## Results

Agreement with Milankovitch expectations was greatly reduced (see Figure 1).<sup>3</sup> Details are found in the referenced articles, whose online versions contain links to my original technical papers. Scientists have made other changes to the Pacemaker climate data since 1976, so I also analyzed the most recent versions of these data I could find. In this case, agreement with the Milankovitch theory was even worse.<sup>4</sup>

I also found circumstantial evidence that conventional scientists had become aware of this problem in 1996 and had tried to quietly "fix" it, apparently without telling either the larger scientific community or the general public.<sup>5</sup>

## Impact

The Milankovitch theory is routinely used to assign ages to ice



*Figure 1. Vertical lines are astronomical frequencies predicted by the Milankovitch theory, and peaks represent climate cycle frequencies, calculated after taking into account the new uniformitarian age of 780,000 years for the most recent magnetic reversal. Two of the three cycles no longer agree with Milankovitch expectations, and the third cycle is problematic for other reasons discussed in my technical papers.*

cores and seafloor sediments. The acceptance of the theory has led many scientists to conclude that our climate is inherently unstable, requiring drastic action to fight global warming. Many Christians assume that Milankovitch-embracing scientists are hard-nosed empiricists who would gladly inform them if evidence for the theory were lacking.

My research shows this simply isn't the case. It also demonstrates that hundreds of uniformitarian age assignments are in doubt, and it calls into question an important argument for catastrophic climate change.<sup>6</sup> Although conventional scientists have ignored these results, they seem to have been a great encouragement to many Christians. One person even told ICR that this Milankovitch research played a role in his becoming a Christian and a young-earth creationist. 🙏

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Dr. Hebert is Research Scientist at the Institute for Creation Research and earned his Ph.D. in physics from the University of Texas at Dallas.



# Original Biochemistry in Fossils

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

## Purpose

In 1997, paleontologist Dr. Mary Schweitzer accidentally stumbled upon what appeared to be blood vessels and blood cells from a *T. rex* bone.<sup>1</sup> Proliferating publications of apparently intact tissues, including branching blood vessels, from long-buried dinosaur bones led ICR to begin its own dinosaur soft tissue research. Biomaterials like blood vessels or even mere protein remnants present a serious challenge for the deep times assigned to the fossils they come from.

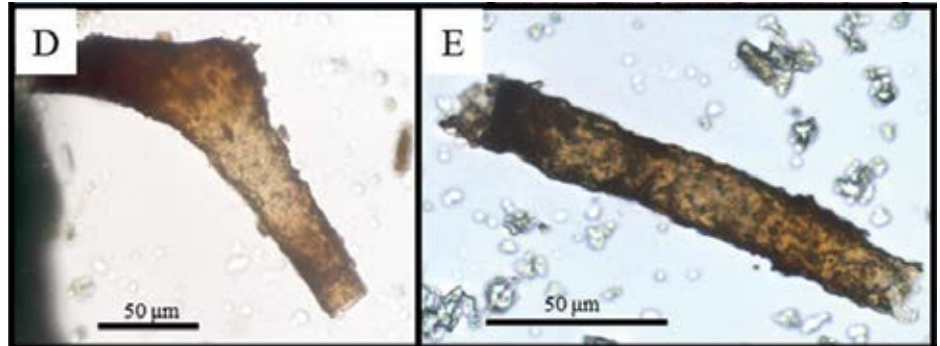
## Methods

We began a literature search in 2008. By 2013, we had compiled about 40 technical articles that described original biochemistry in fossils.<sup>2</sup> In God's providence, that initial report led to collaborations on original research, which blossomed for me into a Ph.D. in paleobiochemistry in 2019.

In my year of graduation, the list had more than doubled. Our 2019 review paper cited our first-ever use of second-harmonic generation imaging of fossil bone collagen remnants, alongside 85 other reports of biomaterials in fossils from around the world.<sup>3</sup> Conventional paleontologists had by then used over 30 techniques to verify whole tissues, including branching blood vessels, from fossil bones in at least three countries.

Our research, funded by ICR donors, aims to resolve answers to two questions. First, can these biomaterials come from any source other than the animals that were buried in the rocks? For this, we bring novel instrumentation or techniques to fossils in an attempt to more accurately characterize residual biomaterials such as proteins.

Second, how long can these biomaterials last in optimum conditions? For this, we apply novel techniques to more precisely



Thoracosaurus blood vessels<sup>5</sup>

characterize expected decay rates and thus shelf-lives. Our most recent study, done in partnership with the Creation Research Society, verified a new protein decay rate protocol.<sup>4</sup>

## Results

Our results thus far confirm the presence of bone collagen in some Mesozoic samples. Collaborators have actually sequenced bone collagen from a hadrosaur from Montana. We plan to submit the results to a conventional journal for publication to help dissolve false accusations of bias in creation research. When published, we will thereby add to conventional findings of young-looking biomaterials like osteocalcin, collagen, elastin, branching blood vessels, and cell structures, including nuclei containing genetic material.

Overall, we have not yet found a more reasonable source for these vertebrate-specific biomaterials than the buried animals themselves. We plan to continue characterizing original fossil proteins using new collaborators, instruments, techniques, and fossils as they become available.

Finally, preliminary results from our decay rate experiments suggest that the published decay rate for collagen may be too low. These experiments take a long time to

perform because collagen is so tough. If confirmed, this would spell bad news for those who wish collagen could last millions of years. Bone collagen—as opposed to collagen in cartilage, epithelium, or elsewhere in a vertebrate body—can last thousands, but not millions, of years based on repeatable experiments.

## Impact

Each new experiment on biochemical decay rates and each new discovery of apparently original biochemistry in fossils tighten the screws on evolutionary time and thus open wider the doors that lead to biblical creation and a recent Noah's flood. These really do look like Flood fossils. 🦖🦕

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Dr. Thomas is Research Scientist at the Institute for Creation Research and earned his Ph.D. in paleobiochemistry from the University of Liverpool.



# CET: Testing the Cavefish Model

S T A F F   W R I T E R

## Purpose

The Institute for Creation Research (ICR) is testing an engineering-based model of rapid biological adaptation called continuous environmental tracking (CET).<sup>1</sup> According to this model, all organisms actively track conditions within specific environments to perform adaptive self-adjustments through internal mechanisms. The purpose of this research is to demonstrate that organisms are the agents in control of adaptations that could not arise through random mutations or unguided genetic variation over artificial timescales. If we are correct, conventional hypotheses that attribute the exquisite fit of organisms to their environments through the agency of nature are unfounded.

## Methods

The animal model is *Astyanax mexicanus* (Mexican tetra), a freshwater fish species with two morphotypes—eyed surface-dwelling fish (surface fish) with distinct pigmentation and eyeless cave-dwelling fish (cavefish) with minimal pigmentation. Within ICR's new biology laboratory, we have exposed fish to treatments with (A) diurnal cycles of full-spectrum high-intensity light, (B) minimal light with different combinations of low oxygen and high CO<sub>2</sub> (low pH), and (C) deionized water. Importantly, the responses of experimental fish to treatments are directly comparable to untreated stocks of surface fish and cavefish.

We have also sampled adult fish tissues (e.g., body, gill, brain) for applications in molecular biology to detect biochemical, neuronal, and genetic patterns of expression and regulation underlying adaptive responses to experimental treatments. And we are currently characterizing eye growth and degeneration during early stages of development in larval surface fish and cavefish.

## Results

Preliminary results reveal:

1. Cavefish increase the amount and distribution of melanin pigment across their body when exposed to artificial sunlight.
2. Cavefish exhibit behavioral and physiological tolerance to low pH and low oxygen.
3. Surface fish decrease pigmentation across their body and labor during respiration in low pH and low oxygen.

4. Melanin pigmentation in surface fish is noticeably reduced by immersion in deionized water.
5. Cavefish and surface fish respond to treatments within weeks of exposure.
6. Experimental responses by cavefish and surface fish are not limited to multigenerational genetic inheritance.
7. Degeneration of eye formation by cell death (apoptosis) is detectable through confocal laser scanning microscopy.



*Astyanax mexicanus* surface fish (top), light-treated cavefish (middle), and untreated cavefish (bottom) in left-lateral views

Image credit: The Institute for Creation Research


Overall, results indicate that cavefish are pre-acclimated to experimental conditions that simulate limestone cave environments (low pH, low oxygen, and total darkness), and surface fish undergo active self-adjustment when placed into simulated cave environments.

## Impact

We are not surprised to find that animals are adaptive to specific conditions within contrasting environments. The CET model predicts a multisystem integration of molecular, biochemical, cellular, physiological, and behavioral adaptations across the whole organism. This model also predicts that multicellular organisms can modify the course of their development, epigenetic changes are heritable across multiple generations, and common

traits will be observed among a diversity of organisms living in similar environments. And these predictions are testable.

Thus far, initial experimental results indicate that *A. mexicanus* may undergo relatively rapid transitions between surface and cave environments, suggesting that adaptive traits in these fish and other animals are reversible. Rapid and reversible adaptations are not explained by any Darwinian models of evolution. Yet, prior to formulation and testing of ICR's innovative CET model, there had been no formal efforts by creation scientists to directly refute the mutation-selection paradigm through experimentation with live animals.

Accordingly, we have initiated a new direction in experimental science for ICR and creation science that sees every organism as a divinely engineered creation with adaptive capacity across multiple environmental conditions. Our research aims to confirm that life is thoughtfully and intentionally prepared by the infinite wisdom of our Creator, “in whose hand is the life of every living thing, and the breath of all mankind” (Job 12:10). 

## Reference

1. For more information, visit [ICR.org/CET](http://ICR.org/CET).

# Continuous Environmental Tracking An Engineering-Based Model of Adaptation

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

## Purpose

The Institute for Creation Research is engaged in our biggest science initiative in the last two decades, and it could be our most important undertaking to date.

We're working on model organisms and producing literature to build a theory of biological design (TOBD) that will fundamentally change how biological phenomena are interpreted.

Why is theory so important? A theory is a working hypothesis that logically compiles observations about something into an explanation about its origin or how it works. A plausible theory can actually change a person's worldview. Darwin's theory moved millions of people away from belief in a theistic origin for organisms. Dr. Henry M. Morris' model of Flood geology changed how geological features are interpreted and pointed millions back to a clear understanding of the historical biblical narrative.<sup>1</sup> But where's the creationist theory of biology that, for instance, models how biological adaptation operates like it was truly engineered?

Why is a TOBD urgently needed? First, if creationists and Intelligent Design advocates say that creatures look designed because they *are* designed, then we need a working theory of engineered biology—not just a focus on identifying problems with evolution. Second, ICR's longstanding model of adaptation was only a lighter version of evolution.<sup>2</sup> Finally, a theory is a framework that constrains how we interpret data and

formulate explanations. It guides the questions we ask and what we predict to find. Thus, a TOBD is paramount to setting ICR's innovative biological research agenda.

## Methods

Theory building begins with field observations and questions. Biological adaptation is central to evolution, so we decided to use adaptation as the first model for our theory of biological design. We observe that when environments change, creatures often rapidly express complex traits that are highly suitable to the new conditions.

What enables these organisms to so quickly and efficiently adjust to changing

external circumstances? Where should we look to discover how these changes happen—to something in the environment or to innate mechanisms within the organisms themselves? How did this adaptive process originate? Can nature function as an agent sufficient unto itself, or is an intelligent agent needed? Building a theory to answer these questions involves the following steps.

*Interpretation.* A TOBD assumes that creatures are engineered entities. Three major tenets guide ICR's interpretations of findings.

1. Intentionality—all traits function purposefully.
2. Individuality—like all engineered entities, organisms should be studied as discreet



*Male eastern bluebird*



Cavefish

individuals delineated by definite boundaries. Organisms are autonomous agents.

3. Internalistic—the operation of *all* biological functions arises from identifiable control systems *innate* to organisms.

*Expectations and Explanations.* Engineering-based, organism-focused assumptions shift ICR to a radically differently approach to biology than evolutionary biologists take. This is a necessary departure from the status quo so researchers can have the latitude to seek accurate explanations rather than rely on mutation-selection assumptions.

ICR holds that basic biological research is within the domain of engineering practice. Analyzing human engineering practices will inform research predictions. Thus, we expect corresponding system elements between human-designed devices and biological mechanisms performing similar functions. We expect that adaptation overwhelmingly occurs through purposeful modifications and not via mutation and broken systems. ICR crafts explanations positing that biological functions can be accurately explained by models that are developed utilizing engineering principles.

Continuous environmental tracking (CET) is ICR's engineering-based, organism-focused model of adaptation.<sup>3</sup> CET hypothesizes that organisms possess innate systems that actively and autonomously track changing conditions using system elements that are similar to those found in human-engineered tracking systems. As we research literature and model organisms, we search for sensors to detect changing conditions, if-then logical algorithms, and output responses in the form of suitably modified traits.

## Results

Research findings from our initial tests on blind cavefish support CET.<sup>4</sup> The striking reduction in eyes and skin pigmentation in blind cavefish stands out when compared to sighted surface fish of the same species. Evolutionists claim these are a loss of functions due to broken genes.

In contrast, the CET model hypothesizes that these are modifiable traits that may be “dialed up or down” as needed. Our work demonstrates that within a month, cavefish can regain pigmentation when placed in simulated river conditions, and surface fish lose pigment when placed in simulated cave water. It's significant to note that no fish died. Studies on eye modification will start soon.

## Impact

Our fish results already show the pow-

er of an engineering-based model like CET to prompt a new world of research questions we would have otherwise missed. Freed from the shackles of Darwin's death-driven selectionism, we no longer need to force-fit Darwin's thinking into the Bible by looking to the Fall and the curse of death to explain adaptation.

By seeking the Creator's originally designed purpose and mechanisms for adaptation, a new perspective opens that sees creatures as active, problem-solving entities that detect and solve very challenging environmental conditions through their spectacularly engineered, innate capacities—all to the glory of the Lord Jesus. 🙏

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4. See “CET: Testing the Cavefish Model” on page 21 of this *Acts & Facts* issue.

*Dr. Guliuzza is President of the Institute for Creation Research. He earned his Doctor of Medicine from the University of Minnesota, his Master of Public Health from Harvard University, and served in the U.S. Air Force as 28th Bomb Wing Flight Surgeon and Chief of Aerospace Medicine. Dr. Guliuzza is also a registered Professional Engineer and holds a B.A. in theology from Moody Bible Institute.*



White beluga whale

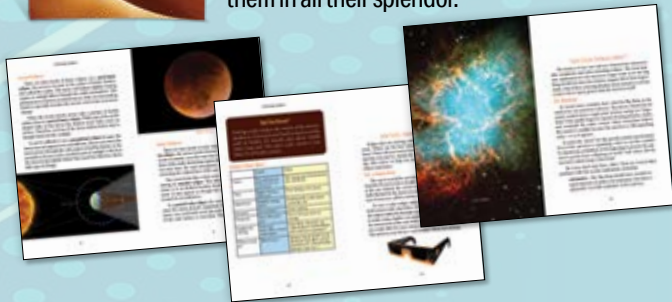
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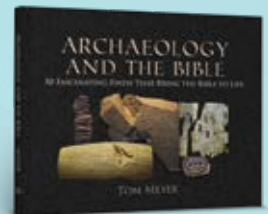


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