

RETHINKING RADIOMETRIC DATING

Evidence for a Young Earth from a Nuclear Physicist Dr. Vernon R. Cupps

> Many believe Earth to be around 4.6 billion years old and accept it as a scientific fact. But are the dating methods that appear to verify this age valid? With decades of experience in nuclear physics laboratories, ICR's Dr. Vernon Cupps examines the major radiometric dating methods and the significant problems with the dating methodology employed by many scientists.





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Looking Forward to New Days

s I'm writing this, the Institute for Creation Research is in the middle of stayat-home orders due to the COVID-19 pandemic. So, from my home office I'm reviewing articles for this issue of *Acts & Facts*. We're highlighting Mount St. Helens because it's been 40 years this month since the volcanic eruption. This event offers a good explanation for how enormous geologic changes can happen in a very short time, and ICR often uses it to illustrate how Noah's Flood could've made catastrophic changes to the earth in a single year.

In "Mount St. Helens, Living Laboratory for 40 Years" (pages 10-13), Dr. Tim Clarey and Mr. Frank Sherwin say, "In 1980, Mount St. Helens dropped an outdoor laboratory in geologists' laps, forcing them to accept catastrophic events as major contributors to Earth's overall geologic story." That historic event provided a lab—a profound learning experience—for scientists around the globe.

No doubt, it also impacted the people in the area around Mount St. Helens. Today, as I look at the images of the smoking volcano, I'm not thinking so much about geologic changes—I wonder about the people who lived through it and, sadly, those who did not. Our cover photo gives a glimpse of the power of the volcanic explosion and reminds us of the terror for those who lived nearby. Fifty-seven people died after it unleashed its fury on its surroundings. There was chaos and pain. Grief. Life forever changed for many people that day.

I'm pondering our current place in time, in the middle of the deadly coronavirus pandemic, hunkering down in our homes. I see gray, like the black and white cover image of that deadly event in 1980. Bleakness. I'm reminded of the tragedy, the deaths, and the life changes that happened with the catastrophe.

In a pandemic, we understand fear. We see our vulnerable loved ones and fear for their safety. We've struggled with the chaos and uncertainty of sudden life changes. We wonder how long this will last and if our lives will ever return to normal. Some of us have experienced the illness or death of a loved one. We know pain and grief.

Looking back at Mount St. Helens 40 years later, from a place of safety and with the assurance that the tragic event is in the past, we can see the catastrophe with a different perspective. We've learned some things from it. There are scars, but there's also new growth. Dr. Clarey and Mr. Sherwin say, "Today, the 40-year-old zone is a lushly treed forest" (page 13).

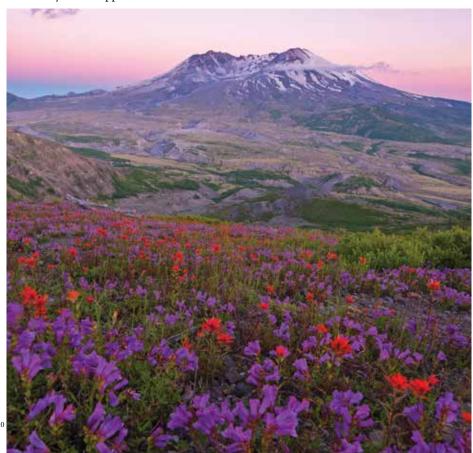
For us, in the middle of this pandemic, we see lots of gray. This virus has touched almost every part of our lives. And while the world may have stopped, for now, we know

this tragedy will pass. I hope by the time this reaches your mailbox that the chaos caused by this pandemic will be nearing an end. I know, for many, the pain and grief will be all too real for much, much longer. There will be mourning and scars.

I hope for new days with the "lushly treed forest" for us. It reminds me of the Israelites when they struggled in difficult circumstances and Isaiah reminded them of a better future, telling them that the desert would blossom as the rose (Isaiah 35:1-10). The image on this page reminds us that God is in control and with time, things change. The gray will be gone. We can look forward to life in living color. We'll witness new growth in our world, and flowers will bloom again.

Jayme Durant

Jayme Durant
EXECUTIVE EDITOR



CARVED IN STONE: A New Flood Model

article highlights

- ICR geologist Dr. Tim Clarey is using drilling data from around the world to develop an accurate geological model of Earth's past.
- The data-driven results from studying the continents simultaneously are a scientific challenge to those who doubt the occurrence of a worldwide flood.
- Dr. Clarey's Carved in Stone provides a detailed description of the Flood's year-long progression across the globe and ties the geological evidence directly to the Genesis account.



EDITOR'S NOTE:

Dr. Tim Clarey's Carved in Stone: Geological Evidence of the Worldwide Flood is finally here! The second installment in ICR's In-Depth Science series, Carved in Stone provides solid geological evidence that the world was once covered by a watery deluge just as Genesis describes. Here's an excerpt from the book's opening chapter. Please also see the ad on page 24.

arved in Stone is about real, touchable, drillable rocks. Few books are written on Flood geology, and even fewer are based on the actual rock data. Rocks are facts for geologists. Fossils found in the rocks and sedimentary structures, like laminations and cross-bedding, are also factual data. And the global patterns we can observe from the rocks give us great insight into the origin of the rocks. This book reports the results of a data-based study of the sedimentary rocks across multiple continents. It examines the rocks that are in place today and utilizes repeatable and real data.

No matter your background, this book will challenge you to rethink your views as we examine and expose the sedimentary rock record continent by continent, layer by layer. It is not a book of fiction but a book that reveals what the rocks really show. The results are the same whether you believe that Genesis records a global flood or a local flood, and whether you believe the earth is thousands of years old or billions. However, be forewarned, the data show undeniable evidence of a recent global geologic event.

Geology: The Science of the Solid Earth

Geology is the study of the solid earth, its rocks, and its history. Geology differs from the other natural sciences because it is mostly forensic or historical. Most other natural sciences—like chemistry, biology, and physics—use a higher percentage of repeatable experimentation. Geologists have to observe what is here to-

day and try to figure out how it may have gotten there in the past. We use the rocks and fossils as the pages in Earth's history book. As we go deeper in the pages, we go further back in time.

Geologists operate much like detectives, piecing together the clues to arrive at the best explanation for the observable data. Unfortunately, much of the rock record we observe is not being actively repeated. The rocks often reveal things that happened in the past that are not happening today. These observations contrast sharply with the traditional uniformitarian thought taught to most geologists. The philosophy of uniformitarianism stresses that "the present is the key to the past."

Geologists who hold to this view think they can explain all of the rocks by studying processes that occur in the world today, like studying current rivers or volcanic eruptions to understand past river systems and volcanoes. However, what if the events that created the rocks only happened once in history? Uniformitarianism fails if we cannot find a modern event to explain what we observe. Where in the world today do we find 10,000 feet of pure salt being deposited like we observe below the Red Sea? Where are 100- to 200-foot-thick coal seams being deposited like we see in Wyoming? We need to recognize that there were past events that may only have happened once in history, like the global Flood.

It's a Battle of Worldviews

The battle for science today is a battle of worldviews, and geology is at the forefront. Young-earth geologists accept God's Word as truth, and they accept the book of Genesis as a true historical account of the creation and the Flood. After all, it was written by the One eyewitness to both events.

Young-earth geologists believe there was a global flood about 4,500 years ago. In complete contrast, whether they accept some of the truth of the Bible or not, old-earth geologists have fabricated their own alternative story of Earth's origin and the origin of its rocks. Sadly, this view has become mainstream science and is taught exclusively

in all public institutions and even most religious institutions.

Francis Bacon (1561–1626) is often credited with devising the scientific method in which experimentation and collected data are used to make conclusions. He accepted the Flood narrative and the 6,000-year-old age of the earth. Unfortunately, few scientists today are using the scientific method as outlined by Bacon. They practice what has been called *verification science* where they merely attempt to verify what they deem to be already known. This type of science leaves little room for falsification and true testing of hypotheses and theories.

Keep in mind that prior to the early 19th century most scientists were young-earth creationists like Francis Bacon. They believed the earth was about 6,000 years old and there was a global flood. They believed the Bible was historically accurate. Deep time was not readily accepted until midway through the 19th century, about the time Darwin proposed his theory of evolution. Evolutionists found they needed both concepts for their alternative version of origins. They needed deep time (millions of years) to give their proposed evolutionary theory a chance at being accepted.

So, the geologists looked at the thick layers of sedimentary rocks and tried to imagine the amount of time it took for them to form using rates they could observe today. This is the central theme of uniformitarianism. Uniformitarian scientists insist that nearly all the rocks can be explained by the same processes observed today, with exceptions for episodes of more rapid activity and a few local catastrophes. This version of uniformitarianism is called *actualism*. For these reasons, many 19th-century geologists quickly became convinced that the sedimentary rock record must have formed over millions of years at slow uniformitarian rates.

Soon after this, all sorts of doubt about the historical accuracy of the Bible began to infiltrate the sciences. People wondered if God really meant what He said in Genesis. Did God really say there was a global flood? These questions are eerily reminiscent of the questions the serpent asked Eve in Genesis 3. And these are the same doubt-filled questions being asked today by scientists and theologians.



I am frequently asked, "Where is the evidence for the Flood?" And I just answer, "Look down at the ground below your feet." Most places in the world are covered by thousands of feet of sedimentary rock filled with billions of fossils. The evidence of the global Flood is at your feet. We just need to be receptive of the truth of the rock record.

And yet old-earth geologists look at the same rocks and insist there was no such thing as a global flood. They claim the earth was never completely flooded at any point in its history. But, as this book will reveal, they have never looked at the rock record across multiple continents simultaneously. They merely accept the secular story as taught to them by their geology professors, who were taught the same story by their professors, and on and on. They don't necessarily question what they are told. They just accept the words and tales of what is called science.

Sadly, most geologists today believe in an old earth because of this indoctrination. They believe radioisotope dates "prove" an old age. In the process, they have convinced themselves that the majority of scientists cannot be wrong. However, many are never taught about the assumptions that go into the determination of every rock age estimation. I hope this book opens the minds of old-earth geologists to the truth. Although this book is written from a young-earth perspective, I hope both young- and old-earth geologists recognize the abundance of factual rock data that is presented. These data are the same no matter what your worldview is. This is truly data-driven science.

Formulation of a New Flood Model

In the last 25 years, the creation geology community has not progressed appreciably beyond the Flood model of catastrophic plate tectonics (CPT). A comprehensive Flood model that explains the distribution of global sedimentation patterns, the fossil record, and the timing of uplifts has remained problematic. This book presents a new and novel Flood model that is based on analysis of rock columns across multiple continents, developing a framework to which future studies can be linked. It builds on the CPT conceptual model but then takes it a step further by explaining the rock record in greater detail. A primary source of information to begin this study was the American Association of Petroleum Geologists-sponsored COSUNA (Correlation of Stratigraphic Units of North America) data set for the United States. These data consist of compiled stratigraphic columns, providing both lithology and thicknesses, at hundreds of locations across the U.S. Most of these columns were compiled by state and government geologists and supplemented by input from the oil and gas industry. Other data were compiled directly from oil well logs and from government reports, especially in western Canada.

Without a data-driven model, we cannot expect to improve our scientific understanding. The present model utilizes nearly 2,000 stratigraphic columns across North America, South America, and



Africa, including the Middle East and parts of western Europe. The rocks identified at each site are factual data. It is only the interpretation of time within and between the rock layers that creates a difference between the views of uniformitarian and creation scientists.

The results are a challenge to all scientists. The creation community needs to take a fresh look at all available geological data and create a global Flood model that isn't based on merely tweaking secular ideas but is instead a new conceptual model based on tangible geological data. This book is an attempt to develop a Flood model from that perspective. Secular ideas are employed but not necessarily adhered to. The science is the same. It only differs in the interpretation of the data. Results of this study are presented in a biblically based, global Flood model that assumes the Flood was real and occurred about 4,500 years ago. These results, because they are based on the rocks that are actually in place, are empirical and repeatable. Someone else could spend years of their life gathering and compiling the data and arrive at nearly the same results. These are the rocks that are there across the continents.

A final goal is to provide the Christian community and creation scientists with a better understanding of the progression of the Flood across the globe, tied directly to the biblical narrative of God's judgment in Genesis 6–8. In a sense, this data set will help build a chapter-by-chapter model of how the Flood changed the surface of the earth. In our human minds we tend to make the Flood small since we have never witnessed a catastrophe of this extent. Only the Bible and the rocks left behind can reveal the awesome scale of the Flood event.

As this research journey unfolded, I began to see how the overall geology of the world (the rocks, fossils, and tectonic plates) all started to make sense. Patterns emerged again and again that could only be explained by a recent, global flood. And they all fit perfectly within a biblical worldview. The rocks don't lie!

Abridgement of the Introduction to Timothy Clarey's book *Carved in Stone: Geological Evidence of the Worldwide Flood*, available from the Institute for Creation Research in Dallac Tayor

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



Special Discovery Center Origins Event

popular Dallas science museum recently featured a special exhibit with an evolution-saturated take on human origins. No doubt many children, students, and families concluded from their visit that science proves they descended from ape-like ancestors. This spurred the ICR Discovery Center for Science & Earth History to offer our visitors the opportunity to delve deeply into the Bible's perspective on human origins. In March, we hosted a special event called Origins: Re-examining

the Evidence. Three ICR Ph.D. scientists offered live presentations throughout the day, sharing their expertise in fossils and human origins, genetics, and geology.

Dr. Brian Thomas tackled multiple evolutionary icons, exposing flaws in the biology and anatomy of the specimens used as "proof" of human evolution and offering a biblical perspective on why humans were created fully human from the beginning. Dr. Jeff Tomkins talked about his long-term research soundly refuting the claim that humans and chimps share a 98% genetic similarity. And



Dr. Tim Clarey pointed out evidence in the geological record that reveals problems with popular claims about fossilized "pre-humans" found on the continent of Africa.

The event ended with a Q&A session with all three speakers, and visitors then explored the exhibit hall, planetarium, and Discovery Store.

We look forward to hosting future events that build Christian believers' confidence in the Genesis account and equip them to be creation advocates within their spheres of influence.



This far exceeded my expectations. The presentations were all very interesting, and the idea of having these seminars is great. Thank you!

— R. W.



Several summers ago, Dr. Brian Thomas of the Institute for Creation Research (ICR) spoke about dinosaurs and creation at our summer family Sunday school class! My son Isaac loves and soaks in everything he can about animals and the creation of the world, and he signed himself up that day to receive ICR's magazine, Acts & Facts.

Today, my mom took him to ICR's

Discovery Center, and Isaac asked the staff if he could meet Dr. Thomas! Dr. Thomas found my mom and Isaac in

the exhibit area, and he was so gracious to spend some time with Isaac. Isaac also wanted to give him one of his own

"artifacts"—one of his foreign coins.
This was such an awesome experience
for him! I believe these are seeds planted

in Isaac that will continue to grow his love for animals and God's creation. Thank you, Dr. Thomas, for investing in my son.



For updates on current ICR events, visit ICR.org/events. For information about the ICR Discovery Center for Science & Earth History, visit ICR.org/events. For information about the ICR Discovery Center for Science & Earth History, visit ICR.org/events.

For the serious science reader

recently published two papers supporting a high Flood/post-Flood boundary. Both articles are a result of ICR's ongoing investigation of the stratigraphic columns of the world. The first article details our research in the area around the South Caspian Sea. The second article takes a closer look at the sedimentary rocks of Europe and the area surrounding the nation of Turkey.

Determining where the Flood ended in the rock record is of great importance in developing a Flood model. The location of this boundary has been debated for de-

cades. The two most commonly proposed locations are either high in the Cenozoic, now called the N-Q, or lower in the rock record at the bottom of the Cenozoic, commonly referred to as the K-Pg boundary. We think our investigations have finally resolved the issue.

Our research concentrated on the strata surrounding Turkey, the presumed landing site of the Ark. The first paper details our findings east of Turkey beneath the southern Caspian Sea. Here, we found about 17 km (10.5 mi) of Tertiary (Paleogene and Neogene) strata covering an area over 300 miles wide. This is one of the thickest deposits of Tertiary sediment in the world, and all of it was deposited on top of Cretaceous and older rocks.

In addition, at least the lower half of this massive Tertiary deposit is composed of strata laden with marine algae. The algae is considered the organic source material for many of the oil fields in the South Caspian Basin.¹ This finding demonstrates that uninterrupted marine deposition continued from the Cretaceous level up through much of the Upper Neogene (Upper Cenozoic). We concluded that the Flood could not have been over in this area until late in the Cenozoic, after these marine strata were deposited.

Our second paper examines the strata across Europe and Tur-

Compelling Evidence for an Upper Cenozoic Flood Boundary

article highlights

- ICR's Column Project team recently published technical papers on the location of the post-Flood boundary in the rock record.
- Stratigraphic data from the Caspian Sea area, Turkey, and Europe reveal evidence of the Flood's timing.
- These rock layers show that the Flood ended at the Neogene-Quaternary or N-Q boundary.

key. Again, we found uninterrupted marine strata such as limestone, rock salt, and glauconitic sands (indicative of ocean deposits) above the K-Pg boundary, extending from Central Europe to the Middle East and entirely surrounding modern-day Turkey.² These findings led us to conclude the Flood/post-Flood boundary must be *above* the level of these marine layers.

Establishing the N-Q Boundary

These results demonstrate that the vast majority of Cenozoic strata were not post-Flood but in-

stead represent the Flood's receding phase. Massive marine deposits across vast areas of the world, and especially around Turkey, indicate Flood processes were still active well into the Upper Cenozoic. It would have been impossible for the rescued humans and animals to get off the Ark if the land was still flooded.

We've found that the correct Flood/post-Flood boundary is near the top of the Pliocene level, coinciding with the top of the Neogene and the base of the Quaternary. There is even a major recognizable extinction in the rock record at this level.³ We propose calling this Flood/post-Flood boundary surface the N-Q (Neogene-Quaternary).²

Any scientific debate must be measured by the strength of the data supporting each viewpoint. The overwhelming strength

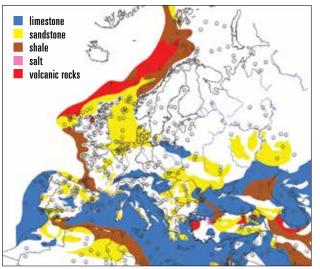
of the global rock record needs to be included and acknowledged in any assessment of the Flood/post-Flood boundary location. The rocks clearly reveal that the Flood ended at the N-Q.

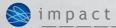
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Map of the basal rock type in the Tejas Megasequence (Paleogene and Neogene) for Europe, North Africa, Turkey, and portions of the Middle East.

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





For the serious science reader

Mount St. Helens, Living Laboratory for 40 Years

article highlights

- The 1980 eruption of Mount St. Helens changed the way many geologists view world geology.
- The eruption's geological results demonstrate that rapid deposition and erosion are the norm.
- Plants and animals quickly repopulated the damaged area, proving the resiliency of Earth's ecosystems.
- Mount St. Helens' living laboratory continues to offer evidence supporting catastrophism and the biblical worldwide Flood.

Mount St. Helens' eruption on May 18, 1980

TIM CLAREY, PH.D., AND FRANK SHERWIN, M.A.

othing put a damper on uniformitarianism like the Mount St. Helens eruption on May 18, 1980. That explosion still echoes through the halls of the scientific establishment 40 years later. For nearly 150 years prior to the eruption, strict uniformitarianism reigned supreme in geology. The influence of James Hutton and his concept of deep time had trickled down

to even the smallest details. Every geological process was thought to proceed as slowly as those observed today. Erosion and deposition were seen as steady, methodical processes requiring vast amounts of time to make a substantial impact.

In 1980, Mount St. Helens dropped an outdoor laboratory in geologists' laps, forcing them to accept catastrophic events as

major contributors to Earth's overall geologic story. Many geologists call this *actualism* as opposed to uniformitarianism. They now accept the evidence that catastrophic events make major impacts on the rock record and that the normal everyday processes of deposition and erosion contribute very little.

Mount St. Helens has even impacted the science of biology. Recovery by flora and fauna in the devastated area around the volcano occurred very quickly. Many centuries aren't required to turn a lifeless terrain into a lush biota filled with life. Plant and animal repopulation is remarkably fast. All of this has implications for the worldwide Flood recorded in Genesis.

Rapid Deposition

The cause of the sudden shift in thought was scientists' direct observation of the effects of Mount St. Helens' volcanic activity. Geologists documented that up to 400 feet of new strata have formed at the volcano since the first eruption in 1980.² These deposits originated from air fall, pyroclastic flows, landslides, and even stream water. The geologists saw that laminated deposits (thin layers) can be produced quickly. Previously, laminated strata were believed to take many years to form, with possibly one layer laid down each year. We now know this assumption is false. One deposit at Mount St. Helens resulted in the creation of a 25-foot-thick finely laminated unit in a matter of hours!²

New studies show that rapid deposition is the norm, not the

exception. Secular science has used the slow deposition of sediments like clay and lime mud (micrite) as an argument for an old earth, claiming that all clays form by slowly settling out of stagnant water. People have been indoctrinated with the notion that enormous periods of time are necessary to explain these thick rock layers.

We do see clay settling out of stagnant water today, but the clayrich rocks we observe didn't form that way. Rocks like shale and mudstone often exhibit fine laminations a few millimeters thick. These layers didn't result from deposition in stagnant water. Recent empirical evidence demonstrates that laminated clays must be deposited in energetic settings by moving water.³ The results match the predictions of creation geologists who interpret clay, which forms mudstones and shales, as rapid deposits that occurred during the year-long Flood.⁴

A second finding also has uniformitarian geologists bewildered. Although some lime-rich rocks called *carbonates* have been interpreted to form in high-energy settings, carbonate mud has always been thought of as forming in "quiescent ocean settings." But laboratory studies show that micrite is also deposited by moving water. Laminated limestones, like laminated mudstones, aren't the result of a slow settling process, as was previously thought.

According to the authors of a recent study, "these experiments demonstrate unequivocally that carbonate muds can also accumulate in energetic settings." They added, "Observations from modern carbonate environments and from the rock record suggest that deposition of carbonate muds by currents could have been common throughout geologic history." 6



Rapid Erosion

Mount St. Helens also demonstrated that erosion can be much quicker than previously claimed. The eruption's steam blast, ash flows, and volcanic mudflows rapidly changed the landscape surrounding the volcano and its waterways. The North Fork of the Toutle River had to carve a new course since the 1980 eruption blocked the original passage with nearly a cubic mile of debris.²

After a small subsequent eruption on March 19, 1982, a mudflow from melted snow and ice flowed down the North Fork of the Toutle River Valley, carving a new canyon up to 140 feet deep.² This "Little Grand Canyon" is an approximately 1/40th-scale version of Grand Canyon, demonstrating the rapid scouring power of water. Creation geologists frequently use this analogy to explain the rapid formation of the much larger Grand Canyon. Erosion can be fast under the right conditions, and creation geologists believe the global Flood provided ample water to carve canyons and erode mountains in a short amount of time. This was especially true in the receding phase of the Flood as water energetically washed off and through the soft-sediment-laden landmasses into the newly forming ocean basins during continental uplift.

In fact, it's been well known for decades that even uniformitarian rates of erosion are still so fast that the continents themselves should have been reduced to sea level long ago.⁷ A recent study confirmed that the average erosion rates of exposed rocks are about 40 feet per million years.⁸ This would completely erode most continents in less than 50 million years, and yet they still exist.

Rapid Removal of Vegetation

The 1980 eruption of Mount St. Helens sent the largest landslide ever recorded down the north side of the mountain. Over 3.3 billion cubic yards of rock and ice, moving at speeds exceeding 150 mph, tore the side of the mountain open, unleashing a devastating steam blast. About 25% of this material ended up in Spirit Lake.⁹

The 680 million cubic yards of material that hit Spirit Lake formed a gigantic tsunami that ripped across the hillsides north of the lake. This water wave sheared off an estimated one million fully grown trees near their bases and transported the logs back to the lake as the water receded. Many of these trees have been found floating upright with the root end down. Following a survey of the floating trees in 1985, it was estimated that more than 19,000 upright logs had settled on the floor of the lake.

Dr. Harold Coffin of the Geoscience Research Institute found that many of the upright trees were randomly spaced, not clumped together, across the bottom of the lake.² And he noted that many of the trees had settled at various levels in the mud, giving the appearance of deposition at different times.

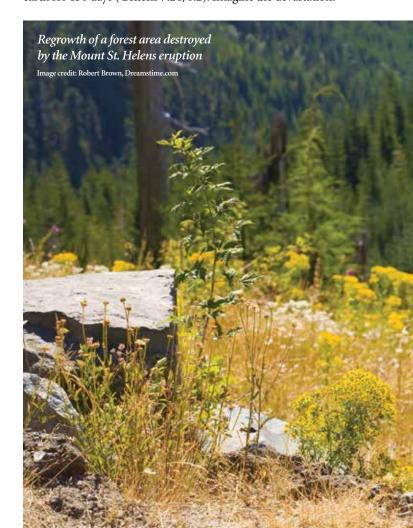
Creation geologists use Spirit Lake's floating log mat and sunken logs as an analogy for the likely devastation that occurred during the Flood year. The sunken upright trees are used to explain the numerous polystrate trees often found extending through coal beds. They also help explain petrified forests like the one at Specimen Ridge in Yellowstone National Park. There we find upright trees at different stratigraphic levels that could have formed all at the same time during the global Flood.

Today, 40 years later, a massive log mat remains floating around Spirit Lake. However, if this mat had been rapidly buried by subsequent sediments, it's likely these trees would have turned into a coal bed. Coal beds also don't take vast amounts of time to form; they just need the right conditions.

Rapid Recovery of Flora and Fauna

When Noah and his family looked out on the bleak and barren post-Flood landscape, they must have wondered how long it would remain that way. After a natural disaster, creation scientists observe environmental recovery processes and extrapolate to the worldwide reclamation after the Flood. Mount St. Helens continues to be a scale model of the world God destroyed and reformed as a result of His judgment.

Scripture states that "all the fountains of the great deep were broken up" (Genesis 7:11) as the Flood began. This breakup most likely included worldwide volcanic activity that continued all over the earth for 150 days (Genesis 7:24; 8:2). Imagine the devastation!



Could there be any recovery after such wholesale destruction? Surtsey is a good example of a mature and varied landscape that developed in just a few months following the island's volcanic formation in the Atlantic Ocean in 1963. A life scientist who studied it stated in 2008, "Surtsey always provides surprises....We discover about 20 new species [of life forms] each year." Together, about 60 plant species including mosses, lichens, and an evergreen shrub have been established since Surtsey formed. Its rapidly growing ecosystem is powerful evidence against critics who claim that Earth could not possibly have recovered yet from a worldwide flood that happened only thousands of years ago.

In 2015, research was published¹² regarding "river ecosystems [that] show 'incredible' initial recovery after dam removal" in the western United States.¹³ A related article stated:

During his time conducting the studies in Washington, [ecologist Christopher] Tonra watched reservoir beds that looked like moonscapes return to vibrant, rich habitat and cascades emerge where none had been, at least for the last century. "Watching that happen was just incredible," he said.¹³

The most significant volcanic upheaval in 20th-century America witnessed a similar remarkable renewal of a devastated environment.

When Mount St. Helens erupted in 1980, it destroyed every living thing around it. Gas, ash and rock, heated to over 1000 degrees Fahrenheit, sterilized a 60-kilometer square area, leaving

a gray lunar-looking landscape devoid of plants and animals. Within a year, the first plant life had started to return, just as ecologists predicted it would.¹⁴

In fact, "the recovery of the Mount St. Helens area was 'a wonderful living laboratory' to investigate how ecosystems and species respond to and recover from major disturbances, said Charlie Crisafulli, a research ecologist." Biologists at the University of Washington observed the recovery of two areas covered by violent types of debris flows or mudflows called *lahars*. They found "there are striking differences—the forest-surrounded lahar has recovered much faster and has pines and firs atop it, while the more isolated lahar is still mostly covered by grasses, early-stage colonizers." ¹⁵

The Mount St. Helens area has quickly recovered from intense devastation. After only 20 years, biologists noted a rapid recovery of animals and plants on what had been something close to a thermonuclear blast zone. Today, the 40-year-old zone is a lushly treed forest. Noah and his family no doubt witnessed the same kind of rapid recovery in the decades following the global Flood.

Conclusion

Mount St. Helens has provided 40 years of empirical data that support catastrophism and refute strict uniformitarianism. The eruptions have even changed the way secular scientists view Earth's processes, shifting them to be more accepting of catastrophism. Creation scientists will continue to use Mount St. Helens as a living laboratory to study the devastating effects of events like the global Flood and Earth's rapid recovery in miniature. It is truly a lasting monument to catastrophe.

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ngaging in worship seems unavoidable for humans—even the atheistic thinkers who dominate modern science. Reverence

and adoration lie at the heart of worship. Scripture tells us the ancient Egyptians, Canaanites, Israelites, and other cultures worshiped idols. They imagined their idols held power and could sway personal, political, or physical events.

Ironically, some of the scientists who scoff at the way our ancestors gave god-like attributes to inanimate objects follow similar patterns today. Each person should examine their heart to root out subtle idolatry.

Romans explains idolatry and its effects:

Therefore God also gave them up to uncleanness, in the lusts of their hearts, to dishonor their bodies among themselves, who exchanged the truth of God for the lie, and worshiped and served the creature rather than the Creator, who is blessed forever. Amen. (Romans 1:24-25)

I've photographed ancient hand-size Canaanite idols on display at the University of Chicago, as well as a modern multistory Buddhist idol in China. Though millennia, measurements, and miles separate them, they share the same purpose: They give people something to worship instead of God.

Even the areligious can fall prey to idolatry without knowing it. Idolatry is so damaging and pervasive that God listed it first in His Ten Commandments.¹ Modern scientific minds commit idolatry when they revere and adore natural forces for crafting creatures instead of the God of all creation who actually made them.

Scientists Mark Hallett and Mathew Wedel authored the academic book *The Sau-ropod Dinosaurs*. In it, they wrote:

From osteoblasts that evolved millions of years earlier to originally give ancient fish protection from sea scorpions, natural selection evolved bioarchetectural marvels of strength and lightness to support vast weight and yet enable flexibility and movement [in sauropods].²

These authors replaced the Creator with evolution by natural selection. Does this differ so much from the ancients who revered their idols' supposed power over physical events?

Make no mistake—sauropods show exactly the kind of ex-

quisite design that only God could craft. Wedel and Hallett sprinkle design terms throughout their book. They describe "very lightly constructed short skulls," but who is the constructor? In reference to sauropod vertebrae, they write, "Each el-

egant, sculpted-looking shape played a part in providing the giant animals with the most support needed with the least amount of bone."⁴ Will the real sculptor please step

forward? Terms like "constructed" and "sculpted" imply a purposeful, personal, powerful, and perceptive otherworldly architect. The God of the Bible meets all those criteria. Natural processes do not.

Has anyone seen or recorded natural processes such as climates and predators behaving like architects or engineers who design and build marvelous buildings or

machines? As an actual Person, God qualifies. Nature qualifies as nothing. It has no mind, being, or agency, just like all those nothing idols. Thus, whoever ascribes architectural and engineering marvels to nature—whether called natural selection, evolution, or physical processes—robs God of the credit only He deserves.⁵

So, what steps can we take to root out naturalism's idolatrous tendencies? When we see words that describe design, we need to keep the real Designer in mind. We need to recognize when scientists make unscientific statements and ask for evidence that shows natural processes can actually perform what naturalists say they can.

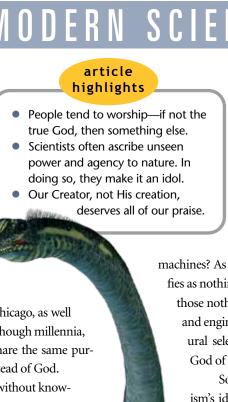
Finally, direct your expressions of reverence and admiration to the real Maker every chance you can!

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5. "I am the LORD, who makes all things, who stretches out the heavens all alone, who spreads abroad the earth by Myself" (Isaiah 44:24).

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HEBERT,

Delighting in GOD'S HANDIWORK in the Classroom

volutionists often see themselves as champions of learning and education—proponents of "enlightenment" fighting the forces of ignorance and superstition, largely represented in their minds by conservative Christianity. It's painfully obvious that the quality of education, at least here in the United States, has greatly deteriorated over the years. And there is simply no way that evolutionists can blame this educational decline on creationism or Christianity, since these worldviews have been effectively outlawed from public classrooms.

One can't help but wonder if the secu-

larization in our public schools is directly robbing children of the joy of learning. Psalm 111:2 says, "The works of the LORD are great, studied by all who have pleasure in them." Many Christians have personally experienced the truth of this verse as they delight in God's handiwork. ICR's Dr. Randy Guliuzza is fond of saying, "Worship should be the normal response to science." In fact, creationist physicist James Clerk Maxwell had Psalm 111:2 inscribed in Latin above the main entrance of the famous Cavendish Laboratory at Cambridge University.

Many of us have painful memories of boring classroom experiences that we endured rather than enjoyed. Evolution can't be entirely blamed for that. Teachers—even Christian teachers—who aren't passionate about their subject matter can turn students off to it.

But would world history have been more interesting if we had seen the connection between it and the people we read about in Scripture? How would our understanding of history have been affected if we had learned:

- The prophet Daniel is referred to in Babylonian cuneiform records, as are his three friends.1
- The archaeological evidence at Jericho is perfectly consistent with the destruction of the city described in Joshua.²
- Some of the people Paul mentions in his epistles are documented in secular historical records.3

Many students dread mathematics, but would they have warmed up to the subject if they had been told:

 Honeybees construct their honeycombs to maximize volume for a given amount of wax. Calculus is needed to show this, but the bees obviously didn't figure this out on their own!4

article highlights

- An evolutionary worldview dominates our country's educational system.
- Leaving God out of the picture can drain the joy out of learning.
- If God's Word and handiwork were included in education, students could see the wonder of His creation and how history, science, and other subjects fit with the Bible.

- Other insects make use of advanced mathematics.5
- Secular scientists and mathematicians are surprised at how well mathematics describes the universe, even though they claim it was a cosmic accident.6

How much more exciting would biology classrooms be if instead of carefully avoiding the overwhelming evidence for design in living systems, God's handiwork was openly acknowledged and admired? Would astronomy class have been more pleasant if instead of just learning facts and equations, the class took time to savor the beauty of the

heavens the Lord made? What if students were shown how our solar system abounds with evidence of a youth that matches the Genesis record?7

Perhaps it's a pipe dream to hope for such things in the public school system.⁸ But surely teachers in Christian schools can share this knowledge with their students, and Christian parents and grandparents can share it with their children. The Institute for Creation Research routinely receives reports from Christians who are delighted to learn that science confirms the truth of Scripture. And visitors to the ICR Discovery Center for Science & Earth History make similar

Perhaps it shouldn't surprise us that a proper relationship with the Lord can result in pleasure and delight in learning and many other areas. And the redeemed will have an eternity to enjoy God's presence: "In Your presence is fullness of joy; at Your right hand are pleasures forevermore" (Psalm 16:11).

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- We would be ecstatic if public school teachers were allowed to candidly acknowledge the religious/philosophical beliefs undergirding evolutionary theory, as well as the difficulties with evolutionary dogma.

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Human Chromosome 2 Fusion Never Happened



JEFFREY P. TOMKINS, Ph.D.

article highlights

- Evolutionists struggle to explain why humans have 46 chromosomes and apes have 48 if both descended from a common ancestor. The supposed answer is the fusion of two chromosomes in the past.
- The alleged fusion site isn't connected to satellite DNA sequence like documented fusions are, and it's too small and muddled to be the fusion of two chromosomes.
- Most importantly, the fusion site is located inside a gene and contains intricate coding functionality—soundly refuting fusion.
- The alleged cryptic centromere site is inside a large protein-coding gene, further refuting the fusion idea.
- The human chromosome 2 fusion theory doesn't hold up to scientific scrutiny.



ne of the more popular arguments used for humans supposedly evolving from apes is known as the chromosome fusion. The impetus for this concept is the evolutionary problem that apes have an extra pair of chromosomes—humans have 46 while apes have 48. If humans evolved from an ape-like creature only three to six million years ago, a mere blip in the grand scheme of the evolutionary story, why do humans and apes have this discrepancy?

The evolutionary solution proposes that an end-to-end fusion of two small ape-like chromosomes (named 2A and 2B) produced human chromosome 2 (Figure 1). The concept of a fusion first came about in 1982 when scientists examined the similarities of human and ape chromosomes under a microscope. While the technique was somewhat crude, it was enough to get the idea going.¹

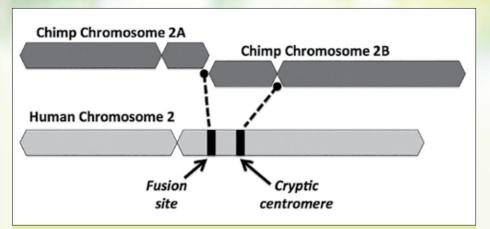


Figure 1. Hypothetical model in which chimpanzee chromosomes 2A and 2B fused end-to-end to form human chromosome 2. The chromosomes are drawn to scale according to cytogenetic images published by Yunis and Prakash.\(^1\) Note the size discrepancy, which is about 10\% or 24 million bases based on the known size of human chromosome 2.

The So-Called Fusion Site

The first actual DNA signature of a possible fusion event was discovered in 1991 on human chromosome number 2.² Researchers found a small, muddled cluster of telomere-like end sequences that vaguely resembled a possible fusion. Telomeres are a six-base sequence of the DNA letters TTAGGG repeated over and over again at the ends of chromosomes.

However, the fusion signature was somewhat of an enigma based on the real fusions that occasionally occur in nature. All documented fusions in living animals involve a specific type of sequence called *satellite DNA* (satDNA) located in chromosomes and found in breakages and fusions.³⁻⁵ The fusion signature on human chromosome 2 was missing this telltale satDNA.⁶

Another problem is the small size of the fusion site, which is only 798 DNA letters long. Telomere sequences at the ends of chromosomes are 5,000 to 15,000 bases long. If two chromosomes had fused, you should see a fused telomere signature of 10,000 to 30,000 bases long—not 798.

Not only is the small size a problem for the fusion story, the signature doesn't really represent a clear-cut fusion of telomeres. Figure 2 shows the DNA letters of the 798-base fusion site with the six-base (DNA letter) intact telomere sequences emphasized in bold print. When the fusion sequence is compared to that of a pristine fusion signature of the same size, it is only 70% identical overall.

Secular researchers have pointed out this discrepancy and have labeled the fusion site as significantly "degenerate." Given the standard theoretical model of human evolution, it should be about 98 to 99% identical, not 70%. The researchers describing this discovery commented, "Head-to-head arrays of repeats at the fusion site have degenerated significantly (14%) from the near perfect arrays of (TTAGGG)_n found at telomeres" and asked the pertinent question "If the fusion occurred within the telomeric repeat arrays less than ~6 Mya, why are the

arrays at the fusion site so degenerate?" It should be noted that the 14% degeneration cited by the authors refers to the corruption of just the six-base sequences themselves, not the whole 798 bases.

The Fusion Site Inside a Gene?

The most remarkable anti-evolutionary finding about the fusion site turned out to be its location and what it actually does. This discovery came about while I was reading the research paper that reported a detailed analysis of 614,000 bases of DNA sequence surrounding the alleged fusion site. I noticed in one of the figures that the fusion site was located *inside* a gene, and quite remarkably this oddity wasn't even acknowledged in the text of the paper.⁸

A finding like this is highly note-worthy. Perhaps this piece of information would've been the nail in the evolutionary coffin, so to speak, which is why the researchers declined to discuss it. This major anomaly inspired me to give the fusion site a much closer examination. This paper was published in 2002, and I took notice of it in 2013. A huge amount of data on the structure and function of the human genome had been published in the meantime, and there was likely much more to the story that needed to be uncovered.

When I performed further research, I verified that the fusion site was positioned inside an RNA helicase gene now called *DDX11L2*. Most genes in plants and ani-

Figure 2. The 798 sequence of the alleged fusion site. Intact forward (TTAGGG) and reverse complement (CCCTAA) telomere sequences are in bold font. The actual alleged point of fusion (AA) is underlined.

mals have their coding segments in pieces called *exons* so they can be alternatively spliced. Based on the addition or exclusion of exons, genes can produce a variety of products. The intervening regions between exons are called *introns*, which often contain a variety of signals and switches that control gene function. The alleged fusion site is positioned inside the first intron of the *DDX11L2* gene (Figure 3).9

The DNA molecule is double-stranded, with a plus strand and a minus strand. It was engineered this way to maximize information density while also increasing efficiency and function. As a result, there are genes running in different directions on the opposing strands. As it turns out, the DDX11L2 gene is encoded on the minus strand. Because genes in humans are like Swiss army knives and can produce a variety of RNAs, in the case of the DDX11L2 gene it produces short variants consisting of two exons and long variants with three (Figure 3).9

The Fusion Site Is a Gene Promoter

What might this *DDX11L2* gene be doing? My research showed it's expressed in at least 255 different cell or tissue types.⁹ It's also co-expressed (turned on at the same time) with a variety of other genes and is

connected to processes associated with cell signaling in the extracellular matrix and blood cell production. The location of the so-called fusion sequence inside a functional gene associated with the genetics of a variety of cellular processes strongly refutes the idea that it's the accidental byproduct of a head-to-head telomeric fusion. Genes are not formed by catastrophic chromosomal fusions!

Even more amazing is that the fusion site is itself functional and serves an important engineered purpose. The site actually acts as a switch for controlling gene activity. In this respect, a wealth of biochemical data showed that 12 different proteins called *transcription factors* regulate this segment of the gene. One of these is none other than RNA polymerase II, the main enzyme that copies RNA molecules from DNA in a process called *transcription*. Further supporting this discovery is the fact that the actual process of transcription initiates inside the region of the so-called fusion site.

Technically, we would call the activity in the alleged fusion site a *promoter region*. Promoters are the main switches at the beginning of genes that turn them on and are also where the RNA polymerase starts to create an RNA. Many genes have alternative promoters like the *DDX11L2* gene.

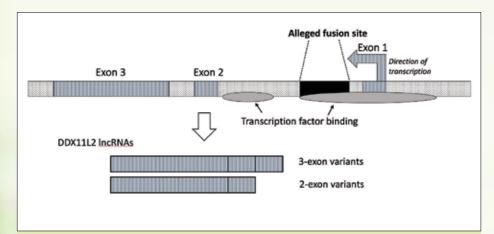


Figure 3. Simplified illustration of the alleged fusion site inside the first intron of the DDX11L2 gene. The graphic also shows two versions of short and long transcript variants produced, along with areas of transcription factor binding. The arrow in the first exon depicts the direction of transcription.

There are actually two areas of transcription factor binding in the *DDX11L2* gene. The first is in the promoter directly in front of the first exon, and the second is in the first intron corresponding to the fusion site sequence. Not only is the *DDX11L2* gene itself complexly controlled, with the alleged fusion sequence playing a key role, but even the RNA transcripts produced are very intricate. The RNAs themselves contain a wide variety of binding and control sites for a class of small regulatory molecules called *microRNAs*.⁹

Functional Internal Telomere Sequences Are All Over the Genome

The presence of internally located telomere sequence is found all over the human genome. These seemingly out-of-place telomere repeats have been dubbed interstitial telomeres. The presence of these sequences presents another challenge for the fusion site idea. It's a fact that very few of the telomere repeats in the fusion site occur in tandem. As noted in Figure 2, the sequence of the 798base fusion site contains only a few instances where two repeats are actually in tandem and none that have three repeats or more. However, there are many other interstitial telomere sites all over the human genome where the repeats occur in perfect tandem three to ten times or more.10-11

Even besides their role at the ends of chromosomes, it appears interstitial telomeric repeats may serve an important function in the genome related to gene expression. In a recent research project, I identified telomere repeats all over the human genome and then intersected their genomic locations with a diversity of data sets containing functional biochemical information for gene activity.12 Literally thousands of internal telomeric repeats across the genome were directly associated with the hallmarks of gene expression. The same type of transcription factor binding and gene activity occurring at the alleged fusion site was also occurring genome-wide at numerous other

interstitial telomeric repeats. Clearly, these DNA features are not accidents of evolution but purposefully and intelligently designed functional code.

Bogus Cryptic Centromere Inside a Gene

Another key problem with the fusion model is the lack of viable evidence for a signature of an extra centromere region. Centromeres are sections of chromosomes, often in central locations, that play key roles during cell division. As depicted in Figure 1, the newly formed chimeric chromosome would've had two centromere sites immediately following the alleged head-to-head fusion of the two chromosomes. In such a case, one of the centromeres would be functional while the other would be disabled. The presence of two active centromeres is bad news for chromosomes and would lead to dysfunction and cell destruction.

Interestingly, the evidence for a cryptic (disabled) centromere on human chromosome 2 is even weaker than that for a telomere-rich fusion site. Evolutionists explain the lack of a clearly distinguishable nonfunctional secondary centromere by arguing that a second centromere would've been rapidly selected against. After that, the disabled centromere would've deteriorated over time since there were no functional restraints placed on it anymore by its doing something useful in the genome.

However, the evidence for a second remnant centromere at any stage of sequence degeneration is problematic for the evolutionary paradigm. Functional centromere sequences are composed of a repetitive type of DNA called *alphoid sequences*, with each alphoid repeat being about 171 bases long. Some types of alphoid repeats are found all over the genome, while others are specific to centromeres. The structure of the sequences found at the cryptic centromere site on human chromosome 2 doesn't match those associated with func-

tional human centromeres.¹³ Even worse for the evolutionary model is that they have no highly similar counterparts in the chimp genome—they are human-specific.¹³

The alleged fossil centromere is also exceptionally tiny compared to a real one. The size of a normal human centromere ranges in length between 250,000 and 5,000,000 bases. The alleged cryptic centromere is only 41,608 bases long, but it's also important to note that there are three different regions of it that aren't even alphoid repeats. Two of these are called *retroelements*, with one being a LPA3/LINE repeat 5,957 bases long and the other an SVA-E element with 2,571 bases. When we subtract the insertions of these non-alphoid sequences, it gives a length of only 33,080 bases, which is a fraction of the length of a real centromere.

The most serious evolutionary problem with the idea of a fossil centromere, though, is that like the alleged fusion site, it's positioned *inside a gene*. The alleged cryptic centromere is located inside the *ANKRD*-30BL gene, and its sequence spans both intron and exon regions of the gene. ^{12,15}

In fact, the part of the alleged fossil centromere sequence that lands inside an exon actually codes for amino acids in the resulting gene's protein. The gene produces a protein that's believed to be involved in the interaction of the structural network of proteins inside the cell called the *cytoskeleton* in connection with receptor proteins embedded in the cell membrane. The fact that the so-called fossil or cryptic centromere is a functional region inside an important protein-coding gene completely refutes the idea that it's a defunct centromere.

Conclusion: No Fusion

Due to the muddled signatures and small sizes of the alleged fusion and fossil centromere sites, it's highly questionable that their sequence was evolutionarily derived from an ancient chromosome fusion. Not only that, they represent functional sequence inside genes. The alleged fusion site is an important genetic switch called a promoter inside the *DDX11L2* long noncoding RNA gene, and the so-called fossil centromere contains both coding and noncoding sequence inside a large ankyrin repeat protein-coding gene.

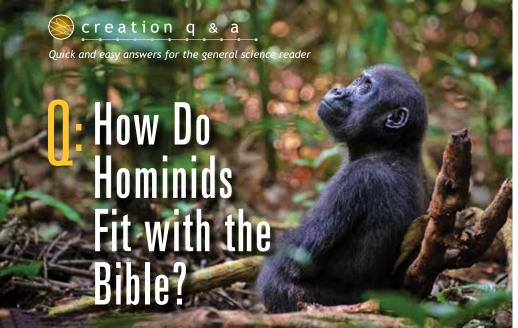
This is an undeniable double whammy against the whole mythical fusion idea, utterly destroying its validity. The overwhelming scientific conclusion is that the fusion never happened.

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A recent survey showed that the most persuasive argument for evolution comes from the iconic drawing of the apes-to-man parade.¹ This popular picture illustrates ape-like animals evolving into a human. If this image reflects actual history, then the history in Genesis is wrong. If we came from apes, then we didn't come from Adam and Eve. That also casts doubt on the other Scriptures—and their human authors—that refer to Adam as our real ancestor.² Do certain fossils demand we take scissors to our Bibles?

Scientific literature and popular media portray hominids as people-like apes or apelike people on their way to becoming real humans. Over the last 50 years of looking into human origins, ICR scientists have found that hominid fossils fit three creation-friendly groups that leave the biblical Adam intact.

The first group is ape. The fossil nick-named Lucy is probably the most famous so-called hominid in this category. Lucy's kind had locking wrists and ape-like fingers, arms, and ribs, with ape jaws and teeth. Why not just call them apes? Their discoverer and promoter Donald Johanson has claimed since 1974 that Lucy's kind was becoming human. But others, like the late Baron Solly Zuckerman, saw them as mere apes with no human ancestry.³ These fossils rightly bear the ape name *Australopithecus*.

Apes in this group are often made to look more human-like than they really were.

In the 1970s, fans of human evolution assigned fossil *human* tracks at Laetoli, Tanzania, to Lucy's kind. That was easier back when australopith fossil finds contained too few foot fragments to figure out what its feet looked like. Since then, scientists have found australopiths with feet, and these new fossils confirm its ape grouping by showing it had hands for feet just like chimps do.⁴ What threat does an extinct ape pose to Genesis history? None. Evolution needs natural processes to create new kinds, not kill off old ones.

A more recent candidate named *Australopithecus sediba* fits a second group. When it was first described in 2011, Texas A&M University's Darryl DeRuiter told *ABC News*, "This is what evolutionary theory would predict, this mixture of Australopithecene and *Homo...*.It's strong confirmation of evolutionary theory." But other scientists took a closer look and found the real reason for "this mixture." Sediba did not combine different *features* but different *species*. Like the famous Piltdown forgery, Sediba belongs to an imaginary group. Human parts placed beside Lucy parts pose no threat to our ancestry in Adam.

The third group is human. Which fossils belong here? Sometimes it's tough to tell. Healthy human heads can take more different shapes and sizes than most other creatures God made. Some ancient human skulls look a bit like apes, but no more so than some folks alive today.

article highlights

- Most secular scientists believe humans evolved from ape-like creatures that lived millions of years ago.
- If this is true, the Bible is wrong when it describes the creation of humanity only thousands of years ago.
- All fossils claimed as human ancestors fall into one of three categories: ape, imaginary, or human.
- These ape and human fossils fit the Bible's narrative.

Homo floresiensis (nicknamed "Hobbit") presented a challenge. The skull and other fragments from a remote island in Indonesia came from a small person with a tiny head. Initial reports declared it a possible ancestor, but later work showed an excellent match between Hobbit and people today who have microcephaly. Diseased humans don't show evolution, just sin's curse on creation.

So far, no fossil fits human evolution. Whether ape, imaginary, or human, fossils confirm created kinds and Adam in our not-so-distant past.

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apologetics

Disconcerting Duck-Billed Dinosaur DNA

bservable facts have a way of embarrassing erroneous theories. Consider how awkward it is that dinosaur bones or cartilage repeatedly show not only soft tissues, like stretchable collagen and recognizable erythrocytes and osteocytes, but also biomolecules that can't be adequately explained as anything except actual dinosaur DNA.

This disconcerting development is especially humiliating for evolutionists who previously denied the modern existence

of dinosaur DNA, because 1) DNA molecules must biochemically degrade into unrecognizability in less than a million years, and yet 2) evolutionists insist all dinosaurs died tens of millions of years ago.1 To them, the very idea of recognizable dinosaur DNA is an impossibility.

Yet, scientists like Dr. Mary Schweitzer keep finding what look like dinosaur DNA fragments under conditions that convincingly negate alternative explanations.

This [duck-billed dinosaur cartilage] study provides the first clear chemical and molecular demonstration of calcified cartilage preservation in Mesozoic skeletal material, and suggests that in addition to cartilage-specific collagen II, DNA, or at least the chemical markers of DNA,...may preserve for millions of years.2

Dr. Schweitzer and her colleagues cautiously suggest there must be an explanation for "deep time"-surviving dinosaur DNA via some as-yet-undiscovered process that some-

how stabilizes fragile DNA. Notice how the deep time assumption itself isn't questioned by Schweitzer and her team. Rather, they assume DNA's inherent instability is somehow rescued by yet-unknown mechanisms that inexplicably preserve it for millions of years. Further, they note that popular reluctance to admit dinosaur DNA can exist today has delayed scientific progress.

The assumption of a temporal limit on molecular longevity has hindered the pursuit of molecular data from fossils older than ~1 million years (MA). A short temporal range is predicted for informative biomolecules (~1 MA for proteins, and ~100,000 years of DNA; with 700,000 years as the oldest genome report)....However, these assumptions have been challenged by multiple studies on Mesozoic fossil remains reporting evidence of chemical and organic remnants, including extracellular proteins and pigments,...cytoskeletal proteins, compounds that localize to cell interiors that are chemically consistent with DNA... and peptide sequence data including histone proteins, a protein not found in bacteria.2

In other words, evolutionist assumptions have delayed scientific progress. Meanwhile, what hope does Schweitzer give to her evolutionary comrades to explain the awkwardness of dinosaur DNA remnants surviving into modern times?

Actual DNA was discovered in a duck-billed dinosaur

article

highlights

Secular scientists try to show that DNA can be preserved over millions of years despite strong evidence that it's physically and biochemically impossible.

Realizing that Earth and its life are only thousands of years old solves this problem.

Although extensive research and sequencing is required to further understand DNA preservation in Mesozoic material,...our data suggest the preserved nuclear material in Hypacrosaurus [duck-billed dinosaur] was in a condensed state at the time of the death of the organism, which may have contributed to its stability.2

So, some dinosaur DNA chromosomes were in "condensing" mode when the creatures died? DNA-

containing chromosomes are constantly undergoing mitotic cell divisions-including condensing stages—in animals of all kinds, but why or how should that detail become a "magic bullet" that miraculously preserves unstable DNA over deep-time eons? The fact is biochemical entropy is universal and DNA is inherently unstable, so DNA wouldn't survive intact over millions of years.

However, because Genesis is true, dinosaur DNA doesn't need to survive in bones or cartilage for millions of years since the creatures the samples are drawn from were killed and buried by the global Flood about 4,500 years ago, along with many other forms of life.3 All of which leads to this conclusion: If it looks

like a duck-billed dinosaur's DNA, it probably is. The reason why it's still recognizable as DNA is because duck-billed dinosaurs lived not that long ago. 🙈

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<u>Ha</u>drosaur

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- 2. Bailleul, A. M. et al. Evidence of proteins, chromosomes and chemical markers of DNA in exceptionally preserved dinosaur cartilage. National Science Review, advance access publication January 12, 2020. The dinosaur remains were described as "disarticulated," suggesting a rapid burial event involving catastrophically destructive force.
- 3. Dinosaur DNA wouldn't be controversial if evolutionary assumptions were excluded when examining the microbiological and biochemical evidences. This illustrates 1 Timothy 6:20-21a because it is the false "science" that impedes the increase of true science...

Dr. Johnson is Associate Professor of Apologetics and Chief Academic Officer at the Institute for Creation Research.



he Bible is full of instances where God used periods of trouble to accomplish His will and refine His people. The remarkable record of Job is perhaps the best example, as God allowed a season of severe testing that would ultimately bring Job into an even closer relationship with Him (Job 1:8-22). From God's perspective, difficult times can significantly benefit us by deepening our



tian lady persistently and lovingly shared the gospel of Jesus Christ with her caretakers whenever the opportunity arose. She and her late husband were faithful supporters of ICR (for over 30 years), and she would often use our resources to answer the man's skeptical questions about science and the Bible. "To say she wore me down would be an absolute understatement," the man told

Faithful Witness in Times of Trouble

faith in and reliance on Him. No matter how bad the situation might seem, believers can rest in the promise that God "will not leave you nor forsake you" (Deuteronomy 31:6) and know that He will be faithful to "supply all your need according to His riches in glory by Christ Jesus" (Philippians 4:19).

Those of us who have known and sought to follow the Lord for many years can testify to the countless blessings we receive from Him. As David sang so many years ago, "Blessed be the Lord, who daily loads us with benefits" (Psalm 68:19). ICR is no exception to this, and one of His sweetest benefits is hearing stories of how our ministry has impacted people's lives. I was recently contacted by a gentleman with an especially encouraging testimony, and with his permission I'm sharing highlights from his story.

Over a decade ago, he and his wife responded to a newspaper ad to serve as caretakers for an elderly widow. When they arrived, they found the lady seated at the kitchen table studying her Bible. Nei-

article highlights

- God can use difficult circumstances to fulfill His purpose in our lives.
- He used the faithful witness of an elderly widow to reach an unbelieving couple with the gospel.
- ICR materials helped her answer the skeptic's questions, and we're grateful our ministry aids others in their work for God's kingdom.

ther of them was a believer—in fact, the man was quite hostile to anything religious. He made it clear on that very first day that while he'd be happy to care for her needs, he didn't want to discuss anything from the Bible. "Why?" she asked. "Because," he replied, "I don't believe anything that book has to say." She quietly chose to ignore his demand, recognizing that God had just given her a new field of ministry.

As the years passed, this sweet Chris-

me, "and I'm thrilled that she lived to see my wife and I give our lives to Christ. And ICR's materials had much to do with it!"

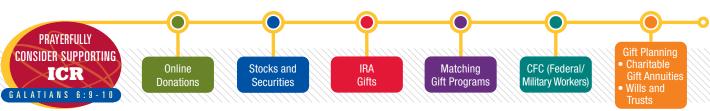
Just a few months ago, the Lord called this great lady home soon after celebrating her 100th birthday. She was mostly homebound in her final years, but God blessed her faithful witness as she made the most of the opportunities she was given. And one day in heaven, these three will no doubt have a great reunion.

Regardless of our current troubles or difficult circumstances, believers can make an impact by sharing the good news of our Creator and Redeemer, the Lord Jesus Christ. As this testimony demonstrates, God used an elderly widow to leave a powerful legacy, and it's a great blessing to recognize ICR's small part in it. I hope this will encourage our supporters, and inspire

new ones, to continue their faithful prayer and financial support of ICR.

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





Visit ICR.org/give and explore how you can support the vital work of ICR ministries. Or contact us at Stewardship@ICR.org or 800.337.0375 for personal assistance.

ICR is a recognized 501(c)(3) nonprofit ministry, and all gifts are tax-deductible to the fullest extent allowed by law.





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Image credit: Joel Kaut

Please go see this place!!! If you have always been taught evolution is fact, come check out real science! They will show you science agreed upon by all scientists [and] show you how real science supports creationism, not evolution!

— J. S.

Wonderful, wonderful museum. Family orientated. Well planned and orchestrated. I'll visit again.

— L. W.

Stepping away from our norm for a couple of days has been a refueling for my soul. And being able to "school" and learn while traveling is something I'm so very thankful for. Part of our day was spent at the ICR Discovery Center for Science & Earth History... which was beyond my expectation (and you need to go!). In the words of our six-year-old, "That's the best museum we've EVER been to!"

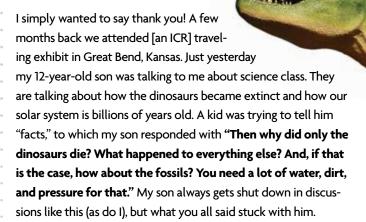
— S. В.



My compliments to John D. Morris, Ph.D., for his [March 2020 Acts & Facts] "Iron Face Mask Found in Coal?" article. I am grateful for his clear separation between what is known and conjecture about the origin of the mask.

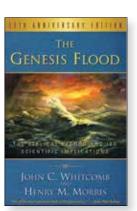






— Т. Р.





My husband, John, went to be with Jesus September 2019 at the age of 78. The book *The Genesis Flood* was instrumental to his conversion to Jesus Christ in 1978. When he was a child, he was involved in Scouting and even as a staff member in later years. He was always searching for truth but never learned how to become a Christian from the church his family attended. **A Scout leader suggested he read** *The*

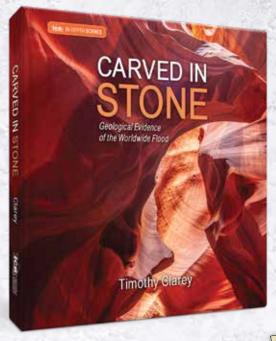
Genesis Flood, so he purchased it. John was an avid reader, and the book meant so much to him that we still have it in the family—our son now has that original book. I thought you might like to know that you are touching lives that you may never know about until we are all in heaven. John's search took him into the world of the occult—but God had other plans. I knew the way from childhood, and when we married I told him to find Jesus Christ. God did such a good work on John. He never doubted this conversion—he was truly a new creation. His Bible is a treasure trove of markings that he studied hours each day, getting up at 4:30 each morning for years for his time of study and prayer. So, the Scout leader had a part in his conversion, as well as ICR and me. I plan to meet him in heaven and looking forward to one day soon. I get your [Acts & Facts] magazine and read your [Days of Praise] devotional every morning.

— M. S.

Have a comment? Email us at Editor@ICR.org or write to Editor, P. O. Box 59029, Dallas, Texas 75229.

Note: Unfortunately, ICR is not able to respond to all correspondence.

ICR IN-DEPTH SCIENCE





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CARVED IN STONE

Geological Evidence of the Worldwide Flood

Dr. Timothy Clarey

nenesis records a worldwide cataclysm that reshaped Earth's surface and destroyed almost all land-dwelling creatures. Secular geologists insist the global Flood is a myth—but they've never studied the rock record across multiple continents simultaneously.

ICR geologist Dr. Timothy Clarey does just this in *Carved* in Stone: Geological Evidence of the Worldwide Flood. With an oil industry background, Dr. Clarey utilizes oil well and seismic data to explain what the rock strata actually reveal about Earth's past.

Rather than reflecting millions of years, Earth's rock record demonstrates that a global flood occurred thousands of years ago. Carved in Stone showcases the geological data compiled across North America, South America, and Africa, with more discoveries to come as he works through the remaining continents.

The second installment in ICR's In-Depth Science book series, Carved in Stone examines the sedimentary rock record continent by continent, layer by layer. The data provide clear evidence of a year-long progressive flood just as described in the Bible. The rocks do not lie!

Carved in Stone will prove a challenge to those who have adopted the thinking of the mainstream. It will prove an encouragement to those who have known there must be a solution but were unable to find it. It will thrill the many who have by faith accepted Scripture's teaching but have lacked the opportunity to go deeper.

— Dr. John Morris, ICR President Emeritus

