

ACTS & FACTS

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NEW!



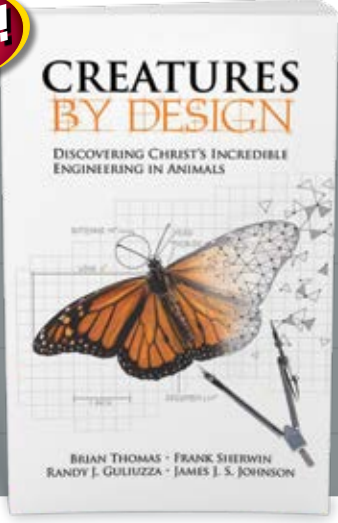
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NEW!



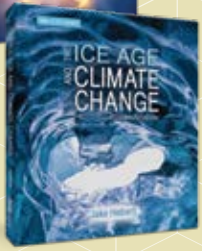
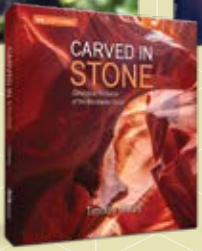
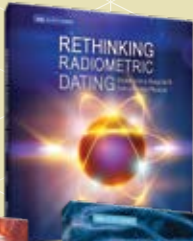
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DESIGNER
Dennis Davidson

[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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Front cover: Crater Lake at dawn
Image credit: iStock



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Finding Biblical Clues to Design

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

- The Bible is full of scientific insights that can guide research.
- It's clear that biology is engineered; organisms are active and have innate abilities to continuously thrive and fill the earth.
- Experiments designed to identify workmanship in living things may be the most efficient path to new biological insights.
- The correspondence in engineering between creatures and man-made things is the general revelation of Christ's power, genius, and wisdom.

T rue story...and the star is physicist Dr. Russ Humphreys. Every so often someone passes on a new insight that revolutionizes our thinking. We remember these occasions because they are so rare.

About 20 years ago, Dr. Humphreys told me that looking to the Bible only to verify that my scientific explanations are biblically consistent wasn't nearly enough. He urged me to search the Bible as a navigational guide with clues about nature that could point toward a sensible path of research for explaining natural phenomena. That advice was invaluable. Searching the Bible for fresh insights into how creation operates guides the Institute for Creation Research's approach to research.

Does the Bible give indications about how creatures operate that could guide ICR's first steps down the best path for developing a theory of biological design? If so, then we would have good reasons to anticipate a theory with the potential to fundamentally change how people interpret biological phenomena by viewing creatures in a radically new way.

Echoing the sage counsel of Dr. Humphreys, we ask ourselves some basic questions. Is there even any biblical justification for a theory of biological design? Are there clues in the Bible that could help us develop this theory, ask novel questions, frame hypotheses, and guide research? Let's start this journey.

Using the Bible to Guide Scientific Research

Since our focus is biology, we ask, "Are there indications in the Bible about the essential operation of living things?" Two passages describe a vital characteristic of all of creation. Psalm 19:1 says, "The

heavens declare the glory of God; and the firmament shows His *handiwork*." Romans 1:20 states, "For since the creation of the world His invisible attributes are clearly seen, being understood by the things that are made." In this verse, the word translated as made is used only one other time in the New Testament, in Ephesians 2:10 where it's translated as *workmanship*.

So, an essential characteristic of living things is that we should expect them to show signs of workmanship or handiwork. This is a vital clue about the construction and operation of creatures.

Numerous other passages also seem to give the same message. For instance, by limiting our search for clues just to the Psalms, we read in 8:3-6 that the cosmos is "the work of Your fingers," and He made humans "to have dominion over the works of Your hands"; 95:5 speaks of the Lord's sovereignty over the creation that "His hands formed"; 102:25 says that God "laid the foundation of the earth, and the heavens are the work of Your hands"; in 143:5 David said, "I meditate on all Your works; I muse on [ponder] the work of Your hands."

What if the Lord is not just using beautiful figurative language to inspire awe when saying creation is "the work of [His] fingers." If we think through the repetition and unity of the Bible's message about handiwork, then perhaps the Holy Spirit is trying to tell us something important about how we *should expect* creation to operate. Scientific hypotheses are built on these types of educated guesses.¹

Additionally, when the Bible tells us that living things are the work of Christ's hands, could it be indicating that our investigative methods or experimental designs should be set up to look within biological systems for the characteristic features of workmanship? If so, then that points us to another important question related to the work

of God's hands: How does anybody even know what these things we call handiwork and workmanship are? The only reference point to understand what the Bible is telling us about God's workmanship is by our own experience with workmanship.

If Dr. Humphreys is right, then answers to these questions are important biblical clues with far-reaching implications. In the theological realm, these answers will provide fresh insights into our understanding of general revelation. Scientifically, they are invaluable to inform a biblically consistent theory of biological design to more precisely guide biological research.

Expecting Workmanship Enhances Our Intuition of General Revelation

If it's true that we should expect workmanship as the defining characteristic of how creation operates, then that helps better explain why the general revelation of God is so powerful and obvious. I would suggest that the engineered workmanship seen in living creatures *that corresponds to* the engineered workmanship of man-made things is the primary and undeniable revelation of Christ's power, genius, and wisdom.

Romans 1:19-21 is likely the most illuminating biblical passage when it comes to God's general revelation of Himself to humanity. A key factor of why people are accountable to correctly deduce that all creatures have a Creator is due to their extensive experience with human workmanship. The fact that people should clearly see a correspondence between human workmanship and the operation of creatures is evident in verse 19. An expanded translation of the Greek could read as "because some things about God are certainly knowable [to mankind] since they are plainly recognizable by the appearance [of things all around them]; for God has made it undeniably evident to them," while verse 21 adds that "because having gained this insight through experience, they actively did not credit the Creator God as Creator or give thanks."²

Because of wide-ranging experience with craftsmanship, people definitely recognize it when they see it. But words to describe what they are seeing may not readily come to mind. This is a good illustration of what's called intuition, where people have a sense that something has happened without fully understanding why.

Even without full understanding, people have a powerful predisposition to link the features of organisms and engineering design together.³ Why? Well, let's compile a short list of what people subconsciously recognize.

For one thing, every culture has experienced the telltale sign of *human agency* expressed in the unique characteristics of crafted things. They know that crafted products don't make themselves. Further, they've seen the characteristics of the skillful

labor needed to create a work of art or fabricate multiple matching parts that are fitted together in a specific order of assembly to make a functional whole.

People who reasonably infer that God created living things do so because they instinctively associate these characteristics of highly skilled workmanship. Thus, humans' ability to intuitively recognize the distinctive features of engineered craftsmanship in creatures—as an undeniable telltale sign of *God's agency*—is what leaves them without excuse when they don't credit Him for their origination.

Finally, there's something else of importance that people perceive about either man-made things or creatures that have multiple interworking parts. What they naturally sense is evidence of engineering activity. The clear indicators of engineering are what bridge the realms of God's general revelation and a new theory of biological design.

The Next Bible-Based Theory: Engineered Biology

ICR founder Dr. Henry M. Morris believed the Bible and searched it for scientific insights he developed into a new theory for interpreting geological findings that he explained in the groundbreaking book *The Genesis Flood*.⁴ In the same way, we can pull together the biblical insights from above to develop a new interpretive framework for biology. In this case, we could call a new working hypothesis to interpret biological phenomena a theory of biological design, or simply *engineered biology*.

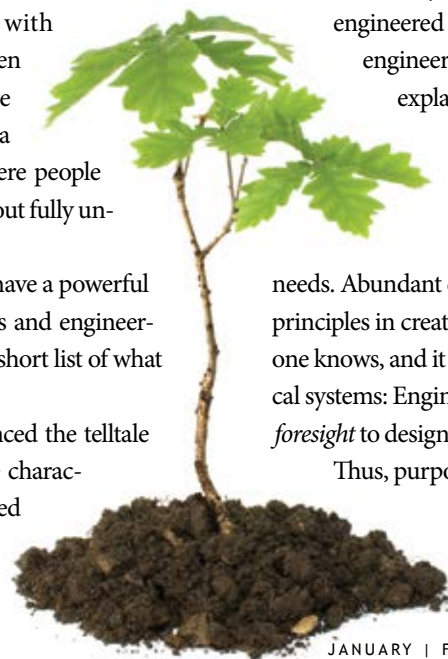
Even though theories are a continuous work in progress, they're still used to interpret observations and set research agendas. Could it be that the most efficient path to new biological insights and sensible explanations are experiments designed to identify the distinguishing marks of workmanship in living things?

With a thanks to Dr. Humphreys, we'll start to put flesh on the bones of engineered biology. How do the biblical insights fit in? First, a word like workmanship is packed with information. It summarizes a whole litany of activities and unique characteristics of human-engineered and manufactured things. Next, we recognize that engineering principles underlie human workmanship and explain why it works. If we are looking for a correlation in living things, then engineered biology would also look for engineering principles to explain biological phenomena.

Engineering principles exist to fit a myriad of needs. Abundant evidence shows that when researchers look for the principles in creatures, they find them. Here's a basic one that everyone knows, and it highlights characteristics we should see in biological systems: Engineers design for a *purpose*. Purpose is evidenced by *foresight* to design *targeted solutions to solve problems* or meet a need.

Thus, purpose constrains the design.

Engineered biology begins with a rational interpretive framework offering some major departures—and benefits—to biological research





compared to Darwin's anti-design theory of selectionism. Engineered biology would assume that even though biological systems are mind-bogglingly complicated, they are purposeful. With intense work, they can be successfully reverse-engineered. Selectionists see biology as a messy hodgepodge of parts cobbled together by nature through a process best portrayed as "tinkering." Random mutation figures prominently in aiding genetic diversity. Genetic information is fractioned out within populations through an iterative process of struggle and death.

Making sense of biomolecular, physiological, or anatomical functions is not mysterious. Just like man-made things, they operate within natural laws. Though it was within God's prerogative to design His systems to contrast with man-made designs by operating through different laws of nature, He didn't. This makes designing aircraft after studying birds possible. One researcher reverse-engineering biological networks likewise concluded:


We have also found that despite their vastly different substrates, biological regulatory mechanisms and their synthetic counterparts used in engineering share many similarities, as they are both subject to the same fundamental constraints that govern all regulatory mechanisms....Notions used in the study of engineering control systems such as optimality...and feedback are invaluable for understanding biological complexity.⁵

Biological Research Within an Engineering-Based Framework

A framework of engineered biology is essential to make correct explanations of biological functions. Thus, interpretations of biological observations are guided by the following expectations and assumptions.

1. Workmanship is an essential characteristic describing the construction and operation of living things.
2. Biological functions are best explained by engineering principles. Experiments are designed to identify the distinguishing marks of workmanship.
3. Since engineers must design all capability *into* an entity, research would principally be "internalistic" by searching for identifiable control systems innate to organisms. Interpretations regarding *organismal form* and *adaptability* are made with the organism as the reference point rather than environmental exposures.

4. Since complex systems are always engineered where purpose constrains the design—i.e., "top down"—the theory expects purposeful biological systems. For example, when a genetic change is observed, the default explanation will be that it was likely a regulated, purposeful change until evidence is produced that indicates it was random.
5. A core expectation is finding corresponding system elements between human-engineered devices and biological mechanisms that perform similar functions.
6. In terms of relationships, the capability for individuals to relate to each other and other external conditions is conferred by highly regulated internal control systems.
7. Organisms are expected to have targeted, preprogrammed solutions to specified challenges; solutions are not due to the challenges. A random solution to a challenge is expected to be the exception and not the rule.
8. Organisms are viewed as active, problem-solving entities that often overcome ecological challenges and continuously fill the earth. They are not to be understood as modeling clay passively sculpted by the hand of nature.
9. Explanations of biological phenomena will be restricted to objective engineering causality. This precise way to explain biological functions doesn't omit any system element between exposure and response. Conversely, it specifically precludes from causal chains personifications of nature in lieu of system elements.
10. Something is fundamentally different about human beings and animals compared to human-engineered things, and that difference is "life." Life itself is not explained by biological functions or engineering principles. No one has held a beaker of "life." This indicates that life is immaterial and imparted from the ultimate source of life, God. Efforts to explain life or its origin solely in terms of chemistry or physics are misguided.

If Christ intended to confirm His incredible engineering of creatures by choosing to allow engineering principles familiar to humans to explain their biological functions, then the ICR science staff believes that by embarking on this biblically informed path of engineered biology we will greatly honor the Lord Jesus as Creator. 

References

1. Studying nature and studying the Bible are both reasonable ways to form hypotheses. The distinguished American oceanographer Matthew Fontaine Maury, who discovered the Gulf Stream current, credits his insight to the reference to "paths of the seas" in Psalm 8:8. See Johnson, J. J. S. 2020. Matthew Maury's Paths of the Sea. *Acts & Facts*. 49 (9): 21.
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5. Khammash, M. 2008. Reverse engineering: the architecture of biological networks. *BioTechniques*. 44 (3): 327.

Dr. Guliuzza is President of the Institute for Creation Research. He earned his Doctorate 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.



New Year, New Logo

After 52 years of fruitful ministry, the Institute for Creation Research is renewing its commitment to rigorous scientific research that affirms the truth of Scripture. As a staff, we're delighted to reveal a new logo that reflects our mission and highlights an exciting field of research.



We're still the ICR you know, love, and support, and our foundation remains the same: We seek to honor the Lord Jesus Christ as our Creator, Savior, and returning King.



The Inspiration for ICR's New Logo

"ICR's most pressing assignment is to fundamentally change the way people understand biology. Our task is to construct a completely new theory of biological design that incorporates recent discoveries and respects the biblical narrative. The theory would explain hundreds


of fascinating examples of creatures' abilities from an organism-centered, engineering-based perspective that gives glory to their Creator—and not to nature.

"We hope this theory will become the fundamental, design-based principle uniting biological explanations in Christian textbooks and museums educating future generations of young believers. We pray that an engineering-based approach to biology will spark a second creationist revival...and once again stir up a sense of certainty in Christian truth."

— ICR President Dr. Randy Guliuzza

The new DNA icon spotlights the marvelous creativity of the Lord Jesus Christ's design within living creatures.

Our name and purpose haven't changed. We still seek to consistently exalt the Lord Jesus through everything we communicate. Whether you just learned about our ministry or have supported us from the beginning, ICR remains your trustworthy resource for cutting-edge science that confirms the Bible. We're excited to increase our impact by revealing the wonders of divine engineering within the realm of biology.

You'll recognize the dark blue from our previous logo. The continuity expresses our commitment to ICR's past and keeps it connected to the logo of our Dallas creation museum, the ICR Discovery Center for Science & Earth History. The blues and greens in the new ICR logo represent our innovative biological research and renewed effort to clearly communicate creation truth in order to glorify the Lord Jesus Christ and equip Christians with a strong, reliable defense of the faith. 

ICR'S MISSION STATEMENT

ICR EXISTS TO SUPPORT THE LOCAL CHURCH THROUGH...

WORSHIP

- Glorify Jesus Christ by emphasizing in all ICR resources the credit He is due as Creator.
- Oppose the deification of nature by exposing Darwinian selectionism as an idolatrous worldview.

EDIFICATION

- Help pastors lead, feed, and defend their flocks by providing scientific responses to secular attacks on the authority and authenticity of God's Word.
- Change Christians' view of biology by constructing an organism-focused theory of biological design that highlights Jesus' work as Creator.

EVANGELISM

- Defend the gospel by showing how natural processes cannot explain the miracles in the Bible.
- Counter objections to the gospel by equipping believers with Scripture-affirming science.

Learn more about ICR's new look in our logo announcement video at [ICR.org/logo](https://www.icr.org/logo)

Announcing ICR's New Digital Media Department



From L to R: Media Producer James Turner, Video Producer Clint Loveness, Digital Media Content Developer Trey Bowling, Digital Media Specialist Ivana Semidey, and Director of Digital Media Michael Hansen



Dr. Brian Thomas and host Trey Bowling give an update in ICR's first annual Christmas address. Watch it on our YouTube channel!



Was the Genesis Flood truly global? ICR geologist Dr. Tim Clarey explains his research findings that confirm a worldwide flood.

Today there are more ways to communicate than ever before, so we have assembled a Digital Media Department to explore the best new avenues for sharing ICR's pioneering research. The department's talented staff uses contemporary platforms and technology to make creation science accessible to everyone. Our team will produce documentaries, audio and video podcasts, email newsletters, social media and promotional content, and more.

We're currently working on several exciting projects, and we can't wait for you to see and hear them in the coming months. Stay tuned for more updates in future *Acts & Facts* issues.

- Subscribe to our YouTube channel today—**YouTube.com/ICRorg**



- Follow us on social media @ICRscience and @ICRdiscovery



ICR podcasts have a fresh look. The Creation Podcast returns in early 2022 in both audio and video formats, and Days of Praise continues its daily audio devotional. Check out the latest episodes at [ICR.org/podcasts](https://www.icr.org/podcasts)



ICR advertises locally and nationally using both print and digital media to spread the word about its unique creation science resources and museum.

JANUARY 22

Dallas, TX
ICR Discovery Center for Science & Earth History
Made in His Image Seminar
(R. Guliuzza, J. Tomkins, B. Thomas)
214.615.8364

FEBRUARY 25-27

Dozier, AL
Good News Baptist Chapel
(T. Clarey)
214.615.8339

SAVE THE DATE

MARCH 6

Houston, TX
First Baptist Church
Greater Houston Creation Association
(R. Guliuzza, T. Clarey)
GHCAonline.com

SAVE THE DATE

MARCH 12

Dallas, TX
ICR Discovery Center for Science & Earth History
Creation: Basic Training Course with the Creation Training Initiative
(M. Riddle)
CreationTraining.org

SAVE THE DATE

JUNE 21-24

Dallas, TX
ICR Discovery Center for Science & Earth History
Christian Educators Conference
(M. Riddle)
CreationTraining.org



Dr. Brian Thomas addressed a large crowd at Flint Baptist Church in Flint, Texas, in September.



Dr. Jake Hebert described Triceratops features during a fossil walk at Flint Baptist Church.



A full house greeted Dr. Randy Guliuzza at Countryside Bible Church in Southlake, Texas, in September.



Future scientists examined fossils during Dinosaur Week at the ICR Discovery Center for Science & Earth History in Dallas, Texas, in October.



Dr. Randy Guliuzza spoke at Epsom Bible Church in Epsom, New Hampshire, in November.



For the latest ICR Discovery Center live science presentations, check our schedule at [ICRdiscoverycenter.org/Live-Presentations](https://www.icrdiscoverycenter.org/Live-Presentations)

Providing a safe and enjoyable experience is a priority for ICR, and we are closely monitoring the COVID-19 situation. Since the public health recommendations change on a frequent basis, please check [ICR.org/events](https://www.icr.org/events) for the most up-to-date event information. If you have questions about a specific event, please send an email to events@icr.org or call **800.337.0375** and press 6.

ICR Ice Core Research Continues

Creationists think the thick ice sheets of Greenland and Antarctica began forming just 4,500 years ago during a short Ice Age triggered by the Genesis Flood. During the Ice Age, warm oceans resulted in tremendous evaporation, causing snowfall rates to be much higher than today. The Flood/Ice Age model easily explains longstanding mysteries of Earth history, such as the ability of millions of woolly mammoths to live in Siberia during the Ice Age.¹

Counting in Ice Cores

In order to learn about past climates, scientists drill and extract long cores from the ice sheets. Some skeptics see the ice cores, particularly those from Greenland, as very strong arguments for an old earth since scientists have counted more than 100,000 annual layers within them.

However, correctly identifying and counting annual layers are very difficult. In 2018, creation critic Bill Nye inadvertently demonstrated that one cannot naively assume that each visible band within an ice core is an annual layer.² Annual lay-

article highlights

- The Flood's unique conditions triggered the Ice Age about 4,500 years ago.
- Neither layer counting nor theoretical age models prove vast ages for the ice sheets since the counting process is very difficult and secular age models assume millions of years.
- Secular and creationist ice sheet models make very different predictions about layer thicknesses within the ice.
- The Flood/Ice Age model better explains patterns of volcanic ash in the deep Antarctic ice cores, as well as an Antarctic mountain range's lack of erosion.

tion rate has always been roughly what it is today. I wrote a computer code that used Vardiman’s prescribed thinning of the ice to find the final thicknesses of the annual layers.⁷ The results are compared with results from the Nye model in Figure 2.

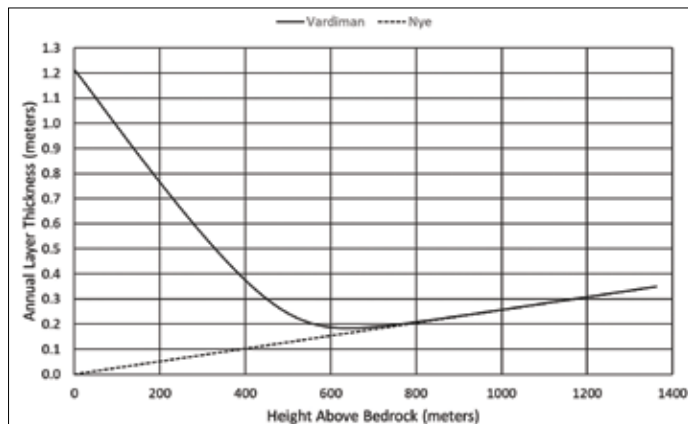


Figure 2. Annual layer thicknesses for the Camp Century ice core obtained from both the Larry Vardiman model and the John Nye uniformitarian model

Comparing the Results

In both models, annual layer thicknesses are the same in the upper parts of the ice. In Vardiman’s model, layers at the bottom of the ice are about a third of their original thicknesses at the time they were deposited, 1.21 meters thick compared to 3.85 meters. This is in stark contrast to the secular model, which predicts layer thicknesses to become vanishingly small near the base of the ice sheet.

It is noteworthy that in Vardiman’s model the very thinnest layers are not at the very bottom of the ice but at about 650 meters above bedrock. This makes sense because the final thickness of an annual layer depends on both its original thickness when it was deposited and the length of time for which it has been thinning. One might naively guess the very lowest ice layers to be the thinnest since they were deposited first and have been thinning for the longest time.

On the other hand, you might also guess that the very uppermost layers should be thinnest since these layers are only 35 centimeters thick when first deposited, whereas earlier annual layers started out more than 10 times that thickness (Figure 1). Actually, these two factors balance each other so that the true minimum thickness is found not at the very top or very bottom but about halfway down the core.

As basic as these two models are, they illustrate an important point. Creation-based ice sheet models predict annual layers deep within the ice to be much thicker than do uniformitarian models.

A More Sophisticated Creationist Ice Sheet Model

Vardiman’s model was a good start, but finding the true amount of thinning requires the use of a physics-based computer model that

can calculate stresses within the ice. Such models do exist, and they can be stripped of the usual assumptions of millions of years that often bias secular age assignments.⁸

I used a simple version of such a model to run a computer program for 4,500 simulated “years.” This produced the 3,300-meter-tall (10,800 feet) ice dome shown in Figure 3. The paper describing the procedure has been accepted for publication.⁹ However, this computer model likely overestimates the height of the ice sheet since it ignores, for ease of calculation, some of the stresses within the ice.

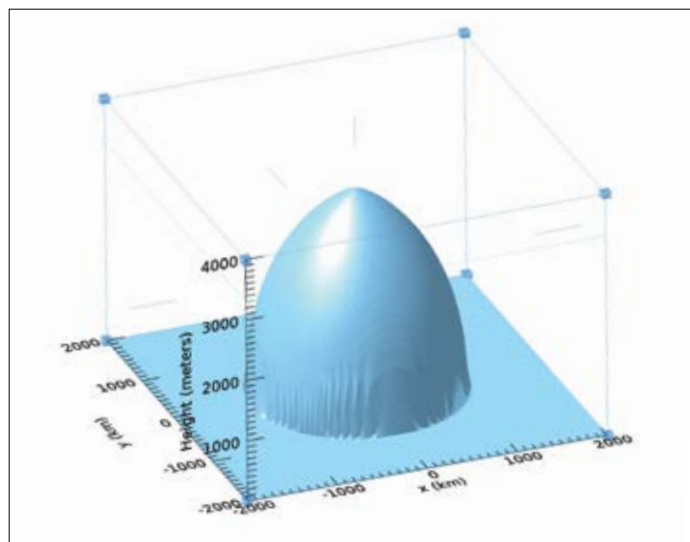


Figure 3. Simulated growth of a 3,300-meter-thick ice dome in the 4,500 years since the Genesis Flood. Vertical thickness is greatly exaggerated for clarity.

Also, this particular model doesn’t allow one to find the present-day thicknesses of annual layers within a core. That will require a more sophisticated computer model. However, this model does demonstrate that a thick ice sheet can form quickly if past accumulation rates were much higher than they are now.

Ice Core Tephra Favor the Flood Model

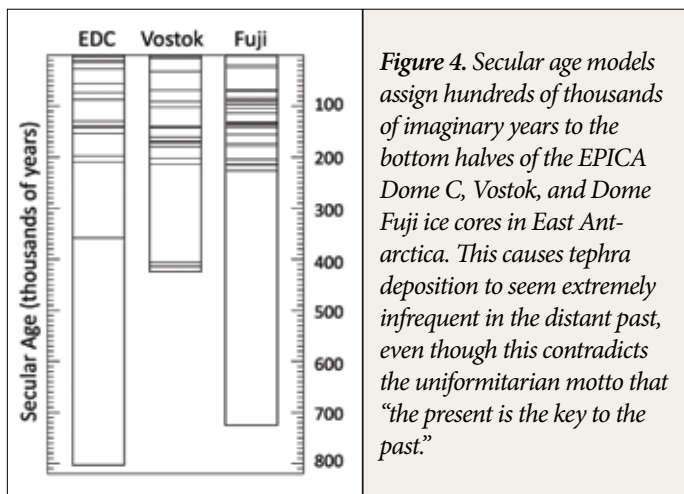
Of course, computer models don’t *prove* anything since the results depend upon the assumptions that go into the model. However, the Flood/Ice Age model makes better sense of volcanic layers within the ice.

Because explosive volcanic eruptions can deposit layers of volcanic ash and debris (or tephra) onto the ice sheets, tephra layers are sometimes found within the ice cores. Because secular age models greatly underestimate the true thicknesses of the deepest annual layers (Figure 2), those models assign far too much time to a given thickness of ice deep within a core.

In the same way, they assign too much time to the thicknesses of tephra layers deep within the ice. Thus, secular age models can imply that fallout from an explosive volcanic eruption can occur for unreasonably long times. For instance, a simple secular age model implies

that one tephra layer in Antarctica's Dome Fuji core, thought to have originated from a volcano almost 3,000 miles away, was deposited over a period of about five years.¹⁰ Has anyone *ever* observed a single ashfall lasting this long?

Secular age models also assign truly vast ages to the deep ice cores from East Antarctica. About 85% of this time is assigned to the bottom halves of the cores. If secular models are assigning hundreds of thousands of imaginary "years" to the bottom core sections, tephra deposits deep within these Antarctic cores will consistently seem extremely infrequent when plotted against the secular timescale. This is indeed the case. Three deep ice cores from East Antarctica have been assigned bottom ages greater than 400,000 years, and all three show this pattern (Figure 4).⁴



Scientists plan to drill another deep East Antarctic ice core.¹¹ I predict that if they successfully obtain another undisturbed core, with no folding of the ice that unduly complicates the analysis, the same pattern will show up there as well.

An Astronaut Inside an Egyptian Pyramid?

Both creationists and secularists think most of the world's major mountain chains formed relatively recently. Creationists think they formed as the Flood was ending and shortly afterward, and secular scientists think they were uplifted just a few million years ago.

However, in the secular view the Gamburtsev Mountain range, hidden under the East Antarctic ice sheet, is an exception. Secular scientists have long claimed that the Gamburtsev Mountains are nearly a billion years old. So, uniformitarian scientists were greatly surprised when imaging data revealed that the Gamburtsev Mountains are sharp and craggy, showing little evidence of erosion.⁴ This lack of erosion is puzzling if the mountain chain is very ancient, but it is easily explained if both the mountain chain and the ice covering it are young.

Evolutionary scientists have proposed two different solutions to this problem, but neither explanation seems to have withstood

scrutiny.⁴ For this reason, some secular scientists are now claiming the Gamburtsev Mountains were formed 50 million years ago.¹² This would go a long way in explaining the absence of erosion, but it is a truly radical revision to the secular story!

However, by secular reckoning mechanisms that could have formed the mountains were absent from East Antarctica 50 million years ago. A statement archived on the website of Columbia University's Lamont-Doherty Earth Observatory illustrates just how badly uniformitarian scientists are bothered by this mountain range. After discussing proposed scenarios for the mountain range's recent formation, the online article states:

Volcanic? Collisional? Rifting? None of these activities has happened recently in East Antarctica. This region is a very old and stable piece of continental crust. There is no good explanation for how this mountain range exists in a formation that geologists refer to as a Precambrian craton (an old stable piece of the continent that has survived untouched by continental break ups and rearrangements over the last ~500 my). It is like opening the door of an Egyptian pyramid and finding an astronaut inside. There is no good reason for an astronaut to be inside an Egyptian pyramid just as there is no good reason for a major mountain range in the middle of East Antarctica.¹²

In the absence of a plausible mechanism that could form the mountains recently, uniformitarian thinking seems to demand a vast age for the Gamburtsev Mountains. This leaves the lack of erosion unexplained, but the mystery vanishes if both the Gamburtsev Mountains and the East Antarctic ice sheet are just a few thousand years old.

The Bible's History Is the Solution

Despite popular hype, deep ice cores do not prove an old earth, and some features within the ice strongly favor the Flood/Ice Age model. The Bible's short timescale, rather than being a problem for which Christians need to sheepishly apologize, is actually the key to making sense of Earth's history. 🙏

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TIM CLAREY, P.H.D., AND
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CRATER LAKE NATIONAL PARK

SERENE BEAUTY AFTER VOLCANIC HISTORY

article highlights

- Picturesque Crater Lake sits inside an enormous inactive volcano.
- Volcanoes erupted during the end of the Flood year and the Ice Age in the area of what is now the Cascade Mountains.
- Crater Lake's unique features reflect the catastrophic processes that began to form it at the end of the Flood around 4,500 years ago.

Stunning Crater Lake, Oregon, with Wizard Island

The deepest and arguably most spectacular lake in the United States is located inside a volcano. Known as Crater Lake, it reaches 1,943 feet at its deepest point.¹ Crater Lake National Park was established in 1902 by President Theodore Roosevelt and became America's fifth national park.

Near the center of the Cascade Mountains in south-central Oregon, Crater Lake is about a five-hour drive south from Portland and is eight hours north of San Francisco.²

How and when did this lake form? The evolutionary story

talks about the Cascade Mountains beginning many millions of years ago.¹ However, this date is based on disproven or unverifiable assumptions and evolutionary dogma. The real account begins with the global Flood just 4,500 years ago.

Flood Origin of Crater Lake

In ICR's Flood model, the Cascade Mountains began development during the receding phase of the Flood.³ The source magmas were generated as the Pacific seafloor was rapidly subducted



or pulled under the West Coast of North America during the Flood year.⁴ This process created explosive magmas much different from the Hawaiian volcanoes.⁵ This process caused repeated eruptions late in the Flood year and into the Ice Age. The Cascades grew very quickly into massive volcanoes.

The volcano beneath Crater Lake catastrophically erupted for a final time during the Ice Age. Formerly known as Mount Mazama, the 13,000-foot-high volcano blasted out about 75 cubic miles of material.² This caused it to collapse upon itself, creating a bowl-shaped crater (caldera). This eruption was 42 times more powerful than the 1980 eruption of Mount St. Helens.² The highest elevation within the park is now just 8,928 feet at Mount Scott.¹

Following this final catastrophic explosion, a few lavas flowed out into the open caldera, and finally a tall cinder cone developed. Known as Wizard Island for its cone-shaped appearance, the island rises almost 800 feet above the lake's surface.¹ Cinder cones often form during a final



Yellow-bellied marmot

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degassing episode (like steam) as volcanoes go dormant or extinct.⁶

Early visitors in 1853 called it Deep Blue Lake, but it was later called Crater Lake in a newspaper account.¹ No streams flow into the lake, and it is only fed by snowmelt from winter snowfalls of about 45 feet each year.² Water is only removed by evaporation and groundwater seepage.¹ Because of these factors, the lake is one of the clearest in the world, with visibility down to 120 feet.¹

Exhibiting Christ's Glory Today

Crater Lake exhibits year-round beauty for those with eyes to see it, and about a half-million visitors view it each year. But some of Christ's creatures don't just visit, they call it home. As a clean freshwater lake, Crater Lake's pure water is habitat to land-locked kokanee salmon and rainbow trout.

Its surrounding shorelands and Wizard Island provide evergreen-forested and felsenmeer habitat for a variety of large animals—"black bear, bobcat, deer, and mar-



Merganser ducks

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mots"²—plus many smaller animals such as pika, chipmunks, and golden-mantled ground squirrels.⁷

Birdwatchers, too, enjoy visiting Crater Lake. Depending upon the time of year, Crater Lake hosts many migratory or resident birds.

Bald eagles (*Haliaeetus leucocephalos*) and peregrine falcons (*Falco peregrinus*) nest along the caldera cliffs. American dippers (*Cinclus mexicanus*, America's only aquatic songbird) forage at the bottom of fast-flowing streams. Subalpine areas are home to the gray-crowned rosy finch (*Leucosticte tephrocotis*). Wildfire burned forests attract a variety of woodpeckers....Common mergansers (*Mergus merganser*) raise families on the lake, and calls of songbirds permeate the forests and meadows.⁷

Who would expect such a beautiful lake surrounding such a magnificent volcanic cinder cone island? Those who visit Crater Lake and who gaze on Wizard Island can echo the prophet Isaiah's words: "Let them

give glory unto the LORD, and declare his praise in the islands" (Isaiah 42:12, KJV).

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The Creation Week: A Systems-Based Approach

article highlights

- The Genesis narrative describes a literal seven-day creation week about 6,000 years ago.
- Conversely, evolution claims the universe popped into being billions of years ago and life mysteriously developed.
- Humans design complex systems to work together, and these must be planned from the top down and carefully built and set up all at once.
- The human design process mimics Christ's design process.

We are clearly told in the book of Genesis that God created the heavens and the earth in a very short sequence of time, six literal days. The Hebrew text is grammatically put together using a specific verbal construct called a *waw* consecutive that defines historical narrative. Each individual day (*yôm*) is further defined by the nouns evening (*ereb*) and morning (*bôqer*) and an ordinal number (e.g., the sixth day, *yôm hašiššîy* [Genesis 1:31]).

If this weren't clear enough, the six-day creation is affirmed twice in Exodus: "For in six days the LORD (*Yahweh*) made the heavens and the earth" (20:11, 31:17). Furthermore, we are told in these verses and also in Genesis 2:2 that God rested on the seventh day, which Hebrews 4:4 cites in the New Testament: "And God rested on the seventh day from all His works." This is where we get our seven-day calendar week, the only demarcation of time not built on a solar or lunar cycle.

In contrast to the Scriptures, evolutionists would like us to believe that the universe somehow exploded into existence and then self-assembled itself through random, chance processes into galaxies, solar systems, stars, and planets. Then the essential information-rich biomolecules for life mysteriously popped into existence on Earth and self-assembled into a fully replicating cell.

This initial cell line then supposedly evolved through random mutation "acted on" by a mystical agent called natural selection into the plethora of plants and animals we see in the fossil and living records. And of course, there's no observable natural process to account for any of this materialistic speculation. In both the fossil and living records, we see creatures fully formed in their various kinds without any evidence of biological evolution whatsoever (e.g., transitional forms).

Thus, the obvious implication from the incredible engineering of our solar system, the earth, and all the living systems it contains is that an all-powerful and all-knowing Creator brought them into existence, and the book of Genesis is the only coherent and systematic account of this. But why the logical stepwise sequence of various creative events over the short course of six days?

The best way to consider the rapid sequential nature of the creation week narrative is by taking an engineering-based approach.


No one can logically deny that our solar system, the earth, and all its living creatures function as a massively complex interconnected system of subsystems. In the present age of human ingenuity, complex systems—whether they are cars, washing machines, or computers—must be engineered and assembled with a high level of foresight and intelligence all at once in a short sequence of time for them to work. A partially assembled car or computer is essentially worthless as an end product.¹

The creation account of Genesis follows this line of common-sense reasoning by describing how a divine Engineer (*Yahweh Elohim*) constructed our complex, interconnected cosmos and its living creatures in a short period of time, six days.

But is it a reasonable approach to compare human engineering with God's work of creation?^{2,3} In Psalm 115:4-8, God rebukes the Israelites for engineering inanimate idols with the nonfunctional attributes of a humanlike entity (having mouths, eyes, ears, and noses). While the overriding lesson in this passage is that we shouldn't worship anything, including "the work of men's hands," above the living God, there's more to glean from this text.

One of humans' unique attributes is their ability to purposefully craft and engineer elaborate things. This is one aspect of humans being created in God's image (Genesis 1:27) as compared to other biological life forms. In Psalm 115:4-8, the Lord uses this fundamental and inherently understood principle to highlight idolatry in a contrastive scenario—low-level human engineering vs. God's all-powerful engineering.

In the modern world of bioengineering, scientists at research centers across the world imitate the elaborate God-created systems found in living creatures using this same inherent perception of design—whether they want to acknowledge it or not. This is because humans inherently perceive design and are held accountable for it. "For since the creation of the world His invisible attributes are clearly seen, being understood by the things that are made...so that they are without excuse" (Romans 1:20).

Based on this engineering principle of system design, the creation week entails the sequential construction of elaborate interconnected systems over a short period of time by an omnipotent Creator God, the Lord Jesus Christ, that we can immediately appreciate from our own built-in perception of how things are constructed. 

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Bucket Orchids and Bees, a Codependent Design

article highlights

- Flowers appear to be specifically designed to attract insects and other creatures.
- The fossil record shows that orchids flourished alongside dinosaurs.
- The bucket orchid has a mutually beneficial relationship with the orchid bee.
- Incredibly, the flower guides the bee through an intricate maze within its petals, with a precise time interval that perfectly suits the orchid's pollination needs.

Flowers hold a fascination for most people. They have at least a threefold purpose: First for attracting animals (e.g., insects, birds, and mammals) for reproduction via pollination, the second for their medical and aesthetic value, and the third is that the ovary of the flower grows into fruit—a valuable source of food.

The orchids (Orchidaceae) are a large family of flowering plants commonly called the orchid family. God designed them to be fragrant and their blooms unique and functional in fascinating ways.¹ Orchids are designed with bilateral symmetry and tiny seeds.

Not surprisingly, orchids have always been orchids. God created orchids during the creation week thousands of years ago. Evolutionists, however, date the earliest orchid at 100 million years ago, but it's still just an orchid.² Indeed, according to the fossil record dinosaurs wandered among some very familiar plants—such as the orchid.

An amazing and intimate relationship is found between a specially designed orchid called the bucket orchid and the euglossine (or orchid) bee found in South America and Trinidad. The green/metallic blue orchid bee (family Apidae, genus *Euglossa*) is designed to pollinate and collect and store fragrances. The exact function of this odorous compound is not definitely known. Perhaps it's a signal to female bees, much like the beautiful tail of the male peacock attracts peahens.

cock attracts peahens.

The bucket orchid does not produce nectar that usually attracts insects. A male euglossine bee is instead attracted to the bucket orchid by its secretion of an aromatic fluid composed mostly of compounds called esters, the combination of an organic acid and an alcohol.³

The bee lands and falls into the fluid of the bucket orchid. Brushes on the insect's foreleg pick up the chemicals that are then stored inside their swollen hind leg (tibia). The orchid's downward-facing guard hairs prevent the struggling bee from climbing out except at a narrow spout. This spout just happens to be designed with small knobs that provide footing for the insect so it can climb up!

It's here that the bee is gripped by portions of the flower. As the bee tries to escape, the flower holds it and applies glue from a structure called the viscidium. This will aid in the fastening of sacs called pollinia, pollen

grains that are fused together. However, the glue needs time to dry and set before the bee is released. This may take up to 45 minutes. Once dry, the bee is freed and will visit other orchids. When the bee enters another flower of the same species, the pollinia will stick to the stigma of the second flower, where pollination occurs. Is such a detailed process the result of time and chance—or plan and purpose?

Evolutionists appeal to the cryptic term co-evolution in an attempt to explain this amazing relationship. But the word means nothing in terms of the origin of these two organisms and means only that they “evolved together.” This is hardly a scientific explanation.

Creationists see this relationship as a form of mutualism created in the beginning in which both insect and plant benefit and neither suffers. Christ has designed the bucket orchid and orchid bee, and the detailed process of pollination, to reflect His glory.⁴

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Puffins, Fitted for Living in Sea, Air, and Land

In order for tufted, horned, and Atlantic puffins to “be fruitful, multiply, and fill” specific habitats on Earth,¹ they need the right equipment. That requires God-given design bioengineering fitted for interfacing with dynamic conditions of habitats that they will “fill.”^{1,2} As living exhibits, puffins present God’s “clearly seen” handiwork and glory.²

Thanks to Christ’s providential bioengineering, puffins have the right equipment—for continuous environmental tracking (CET)—fit for living in the cold coastlands and northern seas of the Atlantic and Pacific Oceans.²⁻⁴

Some puffin CET traits are physical, such as anatomical parts and physiological systems needed for activities on land, in water, and in air. Yet other CET traits are intangible, such as gaining and/or applying know-how (and know-when)—what the Bible calls “received wisdom”⁵—when making life-protecting decisions in real time to avoid hungry predators.



article highlights

- Puffins possess all the necessary abilities to thrive on the land, at sea, and in the air.
- Recently, evolutionists were surprised by the puffins’ efficient use of energy as they both fly and dive for fish.
- Puffins also have the ability to learn how to avoid ground, air, and sea predators.
- Puffins are perfectly engineered by their Creator, Jesus Christ.

Bioengineered Bodies for Land, Air, and Sea

Some evolutionists recently studied and videographed the flying behaviors of puffins, plus their biophysical movements in ocean-water diving and swimming underwater.⁴ The results surprised them; these constantly moving clown-looking birds exhibited metabolic energy efficiency, for hours and days, in *both* air and ocean habitats.⁴

Yet creationists were not surprised because the Lord Jesus bioengineered puffins to move efficiently in both fluids—liquid seawater and gaseous air currents—minimizing wasted metabolic energy, even in a fallen world.⁴

Providentially Programmed for Wise Decision-Based Behaviors


Puffins avoid many bird-eating predators simply by flying to and from island cliff-top heights that are inaccessible to four-footed carnivores such as dogs, foxes, cats, river otters, martens, and rats.³ However, seals may attack puffins underwater, so puffins must stay alert for more than fish whenever they are fishing underwater.

Moreover, puffins keep alert eyes whenever flying because airborne predators include eagles, hawks, skuas, and large gulls—with the great black-backed gull being the most threatening.³

Yet puffins are wise—they learn.⁵ Many puffins, such as some whom this writer observed on Staffa, an island in the Hebrides, have somehow learned that settling in cliff-top grasses near human tourists is a safe place because predatory seagulls are reluctant to land on cliff-tops where humans are present.³

Puffin preferences show endowed intelligence, not trial-and-error random actions. Puffins acquire affinity for human hikers rather than for seagulls. This fits the Bible’s teaching that God gives learning ability—“wisdom”—to diverse animals.^{2,3,5} Thus, puffins display Christ’s caring providence.²

The Lord Jesus wisely endowed puffins with helpful traits—*physical bodies* for interfacing with air and sea plus *learning abilities*—so they can

recognize human “neighbors” as a cue showing where to land safe from predatory seagulls. 

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2. Compare Job 12:7-10 with Romans 1:20. “Biological anticipatory systems are real, and creatures use them to closely track environmental changes...For those with eyes to see, [these CET systems] burst with such purpose-driven activity that both the genius and tender provision of their Creator, the Lord Jesus Christ, are clearly seen.” Guliuzza, R. J. 2019. Engineered Adaptability: Creatures’ Anticipatory Systems Forecast and Track Changes. *Acts & Facts*. 48 (3): 16-18.
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Donors Make It Happen

In 1 Samuel 30, there's an interesting story that's easy to overlook if you fly by too fast. David and his men are returning from Jezreel to Ziklag. Upon arriving at Ziklag, they find the city burned with fire and their families taken captive by the invading Amalekites. Grief-stricken, David inquires of the Lord about a course of action. God replies, "Pursue, for you shall surely overtake them and without fail recover all" (v. 8).

David and his band of 600 men follow in pursuit. However, presumably due to the preceding three days' journey (v. 1) and their emotional exhaustion (v. 4), 200 of the men "were so weary that they could not cross the Brook Besor" (v. 10). Those 200 stayed behind with the equipment while David and 400 men continued the chase. After a day-long battle, they emerged victorious and "recovered all that the Amalekites had carried away" (v. 18), just as God had foretold.

Upon returning to the Besor, certain "men of Belial" ("wicked and worthless men," v. 22) among the 400 combatants objected to sharing the spoils of the battle with those who had stayed be-

hind. David would hear nothing of it and acknowledged God's hand in giving them total victory. David declared, "But as his part is who goes down to the battle, so shall his part be who stays by the supplies; they shall share alike." So it was, from that day forward; he made it a statute and an ordinance for Israel to this day" (vv. 24-25).

article highlights

- The ICR family is much larger than the people who work in our Dallas, Texas, office.
- ICR thrives because of its faithful donors.
- Those who support the frontline workers are vitally important to the battle.
- Thank you for standing with us and making things happen.

No matter the individual, God has for them a responsibility and a reward. This idea is continued by Paul in the New Testament, where he writes in 1 Corinthians 12:14-18:

For in fact the body is not one member but many. If the foot should say, "Because I am not a hand, I am not of the body," is it therefore not of the body? And if the ear should say, "Because I am not an eye, I am not of the body," is it therefore not of the body? If the whole body were an eye, where would be the hearing? If the whole were hearing, where would be the smelling? But now God has set the members, each one of them, in the body just as He pleased.

ICR is made up of more than just the 50 or so staff members at the Dallas, Texas, campus. Many others donate their time, prayers, and money to assist in the great cause God has given us. Our speakers may be the ones who visibly "go down to the battle," but donors are valuable as well and, I believe, will share in God's rewards in a similar manner, as David decreed. As Paul writes in 1 Corinthians 3:8-9: "Now he who plants and he who waters are one, and each will receive his own reward according to his own labor. For we are God's fellow workers; you are God's field, you are God's building."

Yes, donors make it happen just as much as the official ICR staff. Not only do your faithful gifts keep our researchers researching, our speakers speaking, and our writers writing, your donations also keep our computers computing, our networks networking, and our printers printing. Many thanks to our faithful long-term donors. If you are a new donor or just thinking about becoming one, we ask that you prayerfully consider joining us in this battle to help raise Christ up as Lord and Creator to a lost world. 🙏

Mr. Robbins is Information Technology Manager at the Institute for Creation Research.



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A while back we were quite touched by the article in *Acts & Facts* ["A New Commitment to Deep Research," September 2021] regarding all that goes into your free monthly publication. We decided we

want to start giving—hopefully monthly—to ICR again. We are really blessed by *Acts & Facts* and know it to be a first-rate publication that

has strengthened the faith of many, ours included.

— J. & K. S.



I'm a 15-year-old boy from South Carolina. I was born again three years ago, and the Lord is continuing to work in my life. **With this note is \$2, my [gift] from what I made the last week.** I know and pray God will use your organization to catch people on fire for God's Word.

— N. M.



Thank you for supporting my jail ministry—maximum security pods—with copies of *Acts & Facts*. The men look forward to reading these every month, and they generate great interchanges! **Even hardened hearts start to question their unbelief!** Glory to God.

— Seeking Jesus boldly, C.

Editor's note: We are unable to provide individual subscriptions for prison inmates, but chaplains who work in these institutions can request copies of our publications to share. Contact stewardship@icr.org for more information.



A few weeks ago, my husband and I drove over 4,000 miles in two weeks to see friends in Denver and the Grand Canyon, Bryce, Zion, and Petrified Forest. While it was out of the way, my bucket list definitely included visiting the ICR Discovery Center [for Science & Earth History]. It was awesome! We saw all three [planetarium] shows and all the displays. At

the gift shop, I found quite a few Christmas gifts, too. All of the Discovery Center was very well done and God-honoring throughout. It was fun to share our direct experiences of Mount St. Helens' eruption on May 18, 1980, with one of your very nice volunteers. We highly recommend the Discovery Center to all.

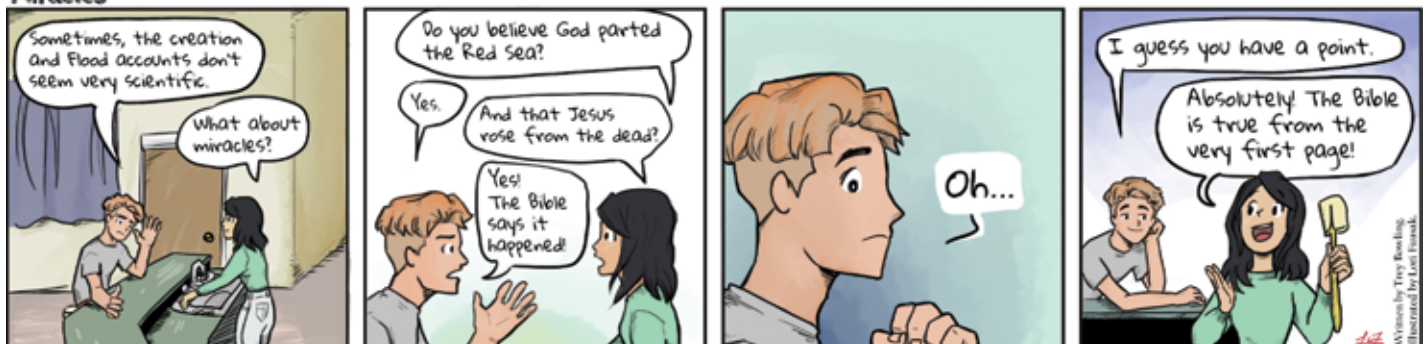
— A. & D. L.



Today we went on a homeschool field trip to the ICR Discovery Center! It was amazing! **They covered everything from a creationist standpoint fully backed and based upon Scripture.** The kids learned about the details of the Flood, the Grand Canyon, the Ice Age, adaptation vs. evolution, and so much more! Highly recommend visiting if you are able....Science confirms creation!

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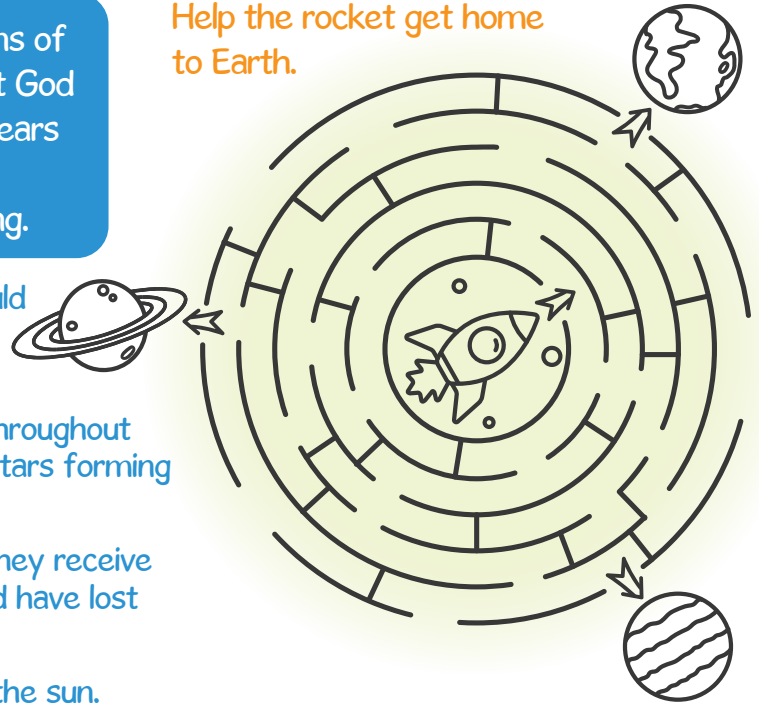
Miracles



Many people say that our solar system is billions of years old. But the Bible's timeline indicates that God created everything in six days around 6,000 years ago. Which is true? Here are a few fascinating facts that show our solar system really is young.

- ✓ After billions of years a thick layer of dust would have collected on Saturn's icy rings, yet they still sparkle and shine.
- ✓ Blue stars burn out quickly, but we find them throughout the universe. Scientists have never seen new stars forming to replace them, so they must be young.
- ✓ Jupiter and Neptune give off more heat than they receive from the sun. Over billions of years they should have lost all their heat, but they haven't.
- ✓ Comets lose icy material each time they orbit the sun. They would have completely vaporized after orbiting for billions of years. Some say new comets replace the old ones, but no one has seen this happen.

Help the rocket get home to Earth.



Next time you see a blue star, comet, or planet in the sky, remember that God's Word is true—and science is confirming it every day!

Solar System Crossword Puzzle

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

Answer to crossword puzzle: 1. Earth, 2. rocket, 3. sun, 4. Venus, 5. Uranus, 6. Saturn, 7. astronaut, 8. Jupiter, 9. Mercury, 10. Neptune, 11. Mars

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