ACTS OFACTS

INSTITUTE FOR CREATION RESEARCH

ICR.org

OCTOBER 2018

Honoring Our Past, Building Our Future page 5

The Moon: Required for Life on Earth

page 10

Darwin's Anti-Design Doctrine page 17

Could One Flood Form Many Rock Layers? page 20

SCIENCE FOR KIDS ANIMALS **BY DESIGN EXPLORING UNIQUE CREATURE FEATURES**

Award-Winning

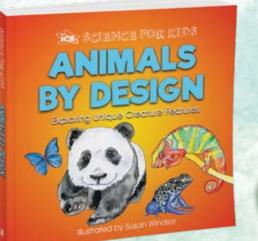
Braving the Cold

e Age. Yeah, yeah, I get that a lot...and for ge Greation scientists think warmer oceans after ad of the first

I the los Age ended, the oceans course or ans-imate became dier. Our part of the works got much take and durins, and we imagined to survive. Event e became entrict. Some of my tends were builed is entries and the survive. w shalk their enroles, including the

> Let It Shine antern Fish





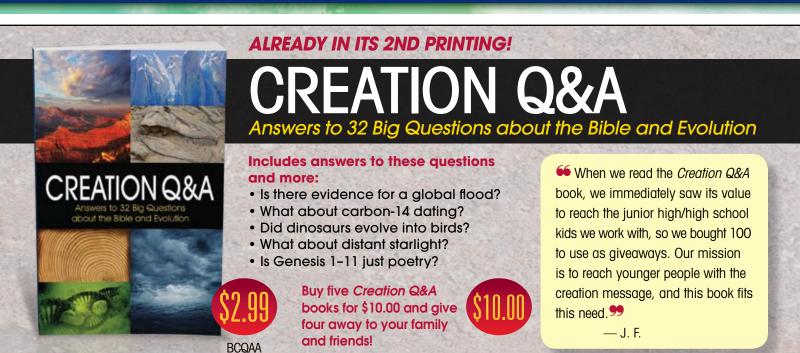
BABDEUCI

Were animals designed by a genius Creator, or did they evolve by random chance? In Animals by Design, you'll discover what the Bible and science say about the source of all life.

f up the darkness. It's like who spt we can turn off our lights. ng that fireflee and lantern full have the use our lights in totally different hobitath? is find a design feature that works well, the multiple inventions. Obviously, our amazing ur lights to good use—in both sky and sea.

Good Migrations

* Thousands of homeschoolers voted ICR a first-place winner in Practical Homeschooling's 2018 Reader Awards. www.PracticalHomeschooling.com



Call 800.628.7640 or visit ICR.org/store

Please add shipping and handling to all orders. Offer good through October 31, 2018, while quantities last.



VOLUME 47 NUMBER 10 OCTOBER 2018

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

Acts & Facts is a free publication. For subscription information, call 800.337.0375, visit ICR.org/subscriptions, or write to ICR at the above address.

EXECUTIVE EDITOR

Jayme Durant

SENIOR EDITOR Beth Mull

EDITORS Michael Stamp

Truett Billups Christy Hardy

DESIGNER

Dennis Davidson

No articles may be reprinted in whole or in part without obtaining permission from ICR.

> Copyright © 2018 Institute for Creation Research

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





Cover: Full moon



feature

Honoring Our Past, Building Our Future 5

impact

10 The Moon: Required for Life on Earth JERRY BERGMAN, PH.D.

research

1()

15 ICR Scientists Make Big Impact at **Creation Conference**

back to genesis

- **16** New Chimp Genome Confirms **Creationist Research** JEFFREY P. TOMKINS, PH.D.
- 17 Darwin's Anti-Design Doctrine RANDY J. GULIUZZA, P.E., M.D.

creation q & a

20 Could One Flood Form Many **Rock Layers?**

BRIAN THOMAS, M.S.

apologetics

21 Grand Canyon Neighbors: Pines, **Truffles**, and Squirrels

JAMES J. S. JOHNSON, J.D., TH.D.

stewardship

22 Finishing Well

HENRY M. MORRIS IV

OCTOBER 2018 | ACTS (FACTS 47 (10) | ICR.ORG (3)











The Wonders of Our Creator

As I read this month's feature article by Dr. Henry Morris III, "Honoring Our Past, Building Our Future," I was jarred by the statement that a large local museum's mission is "to present the wonders of evolution" (page 5). Investors poured millions of dollars into a project designed to showcase the false teaching that something other than our Lord created the universe and everything in it.

Such a mission begs the question exactly which "wonders of evolution" do they have in mind? According to evolution, humans are accidental descendants of apelike ancestors. Evolution's survival of the fittest motto suggests that only the strong should live. This empty philosophy gives no moral authority and no hope for the future.

How do you sell tickets to see that?

You don't. You create something else: engaging exhibits with fascinating science and slip in the evolutionary interpretations along the way.

We don't need a museum for more evolution. It's everywhere. We see evolution displayed not only in museums but also in school classrooms, science and history textbooks, children's picture books, TV programs and movies, literature, zoos, and even some churches. Does this concern you? This focus on evolution undermines our faith—if we can't believe what the Bible says about creation, then how can we believe it about Jesus and salvation?

Instead of going to places that glorify the "wonders of evolution," what if we could take our families somewhere to explore the *wonders of our Creator*? We'll soon be able to do just that! When the ICR Discovery Center for Science and Earth History opens in 2019, it will use science, technology, and creativity to glorify our Creator and celebrate *His* wonderful works. The exhibits will highlight the events described in Genesis 1–11 and show the glorious harmony that exists between science and the Bible.

What wonders will the Discovery Center declare? That our all-powerful God created everything out of nothing, formed human beings in His image, and breathed His very breath of life into them. It will shout that God's response to death is not to promise more death but to provide a way for us to escape eternal death and experience eternal life through Jesus Christ. And it will proclaim that He is wise enough to design and uphold every aspect of this vast universe while caring for the tiniest detail of life.

Visitors to the Discovery Center will encounter scientific evidence that exposes the problems with evolution and demonstrates the accuracy of Scripture. Our scientists' research will be integrated throughout the displays, including the latest information on soft tissues in dinosaur fossils, human versus chimp DNA, worldwide mapping of the Flood's sedimentary layers, weaknesses in the Big Bang model, created design in the human body, and more.

As we work to complete the exhibits, please pray for everyone who will come through the Discovery Center doors. ICR wants all who visit to be blessed by God's work in creation and to leave knowing more than just the science supporting that creation. We want our guests to find a deeper relationship with the One who made them—that's a wonder worth celebrating.

Jayme Durant

Jayme Durant Executive Editor

ICR.ORG | ACTS 🙆 FACTS 47 (10) | OCTOBER 2018

Honoring Our Past, Building Our Future

article highlights

- CEO Dr. Henry Morris III has guided ICR's work and vision since 2007.
- The ICR Discovery Center for Science and Earth History will help ICR reach many more people with creation truth.
- Construction of an evolution-based museum in Dallas inspired Dr. Morris' urgency to build the Discovery Center.
- ICR needs about \$5 million more to open the Discovery Center debt-free in spring 2019.



Dr. Duane Gish, Dr. Henry Morris I and ICR Founder Dr. Henry Morris

ICCR 's founder, Dr. Henry M. Morris, started the Institute for Creation Research in 1970 in a joint venture with Christian Heritage College, now San Diego Christian College. His groundbreaking book *The Genesis Flood*, co-written with Dr. John Whitcomb, triggered the modern biblical creation movement.

If you've read his biography, *Henry M. Morris: Father of Modern Creationism*, you'll know he faced many obstacles and setbacks along the way. But with God's help, his work ultimately resulted in a resurgence of belief in the six-day creation account of Genesis and established a relatively new concept: using science to confirm the Bible's accuracy and authority. Dr. Morris went to be with the Lord in 2006.

The founder's eldest son, Dr. Henry Morris III, took the helm in 2007 as CEO, oversaw ICR's move from Santee, California, to Dallas, Texas, and cast the vision for ICR's biggest project yet—the ICR Discovery Center for Science and Earth History. We sat down with him for an interview about his father, ICR's history, and the Discovery Center. The experience was fascinating. Dr. Morris carries a strong passion to see God honored, the Scriptures upheld, and evolution discredited.

Dr. Morris, what is your vision for the Discovery Center? Where did this idea come from?

I think that it's fair to say that a place to showcase our evidence and research had been on my mind—and on ICR's mind, as a matter of fact—for decades. We had a small museum in Santee. Its main focus was geologically oriented since that was the focus of most of our research back in the '70s and '80s. Although it was a handmade effort, we served a lot of people with it, some years exceeding 25,000 visitors. But the vision for something greater germinated when I saw the announcement of the Perot Museum of Nature and Science in Dallas. The lead article—back in 2008, I think—said that they were going to present the wonders of evolution. My heart just skipped a few beats, and I said, "I've got to do something to counter that."

I began praying in earnest about it, and as the Lord seems to do with visions like that, it tends to grow and morph as you get a little bit

feature

more serious about things. A couple of years later, we began putting the word out among our constituency, and some additional donations began to appear. We received a surprise gift of a little over \$2.5 million that confirmed our sense that the Lord was leading—okay, let's go forward.

Was that kind of a tip-off that the time is now?

Yeah, I knew it wasn't enough for the project, but it was enough to get us started and to seriously begin looking at the "what ifs" and "could be's." But for a while there, it just wasn't coming together.

One thing has been a hard lesson to learn through all of ICR's history. Frequently, the Lord gives a vision, but it doesn't come to fruition for some time. When you look at biblical accounts, you see that's pretty common. For instance, Moses was thrown from power and spent 40 years after that on the back side of the desert before the Lord called him to deliver Israel. David was an outlaw after he had been anointed king by Samuel. Joseph was in prison for 18 years before the Lord made him "pharaoh number two."

Those were some of the struggles I was sensing then, as well as the struggle of building ICR itself. We needed to hire a lot of people.



artist David Rock and Henry Morris IV.

We needed to acquire new scientists and get them focused on the issues at hand. ICR was growing and demanding a lot during those years. It took about five years from that initial "I've gotta do something" to where the timing became more urgent.

ICR already produces a monthly magazine, a daily devotional, podcasts, books, DVD series, video shorts, apologetics courses, news articles, and live events. What do you think the Discovery Center is going to add to ICR's ministry?

The communication outlets we have now are good, and they

are serving a purpose. But we have never crossed the threshold of reaching hundreds of thousands of people. The Discovery Center will enable us to do that.

If you build a mission and a ministry around a long-term vision, then it begins to grow itself, mature itself, and produce its own advocates. Books don't do that, DVDs don't do that, seminars don't do that. So this was a major step in vision and purpose as well as effort and funding.

What makes this project a "Discovery Center"?

I have always been uncomfortable with the typical museum approach. I jokingly call museums a "walk and gawk" exposure, where you just go through and see some things and you learn some things. Maybe you go a second time, but that's the end of it. I wanted to develop something that would be a never-ending source of learning and growth, oriented initially toward homeschools and Christian schools and the families that come with them, then branching off to connect with the churches around the country as a destination event. I want visiting the Discovery Center to be a genuine learning, growing, maturing experience where we can reach and train increasing numbers

of people.

What will visitors learn from the exhibits?

One of the more unique things about our exhibits is that they will progressively tell a story. There's no one exhibit that is the core of the museum. Essentially, we tell the story of the first 11 chapters of Genesis. Each exhibit adds to that story or tells a facet of that story. We introduce the exhibits by laying the foundation for why advances in science are possible today.

Tell us more about that. Why is it important to understand the foundation of science?

Until the Reformation, science as we know it was almost nonexistent. With the Reformation came *sola Scriptura*, the confidence that we could begin to understand God's creation based on the information in the Bible. Johannes Kepler was famous for saying it was the job of the astronomer to think God's thoughts after Him. Isaac Newton and the other scientists of that era were Bible-believing men. That confidence in the Christian worldview was the intellectual freedom that made empirical science possible; you could depend on the experiments that you conducted today, and they would give you the same answers tomorrow. And if they didn't, it was because you had a bad presumption in your experiment. So, they learned by the process of experimentation and observation, what we now call the scientific method, which was nothing more than a restatement of biblical principles.

With the birth of the Reformation, which really started in the 1300s with John Wycliffe and others, science became a major discipline. The discoveries of gravity and planetary motions and laws of physics and chemistry, etc., all of these things that made leaps in science possible came about in 300 years.

(6)

This enormous growth of knowledge was quickly counterbalanced by naturalism and the rise of Darwinism. Satan is no fool; he always tries to undermine the freedom that comes with truth. Evolutionary philosophy began undermining the Christian worldview and today has almost overtaken it.

We're introducing these facts to every visitor to the Discovery Center in what we call the Founders of Science exhibit. As the visitor enters the center, he or she will be encouraged to recognize that the Christian worldview opened the door for genuine science.

What will visitors see next?

From there on, the story of Genesis chapter 1 through Genesis chapter 11 is displayed. We start with the universe and the creation week and the wonders and majesties of Psalm 19. The Garden of Eden, the Fall of man, the awful pre-Flood world, and the Ark that Noah built are exhibited, all enhanced by touchscreens with access to the ICR archives.

The post-Flood world exhibit centers around a diorama of the time of the patriarch Job, with huge models of Grand Canyon and Mount St. Helens close by. This gallery also dedicates a large wall to show the evidence of "dragons" throughout history well into the Middle Ages. The Diversity of Life exhibit hall contains a replica of the Tower of Babel, God's design in DNA, and ICR's human-chimp comparison research, along with examples of soft tissue discoveries in dinosaur bones and a display of the Icons of Evolution showing the more famous discoveries of so-called hominids and the real science that exposes their errors.

Everything that we have talked about up to that point shows how science demonstrates the accuracy of Scripture. But everything is consummated by the last two galleries, which will focus on Jesus as Savior and returning King. In the end, we explain what Scripture



says: Jesus, the Creator, died for you, and you must be twice-born. That's the message of Scripture.

What kind of shows will we see in the planetarium?

We will start with two or three shows that will be about 20 minutes long. The first one will be about the solar system, demonstrating the uniqueness of each planet, the design of the solar system, and the fact that it simply cannot be billions of years old. The second one will be a bigger picture of the universe itself—galaxies, blue stars, comets, things of that nature, again stressing the youth of the universe.

Your father founded ICR back in 1970 and spent decades investing in creation ministry. What do you think he would have thought about all this if he could see it today?

I'm hopeful he would be pleased. Dad and I spent a lot of time thinking forward together in his last few years. What we talked most about was trying to reach leaders, pastors, and Christian educators.



Dr. Morris surveys the Ark-bound creatures.

He and I both wanted to do pastors' conferences. We tried to do as many of those as we could, and we are going to do more. He wanted to reinstall, reinvigorate what we used to call the summer institutes, where we would hold week-long training sessions. People would come and bring their families and stay for a week in an area. With the Discovery Center's auditorium we have here now, we could probably start that up again pretty quickly.

Did the summer institutes include pastors and their families, laypersons, or science people?

All of the above. We tended to orient it during those early years to applied science: medical doctors, veterinarians, engineers, professionals of that nature. It morphed into general leadership after a while. My own heart is strongly oriented to the churches because I see them struggling on these issues, so I'd like to do more pastoral training.

Can you tell us a little more about ICR's history over these almost 50 years?

Well, we certainly had a harvest of men and women in the applied sciences, the doctors and engineers and so on, up through the '90s. That initial harvest was the group that Dad and those early ICR scientists were able to reach. Many among that harvest quickly took to the creation message. They had always been troubled in their own hearts by the conflict they felt between what they read in the Bible and the "scientific" ideas they were taught, but they didn't have the ammunition to debate it. When Dad's book with Dr. Whitcomb hit the market in the '60s, boy, it was like, whoosh—just a breath of fresh air. And we grew from a two-man operation to a 50-employee op-

eration, reaching thousands on a regular basis. When we moved the organization to Dallas in 2006, the staff was right at 50. Only 10 of them made the move. Some were on the verge of retirement, and others had family commitments in California.

For all practical purposes, we became a new organization when we moved here. It was an interesting challenge trying to find and hire and rebuild the organization during those first half-dozen years or so. We've reached 50 again, and we've maintained this level for about four years now. The Discovery Center will bump it up pretty quickly.

What do you hope the Discovery Center will accomplish?

I have three main goals in mind. I certainly want to make solid inroads into homeschools and Christian schools. They will want to come out here on a regular basis for field trips. I would ditto that with church youth departments, primarily junior high and high school, with maybe some college student ministries as well. Ultimately, I would like to see consistent leadership training through the Discovery Center. We could host a pastors' conference for a day or two and while they are here take them through the Discovery Center and concentrate on some particular area of expertise. Those three things, I think, are my want-todos: homeschools, church youth departments, and Christian leadership—pastors and teachers.

How will this facility help parents teach creation to their children?

Well, the most obvious way would be to bring them through and help them see the answers to particular questions they may have about dinosaurs or whatever the case may be. Every age level tends to have a hot topic that they're after. And we would cover most of them here. The second would perhaps be training for parents.

How much more does ICR need to complete this project?

Thanks to the generous donations from ICR's supporters, we've raised almost \$30 million. It's right around \$5 million more to complete the project.

When will the Discovery Center open?

Construction of the facility is almost complete. We're still working on exhibits, but we're planning to be ready by spring 2019.

For more information and to see how you can help complete the vision of the ICR Discovery Center for Science and Earth History, visit **ICR.org/DiscoveryCenter**.

Sept. 6. 2018

Dear Henry:

Youn message last Sunday was exceptional! It was educational and substantiated the truths of creation from God's Word in the Bible. Our people loved hearing you! We're thankful for you and the ministry of ICR.

This weekend was faith-affirming and was extremely well attended. Much effort was invested but the outcome was very successful. Thank you for the privilege of hosting the conference. I'm gnateful for your faithfulness to God, leadership in our church, and for the personal encouragement you are to me. It's my joy to serve as your pastor.

Dr. Repert Jeffress Serior Pastor, First Baptist Dallas

Letter about the First Baptist Dallas creation event in August 2018



For information on event opportunities, email the Events Department at Events@ICR.org or call 800.337.0375.

For the serious science reader

impact

The Moon Required for Life on Earth

article highlights

- The moon was specifically designed to enable life to thrive on Earth.
- The remarkable stability of Earth's rotation and orbit are due to the moon's orbit around it.
- The moon keeps Earth's axial tilt at 23.5°—just right for stable weather.
- The moon's gravity provides fresh tides to our shores and propels ocean currents.

ur moon plays a critical role in producing the environment required for life to thrive on Earth. If the moon suddenly disappeared, then the consequences for many forms of life would be devastating. The moon is the second-brightest regularly visible celestial object in Earth's sky. As Genesis 1:16 says, "Then God made two great lights: the greater light to rule the day, and the lesser light to rule the night."

Without the moon, all clear nights in areas without artificial lighting would be too dark for many nocturnal animals to search for food. Consequently, if the moon disappeared, some species would likely become extinct.¹ Even the biological clocks used by many life forms are closely tied to the moon.

Of the eight planets in our solar system, Earth has the largest moon relative to the size of the planet it orbits. Three of Jupiter's moons—Ganymede, Titan, and Callisto—and one of Saturn's moons, Io, are all larger than our moon but are proportionally far smaller compared to the planet each orbits.

Our moon is only about one quarter of a million miles from Earth, closer than most large planetary moons.² The moon lacks an atmosphere, thus no wind exists. This still environment allows any change on the moon's surface, such as a

meteorite crater or a footprint, to serve as a time capsule. Since the moon lacks an atmosphere, the sky viewed from its dark side would always be dark, allowing the stars to be constantly visible.³ On the sunlit side, one would not see stars because the solar glare would overwhelm the sky.

The Moon Is Earth's Night-Light

From Earth, the moon appears to be a bright gray-white color. Only 12% of the sun's light is reflected, a slightly higher level than that reflected from worn asphalt.⁴ If the reflection were 100%, Earth's night would at times be almost as bright as its day. As a result, plants that require a night cycle would not survive because certain critical plant biochemistry occurs only at night.⁵ The moon requires about a month to circle Earth. Because the moon

is slowly rotating as it orbits, the same face is always visible from Earth.

The Moon and the Seasons

Earth's axis angle is critical to temperature. It's hottest near the equator, where the sun's rays strike at close to a 90° angle. The more it deviates from this angle, the lower the temperature. This is why Earth's poles are significantly colder. Many researchers believe our moon's gravitational influence helps to ensure the stability of Earth's spin axis' tilt angle. Even over several million years of assumed prehistory, Earth's axis' tilt is estimated to only have varied by ± 1.5 to $2.5^{\circ.6}$ As a result, our climate and seasonal variations have generally remained modest throughout our relatively short history.

Without the moon, many scientists believe Earth's axis would likely wobble much more than it does now. Too much deviation and the Earth could be "locked into a permanent deep freeze or else heated to dangerous levels."⁷ The stability of Earth's climate "depends on the presence of the moon which stabilizes its obliquity, and hence the insolation variations on its surface."⁸

The moon's effect on Earth's stability is due in part to two critical factors: its size and orbit. Two basic types of orbit exist: an *equatorial orbit*, which travels along the line of the planet's equator, and an *ecliptic plane orbit*, which lies in the flat plane defined by the planet's orbit of the sun. The moon's orbit is unique—most of the other named moons orbit their planets in an equatorial orbit. In contrast, our moon orbits in an ecliptic orbit. In other words, the moon's orbit is very close to the plane of the ecliptic, not the earth's equatorial plane.

The planets in our solar system have elliptical-shaped orbits,

Because the moon has no atmosphere and therefore no wind, the Armstrong and Aldrin footprints made almost a half-century ago are still intact. Image credit: Copyright © 1969 NASA. Used in accordance with federal copyright (fair use doctrine) law. Usage by ICR does not imply endorsement of copyright holder.

meaning the orbit's shape is an ellipse, or "squashed" circle. However, Earth has an orbit shape that is closer to a circle than that of most planets. Earth's remarkable stability is due to the combination of its large moon and its nearly circular orbit. One of these two traits alone could not produce the stability necessary for life; both are required.

The Moon's Stabilizing Effect

Earth's spin axis' stability is due to the existing Earth-moon system, which causes the axis angle to be nearly constant due to the moon's gravitational effects. Without "the Moon, the tilt angle would wander in response to the gravitational pulls of the sun and Jupiter. The monthly motion of our large Moon damps any tendencies for the tilt axis to change."9

A tilt significantly larger than 23.5° would cause greater climate fluctuations because some areas of Earth would be more exposed to light, others less exposed. The existing tilt of Earth's axis is "just right" for life to thrive.¹⁰ An examination of the climates of other planets in our solar system provides proof of the importance of a planet's tilt.¹¹

Calculations performed in the early 1990s suggested that without our moon, the tilt of Earth's axis could vary by as much as 90°. Obviously, such dramatic changes in Earth's tilt would result in extreme climate changes that would be devastating to life. These calculations indicate that the moon is very important to life on Earth, which in turn suggests that the moon was designed.

More recent research, performed with greater computing power, has refined the earlier estimates. Yet, even these newer calculations indicate that without the moon, the earth's axis tilt could vary by 10° —from 13° to 33°.¹²

Some secular scientists are using these newer results to argue

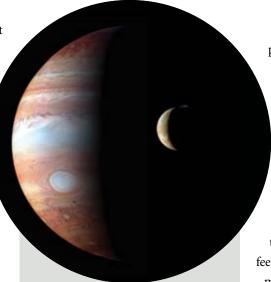


The moon's gravity lifts our ocean's tides, keeping coastline waters from becoming stagnant and driving currents around the world.

impact

that the moon's existence isn't as important for life on Earth as once believed. They claim that the climate changes resulting from a 10° tilt change would be less of a problem than previously supposed. They would like to avoid any suggestion that Earth and our moon have been designed.

Secular scientists are faced with a contradiction, however, when they claim a 10° change in Earth's tilt would not cause significant problems for life. Most secular scientists hold to the Milankovitch (also called astronomical) ice age theory, which claims that the timing of ice ages is somehow controlled by Earth's orbital motions, including the small variations in Earth's axial tilt. If a small variation of 2.5° can bring about ice ages, a 10° variation would cause much greater climate extremes. Of course, many problems exist with this astronomical ice age theory. Mike Oard and other climatologists believe the Genesis



Other planets' moons are much smaller in relation to the planet they orbit. This is a montage of New Horizons images of Jupiter and its volcanic moon Io, taken during the spacecraft's Jupiter flyby in 2007. Image credit: Copyright © 2007 NASA/Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute/ Goddard Space Flight Center. Used in accordance with federal copyright (fair use doctrine) law. Usage by ICR does not imply endorsement of copyright holder.

The moon's pull has an enormous impact on Earth. It's not only exceptionally large for a planet of Earth's size, but astronomically it orbits very close to us. This creates large gravitational forces between the earth and moon, causing both the large ocean tides and the much smaller continental land tides. When the moon travels directly overhead Earth, the atmosphere bulges in distances measured in miles, the oceans bulge in distances measured in feet, and the Earth's land mass in distances measured in fractions of an inch.¹⁷

Although both the sun and wind drive the ocean's oscillations, the moon's gravitational tug is responsible for the major share of the tidal flux. The gravitational attraction of the sun on Earth's oceans is almost half that of the moon's, and their gravitational interaction causes both the spring and neap tides.¹⁸

Flood provides a superior explanation for the Ice Age.13

For example, if Earth's tilt is greater, more of the Northern Hemisphere will be in continuous daylight during the summer months, causing some higher-north latitudes to exceed the temperature of Death Valley, prohibiting many life forms from subsisting there. The other six months would exist in full darkness and therefore be unbearably dark and cold for most all life forms, like the arctic North Pole areas are now.

Less tilt than 23° would produce milder climates but prevent the wide distribution of rain that now exists on Earth. This is because the 23.5° tilt produces wind pattern changes that move around enormous amounts of water vapor in the earth's atmosphere. This water falls as both rain and snow required for plant and animal life.

The presence of our moon not only leads to a relatively stable climate but also creates a phase rhythm that has guided humans for thousands of years. Since ancient times, the moon's prominence in the sky and regular phase cycle have made it a major influence on the development of calendars, agriculture, language, and art.¹⁴

The Tides

The moon causes tides and wind to generate worldwide ocean currents that help to widely redistribute Earth's water nutrients and toxins. Without this effect, ocean water would be stagnant and seriously interfere with, and eventually kill, most life in the ocean.¹⁵ The moon causes about half of the tide effect. The sun and nearby planets cause the rest.¹⁶

The Temperature Modulation Effect of Tides

The ocean's tidal flow also helps to transport enormous amounts of heat from the temperate equator areas to the frigid poles, significantly mitigating extreme climate fluctuations. Without the lunar tides, climate oscillations would be far more extreme. If the moon suddenly vanished, the lack of attraction of the moon on Earth's oceans would cause the bulge of water in the oceans to collapse, resulting in a gigantic global wave, flooding parts of the mainland. Lacking these lunar tides, the water waves driven by the sun and surface winds would move the ocean water miles inland onto the vast, flat landscape.¹⁹

The Moon's Important Protection Role

The moon, like the planets, especially Jupiter and Saturn, helps to protect Earth from damage caused by incoming asteroids, meteorites, and comets. Many space rocks that otherwise would strike Earth are pulled toward the moon by its gravity, missing us.²⁰ Although the moon's surface area is only 7% of Earth's surface area, its effect is significant.²¹

Supporting this role is the fact that the moon's far side, the half not facing Earth, always faces toward deep space "and as a result is one of the most heavily cratered surfaces in the solar system."²² The moon's far side has over a dozen craters with diameters 150 miles or more and very few flat lands, called seas.²³ Although the moon is only a spherical rock 2,000 miles in diameter and 250,000 miles away, it has enabled Earth to be a long-term habitat for life. The moon is a fascinating factor in the Rare Earth concept because the chances that an Earth-like planet should have such a large moon are quite small. Of the many moons in the solar system, nearly all orbit the giant planets of the outer solar system. The warm, Earthlike planets that are close to the sun and that fall within the habitable zone are nearly devoid of moons.24

The Perfect Eclipse for Research

The moon's current orbital distance is about 30 times larger than the earth's diameter, causing it to have an apparent size in our sky almost the same as the sun. This allows the moon to nearly cover the sun's surface during a total solar eclipsethe moon is just the right size to totally block the sun's bright photosphere. This allows the sun's corona to be studied in detail. No other planet-moon system has this advantage, and it's convenient that the planet with this advantage has intel-

ligent life on it that can use this fact to study the sun's corona.

If the moon were much larger, an eclipse would obscure the



The sun's corona, only visible during a total eclipse like this, is a plasma ring (atoms so hot they have lost many or all of their electrons) that extends millions of kilometers into outer space. The red spots—Bailey's beads—occur where the rugged lunar topography allows beads of sunlight to shine through.

Image credit: Copyright © 2017 NASA/C. Thomas. Used in accordance with federal copyright (fair use age by ICR does not imply endorsement of copyright holder. doctrine) law. Us

References

The moon crossing in front of the sun

on January 30, 2014—a partial solar

eclipse. This lunar event happens two

to three times each year. Note how

sharp the moon's horizon is, a dem-

atmosphere to distort the light from

the sun.

onstration of the fact the moon has no

Image credit: Copyright © 2014 NASA/Goddard/SDO. Used in

accordance with federal copyright (fair use doctrine) law. Usage

by ICR does not imply endorsement of copyright holder.

- Comins, N. 1991. The Earth Without the Moon. Astronomy. 19 (2): 48-53.
- DeYoung, D. and J. C. Whitcomb. 2003. Our Created Moon: Earth's Fascinating Neighbor. Green Forest, AR: Master Books, 16.

sun's colorful chromosphere. If less round, the chromosphere would be either partly

> blocked or the bright photosphere would be incompletely blocked, pre-

venting the careful study of the chromosphere.25 But it's the perfect

shape to produce a total eclipse, the

only place in the solar system where

Earth's moon is the perfect shape,

size, density, and distance from us to produce

the stable environment that is important for

life to thrive. Its many protective effects in-

clude causing the tides, providing the ideal

level of light to light up the night, and, many

scientists believe, stabilizing Earth's tilt. The

Earth-moon system relationship would be

very different if only small astronomical

changes occurred. The moon was designed

to help us thrive. Tonight, take the opportu-

nity to look up into the night sky and view

this special piece of God's handiwork. 🛸

this can occur.

Summary

- Comins, N. F. 2003. Heavenly Errors: Misconceptions about the Real Nature of the Universe. New 3.
- Colimis, N. P. 2005. Interventy Errors. Misconceptions about the Real Nature of the Oniverse. New York: Columbia University Press, 35-36.
 Seeds, M. and D. Backman. 2014. ASTRO2. Boston, MA: Books/Cole, 111.
 Black, C. and B. Osmond. 2003. Crassulacean acid metabolism photosynthesis: 'working the night shift.' Photosynthesis Research. 76 (1-3): 329; Dodd, A. N. et al. 2015. Interactions between circadian clocks and photosynthesis for the temporal and spatial coordination of metabolism. Frontiers of Plant Science, 6: 245.
- Ward, P. and D. Brownlee. 2000. Rare Earth: Why Complex Life Is Uncommon in the Universe. New York: Copernicus, 223; Laskar, J., F. Joutel, and P. Robutel. 1993. Stabilization of the Earth's obliquity by the Moon. *Nature*. 361: 615-617.
- DeYoung, D. 2008. Tides and the Creation Worldview. Creation Research Society Quarterly. 45 (2): 100-108.
- Laskar, J. and P. Robutel. 1993. The chaotic obliquity of the planets. Nature. 361: 608-612. See 8 also Jakobsen, H. What would we do without the moon? ScienceNordic. Posted on sciencenordic.com January 12, 2012, accessed August 10, 2018. Ward and Brownlee, Rare Earth, 223-224
- 10. Ibid, 224-225
- Diol, 224-225.
 Laskar and Robutel, The chaotic obliquity of the planets.
 Cooper, K. Earth's moon may not be critical to life. Astrobiology Magazine. Posted on astrobio. net January 26, 2015, accessed August 12, 2018. See also Jack, J. J., J. W. Barnes, and J. E. Cham-bers. 2011. Obliquity variations of a moonless Earth. *Icarus*. 217 (1): 77-87.
- Oard, M. J. 1990. An Ice Age Caused by the Genesis Flood. El Cajon, CA: Institute for Creation Research; Oard, M. 1997. The New Weather Book. Green Forest, AR: Master Books, 6-7.
- Slote, A. 1967. The Moon in Fact and Fancy. New York: World Publishing Company.
 DeYoung and Whitcomb, Our Created Moon, 80.
 Comins, The Earth Without the Moon, 50-51.

- Sonning, The Moon in Fact and Fancy, 28.
 Le Provost, C., A. F. Bennett, and D. E. Cartwright. 1995. Ocean Tides for and from TOPEX/ POSEIDON. *Science*. 267 (5198): 639-642.
- 19. Comins, N. 1993. What if the Moon Didn't Exist: Voyages to Earths That Might Have Been. New York: HarperCollins. 20. DeYoung and Whitcomb, Our Created Moon, 82-83.
- Gonzalez, G. and J. W. Richards. 2004. The Privileged Planet: How Our Place in the Cosmos Is Designed for Discovery. Washington, DC: Regnery Publishing, 115.
 Comins, The Earth Without the Moon, 52.
- Simon, S. 2003. The Moon. New York: Simon & Schuster, 14.
- 24. Ward and Brownlee, Rare Earth, 222
- 25. Gonzalez and Richards, The Privileged Planet, 8.

Dr. Bergman is Research Associate at the Institute for Creation Research and was an adjunct associate professor at the University of Toledo Medical School in Ohio.





e're putting the finishing touches on the outside of the ICR Discovery Center of Science and Earth History! Soon, we'll install huge tiles of fossil replicas along the main wall of the building. The paddlefish example shown on this page is 10 feet across and sure to draw attention from passing drivers on this busy street.

ENTER

Now we've turned our focus to the interior details. ICR leadership and science staff are collaborating with creative experts to make these engaging exhibits as biblically and scientifically accurate as possible. This brings up questions few think to ask. What trees best represent the pre-Flood world? Which grasses belong in the Job diorama? Was the wooly rhino brunette or blond?

Our muralist finished backdrops for the Garden of Eden and Flood exhibits, and is now painting Ice Age scenery. Workers are spraying concrete that will eventually contain the garden's waterfall. And the Grand Canyon exhibit carved deep into the Discovery Center floor is beginning to take shape.

We recently installed over 200 seats inside our new auditorium, where we look forward to hosting science presentations that will encourage and educate visiting families from across the nation. A generous ICR supporter who owns a seating company provided these chairs for the Discovery Center at his cost. We're so thankful for God's provision through His people!

Help Us Complete the Exhibits

We're developing the most educational and inspirational exhibits possible, pointing people to the truth of our Creator, the Lord Jesus Christ. Visit **ICR.org/DiscoveryCenter** to find out how you can join us in this vital project. Partner with us in prayer and help us finish strong!





The new auditorium chairs sit waiting for visitors.



Bands of starry wallpaper finish the outside of the planetarium.



Our muralist creates the background for the Ice Age exhibit.



Ten-foot exterior wall panel of a paddlefish fossil





Pre-Flood trees



Choosing grass for the Job diorama

ICR Scientists Make Big Impact at Creation Conference

scientists recently attended the International Conference on Creationism (ICC) to present their latest research and participate in panel discussions with others in their respective fields. The conference was hosted by the Creation Bible Fellowship of Pittsburgh.

research

serious science r

e a d e

Dr. Jeffrey Tomkins presented research from his ongoing evaluation of the alleged fusion of two chimp-like chromosomes to form human chromosome 2.1 First, Dr. Tomkins reviewed the history of his research, which showed that the alleged signatures of this event in human DNA-the so-called "fusion site" and "fossil centromere"-were each functional features inside active human genes. Not only does this debunk the evolutionary fusion idea, it also refutes the claim that this so-called fusion site is an accident of evolution. The discovery that its telomere-like sequence was an important functional switch inside a gene led Dr. Tomkins to investigate whether it might be found in other places within the genome. Thanks to data generated from an ongoing genome project called ENCODE, he discovered thousands of these internal telomere-like sequences across the genome acting like genetic switches. What many thought was a rare remnant of evolution is actually a prevalent feature in the human genome.

Dr. Randy Guliuzza described a new creationist model called continuous environmental tracking that explains how organisms adapt to changes in environmental conditions.² He showed how creatures seem to be tightly tracking their environmental conditions and self-adjusting to changes in ways that are highly regulated, rapid, and repeatable. Some of their responses are so targeted that they are predictable. These characteristics are consistent with products of purposefully engineered internal mechanisms.

Dr. Tim Clarey presented two papers from his ongoing geologic column research. One paper established a worldwide flood as the origin for the column.3 Dr. Clarey explained that only a true global flood could explain the extent and universal nature of the geologic column. Instead of demonstrating evolutionary progress, the same types of fossils found around the world in similar strata are actually the result of a global event that inundated the same ecological levels at the same time. His second paper detailed how the order of the megasequences can help reveal clues about the pre-Flood geography, identifying shallow seas and lowland and upland environments.4

Dr. Clarey also participated in the Geosciences Workshop as a panel member. The symposium examined Flood boundaries, with particular emphasis on the post-Flood boundary. Dr. Clarey and Dr. John Baumgardner collaborated to make a strong case that the post-Flood boundary must be in upper Cenozoic strata based on the nature of global stratigraphic data and the age relationships of the ocean crust. The continuous deposition of marine limestone, extending from the Cretaceous up through the Miocene across North Africa and the Middle East, invalidates the claims of Flood sediments terminating at the end of the Cretaceous.

ICR scientists spoke to packed rooms

article highlights

- ICR scientists attended the International Conference on Creationism in Pittsburgh to present their latest research and participate in panel discussions.
- Dr. Jeffrey Tomkins demonstrated that the alleged human chromosome 2 fusion site is actually a functional genetic feature located across the genome, countering evolutionary claims.
- Dr. Randy Guliuzza showed how creatures are engineered with internal mechanisms to effectively track and respond to their environments, confirming our Creator's design.
- Dr. Tim Clarey presented his latest research confirming that the Flood is the best explanation for Earth's geological layers.

about scientific research that furthers the creation message. Your faithful support enables us to continue to lead the way in the battle against evolution. Thank you!

References

- Tomkins, J. P. 2018. Combinatorial genomic data refute the human chromosome 2 evolutionary fusion and build a model of functional design for interstitial telomeric repeats. In *Proceedings of the Eighth International Conference on Creationism.* J. H. Whitmore, ed. Pittsburgh, PA: Creation Science Fellowship, 222-228.
- Guliuzza, R. J. and P. B. Gaskill. 2018. Continuous environmental tracking: An engineering framework to understand adaptation and diversification. In *Proceedings of the Eighth International Conference on Creationism.* J. H. Whitmore, ed. Pittsburgh, PA: Creation Science Fellowship, 158-184.
- Clarey, T. L. and D. J. Werner. 2018. Global stratigraphy and the fossil record validate a Flood origin for the geologic column. In *Proceedings of the Eighth International Conference* on *Creationism*. J. H. Whitmore, ed. Pittsburgh, PA: Creation Science Fellowship, 327-350.
- Clarey, T. L. and D. J. Werner. 2018. Use of sedimentary megasequences to re-create pre-Flood geography. In Proceedings of the Eighth International Conference on Creationism. J.H. Whitmore, ed. Pittsburgh, PA: Creation Science Fellowship, 351-372.

New Chimp Genome Confirms Creationist Research

amplified. I studied the 2005–2010 data sets that showed less human DNA data contamination and found they were only 85% similar to human at best.¹

he more DNA sequencing technologies improve, the worse it gets for the evolutionary paradigm. Such is the case with the newest version of the chimpanzee genome.

Since evolutionists speculate that humans and chimps shared a common ancestor about three to six million years ago, their theory requires a human-chimp DNA similarity of 98 to 99%. The first time they constructed a chimp genome and compared it to humans, they claimed 98.5% DNA similarity based on cherry-picked regions that were highly similar to human. However, an extensive DNA comparison study I published in 2016 revealed two major flaws in their construction of the chimp genome.¹

First, many chimp DNA data sets were likely contaminated with human DNA, especially those produced in the first half of the chimpanzee genome project from 2002 to 2005. Second, the chimpanzee genome was deliberately constructed to be more human-like than it really is.² Scientists assembled the small snippets of chimp DNA onto the human genome, using it as a scaffold or reference. It's much like putting together a jigsaw puzzle by looking at the picture on the box as a guide. Since many chimpanzee data sets likely suffered from human DNA contamination, the level of humanness was Just this year, scientists published a new version of the chimpanzee genome.³ This new version incorporated an advanced type of DNA sequencing technology that produces much longer snippets of DNA sequence than earlier

technologies. It also involved better protocols that greatly reduce human DNA contamination. And most importantly, the authors report that the DNA sequences have been assembled without using the human genome as a scaffold.

They also acknowledged the flawed nature of previous versions of the chimp genome:

The higher-quality human genome assemblies have often been used to guide the final stages of nonhuman genome projects, including the order and orientation of sequence contigs and, perhaps more importantly, the annotation of genes. This bias has effectively "humanized" other ape genome assemblies.³

This confirms what many creationists have been pointing out for years.

Curiously, the authors of the new chimp genome paper said very little about the overall DNA similarity between humans and chimpanzees. However, the University of London's specialist in evolutionary genomics, Dr. Richard Buggs, evaluated the results of an analysis that compared this new chimp version to the human genome and discovered some shocking anti-evolutionary findings.

Dr. Buggs reported on his website that "the percentage of nucleotides in the human genome that had one-to-one exact matches

article highlights

- Evolutionists need a 98.5% similarity between human and chimp DNA for their theoretical model to work.
- Dr. Jeffrey Tomkins published research in 2016 concluding that human-chimp DNA similarity is not more than 85%.
- Brand-new chimp genome research challenges the evolutionary paradigm and confirms Dr. Tomkins' conclusions.

in the chimpanzee genome was 84.38%" and "4.06% had no alignment to the chimp assembly."⁴ Assuming the chimpanzee and human genomes are about the same size, this translates to an overall similarity of only about 80%! This outcome is way outside the nearly identical level of 98 to 99% similarity required for human evolution to seem plausible.

Not only do these results refute the evolutionary story and confirm my previous research, but they also support human uniqueness as recorded in the book of Genesis.⁵ We did not descend from ape-like ancestors—we were created in God's image to be in special relationship with Him, just as the Bible says. Some

References

- Tomkins, J. 2016. Analysis of 101 Chimpanzee Trace Read Data Sets: Assessment of Their Overall Similarity to Human and Possible Contamination With Human DNA. Answers Research Journal. 9: 294-298.
- Tomkins, J. 2011. How genomes are sequenced and why it matters: implications for studies in comparative genomics of humans and chimpanzees. *Answers Research Journal*. 4: 81-88.
- Kronenberg, Z. N. et al. 2018. High-resolution comparative analysis of great ape genomes. *Science*. 360 (6393).
- Buggs, R. How similar are human and chimpanzee genomes? Posted on richardbuggs.com July 14, 2018, accessed August 9, 2018.
- 5. Genesis 1:27.

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





engineered adaptability

Darwin's Anti-Design Doctrine

RANDY J. GULIUZZA, P.E., M.D.

ometimes all a medical doctor can do is treat one symptom after another rather than addressing what's actually making the patient sick. People who believe that organisms look designed because they *are* designed frequently face the same frustrating cycle when they talk to those who embrace evolution. Just like doctors

treating only the symptoms, they counter the latest evolutionary claims with sciencebased answers only to have each discredited "evidence" for evolution followed by another "but what about...?" challenge. It can be like an endless game of whack-a-mole.

A better tactic is to address the root problem—the theory of evolution itself. This is the approach ICR's book *Twenty Evolutionary Blunders* takes.¹ It answers evolutionary objections, but more importantly it identifies a problematic element of evolutionary theory known as *extrapolationism*. This is the imaginary process evolutionists use to visualize how present biological phenomena may have originated and functioned millions of years ago. This book explains how scientists' highly speculative theories combined with fertile evolutionary imagination have resulted in multiple major scientific blunders.

If you want to understand how evolu-

creatures respond to changing environmental conditions by reshap-

Darwin's Design Flip-Flop

article highlights

- Charles Darwin developed evolutionary theory as an anti-design explanation for life's complexity and diversity.
- His theory's random variation and externalism contradict the essential truths that engineered functions operate purposefully and are produced by internal capacities.
- In contrast with the purposeful actions of engineers, evolutionary theory views nature as acting like a random tinkerer to mold organisms.
- Darwin's purported cause of adaptation questions God's involvement and mocks His goodness.

ing themselves from the inside out. Their own internal mechanisms produce variable traits that are highly suitable to certain challenges, traits they can then pass on to offspring through their innate reproductive and inheritance capabilities. Darwin radically re-characterized these self-adjusting capacities within organisms. He saw them as somehow being molded from the outside in, which means their basic body plans arose over time due to the external forces of nature remodeling them.

This Engineered Adaptability article series has explored how

Charles Darwin employed tremendous imagination in developing a

clever hypothetical story that flips reality on its head.² We've seen how

bie ing ulation

Letwice A J B. in

Per Darwin, random geological and ecological changes drove creatures to evolve into life's current diversity. How? He envisioned ceaseless deadly struggles over scarce resources in which very few individuals of a species survive—but somehow the population does not go extinct. He envisioned nature exercising agency over organisms

tionists can clearly see what look like engineered features in a creature and yet conclude that the incredible design is only an illusion, then you must know why evolutionary theory was developed. To treat the root cause and not just symptoms, it is vital that you learn how evolutionary theory interprets data and frames explanations. through a projected volitional ability to "select" or "favor" some—even though nature does not have a mind. He imagined that radical changes in morphology are not only plausible but even simple if one can envision imperceptibly tiny changes happening over an incomprehensibly long time—something totally foreign to all actual human experience. 💑 engineered adaptability

Thus, Darwin developed a sophisticated anti-design theory to explain how so many creature features that clearly function for a purpose could originate apart from the agency of a Designer. Darwin did not claim that creatures are poorly designed. Rather, he constructed a framework that combined a misinterpretation of organisms' engineered adaptive ability with a concept of mystical external forces of causation (natural

selection).

The Challenge: Explain the Design of Living Things Without a Designer

To understand a theory, you need an acquaintance with the history of its formation. Evolutionists explain it best. "The conundrum faced by Darwin can hardly be overestimated," according to Francisco Ayala. He goes on:

The strength of the argument from design to demonstrate the role of the Creator had

been forcefully set forth by philosophers and theologians. Wherever there is function or design, we look for its author. It was Darwin's greatest accomplishment to show that the complex organization and functionality of living beings can be explained as the result of a natural process—natural selection—without any need to resort to a Creator or other external agent.³

If someone wants to make an effective anti-design explanation, then they must first know the evidence for the pro-design position. Earlier in life, Darwin had applied himself to learn what the greatest advocates for design thought, so he was equipped with the elements he needed to build its antithesis.

Darwin Understood and Targeted Essential Characteristics of Design

Stephen Jay Gould quoted Darwin's 1859 letter to his neighbor John Lubbock to emphasize Darwin's thorough understanding of the most renowned intelligent design advocate in his day, William Paley. Darwin wrote, "I do not think I hardly ever admired a book more than Paley's 'Natural Theology.' I could almost formerly have said it by heart."⁴ Gould noted that after re-reading Paley, Darwin's style of argument, examples, and even his words closely matched Paley's, and Gould said, "I was struck by the correspondences between Paley's and Darwin's structure of argument (though Darwin, of course, inverts the explanation)."⁵

Darwin used his knowledge about how engineers purposefully use fundamental principles to design distinct entities. But in lieu of God's agency, he substituted the environment exercising designing agency over organisms through random processes.

Darwin developed a sophisticated anti-design theory to explain how so many creature features that clearly function for a purpose could originate apart from the agency of a Designer.

Anti-Design Essential: Externalism

A key of his success was that "Darwin's theory, in strong and revolutionary contrast, presents a first 'externalist' account of evolution....Darwin overturned all previous traditions by thus granting the external environment a *causal* and *controlling* role in the direction of evolutionary change."⁶ Accordingly, Darwin "accepted the

> view that the environment directly instructs the organism how to vary, and he proposed a mechanism for inheriting those changes....The organism was like modeling clay."⁷ This externalism is the opposite of the purposeful internalism used by engineers, who build into their self-adjusting entities the needed problem-solving capacity up front.

> Earlier in his career, Gould synopsized fundamental distinctions between evolutionary externalism and internally designed approaches to adaptation. He said:

Moreover, natural selection, expressed in inappropriate human terms, is a remarkably inefficient, even cruel process. Selection carves adaptation by eliminating masses of the less fit—imposing hecatombs of death as preconditions for limited increments of change. Natural selection is the theory of "trial and error externalism"...not an efficient and human "goal-directed internalism" (which would be fast and lovely, but nature does not know the way).⁸

The Anti-Design Conclusion: Nature Is a Tinkerer

Evolutionary theorists must hold that any change within creatures is purposeless and that most genetic changes associated with adaptations are random, even though they cannot scientifically establish either premise.² These mantra-like assertions merely convey the anti-design essentials of their theory. In fact, they leave no doubt that they are contrasting the distinctive practices of engineers to their non-purposeful characterization of evolution as being the result of the interplay of accidental genetic changes and directionless environmental fluctuations.

Evolutionary change occurs because phenotypic variation within populations is generated through random alterations to existing pathways or structures. This point has been made many times, including by Darwin (1859), but perhaps was made most clearly by F. Jacob's (1977) useful and brilliant analogy between evolutionary change and tinkering ('bricolage' in French). Unlike engineers who design objects with particular goals in mind based on *a priori* plans and principles, tinkers create and modify objects opportunistically by using whatever happens to be available and convenient.⁹

If we look closer at François Jacob's often-quoted analogy, he

personifies natural selection with the capability to do work in specific contrast to engineers: "However, if one wanted to play with a comparison, one would have to say that natural selection does not work as an engineer works. It works like a tinkerer—a tinkerer who does not know exactly what he is going to produce."¹⁰

Darwin's Anti-Designer Perversion

People intuitively link a Creator God to the features of living things because they correspond so well to the features of human workmanship. Gould notes:

The word adaptation did not enter biology with the advent of

evolutionary theory....The British school of natural theology used "adaptation" as a standard word for illustrating God's wisdom by the exquisite fit of form to immediate function. Darwin, in borrowing this term, followed an established definition while *radically revising the cause* of the phenomenon.¹¹

Darwin's radical inversion of the causality of adaptation depended totally on the innate capability of creatures to self-adjust, but he then attributed their targeted responses to their somehow being "molded" from the outside. The switch in causality for adaptation from internal to external isn't merely quibbling over semantics. The theological consequences of Darwin's

shrewd twisting of the explanation for adaptation are so profound that Gould notes that most evolutionists still do not grasp them.

This fact sets the context for possibly the most perceptive and important—analysis of the anti-designer focus of evolutionary theory achieved by Darwin. As Gould continues, Darwin's antidesign explanation goes even further to mock the good purposes of God:

Now suppose, as a problem in abstract perversity, that one made a pledge to subvert Paley in the most radical way possible. What would one claim? I can imagine two basic refutations. One might label Paley's primary observation as simply wrong—by arguing that exquisite adaptation is relatively rare, and that the world is replete with error, imperfection, misery and caprice. If God made such a world, then we might want to reassess our decision to worship him. An upsetting argument indeed, but Darwin chose an even more radical alternative.

With even more perversity, one might judge Paley's observation as undoubtedly correct. Nature features exquisite adaptation at overwhelming relative frequency. But the unkindest cut of all then holds that this order, the very basis of Paley's inference about the nature of God, arises not directly from omnipotent benevolence, but only as a side-consequence of a causal principle of entirely *opposite* import—namely, as the incidental effect of organisms struggling for their own benefit, expressed as reproductive success. Could any argument be more subversive?

Evolutionary theorists must hold that any change within creatures is purposeless and that most genetic changes associated with adaptations are random, even though they cannot scientifically establish either premise.

One accepts the conventional observation, but then offers an explanation that *not only inverts* orthodoxy, but seems to mock the standard interpretation in a manner that could almost be called cruel. This more radical version lies at the core of Darwin's argument for natural selection.¹²

Perverse, indeed. In sum, what evolutionary theory teaches is that nature's beauty and complexity do not exemplify God's engineering genius, wisdom, and kindness, but in utter contrast are only the incidental byproducts of a cruel, self-centered, death-fueled process—perpetuated by every creature acting out its own ultimately purposeless existence.

When it comes to countering the ubiquitous evolutionary mis-

information that surrounds us, understanding the theory matters even more than obtaining an answer to the latest evolutionary claim. That is why this article series is developing a designbased, organism-focused model called *continuous environmental tracking* (CET) that is centered on the innate capabilities of organisms to actively track environmental changes. The evidence for this model is overwhelming. Everywhere we look in God's living creatures, we see numerous purposefully engineered systems that produce highly regulated responses that are so targeted to specific challenges that they are often characterized as "predictable."

But even more important than its scientific applicability, the CET model honors our Lord Jesus Christ as life's incredible Engineer. The more we know about the world He created, the more we can echo David's words: "Many, O LORD my God, are your wonderful works which You have done" (Psalm 40:5).

References

- Guliuzza, R. J. 2017. Engineered Adaptability: Adaptability via Nature or Design? What Evolutionists Say. Acts & Facts. 46 (9): 17-19; Guliuzza, R. J. 2018. Engineered Adaptability: Adaptive Changes Are Purposeful, Not Random. Acts & Facts. 47 (6): 17-19; Guliuzza, R. J. 2018. Engineered Adaptability: Adaptive Solutions Are Targeted, Not Trial-and-Error. Acts & Facts. 47 (7): 18-20.
- Ayala, F. J. 2007. Darwin's greatest discovery: Design without designer. Proceedings of the National Academy of Science. 104 (suppl 1): 8567–8573.
- Gould, S. J. 2002. The Structure of Evolutionary Theory. Cambridge, MA: Belknap Press of Harvard University Press, 116.
- 5. Ibid, 119.
- 6. Ibid, 161-162, emphasis added.
- Kirschner, M. W. and J. C. Gerhart. 2005. The Plausibility of Life: Resolving Darwin's Dilemma. New Haven, CT: Yale University Press, 3, 31.
- 8. Gould, S. J. 1994. The Power of This View of Life. Natural History. 103 (6): 6-8.
- Lieberman, D. E. and B. K. Hall. 2007. The evolutionary developmental biology of tinkering: an introduction to the challenge. In *Tinkering: The Microevolution of Development*. G. Bock and J. Goode, eds. Chichester, UK: John Wiley & Sons Ltd., 4.
- 10. Jacob, F. 1977. Evolution and tinkering. Science. 196 (4295): 1161-1166.
- 11. Gould, Structure of Evolutionary Theory, 117, emphasis added.

12. Ibid, 120-121, emphasis added.

Dr. Guliuzza is ICR's National Representative. He earned his M.D. 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.



^{1.} Guliuzza, R. J. 2017. Twenty Evolutionary Blunders: Dangers and Difficulties of Darwinian Thinking. Dallas, TX: Institute for Creation Research.

Could One Flood Form Many Rock Layers?

В

RIAN

The Grand Canyon exposes layer after layer of sedimentary rock stacked one atop the other like vast, multicolored pancakes in the earth. Other cliff faces and highway road cuts reveal red mudstones, white limestones, and yellow sandstone layers. How did the layers get there? Most people believe that many layers require many years. They imagine ancient worlds that gave each layer unique colors, grain types, and fossils.

In truth, you don't need much time to make rock layers if you have plenty of water. Some floods move more sediment in mere hours than regular rain moves over centuries. How about a world-destroying flood? That would cause more erosion and deposition than most people can even imagine. No wonder those who view Genesis as history see Noah's Flood behind the many varied, thick, and continent-covering rock layers across the world.

But could a worldwide flood like the Bible describes make layers that look so different? Three key sources say yes.

First, the Bible. Whoever says that one flood could not form many different layers must have missed Genesis 6–8, which describes a flood that lasted about a year! This was no small-time, single-deposit flood like we see today. The text tells of water rising for 150 days, sloshing back and forth over all lands, then retreating into the ocean basins for months. How could these many stages *not* form many layers?

Day 150 seems to mark the Flood's peak. "And the waters receded continually from the earth. At the end of the hundred and fifty days the waters decreased."¹ The phrase "receded continually" literally means "going and returning."² Enormous tsunamilike events shoved muddy waters back and forth over earlier deposits. They scraped and re-scraped Earth's surface. Mud-loaded waters going one way would make different



article highlights

- Every continent has stacked sedimentary layers, and some layers spread across continents.
- Secular scientists think these layers formed slowly over ages, but a global flood could deposit them very quickly.
- Genesis, geology, and logic all tell us that a single, huge, year-long flood would make many layers.

layers than later tsunamis headed in another direction. Each one would pick up and lay down different sediments.

Geology is a second source that confirms that one worldwide flood would make many layers. As continents raced apart, mantle material from Earth's depths rose to replace entire sea floors. Hot, expanded, flowing lava-like rock eventually shoved ocean waters onto the continents. During the Flood year, continents split, slid, and collided to make mountains.^{3,4} Tremendous earthquakes generated continent-covering tsunamis.⁵ Every continent's water-deposited rock stacks show that immense catastrophes spread sediments one after the other.⁶

The last source is logic. How could one layer of muddy water keep sliding over the earth nonstop for a year? It would stop moving after friction sapped its energy. So, for one flood to last so long, it would need many pulses. Smaller flooding episodes shifted water flow rates and directions. Flows eroded hard rock and deposited and redeposited sediments. We should expect many different types of layers from a pulsing, year-long flood!

THOMAS,

M . S

So, the next time you see all those layers at the Grand Canyon or your local road cut, remember that Genesis describes water rising for months, surging back and forth, then falling for more months—eroding and redepositing all the while. Geology confirms past mega-catastrophes that match the global scale that Genesis describes, and logic confirms that any flood that lasted a whole year would have sands and muds moving different ways. Genesis, geology, and logic remind us that Noah's Flood definitely would have made water-laid rock layers just like we see today.

References 1. Genesis 8:3.

- Morris, J. and J. J. S. Johnson. 2012. The Draining Floodwaters: Geologic Evidence Reflects the Genesis Text. Acts & Facts. 41 (1): 12-13.
- Clarey, T. 2017. Local Catastrophes or Receding Floodwater? Global Geologic Data that Refute a K-Pg (K-T) Flood/ Post-Flood Boundary. *Creation Research Society Quarterly*. 54 (2): 100-120.
- Baumgardner, J. 2005. Recent Rapid Uplift of Today's Mountains. Acts & Facts 34 (3).
- Baumgardner, J. 2018. Understanding how the Flood sediment record was formed: The role of large tsunamis. In Proceedings of the Eighth International Conference on Creationism. J. H. Whitmore, ed. Pittsburgh, PA: Creation Science Fellowship, 287-305.
- Thomas, B. 2013. Don't Grand Canyon Rocks Showcase Deep Time? Acts & Facts. 42 (10): 18-19.

Mr. Thomas is Science Writer at the Institute for Creation Research and earned his M.S. in biotechnology from Stephen F. Austin State University.





Grand Canyon Neighbors: Pines, Truffles, and Squirrels

d's creation is often misrepresented by evolutionists, so godly researchers and teachers are needed to clarify the real truth about God's world. For example, God's plan for interdependent biodiversity matches His mandate for living things to "be fruitful, multiply, and fill the earth."¹

Evolutionists fail to notice this caring design as they mischaracterize nature, misinterpreting creation as just a selfish mix of competitive

"takers" who never "give back" to their local community. For generations, they've trumpeted death-driven cutthroat competition survival of the fittest, natural selection, and selfish genes—as if death itself were the key to life on Earth. It is not.^{2,3} Death is not the "heartbeat" that regulates Earth's human and animal inhabitants.

Nature is full of proofs that God has programmed His creation, even in its fallen state, to exhibit neighborly helpfulness, enabling His creatures to "fill the earth." In fact, Earth's ecosystems exhibit a lot of care and collaboration. Even in this "groaning" world we witness helpful cooperation and resource sharing, also called mutualistic symbiosis or mutual aid. Sometimes natural neighborliness is simple, such as when two neighbors help each other.⁴ But more often such mutual aid interdependence is more complicated, such as in highly intricate and variable ecosystem food webs.⁵

One quick illustration can be found in Grand Canyon. Its sedimentary layers commemorate God's cataclysmic condemnation of Noah's contemporaries, yet the canyon also displays God's current and continuing care for His creation. This is illustrated by the relationship between a certain tree, a fungus, and a cute furry animal. Grand Canyon's



article highlights

- Tassel-eared squirrels eat and live in ponderosa pines.
- The squirrels cache pine nuts, many of which later grow into new trees.
- They also eat truffles and spread truffle spores. The truffles help the pine trees thrive.
- Neighborly interdependence is common in nature. This fits God's plan for diverse creatures to fill the earth.

mutual aid triangle is interactively formed by the tassel-eared squirrel, the ponderosa pine, and mycorrhizal "truffles" fungus.

The tassel-eared squirrel lives mainly on ponderosa pines, using them for both food and nesting. Year-round, squirrels chew off the ends of pine branches, eating the inner bark. This "pruning" aids the pine by making it more drought tolerant [a valuable quality in the Grand Canyon]. As the squirrels harvest pine nuts, they bury some of them for later retrieval. If not recovered soon enough, these seeds sprout into new trees. The squirrels also eat truffles, a type of mycorrhizae fungus growing on pine roots. In exchange for living on the sugars in pine roots, the truffles greatly extend the pine's ability to take up water and [soil] nutrients. The squirrels also spread truffle spores to other pine roots which benefit both the pines and the truffles, and, ultimately, the squirrels.⁶

The triangular "winwin-win" neighborliness of Grand Canyon's tassel-eared squirrel, ponderosa pine, and mycorrhizal "truffles" fungus quietly carries on day after day, month after month, year after year—mostly unnoticed

by human observers. The trio's interdependence is but one example of the complex relationships we find in nature that are engineered by God Himself.

"The heavens declare the glory of God" — and so does the natural neighborliness at Grand Canyon. It doesn't showcase a death-driven ecosystem, even though it's happening on a fallen planet. Rather, this neighborliness quietly parades God's continuing care for His creation. A deeper understanding of God's world provides an effective counter to evolutionary mischaracterizations.

References

- 1. See Genesis 1:22; 1:28; 8:17; 9:1; 9:7; Isaiah 45:18.
- Johnson, J. J. S. 2017. Cactus, Bats, and Christmas Gift-Giving. Acts & Facts. 46 (12): 21.
- 3. Life on Earth originated in the living God, who loves life. So death is *abnormal*, like a home invasion. In fact, death will be destroyed as God's last enemy (1 Corinthians 15:26). The curse of death is really abnormal, as is the fallen condition of Earth and its creatures. Disease, disharmony, and the universal wastefulness of entropy are not "very good" but are rather only temporary realities on Earth, pending future reclamation and restoration by its Maker, Maintainer, and Monarch, the Lord Jesus.
- Johnson, J. J. S. 1997. Providential Planting: The Pinyon Jay. *Creation Ex Nihilo*. 19 (3): 24-25. See also Kricher, J. C. 1993. *A Field Guide to the Ecology of Western Forests*. New York: Houghton Mifflin, 147-149 (reviewing mutual aid between pinyon jay and pinyon pine).
- 5. Due to space limitations, only part of a food web will be considered here.
- Vail, T. et al. 2008. Your Guide to the Grand Canyon: A Different Perspective. Green Forest, AR: Master Books, 173.
- 7. Psalm 19:1.

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



stewardship

Finishing Well

he phrase "finishing well" means different things to different people. To some, it means acquiring the most "toys" and wealth. For others, it may mean spending their final years in comfortable retirement. But for the Christian, finishing well means faithfully following Jesus Christ to the very end of our lives and completing the tasks He assigned us so we can one day hear Him declare, "Well done, good and faithful servant" (Matthew 25:21).

This takes focus, discipline, and commitment—qualities that only grow with a deepening knowledge of Christ and His Word. But there is far too much emphasis in the Christian world today on *experience* and not enough on *knowledge*, even in many evangelical churches and schools. The Christian faith is not mere "feeling" but a willful devotion to a rigorous understanding of the person and work of the Lord Jesus Christ. We can only believe right if we first think right, and this requires true knowledge that only begins with "the fear [i.e., respect, reverence] of the LORD" (Proverbs 1:7).

The New Testament often uses athletic imagery to portray the importance of finishing well. To the believers in Corinth, the apostle Paul described a disciplined runner in a crowded race who ran with one goal: claiming victory at the finish line (1 Corinthians 9:24-26). To the elders of Ephesus, he emphasized his dedication to ministry by looking forward to finishing his race with joy, even at the cost of his life (Acts 20:24). And in his final letter to young Timothy, Paul could reflect on a lifetime of commitment with a sense of godly contentment, proclaiming, "I have fought the good fight, I have finished the race, I have kept the faith" (2 Timothy 4:7).

Perhaps the most concise counsel on finishing well comes from the author of Hebrews: "Let us lay aside every weight, and the sin which so easily ensnares us, and let us run with endurance the race that is set before us, looking unto Jesus, the author and finisher of our faith" (Hebrews 12:1-2). Our very essence is because of Jesus, for it

CONSIDER SUPPORTING

is "in Him we live and move and have our being" (Acts 17:28), and only through Him can we ever really hope to finish well.

Because of this, the Institute for Creation Research is preparing very special final exhibits for the ICR Discovery Center for Science and Earth History. Most exhibits will depict major events recorded in Genesis 1–11, and visitors will discover the evidence along the way that af-

article highlights

- For Christians, "finishing well" means following Christ and growing in our knowledge of Him to the very end of our lives.
- The New Testament often uses athletic imagery to communicate the importance of finishing well.
- The ICR Discovery Center's final exhibit will include a hologram of Christ returning in glory.
- This grand finale will challenge believers to finish well and encourage skeptics to accept Him as Savior and Lord.

firms the Bible is right and its message is true. But the last displays will focus on the Lord Jesus Christ. Just past the Tower of Babel, the scene changes to depict significant events in the life of Christ. Jesus was not just a good and moral man, as many believe, but the very Creator Himself in human form. He was put to death for us, but

glory hallelujah, He didn't stay dead!

The grand finale will feature a stunning 3-D hologram portraying the returning Christ as described in the book of Revelation. This is not the meek Jesus often depicted in medieval art but the conquering "King of kings and Lord of lords" (Revelation 19:11-16) who will return in great glory to establish His kingdom. The last exhibit will be a powerful finish to the ICR Discovery Center, and we are praying people will come to accept Jesus as their Savior and Lord.

One final note: ICR was recently blessed with a *\$5 million commitment* from a generous ministry partner, and we now need less than *\$5* million to open this innovative science facility completely debt-free—praise God! Will you prayerfully consider

helping ICR "finish well" with a generous gift? The finish line is in sight!

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



Gift Planning

Charitable



CFC (Federal/

Military Workers)

Matching

Gift Programs

IRA

Gifts

Online

Donations

Stocks and

Securities

곀

22)

I think it was the bee dance that first made me doubt evolution. I can understand how people might be led to believe that physical changes can result from random mutations, but **the depth and scope of communication that's required for bees to tell other bees how to find nectar makes nonsense of the entire concept of evolution.** It's bonkers.

— J. G.

The Institute for Creation Research was our 2018 Vacation Bible School "giving project," and we are happy to get behind your program. **Our VBS theme was "Basic Elements: A Science-Inspired, Christ-Focused VBS Program....**" We had a wonderful time illustrating how God is behind everything in creation and without Him nothing exists.

— J. H.



Thankfully, I was raised to question everything. Therefore, I wouldn't believe everything in my textbooks or from my teachers and would verify

things myself. When the internet was taking off, I became fluent in researching. And what I found was religion in science—belief without validation—a total contradiction to the scientific method. So I've nearly always been a creationist because the evidence is strongest for it.

— В. Н.

I was raised in the indoctrination that evolution was a "proven fact," that we had all evolved, and all of the unspoken racism that this idea carried. After all, it implies that not all races are at the same stage of evolution. Thankfully, I was exposed to the creation model about the same time a friend began witnessing to me, and I began to question evolution. The more I questioned it, the more I began to study the matter and really think about it. It quickly became apparent that evolution was anything but proven, and was about as watertight as a kitchen strainer. Today, over 30 years later, I witness to people constantly about the truth of creation as described in Genesis.

— G. D.

When I was a racist, I was an evolutionist. I was saved in 1969—a murder, a funeral, and a come-to-Jesus moment—and within five years I was also a creationist. My church library had a book by Henry Morris, an early one, and that did the trick. — M. H.

~~~

My parents were missionaries in Canada, and I grew up believing in God and the Bible. The only time I ever struggled was with the first part of Genesis just a few years ago. I had been watching a particular gospel TV show, and...they introduced a speaker for a series segment that crept into the old earth very subtly. I was a bit shocked, then I got drawn into the convincing logic of what he taught....**This lasted for** a few weeks, and one day someone on another show pointed out the issue of pre-Fall death. Truth smacked me pretty hard, and understanding plus wisdom have grown and jelled tremendously since. I give ICR a lot of

credit for strengthening my faith with the science of critical analysis of evidence with the integrity to refuse to discount any data.

— R. C.



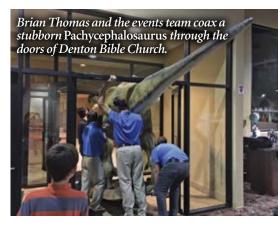
I wanted to thank you for producing several amazing video series! This summer, my children (14 and 11) and I watched *Made in His Image, Uncovering the Truth about Dinosaurs, The Universe, That's a Fact*, and more. When I just couldn't imagine the next



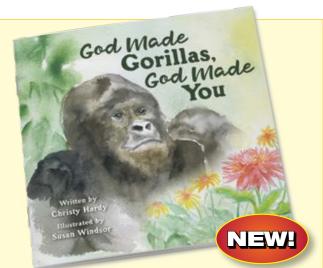
series being better than the last, it was! The video production and photography were top notch, [host] Markus Lloyd did a superb job communicating the information, the interviews were interesting, and the scriptural integration was amazing. I feel like my children are well-equipped to defend the faith by watching and discussing these biblical worldview videos. As a mom, I just can't thank you enough for these incredible resources and am sharing them with everyone I know!

— K. M.

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.



(23)





P. O. Box 59029, Dallas, TX 75229 ICR.org

## God Made Gorillas, God Made You

God created animals and the amazing things they do. But He did something extra-special when He made you!

In *God Made Gorillas, God Made You*, children will learn fun facts about some of God's most fascinating creatures. But nothing compares to His best creation of all-people, who are made in the image of our very big God.





A PLANS FOR HERRY

**\$8.99** BBPFH

### **Big Plans FOR Henry** A Little Book with a Big Plan

**ith a quake and a crrrack, the hadrosaur egg breaks open and Henry's journey begins.** What does God have in store for this little duck-bill dinosaur? Written by ICR geologist **Dr. Tim Clarey** and his wife, Reneé, *Big Plans for Henry* follows a young dino's journey through the pre-Flood world. The pages are sprinkled with science and Bible fact boxes that provide fascinating details about dinosaurs, fossils, and Noah's Ark.



#### Call 800.628.7640 or visit ICR.org/store

NEWH

Please add shipping and handling to all orders. Offer good through October 31, 2018, while quantities last.