ACTS & FACTS

VOL. 46 NO. 8

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AUGUST 2017

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EXECUTIVE EDITOR
Jayme Durant

SENIOR EDITOR
Beth Mull

EDITORS
Michael Stamp
Truett Billups
Christy Hardy

DESIGNER
Dennis Davidson

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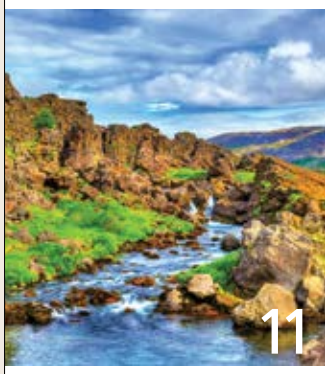
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Start the School Year Right

As we filmed ICR's latest DVD series, I often found myself in complete awe at the work of our majestic God. As you'll see in the feature this month, "Behind the Scenes of *The Universe: A Journey Through God's Grand Design*," the film team had plenty of opportunities to laugh about challenges and changes to our best-laid plans (pages 5-7). While we like to poke fun at our adventures, you can be certain that ICR's message never changes: All of creation showcases our Creator. We're thrilled to be able to point others to the work of our heavenly Father.

If you're a parent, you're probably getting ready to begin another school year. In the midst of your preparations, take time now to equip your student with truth. Talk about evolutionary claims your child may encounter in science and history classes, and help your student find the evidence that reveals the errors of evolution. ICR.org has thousands of articles available to help you. It also offers links to our radio programs and *That's a Fact* videos.

Our online store (ICR.org/store) provides creation resources to equip your student with truth. Our latest children's book, *Dinosaurs: God's Mysterious Creatures,* includes fascinating facts about dinosaurs, creation, and the Flood, while also dispelling evolutionary myths with scientific evidence. Colorful illustrations and simple language make it a good introduction to real dinosaur history. Our *Guide to…* books cover creation basics, animals, the human body, dinosaurs, and the universe. This series is more detailed in its explanations, but these books can grow with your children. Our DVD series supply a fast-paced visual format for education, and we developed them with general audiences in mind. *The Universe: A Journey Through God's Grand Design* will be available for preorder in October.

Take the time to go through *Acts & Facts* with your child and examine the critical information. In this issue, you'll find articles on the floating forest hypothesis (page 9) and God's balanced ecosystem (page 14). *Homo naledi* has been in the news the past few years, and Brian Thomas points out the problems with evolutionary speculations on it (page 15). We answer the question "Can fish walk?" (page 20) and look at how God equipped polar bears (page 21). Dr. Jake Hebert offers a fresh look at the Flood, plate tectonics, and Earth history (pages 11-13). This issue is packed with information that reveals the deception of evolution and the evidence for creation.

We're constantly expanding our resources and educational opportunities. Follow @ICRscience on any of the major social media platforms to get the most up-to-date information about what's happening in our creation ministry. If you prefer to connect with us in person rather than online, we may be coming to your area this fall. ICR.org/events tells you where our seminars and conferences are planned.

We want to be a helpful resource for you as you seek to share God's creation message with your kids. You have a few days left before they're buried in books and school activities—take advantage of the time and really get them ready. Help your students begin the school year with confidence that God's Word can be trusted in every area—including science and history.

Jayme Durant

Jayme Durant
Executive Editor

Behind the Scenes of *The Universe: A Journey Through God's Grand Design*

JAYME DURANT

How do you tell the story of the universe? That's a tall order, but I'll give you a clue—it doesn't start with a Big Bang somewhere in the outer reaches of space. The real account of our origins begins in Genesis with the Creator of the world.

In our DVD series *The Universe: A Journey Through God's Grand Design*—available this fall—a dedicated team of science and Bible experts discuss fascinating details of our divinely orchestrated universe. Markus Lloyd joins us again as host to guide us through the adventure. This is ICR's fourth DVD series, and no matter the subject, we always return from the rigors of filming with great appreciation for the hard work that goes into this kind of production. We also bring back a few good stories.

Our filming journey began in Dallas studios on a set sprinkled with low-hanging Edison-style lightbulbs. Drs. Jake Hebert, Vernon Cupps, Jason Lisle, and James J. S. Johnson described scientific discoveries throughout history that impact what we know today about the universe. They discussed the work of Ptolemy, Copernicus, Kepler, and Galileo, and the development of telescopes and spectroscopes to help us explore the realms of the unknown.

Drs. Danny Faulkner and D. Russell Humphreys joined our crew near Houston at the George Observatory to talk about planets, stars, and magnetic fields. Dr. Don DeYoung met with us in Sugar Land, Texas, at the Houston Mu-

Markus Lloyd

Col. Jeffrey Williams
NASA Astronaut

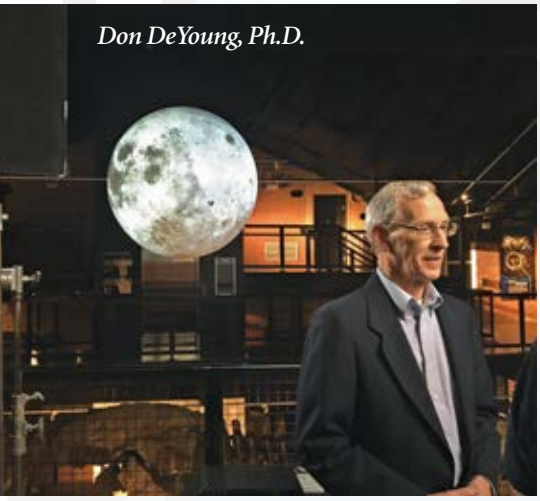
seum of Natural Science. And NASA astronaut Col. Jeffrey Williams graciously opened his home to us for a visit about space travel and NASA discoveries over the years.

For the first episode, Markus Lloyd guided us through the Mount Wilson Observatory in Angeles National Forest, California. We took a look at telescopes that are over a hundred years old—a 1914 36-inch telescope and a massive 1917 100-inch telescope (on the cover of this month's *Acts & Facts*)—and checked out what they could reveal about planets, stars, and other celestial bodies.

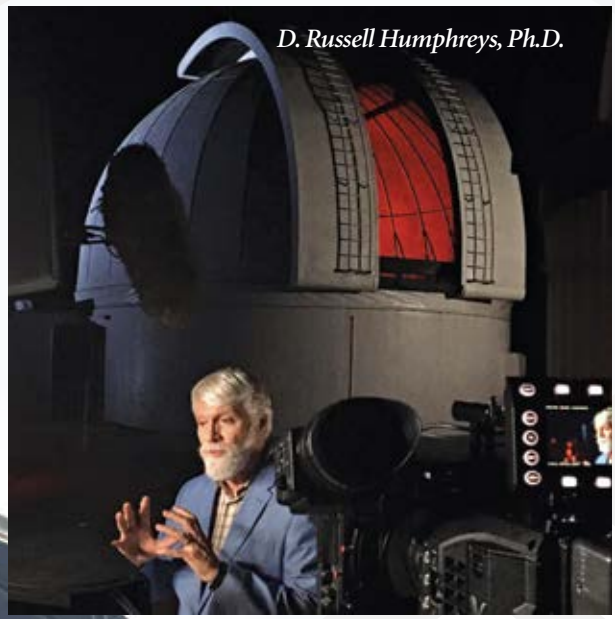
We also filmed at the Anza-Borrego Desert so viewers can get a feel for the barren landscape of Mars. Our challenges there included wind and sand—lots of it. The unique environment provoked some odd questions: *Do we really need to try to retrieve the screen that blew off the side of the sandy cliff? When do rattlesnakes come out of hiding? Should we steer clear of chuckwallas, too? How does being sandblasted by the desert wind compare to a spa facial?* Okay, maybe the men on our team didn't consider that last question.

Anza-Borrego Desert State Park
California

We experienced some excitement on the beaches of Windansea and La Jolla. Helicopters, surfers, dogs, joggers, walkers, and waves delayed our filming and triggered countless retakes. Even sea lions wanted to get in on the action! During one day of particularly tight deadlines, we rolled up our pant legs and kept filming as waves sloshed against our calves in the rising tide. For one scene, we set up in a small cove surrounded by huge boulders when a sea lion washed in. The film director became trapped behind a rock with the frightened creature, and it chomped his knee, causing a deep gash. (Remember, this is a sea *lion*.) After a trip to an urgent care clinic, several stiches, and an antibiotics pre-



Don DeYoung, Ph.D.



D. Russell Humphreys, Ph.D.

Even when we were children, the stars intrigued us, excited us, inspired us. We looked into the night sky and we wondered…what's beyond what we see up there?

Mount Wilson Observatory
Angeles National Forest, California

scription, we set off on the next leg of our journey—the show must go on.

During episode two, Markus talked about how ancient mariners used stars to navigate ships on the seas. For this scene, we filmed him aboard the historic ship *Elissa* in the port of Galveston, Texas. It was a serious monologue until we discovered a slight, elderly gentleman dancing a jig behind our speaker in full view of the camera. (You can find the video of this jig-dancing photo-crasher on our Facebook page.)

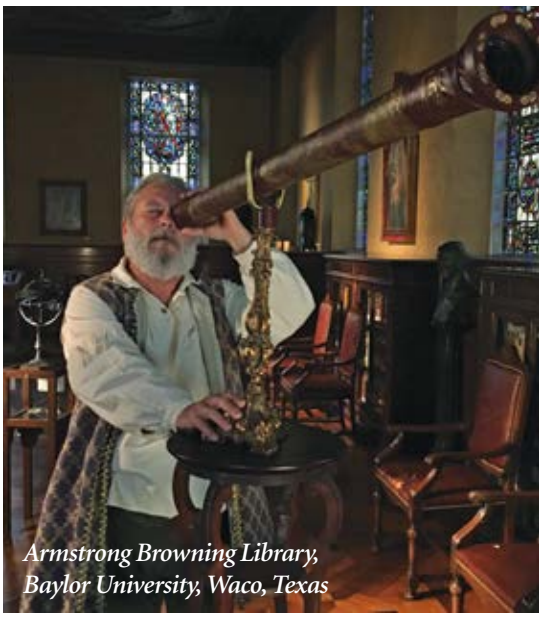
Elissa
Galveston, Texas

We moved on to Huntsville, Alabama, the next day to tour the U.S. Space & Rocket Center and filmed shuttles, rockets, space capsules, simulators, and more. At the sprawling facility where over 1,500 space artifacts are on display, we caught a glimpse of the U.S. space program's enormous achievements through the years. Filming stopped and started frequently because students taking part in the Space Camp moved into the camera's view every few seconds. After filming all day and most of the evening, the director finally called "That's a wrap!" and we began loading equipment. Famished, we were ready to find an open restaurant for a late-night dinner, but it came to our attention that one of the local crew members lost his keys somewhere during our day of filming. We retraced every step over the multi-acre campus to search for the keys. Unfortunately, we eventually had to leave without them.

A few days later in Waco, Texas, we filmed actors portraying Isaac Newton, Galileo Galilei, and Johannes Kepler. Our actors appeared in convincing period costumes, and props had been painstakingly prepared. We were ready to begin shooting until Newton picked up the quill pen. The actor was right-handed, but many scholars believe Newton was left-handed. It was the same case with Galileo. So, we went through some last minute left-handed training before we could film the scenes.

As we captured footage for *The Universe* series, a similar theme ran through every interview and every scripted scene: What we see on Earth and in the heavens beyond didn't happen by chance. The universe displays majestic evidence that our omnipotent Creator put everything in place exactly as He planned. The history of astronomy reveals a foundation laid by scientists who believed the world was created by God. Their

U.S. Space & Rocket Center
Huntsville, Alabama



Armstrong Browning Library,
Baylor University, Waco, Texas

Christian worldview was not a hindrance to science but a help. The belief that God created the universe in a consistent and orderly way furthered their understanding of its nature and laws, just as it does for us today.

We are still putting the finishing touches on this DVD series and plan to release it this October. We can't wait for you to see the vivid animations, breathtaking locations, and faith-building evidence we're putting together for you. Amid the noise of Big Bang claims and naturalistic philosophy, our incredible universe shouts the glory and majesty of our Creator. We hope this series will leave you in awe of His heavenly handiwork!

Jayme Durant is Director of Communications at the Institute for Creation Research.

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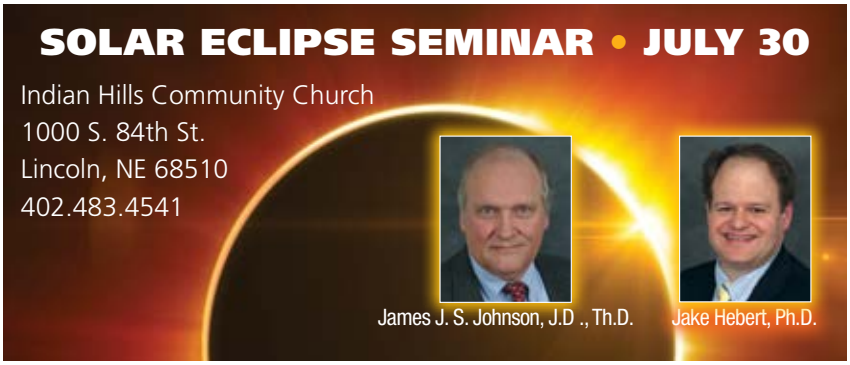

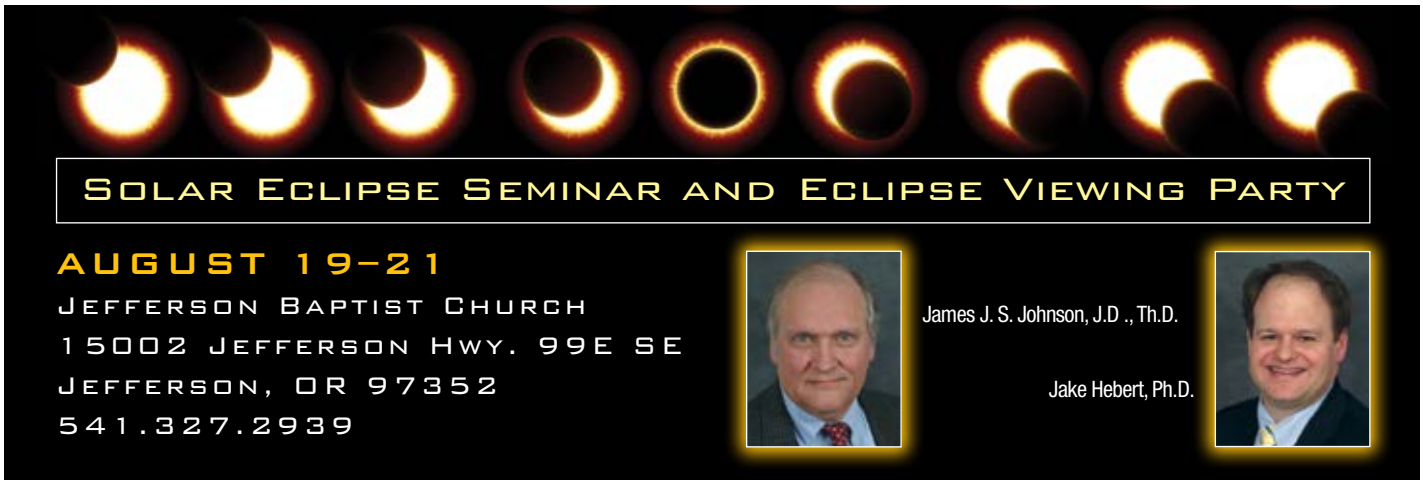

For more information on these events or to schedule an event, please contact the ICR Events Department at **800.337.0375**, visit **ICR.org/events**, or email us at **events@icr.org**

Solar Eclipse Q&A

JAKE HEBERT, PH.D.

1. What is a solar eclipse?
A solar eclipse occurs when the moon passes between the sun and Earth, casting a shadow on Earth.

2. When is the next solar eclipse?
Monday, August 21, 2017.

3. What is required for an observer to see a total solar eclipse?
A total solar eclipse occurs when the moon completely blocks the solar disk so that only the sun's outermost layers, the chromosphere and corona, are visible. An observer must be located on the daylight side of Earth and within the darkest, innermost part of the moon's shadow (called the *umbra*) to see a total eclipse. Observers outside the umbra but within the outer, lighter shadow (called the *penumbra*) will see a partial eclipse. The moon's umbra will trace a narrow path stretching from South Carolina to Oregon. Anyone wanting to see a total solar eclipse must travel to a location along this path. (A NASA map showing the path is available at eclipse2017.nasa.gov/eclipse-maps.)

THEN GOD MADE TWO GREAT LIGHTS:
THE GREATER LIGHT TO RULE THE DAY,
AND THE LESSER LIGHT TO RULE THE NIGHT.
(GENESIS 1:16)

4. What is required to safely observe a solar eclipse?
You should *never* look directly at the sun without proper eye protection since the intense light can permanently damage your eyesight. Sunglasses (even multiple sunglasses stacked together) are *not* sufficient protection; you must wear special solar viewing glasses to safely observe an eclipse. (NASA lists four manufacturers that currently meet international safety standards for such products at eclipse2017.nasa.gov/safety.)

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

TIM CLAREY, PH.D., AND JEFFREY P. TOMKINS, PH.D.

Sinking the Floating Forest Hypothesis

The concept of a pre-Flood floating forest ecosystem has been promoted in creationist literature for several decades and is often used as an explanation for the massive carboniferous coal beds found across the globe. However, this hypothesis wasn't adequately tested until three recent geological challenges were presented.[1] It appears the floating forest hypothesis has difficulty explaining a large portion of the available geological data.

What is the floating forest? Scientists have shown that the dominant plant species of the carboniferous coal deposits were arborescent lycopods (scaly-barked trees) that could achieve heights of over 100 feet (34 meters). Advocates of the floating forest believe these now-extinct trees with their spiraling root systems somehow formed floating mats, growing more densely than do trees in modern forests. But most importantly, they believe the trees had hollow trunks and roots that provided sufficient buoyancy to enable a vast floating tree-and-plant biome to cover much of the pre-Flood oceans.[2]

In Situ or Not In Situ?

Many upright fossil trees found associated with coal seams are interpreted by secular science as being in the "growth position," commonly referred to as *in situ* trees. Secular paleontologists use this claim as evidence against the global Genesis Flood, even arguing that fossil in situ trees demonstrate an *autochthonous* (in original position) origin for coal. Creation scientists have countered with evidence supporting the *allochthonous* (moved from source) origin of coal, showing that many claimed in situ trees are better explained by active transport of trees and other vegetation during the global Flood after they were stripped free from the land.

Further empirical support for the allochthonous origin for upright fossil trees came soon after the 1980 eruption of Mount St. Helens. Dr. Steve Austin estimated that more than 19,000 upright and randomly spaced trees accumulated in the sediment on the bottom of Spirit Lake within just a few years. These trees became waterlogged and sank upright because of their heavier bases and roots. He also postulated that if these trees were buried by additional sediment, in time they would give the appearance of an in situ forest.[3]

Criteria for In Situ Trees

In a recent paper published in the *Creation Research Society Quarterly*, we identified seven criteria to determine if fossil trees were transported or merely buried by Flood sediments in situ.[4] The identification of an in situ site wouldn't necessarily invalidate the allochthonous origin of coal beds; it would merely represent a location where the tops of the trees were sheared off, leaving the trunks and stumps buried in place. Fossil trees that fulfill all, or at least most, of these criteria likely represent true in situ assemblages. The criteria are:

1. Multiple, single-species trees spaced in the growth position in the same horizontal plane, spaced equidistantly in all directions from the trunks as you would find in a living forest and not merely randomly spaced.
2. Multiple trees in the same rock layer or along a common surface
3. Trees with root systems that cross-cut bedding layers
4. Evidence of rapid burial by thick sediment and water
5. A lack of sedimentary rock layers underneath the trees
6. No bowing or distortion of any sedimentary layers beneath the tree stumps
7. Accompanying vegetation that also cross-cut the same layers as the lycopod tree stumps

Fossil Grove Site, Glasgow, Scotland

We identified one particular site in Glasgow, Scotland, that meets nearly all the criteria, including the lack of Flood sediments beneath the tree-root layer.[4] This site appears to be the remnants of a pre-Flood forest, with the fossil trees still rooted in a pre-Flood soil layer now lithified to rock. Fossil Grove, as it is called, is located in Victoria Park (Figure 1). It's likely the best-preserved example of an in situ lycopod forest in the world,[6] and possibly the first identified in a flood context.

Figure 1. *Location map for Fossil Grove in Victoria Park, Glasgow, Scotland. Map shows the Midland Valley terrane bounded to the north and south by major fault systems, as well as the Lower Paleozoic outcrops clustered along the southern and northern boundaries of the terrane.*[5]

Fossil Grove was discovered in 1887 when a path was cut across an abandoned quarry outside Glasgow.[7] After excavation down to the common soil horizon containing the tree stumps and roots, a building was constructed to protect them and allow public viewing. The site consists of a monotypic assemblage of multiple lycopod tree stump casts with attached axial root systems.[6]

The 11 single-species stumps were

found in growth position spacing as opposed to random spacing (Figure 2). The trees are all in one common rock layer, and the root

Figure 2. *Photograph of the lycopod tree stumps at the Fossil Grove. Note the intact roots penetrating the common subsurface horizon and the nonrandom (growth position), equidistant-spaced trees. Reproduced courtesy of Glasgow Museums and the Glasgow City Council.*

systems penetrate downward into the soil horizon similar to modern root systems. As opposed to allochthonous deposited trees, the roots are not broken off near the trunks but instead are intact like those of living trees. The encasing sandstone layer on top of the forest site contains ripples and oriented, broken trunk fragments indicative of a high-energy flow system directed toward the southwest. The tree stumps are also consistently distorted in a southwesterly direction, matching the paleo-flow of the floodwater currents. This indicates all of the trees were likely in place prior to burial by the encasing sandy sediments of the global Flood.

It is significant that the roots are not distorted in a southwesterly direction like the stumps. If the tree stumps, roots and all, were transported in and deposited, there should be a consistent southwest distortion to both trunks and roots. The lack of directional distortion in the roots suggests that the trees were rooted in the forest soil prior to burial.[6]

Lycopod Trees Were Not Hollow

Another line of reasoning put forth in support of the floating forest hypothesis is that the arborescent lycopods were hollow in both their main aerial trunks and in their roots—a contention based primarily on speculation and not soundly supported by the scientific literature. The majority of the "hollow tree" studies do not take into account a number of key reports describing the non-hollow internal structure of lycopods. Research has demonstrated that intact, non-decayed aerial stems of arborescent lycopods clearly indicate a contiguous tissue structure across the breadth of the stem, with the same general schema found in trunks and roots.

In fact, it is now apparent that the initial stages of the global Flood would likely have caused a great deal of plant death followed by decomposition of easily destroyed tissue in the internal cortex region of lycopod trunks and roots. The aerial structures and root systems would have undergone selective tissue decay in the central cortex while retaining overall morphological shape during the hollowing process. At that time, sediments were introduced into the cavity, creating casts. In effect, it would have resulted in the hollow-looking tree fossils that are commonly observed.

Flood Model for Fossil Grove Site

The sedimentation data indicate that Fossil Grove is a preserved remnant of a pre-Flood forest that was not inundated and buried until approximately midway through the rising portion of the Flood.[4] Allochthonous layers of coal were later deposited on top of the trees as part of the Scottish Coal Measure Group. This data-driven interpretation supports the idea that as the floodwaters increased, tsunami-like waves tore the bulk of the lycopod forests free and deposited them allochthonously elsewhere as coal beds.[1] As is the case with Fossil Grove, the lycopod tree trunks were broken off, allowing substantial decay of the stumps to have occurred prior to burial.[6]

Sinking the Floating Forest Hypothesis

Fossil Grove would be the first documented in situ preservation of a pre-Flood soil with plants. However, it doesn't support the floating forest hypothesis since the tree roots of the 11 stumps are found embedded with intact root systems throughout a common horizon. There is strong evidence to demonstrate these stumps are in the growth position and were inundated, buried, and fossilized in situ by rising floodwaters.

All available geological and fossilized anatomical data support the existence of pre-Flood lycopod forests rooted in soil. These forests were likely located in wetlands and/or coastal lowland areas along the fringes of land masses such as the Dinosaur Peninsula (Figure 3).[1] Detailed analysis further

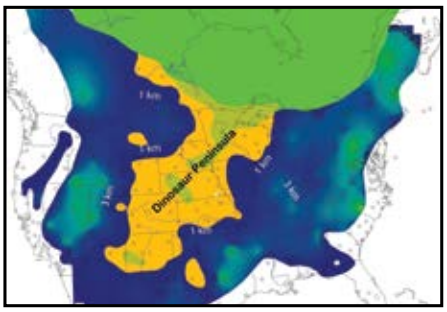

Figure 3. *Map of the interpreted pre-Flood environments of the United States showing the Dinosaur Peninsula. Lycopod trees likely fringed the land/sea boundary along the outer edges of the peninsula. Map courtesy of Davis J. Werner.*

demonstrates the trunks and the roots were not hollow as previously claimed. Based on these studies, we recommend abandoning the floating forest model.[1,4]

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Dr. Clarey is Research Associate and Dr. Tomkins is Director of Life Sciences at the Institute for Creation Research. Dr. Clarey earned his Ph.D. in geology from Western Michigan University. Dr. Tomkins earned his Ph.D. in genetics from Clemson University, where he worked as a research technician in a plant breeding/genetics program.

JAKE HEBERT, PH.D.

The Flood, Catastrophic Plate Tectonics, and Earth History

Although evolutionary scientists insist there is no evidence for the global, Earth-destroying Flood described in Genesis, accepting the Genesis Flood as literal history enables researchers to make sense of a wide array of geological, climatic, and cultural data.

Fossils in Water-Deposited Rocks

Most of Earth's land surface is covered with sedimentary rocks or sediments, which are formed when pre-existing rock material is weathered. The resulting sediment is then transported to another location by water, wind, or glacial action. Even secular geologists acknowledge that nearly all the world's sedimentary rocks are water-deposited, although they would deny that these rocks were the result of the Genesis Flood.[1] Furthermore, some of the sedimentary rocks that secular geologists attribute to wind action are better explained as resulting from water currents.[2]

Within these water-deposited sedimentary rocks are the fossilized remains of billions of plants and animals. These fossils are evidence of rapid burial since organisms that are not buried rapidly will quickly decay or be eaten by scavengers. The fossils are often found in mass graveyards, and marine and land creatures are frequently buried together.[3] This is exactly what one would expect from the catastrophic global Flood described in the Bible.

Global Flood Traditions

People groups all over the world have recollections of a great flood that nearly destroyed the human race. ICR President Emeritus Dr. John Morris has personally collected more than 200 such flood stories, many of which bear remarkable similarities to the Genesis account.[4] If the Flood was a real event, then it would surely have been remembered by those who lived through it—Noah's family—and told to their descendants.

Catastrophic Plate Tectonics and Runaway Subduction

The Flood also enables us to make sense of clues contained within Earth's interior. Our planet can be divided into a thin outer crust, a core at its center, and the mantle between them (Figure 1). The core is comprised of a solid inner core and a liquid outer core. The uppermost part of the mantle and the crust together comprise the lithosphere, about 60 miles thick. Like a cracked eggshell, the lithosphere is divided into seven or eight large plates and many smaller plates.

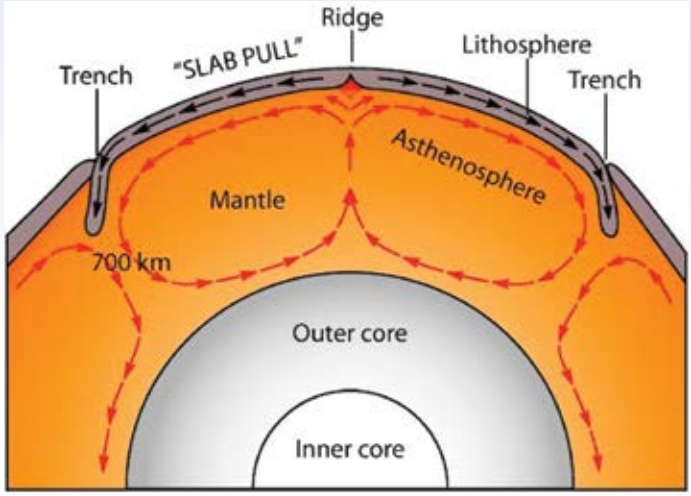

Figure 1. *Diagram showing the earth's interior as well as a mid-ocean ridge and two subducting slabs.*

Image credit: U.S. Geological Survey.

Creation geophysicist John Baumgardner—described as "the world's pre-eminent expert in the design of computer models for geophysical convection"[5]—has spent many years studying the connection between plate tectonics and the Flood. Today, the plates are moving very slowly, at rates of just a few centimeters per year, but Dr. Baumgardner argues that they moved much faster in the recent past.[6]

The fossils are often found in mass graveyards, and marine and land creatures are frequently buried together. This is exactly what one would expect from the catastrophic global Flood described in the Bible.

When an oceanic plate and a continental plate collide, the denser rocks of the ocean floor tend to slide under the less-dense continental rocks, a process called *subduction*. As a subducting plate moves down through the mantle, the resulting friction heats the surrounding material. This heating reduces the viscosity of the material, enabling the subducting plate to move more quickly. As long as the heat is carried away by the surrounding mantle rocks faster than it is generated by the subducting slab, subduction will be slow and gradual. If, however, the generated heat is not carried away at a sufficient rate, the viscosity of the slab decreases still further, enabling the slab to descend even faster. This results in an effect called *runaway subduction* in which the subducting slab moves at speeds of meters per second rather than centimeters per year![6] Fortunately, conditions for runaway subduction are not currently present in the mantle, but there are good reasons to think such conditions occurred in the past.

An imaging process called *seismic tomography* has revealed a ring of dense rock at the bottom of the mantle. Since its location corresponds approximately to the perimeter of the Pacific Ocean, it appears to represent subducted ocean crust (Figure 2). Located inside this ring of cold rock is a blob of less-dense rock that appears to have been squeezed upward toward the crust. If one assumes that the density of the cold ring is comparable to that of the surrounding material, which is the most straightforward assumption, this ring is 3,000 to 4,000 °C colder than the inner blob. This is completely unexpected in the conventional plate tectonic model since it can take about 100 million years for a slab to descend all the way to the base of the mantle.

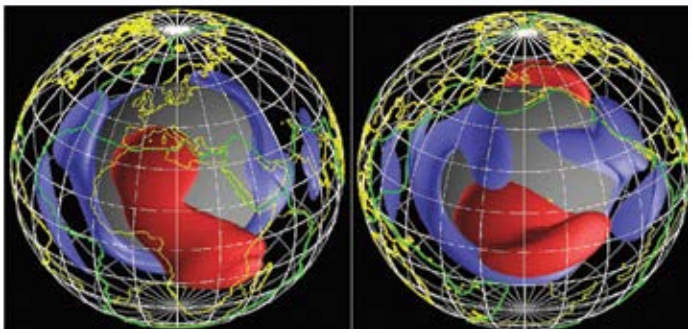

Figure 2. *Regions of more dense (blue) and less dense (red) materials in the lower mantle, as shown by seismic tomography.*

Image by Alessandro Forte, from reference 7, used by permission of Creation Science Fellowship of Pittsburgh.

In that time, one would expect any such temperature differences to have evened out. However, in the catastrophic plate tectonics model, such a temperature difference is to be expected if the slab rapidly subducted into the mantle just a few thousand years ago.[7]

Runaway Subduction: Logical Consequences

If runaway subduction *did* occur, then certain things logically follow. Since one expects Earth's volume to remain constant during the subduction process, rapid subduction and the destruction of the old seafloor also imply rapid creation of a new seafloor. This would occur at the mid-ocean ridges, where hot magma rises upward (Figure 1). The lithosphere above the ridge would stretch and thin, allowing the magma to break through the crust. Dr. Baumgardner thinks the mid-ocean ridges, which encircle Earth like seams on a baseball, were the result. As this hot magma came into contact with cold seawater, the result would have been a long, linear geyser that ejected huge amounts of superheated water into the atmosphere. This may have been the source of the intense rains that fell for 40 days and 40 nights (Genesis 7:12).

Furthermore, this upward motion of less-dense material at the mid-ocean ridges would have temporarily raised the ocean floor along these underwater belts, displacing massive amounts of seawater onto the continents and resulting in catastrophic flooding on a global scale. This is exactly what one would expect during the global Flood. Dr. Baumgardner has written sophisticated computer programs to model both the rapid plate motions and the transportation of sediments by water currents during the Flood (Figure 3).[8,9]

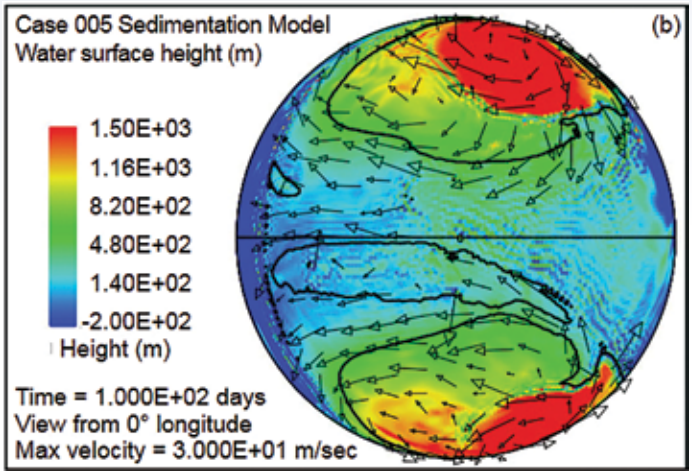

Figure 3. *Graphical results from one of Dr. John Baumgardner's numerical simulations.*

Used by permission of *Answers Research Journal* (reference 9).

Rapid Magnetic Reversals

Molten lava, or magma, contains minerals whose magnetic domains tend to align with the direction of Earth's magnetic field. When the rock cools and hardens, this alignment is "locked" into the volcanic rock. The basaltic rocks on either side of the mid-ocean ridges depict a striped pattern consisting of alternating bands of magnetization that reverse direction as one moves away from the ridge. This striped pattern indicates that Earth's magnetic field has flipped dozens of times, with the north and south magnetic poles trading places.

If a new seafloor rapidly formed during the Genesis Flood, then the fact that these magnetic reversals are recorded in oceanic volcanic rocks (most of which were formed during the Flood) implies that the magnetic reversals must *also* have occurred rapidly. Uniformitarian scientists found strong evidence for rapid magnetic reversals, although such rapid reversals are very hard for them to explain.[10-12] Creation physicist D. Russell Humphreys proposed a theory that at least qualitatively explains how such rapid reversals could occur.[13] His mechanism requires strong up-and-down motions of fluids within Earth's outer liquid core due to convection. Such convection might be initiated if a cold subducting plate were to come into contact with the outer core at the core-mantle boundary, which Dr. Baumgardner argues is exactly what happened.[7]

Rapid Erosion and Deposition

As the newly formed ocean floor cooled, its density increased and it sank, allowing the floodwaters to drain off the continents. The rapidly receding waters would have eroded away an enormous amount of sediment. In places where the sediments were relatively thin, the water would have eroded all the sedimentary layers, leaving the original basement rocks exposed. Huge volumes of fast-moving water would have planed some areas flat, resulting in so-called *planation surfaces*. Since they are not forming today, these surfaces are difficult for secular geologists to explain.[14] This extensive erosion implies that huge amounts of sediment would have rapidly been dumped into the ocean basins. The Whopper Sand in the Gulf of Mexico—a complete surprise to uniformitarian scientists—is an example of this massive, sheet-like draining of North America.[15]

The Ice Age

The Genesis Flood also provides a straightforward explanation for the Ice Age. The heat generated by the rapid formation of a completely new seafloor during the Flood would have significantly warmed the world's oceans, dramatically increasing global evaporation. This would have put far more moisture into the atmosphere than we see today, resulting in greatly enhanced snowfall at high latitudes and on mountaintops. Late-Flood and residual post-Flood volcanic activity would have put great amounts of light-reflecting aerosols into the stratosphere, resulting in cooler summers that would have allowed thick ice sheets to persist and grow over hundreds of years. As the oceans cooled and volcanic activity diminished, the Ice Age would have gradually come to an end.[16] In contrast, the currently popular secular ice age theory has serious problems.[17]

Although creation scientists are still working to resolve unanswered questions, the creation-Flood model is much more robust and has much more explanatory power than secular Earth history stories.

Conclusion

Accepting the Genesis Flood as literal history enables researchers to make sense of a huge array of data. Although creation scientists are still working to resolve unanswered questions, the creation-Flood model is much more robust and has much more explanatory power than secular Earth history stories. Skeptics "willfully are ignorant of" (2 Peter 3:5) the reality of the Genesis Flood—not because of a lack of evidence but because of an unwillingness to acknowledge God's Lordship over their lives.

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

FRANK SHERWIN, M.A.

God's Balanced Ecosystem

If the apostle Paul is right and God's attributes in creation are "clearly seen" (Romans 1:20), then we should see them manifest in both the biotic (animals and plants) and abiotic (geology and meteorology) areas of His creation. These two basic areas interact in a sophisticated ecological web. Disturbance of one facet (e.g., a species of animal or plant) may reverberate throughout the biological system.

In the beginning, God gave humans a dominion mandate:

> Then God blessed them, and God said to them, "Be fruitful and multiply: fill the earth and subdue it; have dominion over the fish of the sea, over the birds of the air, and over every living thing that moves on the earth." (Genesis 1:28)

We are to respect and care for the created environment, but not idolize it. However, natural man has rejected the Creator's commandment. As a result, the creation is often worshipped (Romans 1:25), and modern militant environmentalism has become a religion.[1]

Although sometimes it doesn't seem like it, God really does have everything under control. He designed ecological niches to interact in such a way as to have a balanced ecosystem. Each creature God created has the ability to move in and fill niches in the environment.

One of the more fascinating stories of ecological recovery and conservation involves the gray wolf (*Canis lupus*) of North America. This magnificent animal was nearly wiped out in the early 20th century in the lower 48 states due to the mistaken assumption that wolves were a treacherous competitor and predator to both man and beast. Because of this, there was a campaign to eliminate them, specifically in and around Yellowstone National Park. What followed between 1926 and 1995 is what ecologists call a *trophic cascade*.

Wolves—the apex predators—had kept elk and deer numbers in check. As a result of the wolves' removal, the populations of these large herbivores increased exponentially. They over-browsed the vegetation, causing many species of plants to disappear. Stream edges where cottonwood and willows (riparian vegetation) grew were devastated, leading to a reduction in the numbers of smaller animals such as rabbits and insects. Aspen saplings in the northern Yellowstone valleys were decimated, leaving no expansive root system to curb erosion. With the loss of trees, birds lost nesting sites.

The overgrazing of trees in turn reduced food for beavers in the northern range. The animals soon disappeared from that area, along with the ponds produced by their dam building. There followed heavy stream erosion. More animals and plants such as mature willows and aspen were affected. Even the numbers of scavenger species such as the golden and bald eagle, coyote, raven, magpie, and grizzly bear dipped because they had no wolf kills to feed on.

An environmental recovery began in 1995 when the conservation community and U.S. Fish and Wildlife Service introduced about 30 Canadian wolves into Yellowstone. The impact was nothing less than dramatic. In just seven years, Yellowstone had 16 free-ranging packs of wolves.

Woody species of plants such as the willow, cottonwood, and aspen made a comeback. Indeed, new aspen groves are now over 20 feet high thanks to the reduction of elk from more than 15,000 before 1995 to a more manageable 6,000 in 2005. Many animals returned to areas from which they had almost disappeared, including the willow flycatcher, the insectivorous ground feeding restart, and other birds. Wolves even help keep the coyote population in check, allowing the recovery of the magnificent pronghorn sheep. Dozens of God's furry engineers, beavers, are now making productive marshes and ponds by damming streams. Small mammals, birds (green-wing teal), fish (cutthroat trout), and amphibians (boreal chorus frog) are moving into these newly created aquatic ecosystems. Insects flourish as well to feed them.

There are clear indications that biological equilibrium is being regained in Yellowstone. How should this welcome ecological recovery affect the biblical creationist? With joy! This is responsible environmental stewardship, caring for what God has given us.

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Mr. Sherwin is Research Associate, Senior Lecturer, and Science Writer, and earned his M.A. in zoology from University of Northern Colorado.

Another Evolutionary Ancestor Gets Nixed

Homo naledi skyrocketed to international fame in 2015 as a claimed ape-like ancestor of man that fit the story of human evolution. Discoverer and promoter Lee Berger published hasty reports and then toured the world with dynamic, media-packed presentations. Back then, the Associated Press wrote that scientists had "discovered a new member of the human family tree" in the odd-looking fossil assembly.[1]

The Institute for Creation Research responded to the claims and made a bold prediction that further research has now verified. Creation zoologist Frank Sherwin wrote, "We predict, on the basis of the creation model, *Homo naledi* too will become just one more dead end in the questionable human evolution parade."[2] New dating results show why Mr. Sherwin was right.

Why does the fossil's age assignment matter? According to the evolutionary story, a gaggle of extinct apes slowly morphed closer toward the form of modern humans over millions of years. Supposedly, the first truly modern-looking people did not evolve until two to three million years ago. This follows from the long ages assigned to unquestionably human fossils. What, then, should qualify a fossil as a true evolutionary ancestor of man? First, it should have body parts that look more human-like than ape-like. Second, it should bear an age assignment of no fewer than two million years.

ICR geologist Tim Clarey described a key dating dilemma when he analyzed details published in 2015 about *Homo naledi*'s setting. He wrote that a relatively young evolutionary age assignment would place "*Homo naledi* alongside species of modern humans" instead of demonstrating it to be an ancestor of modern humans.[3]

Now in 2017, scientists including Berger revealed new dates that place *Homo naledi* only several hundred thousand years ago—far too recently to match their 2015 claims that it represented a human ancestor.[4]

A large team of scientists published the unexpectedly young age assignments in the online journal *eLife*.[5] The University of the Witwatersrand in South Africa wrote about the results:

> After the description of the new species in 2015, experts had predicted that the fossils should be around the age of these other primitive species. Instead, the fossils from the Dinaledi Chamber are barely more than one-tenth that age.[6]

What Is *Homo naledi*?

In short, we don't know yet. Its fragmentary remains might represent human variations or diseased people.[7] Detailed trait analyses suggest an extinct ape, possibly related to Lucy's kind.[8] Then again, maybe it's a mix of human parts (especially its feet) with parts from extinct apes (like curved finger bones and tiny skulls).[9] That would make the whole construct farcical, like Java man, Piltdown man, and possibly *Homo habilis*. Whether extinct human, extinct ape, or man-made mixture, none of these creation-friendly categories helps evolution.

In other words, those who believed that this fossilized creature was evolving into humans had predicted an age of *older* than two million years. Now their own dating methods have refuted this. Meanwhile, experts have completely disagreed over the evolutionary significance of every other supposed ape-human transition, including the famous Lucy—which is merely an extinct ape.[10] Those who believe God created apes separately from man therefore predicted that more research would eliminate *Homo naledi* from the fake parade of human evolution candidates. Creation science got this one right.

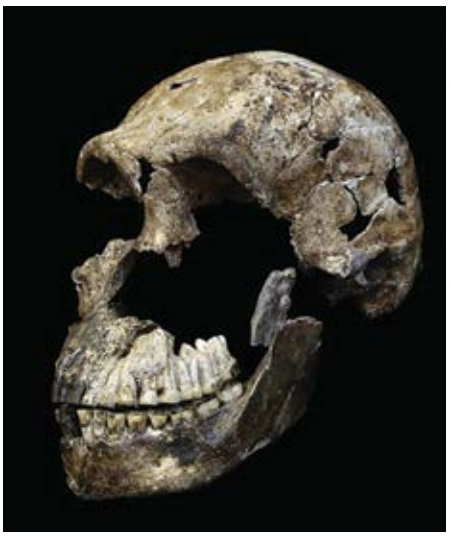

Image credit: John Hawks/University of Wisconsin-Madison. Adapted for use in accordance with federal copyright (fair use doctrine) law. Usage by ICR does not imply endorsement of copyright holder.

Homo naledi*'s startlingly young age assignment—a factor of 10 off from where it should be in the evolutionary model—raises serious questions about its placement as a human ancestor.*

Despite its initial glad entry into the evolutionary lobby, it didn't take long for *Homo naledi* to turn right around and exit the building, just like creation thinkers foresaw.

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

CONSTRUCTION UPDATE: LAYING THE FOUNDATION

In June, the Institute for Creation Research's Board of Directors gathered for their annual meeting. They seized this opportunity to tour the construction progress on the ICR Discovery Center for Science and Earth History.

(left to right) ICR Board members Dr. Rob Stadler, Dan Arnold, Dan Farrell, ICR CEO Dr. Henry Morris III, ICR CFO Eileen Turner, Board members Dan Mitchell, Walter Guilliaume, and ICR Chairman of the Board Richard Bliss stand on the southern side of the future planetarium.

Beck superintendent Roy Chumley describes the soil, foundation, and engineering work required for the new construction area for the planetarium, lobby, auditorium, and gift shop to Dr. Rob Stadler, Richard Bliss, and Dr. Henry Morris III. The new construction's foundation will be laid in the flagged area in the distance.

As with most building projects, we must remove the old before we can build the new. Last month we shared a few demolition pictures from inside our existing building. This month, let's tour the outdoor progress with our Board.

Construction team completes trenching work for property drainage.

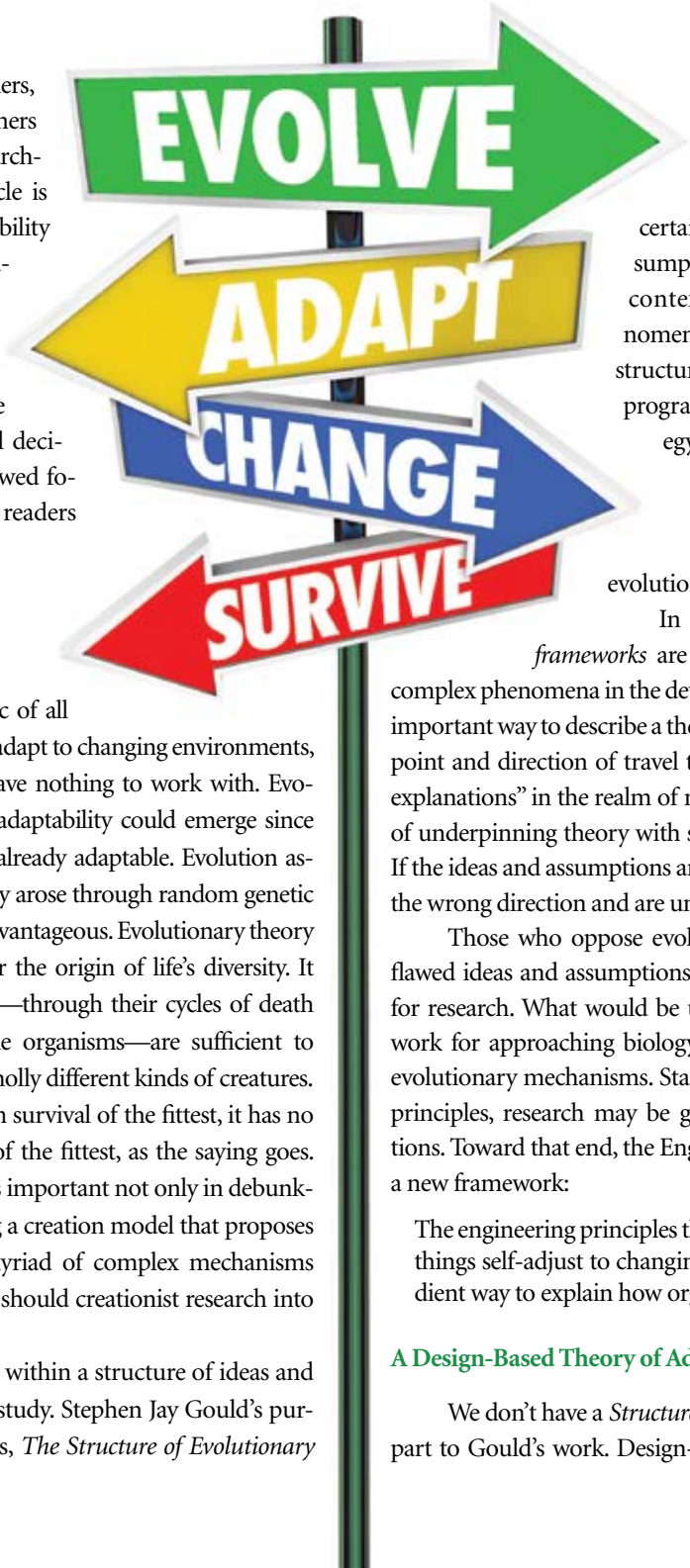
Beck supervisor Paul Palerchio gives an overview of the interior work, including demolition, foundation, excavation for utilities and the Grand Canyon exhibit, location of specific exhibits and the ceiling paint project (painting it black).

Help Us Finish the ICR Discovery Center

Please help ICR reach generations to come with evidence that confirms the Bible. As we build the superstructure, we are still raising funds for the interior exhibits. Your gift will be put to effective use to point people to the truth of our Creator, the Lord Jesus Christ. Please visit **ICR.org/discoverycenter**

Arriving at a Design-Based Framework for Adaptability

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



A map is crucial for all travelers, from fun-seeking vacationers to serious scientific researchers. This month's article is a map of the Engineered Adaptability series and highlights the places future articles will stop en route to its destination—a design-based framework that explains adaptability. To keep everyone traveling together, the articles will decipher information from peer-reviewed forums and supply an orientation so readers know where they're headed.

Where Adaptability Goes, Evolutionary Theory Follows

Adaptability is a characteristic of all living things. If organisms couldn't adapt to changing environments, then evolutionary theory would have nothing to work with. Evolutionists struggle to explain how adaptability could emerge since a creature cannot adapt until it is already adaptable. Evolution assumes that adaptability mysteriously arose through random genetic mutations that somehow proved advantageous. Evolutionary theory offers a naturalistic explanation for the origin of life's diversity. It holds that changing environments—through their cycles of death and survival "acting" on adaptable organisms—are sufficient to slowly transform organisms into wholly different kinds of creatures.

In evolution's quest to explain survival of the fittest, it has no viable explanation for the *arrival* of the fittest, as the saying goes. Thus, understanding adaptability is important not only in debunking evolution, but also in validating a creation model that proposes organisms are designed with a myriad of complex mechanisms that allow them to adapt. But how should creationist research into adaptability proceed?

Scientific activities take place within a structure of ideas and assumptions that define a field of study. Stephen Jay Gould's purpose for writing his magnum opus, *The Structure of Evolutionary Theory,* wasn't to provide evidence for evolution. Instead, its intent was to frame the history of scholarly exchanges that approved certain ideas and endorsed specific assumptions that became the evolutionary context used to interpret natural phenomena. Gould also noted how a theory's structure establishes and prioritizes research programs, of which he said, "The best strategy, Darwin asserts, lies in the study of adaptation….The adaptations of organisms therefore constitute the bread and butter objects of study in evolutionary biology."[1]

In scientific research, *structures* and *frameworks* are configurations of ideas explaining complex phenomena in the development of a theory. But an equally important way to describe a theory is like a map that sets the starting point and direction of travel toward a destination called "truthful explanations" in the realm of natural phenomena. The importance of underpinning theory with sound fundamental ideas is obvious. If the ideas and assumptions are wrong, then researchers start off in the wrong direction and are unlikely to get to truthful explanations.

Those who oppose evolutionary theory often point out its flawed ideas and assumptions but don't offer a different structure for research. What would be useful, then, is an alternative framework for approaching biology that fundamentally contrasts with evolutionary mechanisms. Starting with one based on engineering principles, research may be guided to produce truthful explanations. Toward that end, the Engineered Adaptability series proposes a new framework:

> The engineering principles that underlie how human-designed things self-adjust to changing environments is the most expedient way to explain how organisms adapt.

A Design-Based Theory of Adaptability

We don't have a *Structure of Design Theory* book as a counterpart to Gould's work. Design-promoting concepts have advanced

primarily by 1) detailing the total *insufficiency* of the Darwinian mechanism; 2) exposing colossal hurdles for evolution such as the Cambrian Explosion; 3) highlighting many characteristics of organisms, especially their information content, that indicate the work of an intelligent agent; and 4) charting a rational approach for making a plausible inference to design. But while it is valuable, this work isn't a clearly focused design-based structure for explaining adaptability.

Dr. David Snoke of the University of Pittsburgh has laid important groundwork for Intelligent Design advocates to utilize engineering principles to guide research via systems biology.[2] His work is a section within the foundation of design theory.

One goal for this Engineered Adaptability series is to lay additional foundation. Several articles begin by replacing evolution's outdated principal mechanism with a fresh, engineering-based approach to adaptability that incorporates the latest biological discoveries. One premise is that the engineering paradigm in modern biology is fundamental and engineering principles should therefore guide biological research.[3] Humans design adaptable machinery and systems by invariably including internal features that control the entity's relationship to environments. Hence, a structure of design theory could use engineering principles to more accurately interpret findings about biological functions within the context of a living creature's *innate* systems.

Research, Interpretation, Causation: Why Starting Points Matter

Now is an excellent time for developing a new engineering-based theory. Next month's article will show how evolutionary biologists are increasingly divided over theory. A recent conference—New Trends in Evolutionary Biology: Biological, Philosophical and Social Science Perspectives—deliberated if evolutionary theory needs to be extended or even renovated to accommodate fresh discoveries highlighting the incredible complexity of living systems and the severe problems they propose for evolution. One key organizer, Kevin Laland of the University of St. Andrews, noted that "the discussion witnessed little meeting of minds."[4] Previously, an article in the science journal *Nature* presented contrasting opinions on the question "Does evolutionary theory need a rethink?" The article noted that "researchers are divided over what processes should be considered fundamental."[5] Why the sharp division amongst evolutionists this late in the game? The answer spins on whether evolutionary theory's ideas and assumptions set the correct starting point and direction for research.

Adaptability is a characteristic of all living things. If organisms couldn't adapt to changing environments, then evolutionary theory would have nothing to work with. Evolutionists struggle to explain how adaptability could emerge since a creature cannot adapt until it is already adaptable.

Recent debates are plowing all the way back through evolutionary literature to how Darwin initially adopted the environment-dominant view of adaptation. He decided to explain adaptation "externalistically." Darwin's view perceives organisms as passive modeling clay whose basic form is molded over time by their environments.[6] Form is imposed on organisms from without. Environments sculpt them into nature's diverse forms. The organism-as-modeling-clay is the status quo assumption. It shapes the interpretation of results from studies focused on where the key action takes place—the organism-environment relationship.

The recent struggle in the evolutionary camp over fundamental processes revolves around discoveries of pervasive and complex internal mechanisms that organisms utilize to self-adjust to changing conditions.[7] Per one New Trends conference attendee, this observation-to-theory mismatch is leading to "deeply entangled" causal explanations.[8] Biochemist Michael Denton notes that tensions rise because "it is inconceivable to most English-speaking biologists that living things might contain a significant degree of order that arises from basic internal physical constraints," an idea that many find "very alien" to their way of thinking.[9]

The evolutionists' current uncertainty over how new discoveries fit their theory provides a rare opening for non-evolutionists to frame these data into a novel theory that does not incorporate evolutionary explanations.

A Theory That Integrates Engineering Causation and Principles

Scientific literature describes dozens of fascinating systems within creatures that control flexible expressions of problem-solving traits. The next stop in this series will describe a revived interest in a model called *structuralism* (a type of) to explain new discoveries.

Yet, renewed interest in structuralism itself still misses the target. It is better to organize findings into an organism-focused, *design-based* theory of adaptability. Researchers who are open to considering that organisms may be designed could formulate theory that allows them to assume that organisms' diverse systems have some discoverable purpose(s) and that those systems operate according to engineering principles.

For instance, what if a design-based research program was launched to investigate whether the same principles that regulate functions in human-designed vehicles also operate in creatures that travel through diverse environments? For human-engineered vehicles, intrinsic design controls detect challenging exposures and dictate specific measures as solutions. Per design-based theory, a similar innate self-adjusting capacity would be predicted within organisms. That is, organisms over multiple generations could actively detect environmental conditions, and innate systems could control the expression of a spectrum of traits

(phenotypes) from a relatively stable set of instructions in the genome. A design-based theory might be able to help refine the full extent of internal control.

Throughout this series, we will focus on engineering causation. It's different from philosophical, psychological, theological, or other causation. Objectivity is its distinguishing characteristic. Only verifiable elements are included in causal chains. In our series articles, these chains generally link genetics or epigenetic information through specific cellular systems to modified traits and then to the specific environmental conditions they relate to.

Continuous Environmental Tracking: An Engineered Means to Fill Niches

If engineering-minded scientists hypothesized how creatures spread into diverse niches (and possibly undergo speciation), they might produce a treatise titled *On the Origin of Species by Means of Continuous Environmental Tracking*. It's not enough to just identify design features in systems. Those features should be fitted into some conceptual framework. Thus, the bulk of this series will highlight mechanisms through which organisms express traits that enable them to closely track changing conditions and adjust accordingly. This explanation for adaptability was given the descriptive title Continuous Environmental Tracking (CET) and was presented at several science conferences in 2016.[10]

Adaptability is the engineered control system within organisms that maintains the organism-environment relationships through appropriate self-adjustments. An organism's innate systems determine its output and responses.[11] Human engineers know they must build dynamic machines to relate to dynamic environments. If human engineers can use a tracking system to detect and maintain the surveillance of a moving target, could creatures employ a similar overall strategy that utilizes different types of mechanisms to track changing conditions?

The essential, well-matched elements underlying the self-adjustable property of tracking systems are 1) input sensors to gather data on external conditions; 2) internal programming that specifies reference values, and logic segments that compare input data to a reference and select a suitable response; and 3) output actuators to execute responses. The route from condition to adaptation runs through these components, and the removal of any one stops self-adjustment. Research demonstrates that organisms have these same elements and utilize them to track changing conditions and produce specific results.

These recently outlined internal mechanisms have some surprising characteristics. These innate mechanisms yield results that are regularly described as "regulated," "rapid," very often "repeatable," and, surprisingly at times, even "reversible"—words that fit the outcomes of engineered systems.

Most of the exciting action obviously takes place where organisms interface with their environments. A few future articles will discuss key design features found at creatures' environmental boundaries that enable engineered adaptability.

All organisms have environmental interfaces. For adaptability, interfaces can be thought of as gatekeepers. A contemporary analogy in today's computer world is that they act as a firewall for control and security reasons. In a related manner, no condition in-and-of-itself is a stimulus to an organism. Internal programming must specify it as a stimulus. A creature must then be equipped with a sensor to detect the specified condition. Another principle of design is that for two autonomous entities to work together, they must be connected by an interface system that permits "business transactions" to happen.[12]

Engineered, Active, Problem-Solving Creatures…NOT Passive Modeling Clay

When researchers see recurrent, similar categories of change that are described as being regulated, rapid, and repeatable, they should recognize them as corresponding to distinctive expectations of design. A framework postulating that creatures were designed is reasonable. With human-engineered things, internal features regulate their relationship to environments, and it seems this should also be true for organisms. This would imply that both internal form *and adaptability* are governed by internal systems. Thus, the total validity of Darwin's externalistic theory itself, not merely its sufficiency, is challenged by the reality of intelligent design.

If the design-based model of adaptation postulating that organisms continuously track environmental changes is correct, it would emphasize organisms as active, problem-solving entities—not passive modeling clay. It's a creature's self-adjusting innate mechanisms that produce change-suitable solutions that *precede* changing conditions rather than being caused by them. Could it be possible that creatures actively track changing conditions—rather than being passively "pressured" by them—while driving themselves through time to fill new niches?

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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.

FRANK SHERWIN, M.A.

Q: Did Fish Learn to Walk?

"Walking" catfish.

A: Virtually all natural history museums have a diorama displaying fish with strange leg-like fins emerging from the water onto land. This is a critical evolutionary event—gills somehow evolving into lungs and fins evolving into legs—that allegedly occurred many millions of years ago.

But how true is this scenario? After all, this happened before anyone could observe or document it. The only way to "see" if it actually happened is to find fossils of water creatures displaying structures that would have the specific anatomy to enable them to invade this foreign environment called land. It's no wonder evolutionist Carl Zimmer recently said, "Scientists still puzzle over exactly how the transition from sea to land took place."[1]

There has been much work by paleontologists (those who study fossils) investigating this supposed event. Fish becoming amphibians would have involved a very complex process, and the hunt for evidence is quite frustrating because so far there are no fossils to document this bizarre transition. As a University of Geneva press release on a related study noted, "The transitional path between fin structural elements in fish and limbs in tetrapods [four-limbed vertebrate animals] remains elusive."[2]

Occasionally, some will insist the "walking" catfish of Florida can walk from pond to pond, thereby showing evolution in action. However, it's notable that even evolutionists generally don't see the walking catfish as anything more than a 100% fish that slithers along on its belly until it gets to a new body of water or leaps from the water's edge to snag a bird. There is no real demonstration of evolution in this behavior; it's still just a catfish with a unique skill set.

Evolutionists appeal to phantoms and specters to make their "scientific" case of fish turning into amphibians:

> The first evidence of tetrapods comes from 395-million-year-old trackways found in shallow marine sediments in Poland…suggesting there is a ghost record of missing forms, as these trackways predate the oldest known elpistostegalian fishes by 10 million years.[3]

These Polish trackways are distinct digit imprints, and they greatly upset the idea of a lineage of fish-to-tetrapod evolution, particularly as it applies to the role of *Tiktaalik*.[4]

One of the many anatomical roadblocks of the transition to amphibian lies in the evolution of the pelvic girdle.[5] Pelvic fins in fish are loosely embedded in the flesh and muscle. There is no hint of a connection of these structures with the spinal column.

Recently, however, there was a discovery in Thailand of a wall-climbing cave fish called *Cryptotora* that some hoped would give "hints about how fish originally arrived on land."[1] It has a pelvic girdle—but no digited appendages.[6] According to the evolutionary story, such appendages should have evolved before the pelvic girdle. Even the secular scientific community has been largely silent about this creature.

And according to one expert in the field, the earliest-known tetrapods had a 100% pelvis:

> Even in the earliest known tetrapods, the pelvic girdle had become far different in structure from that of a fish.[7]

Figure 4.2 of Michael Benton's fourth edition of *Vertebrate Paleontology* shows an outright magical transition of a fish spinal column having no pelvic anatomy to that of a creature with an "Illum [*sic*], Ischium, Sacral rib and Pubis"—in just one step (so to speak).[8]

Did fish learn to walk? No. Science does not document this because it cannot—there are no fossils that show it. And Scripture clearly declares fish were created on Day Five of the creation week.[9]

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Mr. Sherwin is Research Associate, Senior Lecturer, and Science Writer, and earned his M.A. in zoology from University of Northern Colorado.

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

Polar Bears, Fitted to Fill and Flourish

Polar bears are really cool. These furry frost-giants are fitted to fill frigid habitats in Arctic Ocean waters, ice floes, and shore lands.[1]

Polar bears also provide four living lessons in apologetics: 1) their lifestyles corroborate biblical information; 2) their lives refute evolutionist speculations; 3) they help to clarify historical truth about global climate change; and 4) they glorify their Creator—simply by living their lives.[2]

When Mama Bear Ain't Happy, Ain't Nobody Happy

Female bears, as described in Scripture, are serious threats to anyone who angers them, especially anyone threatening their cubs (2 Samuel 17:8; 2 Kings 2:24; Proverbs 17:12; Hosea 13:8). It's a risky adventure to fight a mama bear (1 Samuel 17:34-37)!

Bears are omnivorous predators.[3] Bears growl (Isaiah 59:11), lie in wait for edible prey (Lamentations 3:10), and showcase fierceness (Daniel 7:5; Revelation 13:2). Hungry bears should be avoided until the time when God transforms them into strict vegetarians (Isaiah 11:7).

Scripture portrays bear behavior that matches what we observe in today's bears, including polar bears.

Polar Bears Can Hybridize, Yet "Missing Links" Are Still Missing

Consistent with how Genesis reports biodiversity, creationists recognize an ursine "bear kind."[3] Unsurprisingly, polar bears can mate with other bears (e.g., polar bears breeding with grizzly/brown bears), yet this reality *disproves* earlier evolutionist notions of ursine speciation and genetic incompatibility.[4]

Meanwhile, imaginary phylogenetic lineages—of bears with non-bears such as canines—are still missing the predicted transitional forms despite 150-plus years of extensive searching for them in the fossil record.[5]

Polar Bears Aren't Threatened by Global Warming

Polar bears aren't going extinct even if Earth warms up a few degrees, notwithstanding alarmist pseudoscience. Polar bears can safely survive vacillations of global climate change without any help from politicians.

During the Medieval Warm Period lasting from about 950 to 1250 A.D., polar bears (also called white bears or snow bears) survived. Vikings captured and marketed them as exotic animals.[6] After those "global warming" centuries, the cooler Little Ice Age followed from approximately 1350 to 1850. Polar bears survived again—evidence that global warming-based "save the polar bears" doomsaying is just histrionic hype.[3,6]

Polar Bears Exhibit God's Providence

Like other wild beasts in God's created world (Revelation 4:11), polar bears daily demonstrate God's caring providence just by being themselves. For example, although baby polar bears are conceived during the spring, uterine implantation of embryos (as with other bears as well as mustelids and seals) is delayed by design until autumn. That's when mama bear enters her maternity-ward den, ensuring that births occur in winter during hibernation. The family's den exodus is timed for spring, when food availability is optimal and infant cubs are physically developed enough to travel on sea ice.[3]

Also, consider the energizing nutrition that God installed in polar bear mothers. Polar bear babies are born small, about 1.5 pounds—one-fifth the size of human babies. Before leaving the den in spring, each cub needs to weigh around 25 to 30 pounds! Following the initial protein-loaded, antibody-rich colostrum, milk for newborns can be 46% fat, facilitating a get-big-and-fat-quick growth pattern. Yet, fat content declines over time to about 5% (like in human milk) at weaning, having fueled a 1,500 to 2,000% weight gain during three to four months.[3] God's design delivers precisely what's needed.

Polar bears are cool exhibits of God's creatorship!

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

HENRY M. MORRIS IV

Godly Sowing

Sowing seed is a frequently used image in the Bible, most often as a symbol of witnessing for the Lord. "Cast your bread upon the waters," the wise Preacher wrote, "for you will find it after many days" (Ecclesiastes 11:1). The Hebrew word for bread (*lechem*) can also be translated "grain," and in context this likely refers to the ancient custom of sowing seed from boats onto the marshy banks of an overflowing river. Once the waters recede, the grain settles on the soil and takes root.

But unlike the farmer, Christians are expected to engage in this special work at all times everywhere they go. Emphasizing the need for continual diligence, the Preacher explained it this way: "In the morning sow your seed, and in the evening do not withhold your hand; for you do not know which will prosper, either this or that, or whether both alike will be good" (Ecclesiastes 11:6). Such sowing can be difficult, and the benefits aren't always assured. But it is absolutely necessary before fruit can be produced. The promise is that "those who sow in tears shall reap in joy," for "he who continually goes forth weeping, bearing seed for sowing, shall doubtless come again with rejoicing, bring his sheaves with him" (Psalm 126:5-6). The image is of one spreading spiritual seed far and wide, trusting that it will eventually produce fruit in redeemed lives.

It may be that others will harvest the fruit of our efforts, or we may reap the fruit of those who came before us. But this is a good thing in terms of spiritual labor. Paul said, "I planted, Apollos watered, but God gave the increase" (1 Corinthians 3:6). And even Jesus, in speaking of the Samaritan woman at the well, told His disciples that "one sows and another reaps" so that "both he who sows and he who reaps may rejoice together" (John 4:36-37). The result was that "many of the Samaritans of that city believed in Him because of the word of the woman who testified" (John 4:39).

Some seed may not ever grow at all, a principle that Christ conveyed in His parable of the sower. While much of the spiritual seed we sow will be devoured on the wayside or wither away on stony or thorn-infested ground, some seed "fell on good ground and yielded a crop that sprang up, increased and produced" (Mark 4:8). Our job is to ensure the seed we sow is good seed—through our testimony and living example, by listening and praying, in everything we say or do or think—and then to trust God to produce the increase. God will prosper our faithfulness in His own good way and according to His perfect time and will.

Sowing imagery is also applied to Christian giving, and nowhere more strongly than in Paul's appeal to the believers in Corinth. After praising the Macedonian churches that had given "beyond their ability" to relieve the suffering in Jerusalem, Paul challenged the Corinthians to follow their example and show "the proof of [their] love" (2 Corinthians 8:2-8, 24). In the well-known "cheerful giver" passage that follows, Paul employs a theological cause-and-effect principle to drive home the point—those who "sow bountifully" can expect to "reap bountifully," and those who "sow sparingly" can't expect to reap much at all (2 Corinthians 9:6-7).

God's promise of a bountiful return for generous giving is not measured in material wealth. Rather, the rewards are spiritual, which is far greater and more valuable in terms of eternity (e.g., 2 Corinthians 9:8-14). Therefore, when we give with abundance, we are not really giving but sowing—godly sowing—for the cause of Christ. As the Institute for Creation Research continues to sow the truth of our Creator's message, we are thankful for those who sow bountifully with us through their gracious support to ensure our vital work continues. Keep up the good work!

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

Your [*Days of Praise*] devotional for March, April, and May arrived, and the **women [in this correctional facility] appreciate the selections for each day.** Most women here have a deep desire to walk with God….Through this ministry, we encourage them to stay the course, and you are instrumental in the process. The women pray for you and your wonderful organization in their prayers every Friday.

— M. A. C., chaplain

Editor's note: Due to varying restrictions, we cannot offer inmates individual subscriptions to *Days of Praise* or *Acts & Facts*. However, subscriptions can come through a chaplain.

Thank you for writing on this controversy. I recently was shocked by a friend's comment when I was talking to him about the validity of Genesis when he said, **"You do know the earth is flat?"** After I said, "You have got to be kidding me," I started trying to convince him otherwise. You already know how hard it is to bring sight to the "willingly ignorant."

He asked me to provide him with one proof that NASA did not fix! God led me to have him find two things; however, he wanted to dig them up. Find a picture taken of the full moon in the Northern Hemisphere and one taken in the Southern Hemisphere. They are upside down to each other. Explain that from a flat earth. Only God's grace and time will tell if it made an impact.

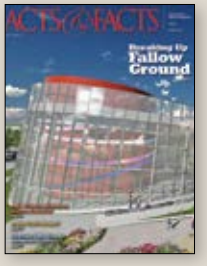
— F. W.

I thoroughly enjoy *Acts & Facts*. I've been reading it in its entirety for years now (even the material that's way above my head). **I found the article "DNA Science Disproves Human Evolution" most satisfying** as I've felt that way for years. So much so I use an acronym I hope catches on: DDD for DNA Disproves Darwin. Thanks so much for the important work you do.

— G. S.

Gentlemen, recently received your July 2017 edition of *Acts & Facts.* As almost always it was filled with intelligent, informative, and interesting articles as expected. But the article "Dinosaurs and Dragon Legends" was without a doubt **the finest dragon/dinosaur/behemoth explanation I have read in years,** if not ever. Ever since reading Job 40 back in 1966, the dinosaur/behemoth topic has been of special interest to me. Mr. [Brian] Thomas' clear and logical explanation of the situation was well presented. His discussion of dragon lore and language was informative and enlightening. Your presentation of this topic as always was clear, logical, convincing, and both scripturally and culturally based. Congratulations on an excellent article well presented!

— J. W.



Editor, You don't really think that ¾ to 1-page articles **debunk all the science** behind the issues you intend to address in the above-referenced issue, do you?

— T. L. B.

Editor's note: Each one-page *Acts & Facts* article usually focuses on a single topic boiled down into a layman-friendly form. Virtually every article is a brief look into a substantial issue that either debunks hypotheses like evolution or the Big Bang, or demonstrates that the Bible's narrative is a highly accurate description of history and reality. We challenge you to thoroughly study the vast material associated with these vital issues before jumping to conclusions.

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

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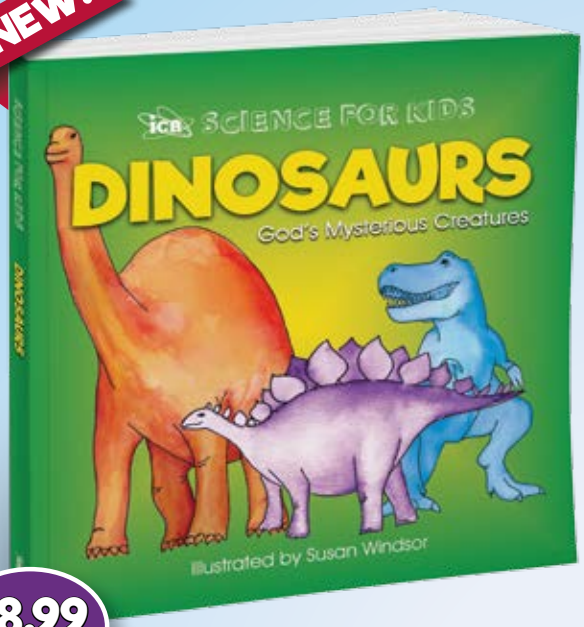

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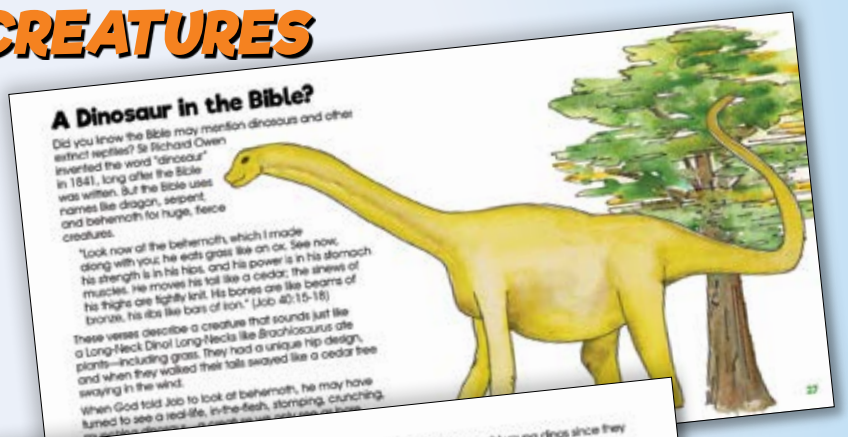

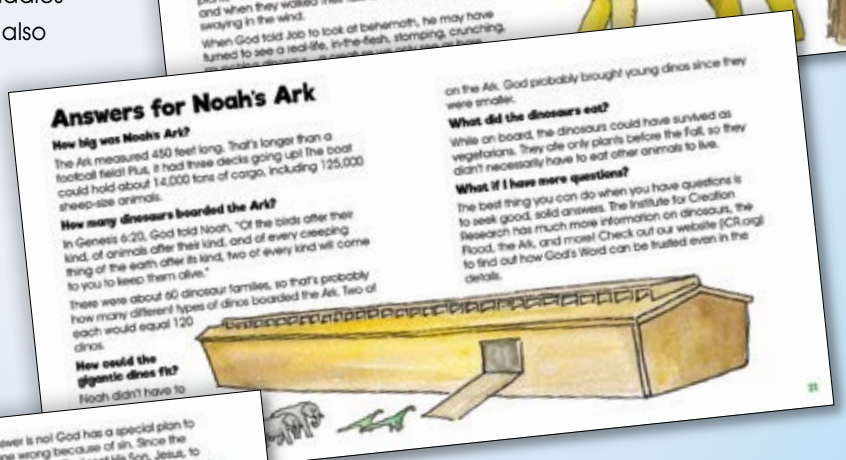

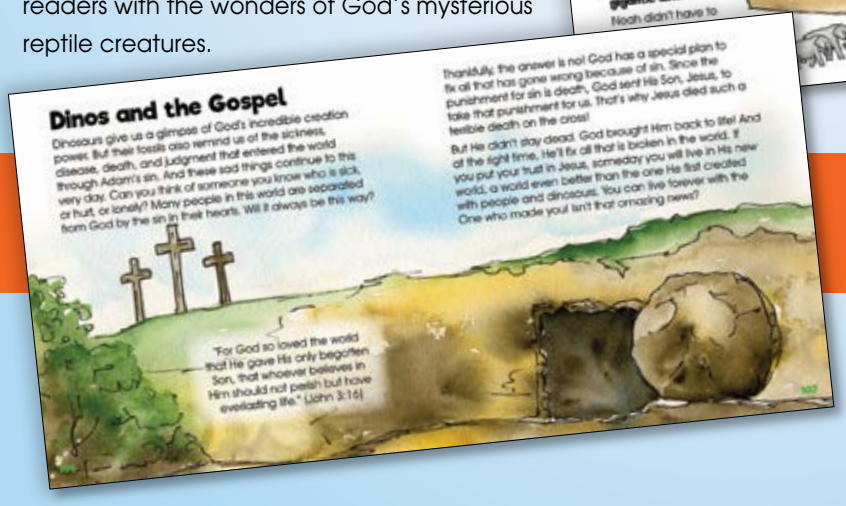

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