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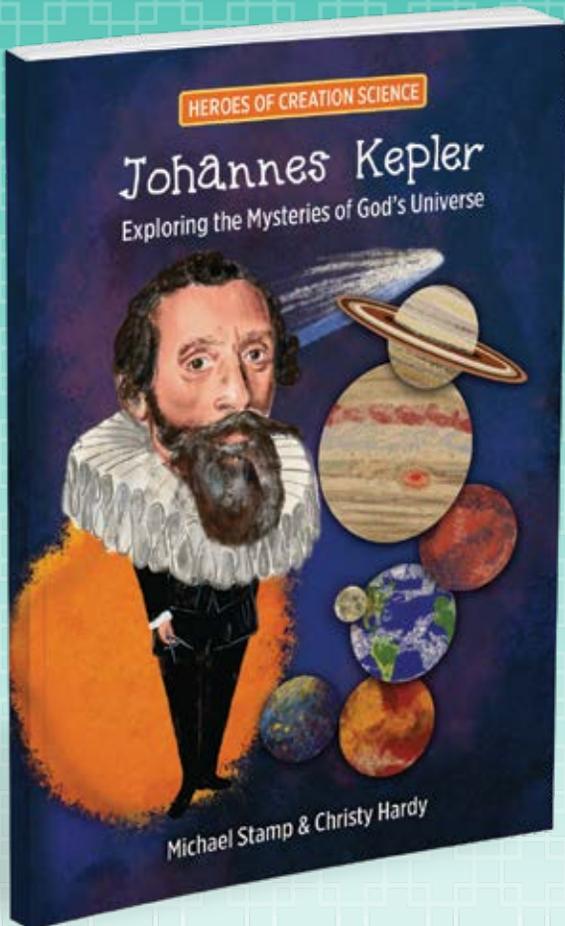
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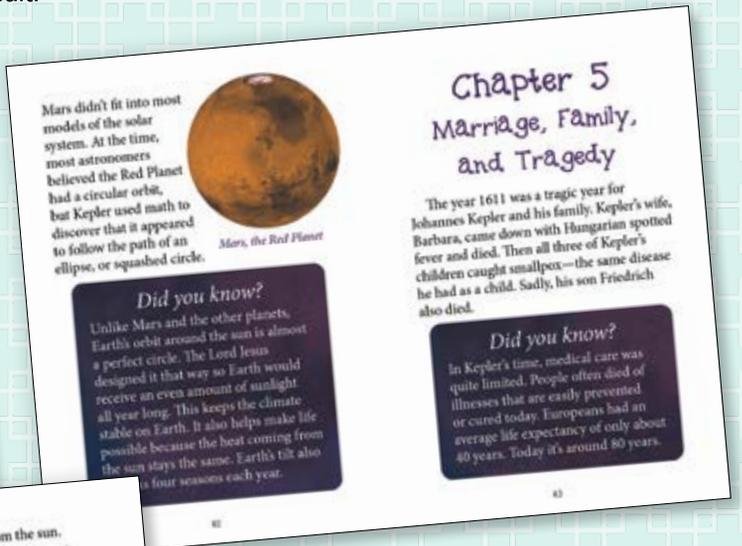
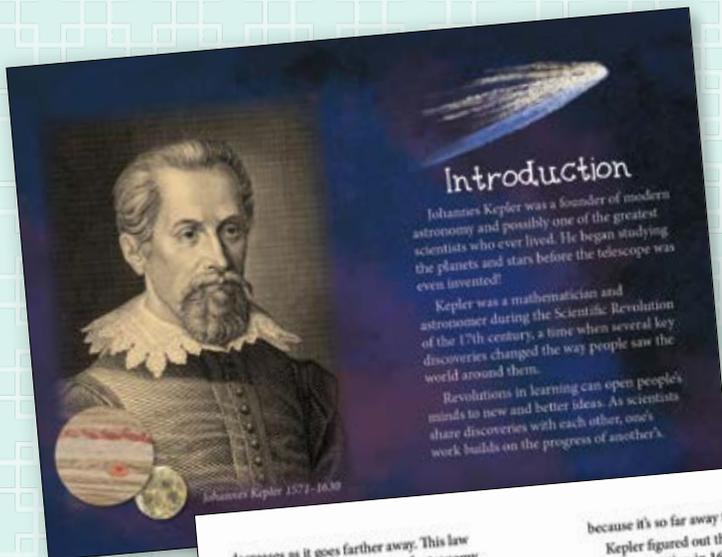
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**DESIGNER**  
Dennis Davidson

[Jesus Christ] is the image of the invisible  
God, the firstborn over all creation. For by  
Him all things were created that are in  
heaven and that are on earth, visible and  
invisible, whether thrones or dominions  
or principalities or powers. All things were  
created through Him and for Him. And He  
is before all things, and in Him all things  
consist. And He is the head of the body, the  
church, who is the beginning, the firstborn  
from the dead, that in all things He may  
have the preeminence. For it pleased the  
Father that in Him all the fullness should  
dwell, and by Him to reconcile all things to  
Himself, by Him, whether things on earth  
or things in heaven, having made peace  
through the blood of His cross.  
(Colossians 1:15-20)

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Front cover: *Tyrannosaurus rex*  
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# Natural Selection's Death-Driven Worldview

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

Millions of Christians are rejoicing over the United States Supreme Court's decision to overturn the 1973 *Roe v. Wade* ruling that legalized abortion. Countless Christians have prayerfully labored for decades to protect pre-born children. With the answer to these prayers in the recent *Dobbs* decision, more children may now continue life—and a shameful blight on our nation has been diminished.

Why are so many Christians strongly pro-life? The Bible teaches that in the original creation, God bestowed something only on humans—His image. “So God created man in His own image; in the image of God He created him; male and female He created them” (Genesis 1:27). Unlike animals, humans can “know” and “understand” their Creator (Jeremiah 9:24). And *specifically* because humans bear God's image, they're not to be murdered, abused, misused, or even cursed (Genesis 9:6;

James 3:8-11).

It's been both troubling and revealing to witness the response of many who detest the *Dobbs* decision. Numerous people now vocalize even *less* regard for the lives of pre-born children than before. It's palpably obvious that the same spirit that animated Pharaoh and King Herod to have no regard for the lives of children has continued unabated (Exodus 1:15-18; Matthew 2:16). Many of those who touted the term pro-choice and hailed *Roe* as a hallmark of liberation have now been shown to actually be pro-*abortion*.

Abortion isn't the only expression of the current disregard for human life. Other plagues of society include infanticide, mass shootings, euthanasia, and a resurgence of eugenics. Their growing frequency reveals the population's increasing desensitization to death and the woeful ease with which perpetrators kill. How did whole sectors of Western civilization that were once constrained by Christian teachings dignifying human life ever get to this point?

I used to put the whole blame on a worldview called evolutionary humanism. By not acknowledging the Creator, man puts himself in the place of God and presumes to usurp the rights of the Almighty regarding life and death. When people are taught they're no more than evolved animals, we shouldn't be shocked when they behave like animals. Human life is therefore increasingly devalued.

But this view fails to explain the cause of societies' change in thinking from firmly believing humans have a God-given right

to life to an ever-increasing ease with killing and a corresponding numbness to death. To understand that problem, creationists must be mindful of what Darwin and his disciples have introduced into Western cultures. We must probe deeper into the worldview of Darwinian selectionism to see how it pioneered a way for people to see death as a good thing.

What links selectionism to a culture easy with death?

## Selectionism Is a Death-Driven Worldview

What is the difference between “a sick child died” and “a sick child was weeded out”? They're not equivalent in any way. The first is a statement of fact that should elicit a feeling of sorrow. The second highlights the pivotal role death plays in Darwin's concept of natural selection. Specifically, it acts as the mechanism that adapts populations of organisms to their environments. It also highlights the underlying mystical choice-



### article highlights

- Humans are created in God's image, so human life is precious.
- Darwin's natural selection embraces death as a good thing, which feeds our society's increasing desensitization to death.
- The words of both evolutionary thinkers and mass killers expose the death-centered nature of selectionism.
- Creationists must counter selectionism's death-driven worldview and point others to our Creator Jesus Christ, who gives us life.



making agency attributed to nature that's inherent to selectionism.

Darwinian evolution has an upward trajectory toward improvement that's imparted by deadly intraspecies competition. For Darwin, death was the discriminator between improved and less improved organisms. He incorporated British population theorist Thomas Malthus' assertion that creatures compete for scarce resources just to survive.

This is the doctrine of Malthus, applied to the whole animal and vegetable kingdoms. As many more individuals of each species are born than can possibly survive; and as, consequently, there is a frequently recurring struggle for existence...we shall then see how Natural Selection almost inevitably causes much Extinction of the less improved forms of life...I have called this principle, by which each slight variation, if useful, is preserved, by the term Natural Selection, in order to mark its relation to man's power of selection. But the expression often used by Mr. Herbert Spencer of the *Survival of the Fittest* is more accurate, and is sometimes equally convenient.<sup>1</sup>

Harvard's renowned evolutionary theorist Ernst Mayr conceived of natural selection as "the process by which in every generation individuals of lower fitness are removed from the population."<sup>2</sup> And two evolutionary developmental biologists said



simply, "Death is selective."<sup>3</sup>

Stephen J. Gould, another evolutionary theorist from Harvard, didn't shy away from the centrality of death within selectionism. Extolling the selectionist worldview's "power," he wrote:

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 [great slaughter] of death as preconditions for limited increments of change. Natural selection is a theory of "trial and error externalism"—organisms propose via their storehouse of variation, and environments dispose of nearly all.<sup>4</sup>

A subsequent article finds Gould chiding the hypocrisy of those believing they can embrace a benevolent view of God and pro-life positions while simultaneously commending the virtues of selection.

The radicalism of natural selection lies in its power to dethrone some of the deepest and most traditional comforts of Western thought, particularly the notion that nature's benevolence, order, and good design, with humans at a sensible summit of power and excellence, prove the existence of an omnipotent and benevolent creator who loves us most of all...*To these beliefs Darwinian natural selection presents the most contrary position imaginable.* Only one causal force produces evolutionary change in Darwin's world: the unconscious struggle among individual organisms to promote their own personal reproductive success—nothing else, and nothing higher (no force, for example, works explicitly for the good of species or the harmony of ecosystems).<sup>5</sup>

One man who fully understood the weight of Darwinian thinking was the co-founder of Apple Computer, Steve Jobs. Facing a life-threatening disease, he expounded on the Darwinian meaning of death in his 2005 commencement address at Stanford University, saying, "Death is very likely the single best invention of Life. It is Life's change agent. It clears out the old to make way for the new."<sup>6</sup>

## Natural Selection Applied to Populations

Darwin was fully in accord with the vision that "Natural Selection almost inevitably causes much Extinction of the less improved forms of life."<sup>1</sup> That influence has extended to the most prominent mass-murdering dictators.<sup>7</sup> Today, increasing numbers of commonplace citizens are adopting Darwin's "survival of the fittest" (i.e., selectionism) for their worldview—with the same deadly consequences.

Most of us are horrified by school and mass shootings, and they seem to be increasing in frequency. The Intelligent Design advocates at the Discovery Institute have done the best job of tracing—and documenting—the role of natural selection in motivating many of the people bent on mass killing. David Klinghoffer's thorough report on the 1999 massacre at Columbine High School in Colorado revealed:

When one of the assailants, Eric Harris, was autopsied, the medical examiner found that under his black trench coat the boy had on a white t-shirt emblazoned with a peculiar slogan. The slogan was "Natural Selection." It was later reported but little commented upon that, on his website, Harris had written, among other paeans to the Darwinian mechanism, "Natural SELECTION!!!!!! [Expletive] it's the best thing that ever happened to the earth. Getting rid of all the stupid and weak organisms...but it's all natural!!! YES!"<sup>8</sup>

Klinghoffer then described the mass murder of seven students and a school headmistress on November 7, 2007, by Finnish high school student Pekka Eric Auvinen, who also committed suicide.

On a website, it was later learned, [Auvinen] described himself as an "anti-social social-Darwinist," declaring that "I am prepared to fight and die for my cause. I, as a natural selector, will eliminate all who I see unfit, disgraces of human race and failures of natural selection."<sup>8</sup>

More recently a white supremacist,

Payton Gendron, murdered 10 people in Buffalo, New York. John West, also with Discovery Institute, reported:

In his purported manifesto, [Gendron] asserts that blacks “are a different subspecies of human.” Why? Because “Whites and Blacks are separated by tens of thousands of years of evolution, and our genetic material is obviously very different.” Elsewhere he suggests that Europeans and Asians are more recently evolved than blacks.<sup>9</sup>

West noted that Darwinism also played a motivating role in the thinking of the Holocaust Memorial Museum shooter in 2009 and the Gilroy Garlic Festival shooter in 2019.<sup>9</sup>

The selectionist worldview not only poisons minds but also breeds a callous attitude toward death—including toward the hundreds of thousands of people who have died from COVID-19. One believer in natural selection used the outbreak to expound on the virtues of the selectionist worldview. Writing anonymously, this person sees value in “war, famine and natural disasters” reducing human population, and says, “Coronavirus has swept through continent to continent, leaving in its wake only chaos and panic....But I argue that we should welcome the illness as Earth’s natural selection.”<sup>10</sup> He adds:

It could justifiably be argued that the coronavirus outbreak is just another of the Earth’s ways of stabilising the population. It is the Darwinian theory of natural selection playing out....Perhaps influenza and the black death were simply methods of enacting the process, making sure the human race evolves into their most able selves.<sup>10</sup>

For this anonymous author, “Darwin’s natural selection and survival of the fittest is the natural process of pruning out the weak and ensuring the fittest survive and reproduce.”<sup>10</sup> So, death has been reduced to merely “pruning.”

Finally, we see advocates of abortion becoming increasingly cavalier about the death of human life. They’ve covered all the bases. Some simply deny that a pre-born

baby is human. Perhaps the most outspoken popularizer of Darwinian selectionism is Cambridge University professor and atheist Richard Dawkins. In response to some powerful pro-life messaging, he tweeted, “With respect to those meanings of ‘human’ that are relevant to the morality of abortion, any fetus is less human than an adult pig.”<sup>11</sup>

An even more jaded approach is expressed in the social commentator Mary Elizabeth Williams’ *Salon* article titled “So what if abortion ends life? I believe that life starts at conception. And it’s never stopped me from being pro-choice.”<sup>12</sup> She says:

Here’s the complicated reality in which we live: All life is not equal. That’s a difficult thing for liberals like me to talk about, lest we wind up looking like death-panel-loving, kill-your-grandma-and-your-precious-baby storm troopers. Yet a fetus can be a human life without having the same rights as the woman in whose body it resides. She’s the boss. Her life and what is right for her circumstances and her health should automatically trump the rights of the non-autonomous entity inside of her. Always.<sup>12</sup>

Gould identified a key element of the selectionist worldview as self-promotion, and Mary Elizabeth Williams’ views are the contemporary embodiment of it. People don’t like to think of themselves as self-centered because being self-centered just sounds so, well...selfish.



## Conclusion

Even though *Roe v. Wade* has been overturned, we still live in a culture that’s easy with death since it’s permeated with Darwin’s deadly competition and survival-of-the-fittest thinking. In order to fix a problem, we must make the correct diagnosis. The powerful evidence straight from the mouths of Darwin, his followers, and his current advocates cannot be ignored.

Believing that death brings good things is the root cause. But ICR affirms that death is a curse resulting from Adam’s sin and is an enemy (Romans 8:18-23; 1 Corinthians 15:26). We’ll do all in our power to counter the selectionist worldview that opposes and subverts God’s truth. And we’ll do all we can to point people to our Creator, Lord, and Savior Jesus Christ, who has given us life. 🙏

### References

1. Darwin, C. 2009. *The Origin of Species: 150th Anniversary Edition*. New York: Penguin Publishing Group, 29, 75.
2. Mayr, E. 2001. *What Evolution Is*. New York: Basic Books, 288.
3. Gilbert, S. F. and D. Epel. 2009. *Ecological Developmental Biology: Integrating Epigenetics, Medicine, and Evolution*. Sunderland, MA: Sinauer Associates, 292.
4. Gould, S. J. 1994. The Power of This View of Life. *Natural History*. 103 (6): 6-8.
5. Gould, S. J. 1997. Darwinian Fundamentalism. *The New York Review*. (44) 10 (June 12, 1997 issue). Emphasis added.
6. ‘You’ve got to find what you love,’ Jobs says. Stanford University News. Posted on news.stanford.edu June 14, 2005, accessed November 5, 2019.
7. Weikart, R. 2022. *Darwinian Racism: How Darwinism Influenced Hitler, Nazism, and White Nationalism*. Seattle, WA: Discovery Institute Press.
8. Klinghoffer, D. Slouching Toward Columbine: Darwin’s Tree of Death. Discovery Institute. Posted on discovery.org April 20, 2009, accessed June 29, 2022.
9. West, J. G. How Science Fueled the White Supremacist Mass Murderer in Buffalo, NY. *Evolution News & Science Today*. Posted on evolutionnews.org May 16, 2022, accessed June 29, 2022.
10. Coronavirus Is Just Natural Selection. The Complete Thinker. Published on thecompletethinker.wordpress.com March 16, 2020, accessed April 8, 2020.
11. Freeman, D. and E. Sankar-Gorton. 15 Of Richard Dawkins’ Most Controversial Tweets: His posts about Ahmed Mohamed are just the latest in a long series of provocative online comments. HuffPost. Posted on huffpost.com September 22, 2015, accessed June 29, 2022.
12. Williams, M. E. So what if abortion ends life? I believe that life starts at conception. And it’s never stopped me from being pro-choice. *Salon*. Posted on salon.com January 23, 2013, accessed June 12, 2022.

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



# ICR Ice Sheet Research: Status Update

## article highlights

- Creation scientists think the seafloor spreading and volcanism of the Genesis Flood led to hot oceans and placed sunlight-reflecting particles in the atmosphere, triggering the Ice Age.
- ICR's Ice Age model describes how thick ice sheets could grow quickly due to greater snowfall and cooler summers. It also counters the old-age assumptions of uniformitarian models.
- Dr. Jake Hebert has used Dr. Larry Vardiman's mathematical model to calculate the thickness of annual layers in an ice sheet and has also improved on Dr. Vardiman's ice sheet model.

With ICR's new focus on biology, my current ice sheet research is wrapping up. So, now is a good time to summarize the results so far.

Creation scientists argue that there was only one Ice Age and that it was triggered by the Genesis Flood. Heat from rapid seafloor spreading during the Flood greatly warmed the world's oceans. This significantly increased evaporation, which resulted in heavy snowfall on mountains and at high latitudes. Explosive, sulfur-rich post-Flood volcanism placed sunlight-reflecting aerosols in the stratosphere, causing colder summers. This prevented snow and ice from melting, allowing quick growth of thick ice sheets.

This theory solves mysteries that still puzzle conventional scientists. It explains how millions of woolly mammoths could thrive in Ice Age Siberia and what caused their extinction.<sup>1</sup> Creationists have answered the claims of uniformitarians and Bible skeptics that deep ice cores demand an old age for the Earth.<sup>2</sup> Heavy Ice Age snowfall, predicted by our Flood/Ice Age model, would allow thick ice sheets to form in just hundreds of years.

Uniformitarian scientists use theoretical models to assign ages to ice at various depths. However, these models completely ignore the time needed for a thick ice sheet to form, treating the ice sheet's height as constant. This makes the mathematics much easier, but ignoring the time for the ice sheet to form is a source of error in the model. Uniformitarians feel justified in ignoring this time because it's very short compared to the millions of years they believe the ice sheets have been in existence. So, these models implicitly assume long ages.

In the early 1990s, ICR scientist Dr.

Larry Vardiman developed a basic mathematical model for the rapid formation of a thick ice sheet.<sup>3</sup> It allowed the ice sheet height to change over time and assumed heavy Ice Age ice accumulation that gradually tapered off in the centuries after the Flood. I recently wrote a computer code to calculate the thicknesses of annual layers in Vardiman's model.<sup>4</sup>

Since the 1970s, there've been ice sheet models that don't assume the thickness of the ice sheet to be constant and that allow for varying ice accumulation rates. Creationists could use these to more realistically model the rapid growth of thick post-Flood ice sheets. I recently combined such a model with Vardiman's post-Flood ice accumula-

tion model to simulate the rapid growth of a thick post-Flood ice dome.<sup>5</sup>

It's also possible to use this model to simulate the rapid growth of a long ice ridge (Figure 1). I've done so and submitted another paper for publication.

This computer code can conceivably be modified to take uneven bedrock terrain into account, as well as up-and-down movements of the underlying bedrock caused by the weight of the overlying ice. A limitation of this model is that it treats every part of the ice as having the same temperature, which isn't true in real ice sheets. Doing so would require more sophisticated computer models, which do exist.<sup>5</sup>

For readers who would like to read my original technical papers, all but the most recent are freely accessible under Publications/Technical Papers/Past Articles on the ICR.org main menu. We're also in the process of constructing a new exhibit at the ICR Discovery Center that will highlight some of these discoveries. We hope you come pay us a visit!<sup>6</sup>

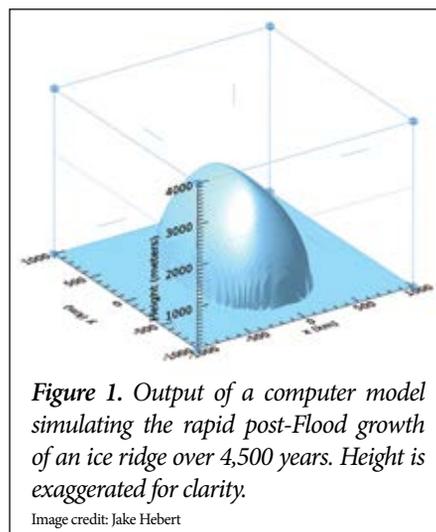


Figure 1. Output of a computer model simulating the rapid post-Flood growth of an ice ridge over 4,500 years. Height is exaggerated for clarity.

Image credit: Jake Hebert

## References

1. Hebert, J. 2018. The Bible Best Explains the Ice Age. *Acts & Facts*. 47 (11): 10-13.
2. Hebert, J. 2019. Earth's Thick Ice Sheets Are Young. *Acts & Facts*. 48 (2): 11-14.
3. Vardiman, L. 1994. An Analytic Young-Earth Flow Model of Ice Sheet Formation During the "Ice Age." In *Proceedings of the Third International Conference on Creationism*. R. Walsh, ed. Pittsburgh, PA: Creation Science Fellowship, 561-568.
4. Hebert, J. 2021. Using Vardiman's Young-Earth Ice Sheet Model and a Simple Computer Code to Estimate Annual Layer Thicknesses. *Creation Research Society Quarterly*. 57 (3): 175-185.
5. Hebert, J. 2022. Towards a More Realistic Young-Earth Ice Sheet Model: A Shallow, Isothermal Ice Dome with a Frozen Base. *Creation Research Society Quarterly*. 58 (4): 262-272.
6. Go to [ICRdiscoverycenter.org](http://ICRdiscoverycenter.org) for information on visiting the ICR Discovery Center in Dallas, Texas.

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

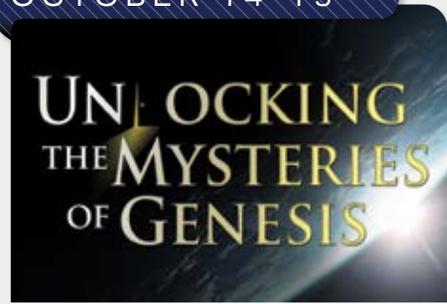


SEPTEMBER 3



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OCTOBER 14-15



Spokane, WA  
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SEPTEMBER 9 & OCTOBER 7

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**Day 4 Astronomy Club Meeting**  
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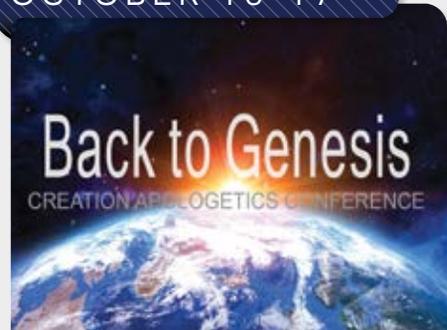
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ICR Discovery Center  
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Tom Meyer  
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OCTOBER 13

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OCTOBER 2

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OCTOBER 12

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Candlelight Christian Fellowship  
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OCTOBER 17

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OCTOBER 23-30

**Scotland Speaking Tour**  
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## recent events



*ICR Event Coordinator Cory Edwards bravely allows Bob Jones University's George and Darlene Matzko to set his hand ablaze during a science demonstration at ICR Discovery Center's recent Homeschool Days event.*

Image credit: Joel Kautt



Image credit: Brian Thomas



*Dr. Brian Thomas discusses Grand Canyon's formation with ICR's June 2022 Grand Canyon Adventure tour group before their descent into the canyon.*

Image credit: Dave Napier



*Dr. Tim Clarey gives a geology lecture to the June 2022 rafting group.*

Image credit: Kevin Turley

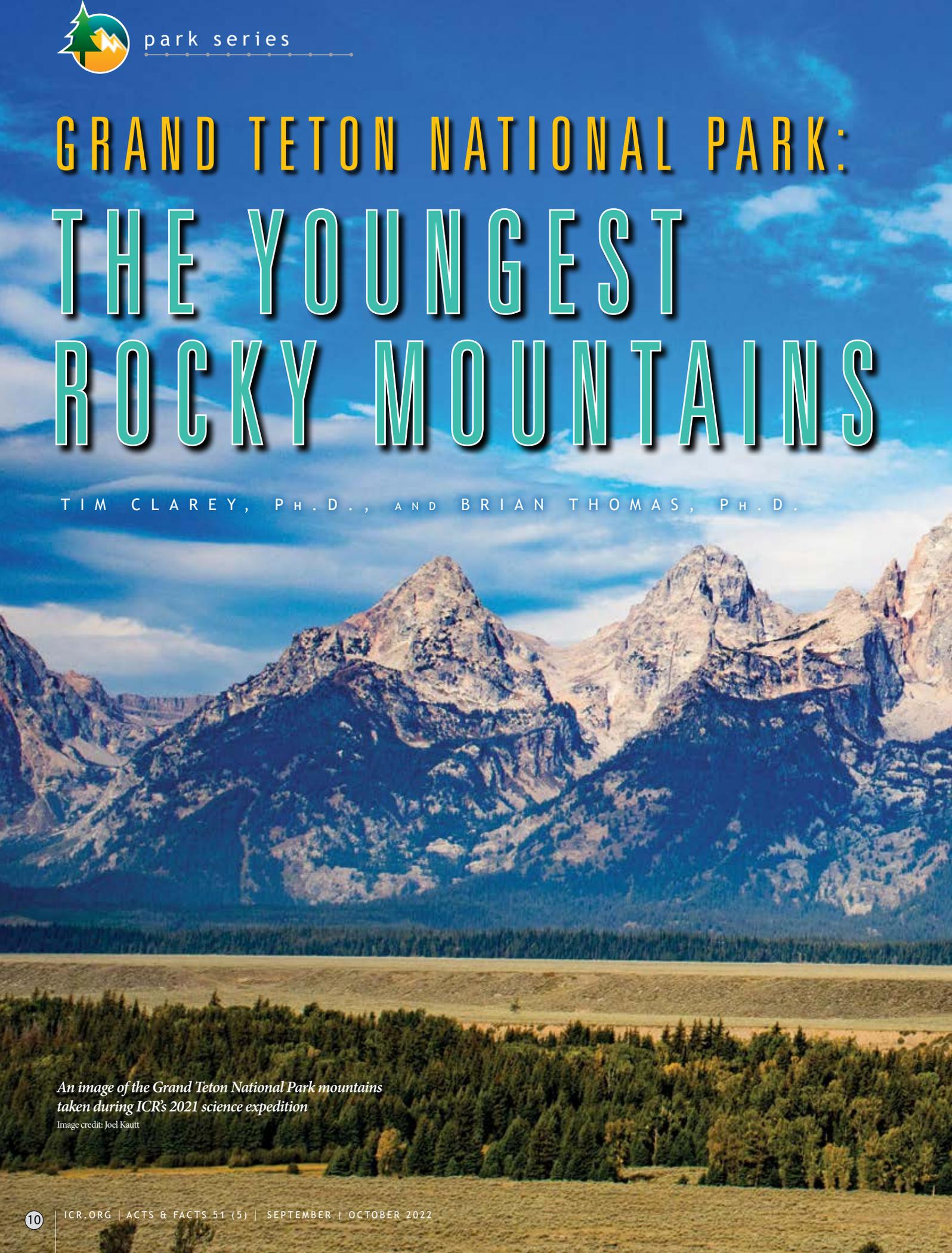


*Bon voyage! The Grand Canyon Adventure tour sets off on their rafting voyage.*

Image credit: Kevin Turley

# GRAND TETON NATIONAL PARK: THE YOUNGEST ROCKY MOUNTAINS

TIM CLAREY, P.H.D., AND BRIAN THOMAS, P.H.D.



*An image of the Grand Teton National Park mountains  
taken during ICR's 2021 science expedition*

Image credit: Joel Kautt

Just south of Yellowstone National Park lies one of the most picturesque mountain ranges in the western United States—the Teton Range, established as a national park in 1929.<sup>1</sup> When viewed from the east, the Tetons seem to shoot straight out of the plains. Their stark, jagged peaks rise to heights above 13,000 feet, while the valley floor with its sage and wildlife lies at only 6,000 to 7,000 feet.

Grand Teton National Park's wide variety of animals, including foxes, showcase out-of-this-world innate engineering. Plus, the park's rocks carry clues to a catastrophic start and an icy finish. Let's see where those clues lead.

### A Fox Superpower

While we were hiking around Jenny Lake at the foot of the Tetons during ICR's 2021 science expedition, a bold fox crisscrossed our trail. During winter, these foxes hunt prey they

can't even see. Small mammals crawl beneath several feet of snow, yet foxes find them. How do they know where to look?

Hearing helps, of course. The fox pauses, tilts its head to pinpoint the prey, then takes a bounding leap and plunges, paws and nose first, straight down into the snow. It then emerges with a meal in its mouth. Researchers noticed that a fox finds food an astounding 74% of the time when it attacks “about 20° clockwise of magnetic north.”<sup>2</sup>



*Red fox*  
Image credit: Joel Kautt

### article highlights

- The foxes in Grand Teton National Park use a highly engineered combination of acute hearing and magnetic sensors to hunt prey beneath snow.
- Instead of demonstrating a slow evolution of traits, foxes show rapid self-adjustment to changed circumstances.
- The Tetons are the youngest of the Rocky Mountains, and the steep peaks display little erosion.
- The Flood and the Ice Age that it caused better explain the origin of every geological feature of this stunning landscape.

Foxes facing east or west returned a dismal 18% or less hunting success rate. So, the researchers tested for evidence that foxes have magnetic sensors. The study authors described how the foxes might mentally merge sight, sound, and magnetism.

A fox moving in a fixed direction when approaching its prey (i.e., moving to the north), could approach until a specific component of the visual pattern generated by the magnetic compass is superimposed on the source of the sound from the prey, so that it could initiate an attack from a fixed distance.<sup>2</sup>

Where could a well-integrated and effective biological system such as this come from? The researchers asserted that it had all somehow evolved. That's like saying it happened by magic. What steps supposedly occurred? What observations even hint that environments, foxes, or any natural condition or combination of natural factors could ever invent something as intricate as a magnetic sensor, let alone combine magnetic, visual, and sound information into a single accurate picture?

Perceptive problem-solvers, not natural processes, craft sensitive instruments like this. These foxes have a superpower. They must have therefore come from a super-powerful Maker.



ICR's 2021 science expedition team at work

Image credit: Joel Kautt

### Making Foxes Friendly...Fast

How many generations do you think it would take to turn the snarl-and-snap behavior of wild foxes into the friendly approach of domestic dogs? Evolutionary ideas of creature changes demand long periods of time. Charles Darwin wrote:

For the process of modification and the production of a number of allied forms must be slow and gradual—one species giving rise first to two or three varieties, these being slowly converted into species, which in their turn produce by equally slow steps other species, and so on.<sup>3</sup>

Darwin devotees point to random mutations as the source of changes in DNA that lead to changes in body and behavior. These happen slowly also, building up over many generations. Evolution

trains us to think in terms of long ages.

Researchers tested this question by breeding 130 wild-caught foxes for what they called “tameability.” They crossed the friendliest fox parents over many generations. Imagine their surprise when “the aggressive and fear avoidance responses were eliminated from the experimental population in just two-three generations of selection.” At the sixth generation, fox pups eagerly sought human contact, complete with wagging tails, “whining, whimpering, and licking in a dog-like manner.”<sup>4</sup>

So much for the necessity of ages of mutations. Rapid domestication fits supernatural creation. Why not praise the Lord Jesus since all things, including foxes, “were created through Him and for Him” (Colossians 1:16)?

### Catastrophic Beginnings

The rocks that make up the Tetons, the youngest of the Rocky Mountains, are exposed granite. This rock type probably formed from melt before Noah's Flood, but the sedimentary units that surround it came from the Flood. Catastrophic deposition of about 4,000 feet of early Flood sediments (Paleozoic), 15,000 feet of middle- and high-water Flood rocks (Mesozoic), and up to six miles of receding Flood rocks (Cenozoic) fill nearby areas such as Jackson Hole.<sup>5</sup>

The rock layers that lie deep beneath the ground at Jackson Hole show the same patterns of rocks as similar layers on every continent.<sup>6</sup> Marine-dominated sediments began accumulating as tsunami-driven floodwaters progressed higher and higher from Day 1 to Day 150 of the Flood year. As the waters began to recede after Day 150, they deposited thick layers (the Tejas Megasequence).<sup>7</sup> These include volcanic rocks from Yellowstone's eruptions, and thick sands and shales eroded off the rising Rocky Mountains.

The Tetons form a fairly straight, steep mountain front because of a massive, fast-growing fault called the Teton fault.<sup>8</sup> Most of the Rocky Mountains emerged early in the receding Flood as thickened continental crust rose rapidly.<sup>9</sup> But the Teton fault occurred later when the Flood year was nearly over. Like a mammoth trap door, Jackson Hole fell over 15,000 feet, while the Tetons rose over 13,000 feet in a matter of days or weeks. These mountains popped up nearly overnight.

The same rocks found on the top of Teton's Mount Moran are found 30,000 feet *beneath* Jackson Hole. What kind of extreme forces accomplished all this geological work? Nothing that fast and violent happens in today's slow processes. Nor do today's processes elevate mountains.

These clues point to unimaginable catastrophe. When did this catastrophe happen? Millions of years should have rounded the Tetons' peaks by now, but they remain tall and sharp. Noah's recent Flood fits all these features.



## U-Shaped Valleys and Dammed Lakes

Broad U-shaped valleys separate the individual Teton Range mountains. How and when did these valleys form? Just a few hundred years after the Flood, the Ice Age was at full strength.<sup>10</sup> Ice collected into alpine glaciers on the newly uplifted Tetons. The snake-shaped ice sheets carved out swaths of rock as they slid down the slopes.

Some glaciers deposited piles of rocks, sand, and clay across Jackson Hole, damming the Snake River. Two of these earthen dams formed today's Jackson Lake and Jenny Lake at the foot of the Tetons. The Flood and the Ice Age it caused explain the origin of every main feature of this stunning landscape.

## Conclusion

We hold our Bibles in hand when we think about this awe-inspiring park. The Genesis Flood supplied the power to make mountain ranges. Post-Flood conditions led to enough ice to carve the ridges and leave behind the sharp peaks we see today. Finally, creation offers the most sensible answer to the origin of well-integrated and engineered biological systems like acute hearing and magnetic sensors in foxes.<sup>11</sup>

How wonderful to discover such tight matches between science and Scripture in such a beautiful place. 🙏

## References

1. The area of Grand Teton National Park was first surveyed by geologist James Stevenson in 1872 as part of the Ferdinand Hayden expedition to Yellowstone. See Clarey, T. and B. Thomas. 2022. Yellowstone National Park, Part 1: A Flood Supervolcano. *Acts & Facts*. 51 (3): 10-13.
2. Červený, J. et al. 2011. Directional preference may enhance hunting accuracy in foraging foxes. *Biology Letters*. 7 (3): 355-357. See also Krulwich, R. 'You're Invisible, But I'll Eat You Anyway!' Secrets Of Snow-Diving Foxes. NPR. Posted on npr.org January 3, 2014, accessed January 14, 2014.
3. Darwin, C. 1859. *On the Origin of Species*, 1st ed. Project Gutenberg eBook no. 1228.
4. Trut, L., I. Oskina, and A. Kharlamova. 2009. Animal evolution during domestication: the domesticated fox as a model. *Bioessays*. 31 (3): 349-360.
5. Hacker, D. and D. Foster. 2018. Grand Teton National Park. In *The Geology of National Parks*, 7th ed. D. Hacker, D. Foster, and A. G. Harris, eds. Dubuque, IA: Kendall-Hunt.
6. Clarey, T. 2019. European Stratigraphy Supports a Global Flood. *Acts & Facts*. 48 (12): 10-12.
7. Most of the Cenozoic system corresponds to the Tejas Megasequence, which refers to a vast stack of coarse-to-fine-grained layers deposited during the receding phase of the Flood. The Flood deposited six megasequences, and every continent carries some of each one.
8. The Teton fault is a large normal fault. These develop where one side of the fault drops and the other side moves upward, usually during an episode of crustal extension. The Teton fault has about 30,000 feet of offset.
9. Clarey, T. 2020. *Carved in Stone: Geological Evidence of the Worldwide Flood*. Dallas, TX: Institute for Creation Research, 114-151.
10. Hebert, J. 2018. The Bible Best Explains the Ice Age. *Acts & Facts*. 47 (11): 10-13.
11. Guliuzza, R. J. 2019. Engineered Adaptability: Continuous Environmental Tracking Wrap-Up. *Acts & Facts*. 48 (8): 17-19.

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# Evolutionary Dinosaur Myths

**DEBUNKED**

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

**D**inosaurs capture the public imagination like no other creatures. The extreme popularity of the *Jurassic Park* movie series over the past three decades highlights this interest. But the *Jurassic Park* movies not only pander to people's fascination with dinosaurs, they also reveal trends in evolutionary speculation that have no factual basis.<sup>1</sup>

## article highlights

- When it comes to dinosaurs, evolutionary myths abound, as showcased in the *Jurassic Park* movies.
- Instead of showing millions of years, soft tissues in dinosaur fossils reveal recent burial.
- Dinosaur skulls and respiratory systems match living reptiles, revealing they were cold-blooded, not warm-blooded.
- So-called feathered dinosaur fossils are either true birds or have decayed collagen fibers mistaken for protofeathers. And bird fossils appear *before* "bird-like" dinosaur fossils.
- Dinosaur brains are more similar to reptile brains than bird brains.
- Dinosaurs were created as dinosaurs, and their fossils resulted from the Genesis Flood around 4,500 years ago.

It's bad enough we're told dinosaurs lived millions of years ago, despite the fact numerous fossil bones contain intact soft tissues and proteins.<sup>2</sup> Now we're also bombarded with unsubstantiated claims that dinosaurs were warm-blooded, had feathers and brains like birds, and were able to live in cold, snowy environments. What is the truth regarding these dinosaur claims?

## **MYTH ONE:** Dinosaurs Evolved Millions of Years Ago

According to the evolutionary story, the first official dinosaurs didn't show up until the Upper Triassic system, conventionally dated at approximately 230 million years ago.<sup>3</sup> This scenario is built on the evolutionary idea that Earth's sedimentary rock layers were laid down slowly and progressively over a period of about 540 million years. However, ICR scientists have shown that the various megasequences (large rock-layer units) of water-borne strata (sandstone, limestone, and shale) that form the geologic column were deposited about 4,500 years ago in a year-long global catastrophe known as the Genesis Flood.<sup>4</sup>

The Flood was a progressive event that began with the burial of marine creatures in the first three megasequences. The deposition of these strata took place the first 40 days of the Flood and includes

the Cambrian through the Devonian system rocks. Next, the burial of land animals began as tsunami-like waves fueled by new tectonic plate formation pushed the water higher onto the edges of the low-land regions.<sup>5-10</sup>

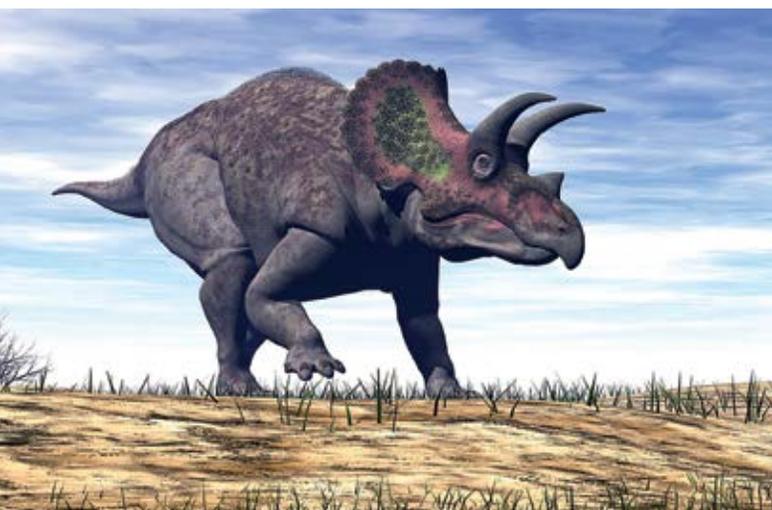
This is why we see fossils like tropical coastal vegetation, lizards, and dragonflies in the Absaroka Megasequence (Carboniferous system) as the floodwaters first slammed into the land.<sup>10</sup> As new ocean crust was formed, water was pushed higher, inundating the large lizards and other reptiles found in the overlying Permian system.<sup>11</sup> These reptiles were as large as many dinosaurs.<sup>5</sup> In the Triassic system layers higher in the Absaroka Megasequence, we find various dinosaurs. Different types keep showing up through the overlying Zuni Megasequence rocks, which include the Jurassic and Cretaceous system rock layers.<sup>3,12,13</sup>

Each fundamental dinosaur kind shows up in the rock record fully formed, with no evidence of evolutionary precursors. Not only is there no evidence of them having evolved from earlier dinosaurs, but their fossils often contain soft tissues and decay-sensitive biomolecules that are still intact and undegraded. Such biomaterials shouldn't exist in fossils that are supposedly millions of years old—but they do. These evidences point to a recent burial only thousands of years ago in the global Flood.<sup>2</sup>

The most famous case of this evolutionary enigma was the discovery of soft, stretchy tissue in the bones of a *T. rex*, along with visible blood vessels, blood cells inside the vessels, and bone cells with delicate finger-like projections (filopodia) called osteocytes.<sup>14,15</sup> Collagen proteins were also found in the *T. rex* bones. Similar findings have been discovered in other dinosaur fossils, including a hadrosaur and a *Triceratops*.<sup>16,17</sup> ICR research scientist Dr. Brian Thomas has compiled a publicly available list of 128 journal papers describing the presence of soft tissues, cells, and sensitive biomolecules in fossils.<sup>18</sup>

## MYTH TWO: Dinosaurs Were Warm-Blooded

In the most recent *Jurassic Park* movie, dinosaurs are portrayed as warm-blooded animals frolicking in cold, snowy environments.<sup>1</sup>



At one point in the film, a large feathered raptor-like theropod even dives into an ice-covered lake and swims around. This idea comes not from the facts of science but rather from the evolutionary myth that warm-blooded birds supposedly evolved from dinosaurs. Could dinosaurs have also been warm-blooded?

Today's reptiles are cold-blooded, which means their body temperature varies according to the temperature of their environment. This is why many reptiles live only in warm climates. Those who live in colder climates are only active during the warm season and hibernate in the winter. Since dinosaurs are extinct, how can we tell whether they were cold-blooded? As it turns out, a variety of tell-tale anatomical features preserved in their fossil remains give us the answer.

The first piece of evidence comes from the skulls of several dinosaurs, including tyrannosaurs, indicating that their nasal passages were too narrow to be warm-blooded.<sup>19</sup> This matches the anatomy of today's crocodiles. Most importantly, these dinosaurs lacked turbinates, complex respiratory structures that 99% of warm-blooded animals such as mammals and birds possess. Turbinates are specialized features inside the nose that heat and humidify air as it passes through the nasal cavity and into the lungs.<sup>19</sup> Because of the narrow nasal passages and lack of turbinates, reptiles couldn't have lived in cold environments because their body temperature would plummet. The *Jurassic Park* movie depiction of dinosaurs living in snow and cold is pure fiction.

Dinosaurs have other diagnostic features similar to living reptiles that indicate cold-bloodedness. In the abdominal cavity of a theropod dinosaur, researchers discovered fossilized soft tissue that revealed a lung ventilation system like that of crocodiles.<sup>19</sup> In another study, researchers analyzed the skulls of a *T. rex* dinosaur and living alligators.<sup>20</sup> Similar to a *T. rex*, alligators have two large holes on top of their skulls. In alligators, these holes are filled with specialized blood vessels and thermoregulatory tissues. Thermal imaging showed that the tissues in these holes metabolically fluctuated with external temperature.



The researchers deduced that this was part of a crosscurrent circulatory system associated with an internal thermostat. Until this study, scientists had erroneously assumed that these same spaces in dinosaur skulls contained jaw muscles. Given that dinosaur brains are similar in shape and structure to the brains of living reptiles like alligators, this new finding comes as no surprise.<sup>21</sup>



So, if dinosaurs were cold-blooded, how did they hunt down prey or avoid becoming prey? Answers to this question come from studying the Komodo dragon, a living large-bodied reptile.<sup>22</sup> Komodo dragons are able to rapidly ramp up their metabolism to near-mammalian levels for incredible bursts of speed and even extended arduous sprints. When researchers sequenced the Komodo dragon genome and compared its various metabolic genes known to be common among reptiles, they discovered genetic evidence associated with this metabolic ability.

Based on their findings, researchers proposed that many dinosaurs had low metabolic levels during resting or low-activity periods but could rapidly expand their lung ventilation levels for bursts of activity associated with running, attacking, and defensive maneuvers. This metabolic trait would have also allowed large dinosaurs to sustain life within a reasonable level of caloric intake. Indeed, research has shown that if large dinosaurs were warm-blooded, they wouldn't have been able to ingest enough food to maintain their metabolism.<sup>20,22</sup>

### MYTH THREE: Dinosaurs Had Feathers

The third evolutionary dinosaur myth is that a variety of dinosaurs had feathers or protofeathers, sometimes called dino fuzz. This claim is often used to undergird the paradigm that dinosaurs evolved into birds. But before we start putting feathers on dinosaurs, we have to ask how they could preen feathers.<sup>23</sup> Birds spend a lot of time fixing their feathers so they are functional, penguins included. Without a bird's beak, how could the dinosaurs maintain feathers? Instead, modern paleontologists are so convinced that birds are dinosaurs and vice versa that they don't even consider this issue.

The main problem with the dinosaur feather idea is that it has no strong support from research in the field. Alan Feduccia, an evolutionary bird paleontologist, has published several papers and books that show dinosaurs didn't have dino fuzz—or even feathers, for that matter.<sup>23,24</sup> He showed in a 2005 study that so-called dino fuzz was merely the fossil remains of thin collagen fibers left over from partially decomposed skin.<sup>23</sup> The research included analysis of decomposing collagen skin fibers in reptiles, sharks, and dolphins, and compari-

sons of these fibers with those of several dinosaurs.

Feduccia has also debunked most of the claimed feathered dinosaurs as merely boney-tailed birds with feathers, like *Archaeopteryx*, one of the earliest birds found in Flood rocks.<sup>19</sup> In fact, *Archaeopteryx* is found in Flood rocks well below the claimed bird-like dinosaurs.<sup>21</sup> How can the descendants appear in the rock record before their claimed ancestors?

Again, unchecked evolutionary speculation is the answer. Mainstream paleontologists claim there was an unknown ancestor in the rocks below both *Archaeopteryx* and the bird-like dinosaurs. They call these “ghost lineages.” The problem is that these ghost fossils don't exist and have never been found. It's all imagination! The rocks tell us there were true birds buried in Flood rocks before *Velociraptor* appeared. There was never any evolution from dinosaurs to birds, period.

### MYTH FOUR: Dinosaurs Had Bird Brains

Because of paleontologists' blind acceptance that dinosaurs are essentially birds, it's no surprise that dinosaurs are often portrayed as being exceptionally intelligent. The problem with this line of reasoning is that dinosaur brains were similar in shape to alligator or crocodile brains and about the size equivalent of scaled-up reptiles living today.<sup>21,23</sup> They didn't have the shape of bird brains or the relative brain volume.

Admittedly, *Velociraptor*-style theropods had bigger brains than most dinosaurs, but they weren't large enough to be a bird's. So, they didn't have the bird-like intelligence that *Jurassic Park* portrays.



## Conclusion

The scientific evidence strongly shows that all the different kinds of dinosaurs appeared suddenly in the rock record without any previous ancestors. Their fossils, which still contain soft tissue and biomolecules, speak directly to their being buried in the global Flood about 4,500 years ago.

Also, dinosaur anatomy and morphology compare favorably with that of living reptiles, showing they were most likely cold-blooded. And the lack of evidence for feathers, combined with reptile-shaped brains, demolishes the claims of bird evolution. This negation of dinosaur-bird evolution is further bolstered by the fact that birds appear in the rock record before raptor-like dinosaurs, the supposed precursors to birds.

Despite the fanciful depictions in *Jurassic Park* movies, the evidence shows that dinosaurs were created as dinosaurs, just as Genesis says, and their fossilized remains were buried in the global Flood around 4,500 years ago. 🐦

### References

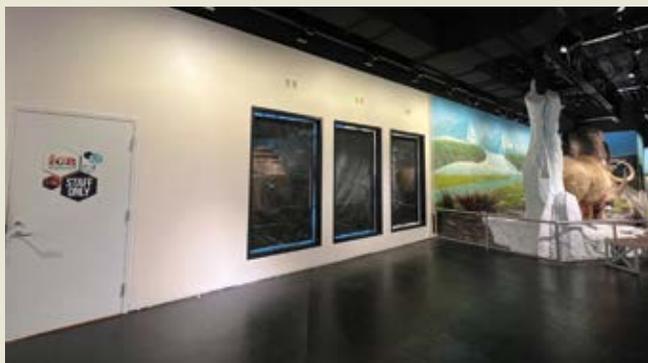
1. Clarey, T. Imaginary Dinosaur Science in *Jurassic World: Dominion*. *Creation Science Update*. Posted on ICR.org June 20, 2022, accessed June 23, 2022.
2. Tomkins, J. T. 2019. Six Biological Evidences for a Young Earth. *Acts & Facts*. 48 (5): 10-12.
3. Tomkins, J. T. 2021. The Fossils Still Say No: Tumultuous Triassic Tussle. *Acts & Facts*. 50 (7): 10-12.
4. Clarey, T. 2020. *Carved in Stone: Geological Evidence of the Worldwide Flood*. Dallas, TX: Institute for Creation Research.
5. Tomkins, J. P. 2020. The Fossils Still Say No: The Cambrian Explosion. *Acts & Facts*. 49 (12): 10-13.

6. Tomkins, J. P. 2021. The Fossils Still Say No: The Origin of Vertebrates. *Acts & Facts*. 50 (1): 10-12.
7. Tomkins, J. P. 2021. The Fossils Still Say No: The Mystery of Jawed Vertebrates. *Acts & Facts*. 50 (2): 12-14.
8. Tomkins, J. P. 2021. The Fossils Still Say No: The Fins-to-Feet Transition. *Acts & Facts*. 50 (3): 10-13.
9. Tomkins, J. P. 2021. The Fossils Still Say No: Missing Early Evolution of Land Vertebrates. *Acts & Facts*. 50 (4): 10-12.
10. Tomkins, J. P. 2021. The Fossils Still Say No: Enigma of the Carboniferous Explosion. *Acts & Facts*. 50 (5): 11-13.
11. Tomkins, J. T. 2021. The Fossils Still Say No: Global Flood Solves Permian Perplexities. *Acts & Facts*. 50 (6): 10-12.
12. Tomkins, J. P. 2021. The Fossils Still Say No: Jostle in the Jurassic. *Acts & Facts*. 50 (8): 10-12.
13. Tomkins, J. P. 2021. The Fossils Still Say No: Capping a Cretaceous Conundrum. *Acts & Facts*. 50 (9): 8-11.
14. Schweitzer, M. H. et al. 2005. Soft-Tissue Vessels and Cellular Preservation in *Tyrannosaurus rex*. *Science*. 307 (5717): 1952-1955.
15. Schweitzer, M. H., J. L. Wittmeyer, and J. R. Horner. 2007. Soft tissue and cellular preservation in vertebrate skeletal elements from the Cretaceous to the present. *Proceedings of the Royal Society B*. 274 (1607): 183-197.
16. Schweitzer, M. H. et al. 2009. Bimolecular Characterization and Protein Sequences of the Campanian Hadrosaur *B. canadensis*. *Science*. 324 (5927): 626-631.
17. Armitage, M. H. and K. L. Anderson. 2013. Soft sheets of fibrillar bone from a fossil of the supraorbital horn of the dinosaur *Triceratops horridus*. *Acta Histochemica*. 115 (6): 603-608.
18. Thomas, B. 2022. List of Biomaterial Fossil Papers. Posted on Google Docs.
19. Clarey, T. 2016. Dinosaurs Designed Cold-Blooded. *Acts & Facts*. 45 (1): 15.
20. Tomkins, J. P. and T. Clarey. 2019. Dinosaurs Had Reptilian Metabolic Adaptation. *Acts & Facts*. 48 (12): 14.
21. Clarey, T. 2015. *Dinosaurs: Marvels of God's Design*. Green Forest, AR: Master Books.
22. Tomkins, J. P. Komodo Dragon Genome Bites Evolution. *Creation Science Update*. Posted on ICR.org September 10, 2019, accessed June 23, 2022.
23. Feduccia, A., T. Lingham-Soliar, and J. R. Hinchliffe. 2005. Do Feathered Dinosaurs Exist? Testing the Hypothesis on Neontological and Paleontological Evidence. *Journal of Morphology*. 266 (2): 125-166.
24. Feduccia, A. 2020. *Romancing the Birds and Dinosaurs: Forays in Postmodern Paleontology*. Irvine, CA: Brown Walker Press.

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## New Biological Research Lab!



Work is underway on the new lab. Soon these three windows will open to ICR Discovery Center visitors so they can see ICR's ongoing research up close.

As one of the new exhibits in the ICR Discovery Center, the Biological Research Laboratory will feature ongoing research to discover how our Creator Jesus Christ engineered living creatures to adapt to changing environments. Go to [ICR.org](http://ICR.org) to see updates on our progress!

For information on visiting the ICR Discovery Center in Dallas, Texas, go to [ICRdiscoverycenter.org](http://ICRdiscoverycenter.org). To support ICR's work, go to [ICR.org/donate](http://ICR.org/donate) or send a message to [stewardship@icr.org](mailto:stewardship@icr.org).



Four recently donated environmental chambers will greatly aid our research.

Once triggered, the Venus flytrap quickly snaps shut. Its spines interlock like a pair of grasping hands, making escape nearly impossible.

# THE VENUS FLYTRAP'S SNAP

**T**he Venus flytrap is one of the more unusual plants in God's creation. It grows naturally only on the East Coast of the United States and has the fascinating ability to snap up unsuspecting insects with its uniquely designed leaves. Botanists have spent decades researching the micro-mechanics of its rapid leaf closure and enzymatic digestion of its hapless victims. As with all research, the more that's discovered, the more the Creator's hand is clearly seen.<sup>1</sup>

The two leaves (or halves) of this plant make up a trap. Each half has three sensory trigger hairs that perform as high-sensitivity levers. They're designed to shut only when touched twice within approximately 20 seconds. In this way, raindrops

don't cause a false closure.

A 2020 article described how this fascinating plant senses its prey and rapidly responds.

The carnivorous Venus flytrap (*Dionaea muscipula*) has highly sensitive organs...sensory hairs that register even the weakest mechanical stimuli, amplify them and convert them into electrical signals that then spread quickly through the plant tissue.<sup>2</sup>

Furthermore, scientists discovered that "this mechanism would ensure that it is something living that is inside the leaves, rather than something like a little piece of stick or other things that [the plants] are not interested in investing in digesting."<sup>3</sup>

## article highlights

- Like something out of a science fiction movie, the carnivorous Venus flytrap lures and ensnares its victims.
- Its trap mechanism is specifically engineered to sense motion and only close on living creatures, which it then digests.
- The Venus flytrap demonstrates the Creator's purpose, plan, and design.



*The flytrap lures its victims with a scent that mimics food. It eats insects to add nutrients to its diet.*

The key to such a mechanism is found in a biological process called an action potential (or the all-or-nothing law). It's a localized, transitory difference in electrical potential occurring across, in this case, the membranes of sensory hair cells. With the right stimuli, "ion channels burst open due to a stretching of their envelope membrane and become electrically conductive."<sup>2</sup> Put another way, "Venus flytraps detect moving insects via highly sensitive, action potential (AP)-producing trigger hairs, which act as high-sensitivity levers, crucial for prey capture and digestion."<sup>4</sup>

At the genetic level, biologists "found for the first time the genes [DNA] that presumably serve throughout the plant kingdom to convert local mechanical stimuli into systemic signals."<sup>2</sup> Mechano-sensors in these plants were also discovered. Scientists used tiny force meters and digital 3-D image correlation methods in their investigation. In other words, the application of the fields of mechanical engineering, electrophysics (i.e., mechano-electric stimulation), biochemistry (ion channels and various chemical factors), and botany were utilized to determine the finer points of the flytrap's ability to snare and digest arthropods.

Researchers likewise found that

...only well-watered traps are able to snap shut quickly and correctly. ...Watering the plant changed the pressure in the cells and with it the behavior of the tissue. In order to close correctly, the traps also had to consist of three layers of tissue: an inner which constricts, an outer which expands, and a neutral middle layer.<sup>5</sup>

These same leaves secrete special enzymes to digest the prey. But the plant has to "know" whether the insect is large enough to begin the complex digestive process. How? Research continues on that.

It's interesting to note that science articles generally fail to address, let alone explain, how this amazing plant evolved its deadly snap. There's no fossil evidence of the multitude of steps linking *Dionaea* with another plant in a supposed evolutionary progression leading to the fully functional Venus flytrap. Instead, words and phrases such as "infer," "must have," "somehow differentiate," and "evolutionary pressure" abound in the literature. It's only stated that the flytrap snap supposedly evolved "48 million years" ago.<sup>6</sup>

Chance, time, and natural processes couldn't have led to this strange plant predator. Instead, creationists marvel at the Venus flytrap's resourceful purpose, plan, and design. 🧠

### References

1. Romans 1:20.
2. Emmerich, R. The Pressure Sensor of the Venus Flytrap. Julius-Maximilians-Universität Würzburg news release. Posted on uni-wuerzburg.de December 11, 2020, accessed June 11, 2022.
3. Grens, K. What Makes a Venus Flytrap Snap. *The Scientist*. Posted on the-scientist.com March 1, 2020, accessed June 11, 2022.
4. Scherzer, S. et al. 2019. Venus flytrap trigger hairs are micronewton mechano-sensors that can detect small insect prey. *Nature Plants*. 5: 670-675.
5. Biomechanical analyses and computer simulations reveal the Venus flytrap snapping mechanisms. Office of University and Science Communications, Albert-Ludwigs-Universität Freiburg news release. Posted on kommunikation.uni-freiburg.de June 23, 2020, accessed June 11, 2022.
6. Ellison, A. and L. Adamec, eds. 2018. *Carnivorous Plants: Physiology, Ecology and Evolution*. Oxford, UK: Oxford University Press.

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For fish, life is very demanding. Fish life requires quick, targeted self-adjustments 24/7 to ever-changing conditions such as varying salinity and dissolved oxygen, pH (acidity/alkalinity), seasonal sunlight, water temperature, territory competition, shelter availability, piscivorous (fish-eating) predators, and more.

Living life is a nonstop challenge, even for fish. However, since the creation week's Day 5, it was always God's providential purpose for fish to "be fruitful, multiply, and fill" the seas.<sup>1</sup> How can fish successfully fill salt-water and freshwater habitats worldwide in such ever-changing conditions?

For starters, Christ creatively designed and equipped fish to carefully collect vital external information (continuous environmental tracking, or CET). Accordingly, CET-acquired data are processed by relevant "if/then" program-logic mechanisms to activate and implement purposeful responses to real-world situations.<sup>2,3</sup>

Fish need to know what is happening around them and how to relate to it. Like us, fish need accurate data about the world around them—constantly provided by light sensors, chemoreceptors, temperature detectors, etc.—so they can react to threats and opportunities.<sup>3</sup>

Illustrations of CET-based adaptation responses in fish are uncountable.<sup>1</sup> Fish-farmed Norwegian salmon utilize CET when they physiologically self-adjust to artificial safety lights in high-latitude net pens by delaying their usual transition from "growth mode" into reproductive "spawning mode." In effect, the artificial lighting installed to aid fish-farm workers at night is phenologically interpreted by the salmon as "midnight sun" summertime, during which season the Norwegian salmon continually eat and grow bigger.<sup>4</sup>



## God's Providence in Salmon, Guppies, and Cavefish

### article highlights

- Fish face constant challenges in this fallen world.
- Christ Jesus equipped the world's fish with the tools they need to thrive.
- Salmon and guppies provide examples of rapid fish responses to outside conditions.
- An ICR research project is focusing on blind cavefish to uncover how these unique creatures display God's providential bioengineering.

For another example, Trinidadian guppies—encountering the jawed jeopardy of predator pike cichlids—repeatedly utilize split-second CET data just to stay alive!

Have Trinidadian guppies learned evasive maneuvers from Spanish bullfighters?...*Current Biology* reports how gutsy guppies confront a regular predator, the voracious pike cichlid, like a matador. They attract the attacker to a location that can be dodged from. Then, at the last instant, the guppy pivots to safety....The toreador trick depends upon the guppy flashing its eyes at the attacker. Specifically, the threatened guppy attracts conspicuous attention by turning its irises black, so the predator aims at the guppy's head. After the

predator lunges at a committed angle of attack, the guppy dodges.<sup>5</sup>

Speed and timing are critical. Is matador-like evasive behavior due to evolutionary luck? No, the guppies exhibit "survival of the fittest" because Christ

providentially designed their CET-enabled "fitted to fill" survival systems.<sup>5</sup> Of course, there is much more.<sup>2-4</sup>

Meanwhile, as previously reported, ICR's science team is intensively researching CET-based phenotypic and behavioral adaptations in fish, specifically blind cavefish (*Astyanax mexicanus*). Fish display Christ's bioengineering for all with eyes to see.<sup>6</sup>

### References

1. Genesis 1:21-22. See also Job 9:10.
2. For several years, ICR's Dr. Randy Guliuza has systematically documented how creatures continuously track environmental changes "using the same key elements [that] man-made tracking systems use—sensors, logic algorithms, and response mechanisms"—thus showing the Lord Jesus as the ultimate Bioengineer who purposefully built His creatures to promptly track changing environmental conditions so they can beneficially and rapidly self-adjust by applying "internal logic [programmed] to select targeted responses to changed conditions." Guliuza, R. J. 2018. Engineered Adaptability: Creatures' Adaptability Begins with their Sensors. *Acts & Facts*. 47 (3): 17-19.
3. Fish need information! "Fish constantly interact with living and nonliving entities: aquatic animals and plants, microbes and toxins, predators, parasites, and poisons." Johnson, J. J. S. 2016. Even Fish Need to Know! *Acts & Facts*. 45 (1): 21. See also Guliuza, R. J. 2018. Engineered Adaptability: Designed Mechanisms Best Explain Convergent Traits. *Acts & Facts*. 47 (5): 17-19.
4. Johnson, J. J. S. 2015. The Moon Rules. *Acts & Facts*. 44 (9): 21. Salmon fish-farming benefits when natural conditions are imitated. See Johnson, J. J. S. God's Plan is Best: Salmon Need Saltwater Acclimation. *Creation Science Update*. Posted on ICR.org August 3, 2020. Also, some finfish thrive better if their natural or artificial habitat is shelter-enriched. See Johnson, J. J. S. Artificial Plants Help Keep the Peace at Tilapia Farms. *Creation Science Update*. Posted on ICR.org June 26, 2020, accessed June 30, 2022.
5. Johnson, J. J. S. Guppies Dodge Predators Like Spanish Bull-Fighters. *Creation Science Update*. Posted on ICR.org June 16, 2020.
6. See Tomkins, J. P., S. Arledge, and R. J. Guliuza. 2022. Catching the Vision: Blind Cave Fish (*Astyanax mexicanus*) as a Model System for Continuous Environmental Tracking and Adaptive Engineering. *Creation Research Society Quarterly*. 58 (4): 289-296. See also Tomkins, J. P. Blind Cavefish Illuminate Divine Engineering. *Creation Science Update*. Posted on ICR.org October 23, 2017, accessed June 30, 2022; Tomkins, J. P. Oxygen-based Adaptive Engineering in Blind Cavefish. *Creation Science Update*. Posted on ICR.org March 21, 2022, accessed June 30, 2022. How magnificently Christ providentially designed and equipped these little fish to carefully recognize and successfully interact with the many moving parts of their watery world. These little finfish are truly some of our Creator's "wonders without number" (Job 9:10).

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



# We Need You!

There's been a steady decrease in the U.S. population's belief in God. The assessment of our country's religious views began when Gallup conducted a public opinion poll in 1944. Remarkably, 98% of those polled said they believed in God, a result reflected in polls in 1947 and the 1950s and '60s. In a 2013 follow-up survey, the percentage dropped 11% to 87%.<sup>1</sup>

By 2022, the number decreased another 6%, with only 81% of Americans believing in God.<sup>1</sup> Not only has the number declined, but belief in the integrity and clarity of the Bible is on the same downhill trajectory in both non-Christian and Christian populations.

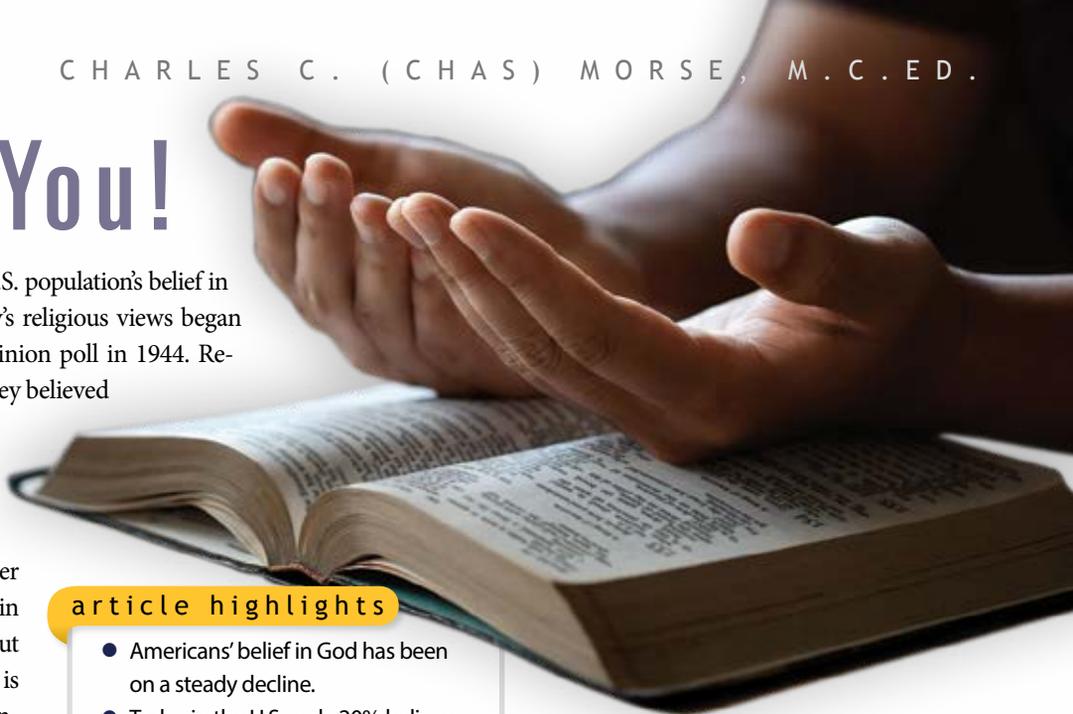
A recent Gallup poll revealed that only 20% of Americans believe the Bible is "the literal word of God." In the same poll, 29% of these folks say that "the Bible is a collection of fables, legends, history and moral precepts recorded by man." And 58% of Christians were registered as believing "the Bible is the inspired word of God but not everything in it is to be taken literally."<sup>2</sup>

How does the church at large view Yahweh's sacred text? Gallup records that less than 50% of those who identify as "evangelical or born again" are likely to view the Bible as literally true. It's a wonder these percentages aren't lower, with many pastors, theologians, and seminary professors campaigning against the clarity of Scripture. One Old Testament professor paints an opaque picture of Genesis by stating:

Genesis 1 was never intended to offer an account of material origins and...the original author and audience did not view it that way....There is no biblical view of material origins aside from the very general idea that whatever happened, whenever it happened, and however it happened, God did it.<sup>3</sup>

Opinions like this abound. I've read more than 20 recent books written under Christian labels, many of which question portions of Scripture—books the Christian community feeds on to get "biblical" knowledge.

So, what does this have to do with stewardship and the Institute for Creation Research? ICR equips those in their spheres of influence to lead, feed, and defend believers by providing scientific responses to attacks against the authority and accuracy of God's Word. As the writ-



## article highlights

- Americans' belief in God has been on a steady decline.
- Today in the U.S., only 20% believe the Bible is the literal Word of God, a skepticism that's also grown among Christians.
- We invite you to help us equip believers with scientific research that supports biblical creation.

er of Hebrews states, "For the word of God is quick, and powerful, and sharper than any two-edged sword" (Hebrews 4:12).

ICR research views science through the lens of God's Word. For example, this issue of *Acts & Facts* tackles evolutionary myths about dinosaurs, Ice Age models

that sync with the Genesis Flood account, and the engineered Venus flytrap that demonstrates the Creator's purpose, plan, and design. ICR connects people with the truth of Scripture, coupled with the current science of biblical creation.

If you're an ICR donor, it's a blessing for us to serve the Lord Jesus Christ with you to bring the truth of biblical creation to a spiritually starving culture. The Lord is working powerfully through your faithful efforts, both in your prayers and your giving. If you're new to ICR, please prayerfully consider coming alongside us as a co-laborer and donating to empower ICR's Christ-centered initiatives.

Scientific research requires a substantial investment of time and resources for staffing, investigation, and materials. Our goal is to communicate scientific evidence that affirms the clarity and truthfulness of God's written Word. Visit [ICR.org/donate](https://www.icr.org/donate) to see ICR's online giving options.

We need you! 

### References

1. Jones, J. M. Belief in God in U.S. Dips to 81%, a New Low. Gallup News. Posted on news.gallup.com June 17, 2022.
2. Newport, F. Fewer in U.S. Now See Bible as Literal Word of God. Gallup News. Posted on news.gallup.com July 6, 2022.
3. Walton, J. H. 2009. *The Lost World of Genesis One: Ancient Cosmology and the Origins Debate*. Downers Grove, IL: IVP Academic, 112.

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



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**The Discovery Center at ICR is next-level awesome**—think the Museum of the Bible (in Washington, DC) awesomeness but right here in Dallas! Interactive, engaging, informative, educational, and even more coming soon! Schools, check out the concept of a field trip—think 5-6 grade students and older (younger might work, too)—or parents, just take your kids and make a day of it. Worth the price of admission, you’ll learn a ton and be entertained at the same time!

— D. P.



Beautiful displays. Very welcoming and very informative. Impressive presentations and animatronics. We took our time, went out for lunch, and then back in for another hour. A must-see for everyone.

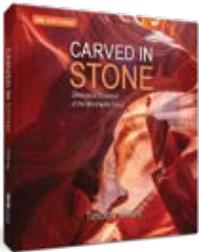
— S. N.

[The ICR Discovery Center] was great. Highly recommended for believers. Great for kids and adults! **The exhibits are some of the best, well put together and modern. This place is a must-see even if you are coming to visit Dallas.** The planetarium shows are great, too. We watched the solar system show. The evidence for a young solar system is compelling.... We will be back for sure. I hope this place becomes bigger ‘n better over the years.

— J. Y.



**From a Homeschooler**



How do I teach more in-depth science to my kids while firmly holding to the authority of Scripture? Sadly, our “Christian” Earth Science textbook merely regurgitated the anti-biblical stance that the earth is millions of years old. So, I had to do my own research. I Googled a lot and knew that I wanted more than apologetics articles. I wanted to find young-earth scientists’ own research. That led me to ICR! You had just published Dr. [Timothy]

Clarey’s *Carved in Stone*. It was perfect timing for our Earth Science class!

We love reading *Acts & Facts* cover to cover. We were able to visit the new Discovery Center in 2020. I was blessed to attend the Christian Educator’s Conference you hosted in 2021. Just this past weekend, we had the opportunity to hear Dr. [Randy] Guliuza, Dr. Clarey, and Dr. [Brian] Thomas

**Patrick the Platypus**



Written by Trey Bowling. Illustrated by Lori Fausak.

in Denver. My husband and I are so grateful for ICR’s strong commitment to both careful scientific research and the gospel. Everything points back to Jesus, His Word, and His creation!

— R. R.



As a medical doctor, I am fascinated at the number of “fail-safes” engineered into biological systems, as well as the interplay between the parts and larger systems. **I went through theological studies before my medical degree, so my faith was already strong, but my scientific education only reinforced and substantiated my belief.**

— S. F.



A few years ago, the church hosted Dr. [Tim] Clarey.... It was just fantastic. I had always learned creationism because I went to a Christian school, but working in the oil industry, I am constantly surrounded by the ideas of evolution. **It was so fantastic to hear an oilman [who] could support creation with**



**his work in the industry.** From there, I was first able to visit the Discovery Center as part of the Basic Creation class that I attended in 2021 with Mike Riddle. This, too, was great, and since then we try to visit the ICR Discovery Center whenever we are in Dallas.

— H. H.



**This is the ultimate channel.** Such thorough discussion and exciting content. Keep up the good work. Important times.

— R. L.

Have a comment? Email [Editor@ICR.org](mailto:Editor@ICR.org) or write to Editor, P. O. Box 59029, Dallas, TX 75229.

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Our Creator Jesus Christ made sharks on Day 5 of the creation week, along with all the other fish. There are over 500 shark species, and they come in many sizes. An adult great white shark can grow more than 20 feet long and live to be 70 years old. Did you also know...



- ✓ Shark fossils look just like today's sharks—no sign of evolution or millions of years.
- ✓ Sharks don't have hard bones like yours and mine. Their skeletons are made of easy-to-bend cartilage, like what we have in our ears and noses.
- ✓ Like most fish, sharks never stop growing, and when they lose a tooth, another takes its place.
- ✓ Sharks can hear sounds in the water over 2,000 feet away, and they can smell blood more than a mile away.
- ✓ Sharks don't chew their food...they swallow it whole! Yikes!

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GREAT WHITE  
DORSAL  
CREATION  
SHARKS  
CARTILAGE  
OCEAN  
FISH

### Which One of These Is Not a Shark?



CRAFT SUPPLIES NEEDED: Blue, red, and white paper, a paper lunch bag, glue, scissors, a pencil, and a black marker or crayon.

1. Trace blue paper around bag and cut two pieces, one for the body and one for the head.
2. Cut three blue triangles for the fins.
3. Cut one red rectangle the width of the bag for "inside" the mouth (under the folded section of the bag).
4. Cut white triangles for teeth and two white circles for eyes.
5. Glue the blue, red, and white cut papers onto the paper bag as shown.
6. Add the finishing touches with the black marker or crayon. Your shark puppet is ready to play!



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