

ACTS & FACTS

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50 Years of
Creation Research
1970–2020

NEW!

CARVED IN STONE

ICR IN-DEPTH SCIENCE

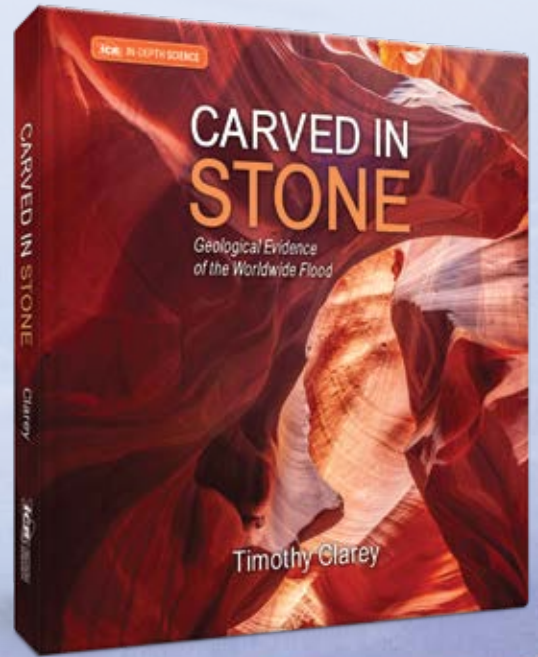
Geological Evidence of the Worldwide Flood

Dr. Timothy Clarey

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

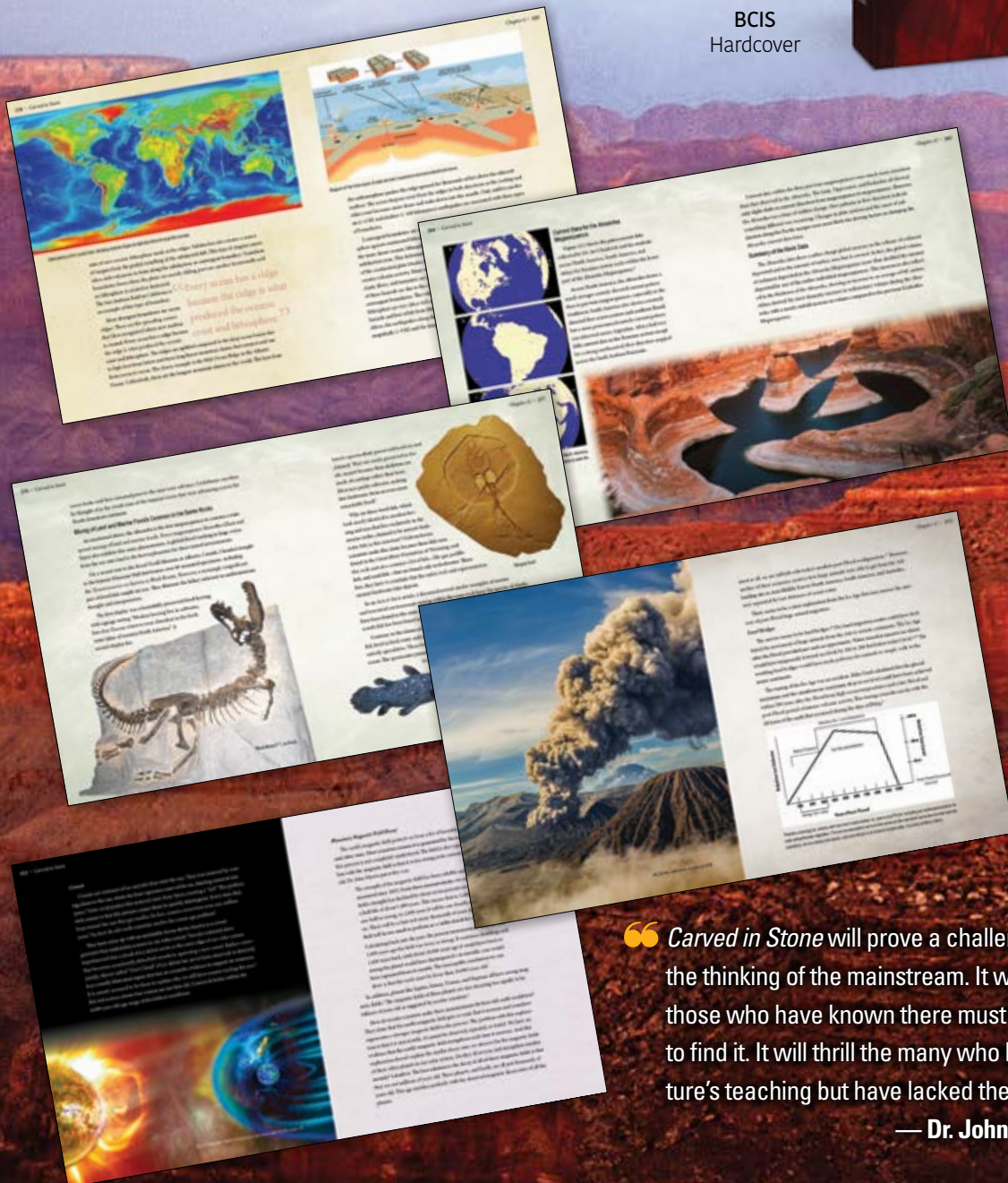
ICR geologist Dr. Timothy Clarey does just this in *Carved in Stone: Geological Evidence of the Worldwide Flood*. With an oil industry background, Dr. Clarey utilizes drill and seismic data to explain what the rock strata actually reveal about Earth's past. Rather than reflecting millions of years, the rock record demonstrates that a global flood occurred thousands of years ago.

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



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

— Dr. John Morris, ICR President Emeritus

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



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Image credit: Bigstock, T. Akehurst



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Fill in the Blanks

For those of you homeschooling this year, the anticipation of summer probably pushed you to the finish line. And you've done it. That last school assignment has been turned in, and you get a gold star in parenting! You're so relieved—summer is here at last.

But wait.

This long-anticipated break from school won't look like your normal summer. If your summers are much like mine were with a house full of children, every day is usually filled to the brim with activities. Most parents experience this—a lot of summer schedules are dictated by children's sports activities, summer camps, a variety of lessons, play dates and parties, and church trips. You often find yourself rushing around between baseball practices, swim lessons, Vacation Bible School, cheerleading camps, and piano lessons.

You probably won't have that problem of overbooking this year. In fact, this summer will look very different from the summers of the past. That family vacation you squeezed between the last baseball game and summer choir camp? It's now crossed off the calendar. Those swim lessons at the local pool? They're now canceled. And baseball, hotdogs, and Fourth of July parades? All gone, except maybe the hotdogs. As you review your summer calendar, you see a lot of blank spots.

What will you fill them with?

Whatever activities you pencil into those white spaces, you'll be making memories. Maybe this is the summer where you and your family discover that simple is better. Take advantage of the relaxed routine. The older kids will remember those conversations around the table as they munch on chocolate chip cookies right out of the oven. The younger ones may not remember what was said, but they will all

remember how they felt when they snuggled with you.

ICR can help you with some of those open spots on your calendar. Each Friday, we're currently offering a Facebook live Q&A with ICR scientists and events staff.

During the online event, our featured scientists answer questions that you submit ahead of time or during the actual interview. We also offer Zoom events throughout the week for homeschools, private schools, church groups, and others. Using platforms like Zoom or Facebook, students, educators, families, and ministries can enjoy free live stream presentations with our team of scientists. Follow us on Facebook @ICRscience to find out about our upcoming presentations, or go to [ICR.org/virtual-classroom](https://www.icr.org/virtual-classroom) to

host a private online presentation for your educational or ministry group. You can discover scientific evidence that confirms the Bible without ever leaving home.

So, while summer is here at last, and it doesn't look a thing like the summers of the past, that's okay. You can make this the most memorable summer yet. Take the time to look into your children's eyes—to smile, to listen, to let them know you like being with them. Relax. Have fun with unscheduled living.

Someday, you'll all look back at this time and say, "Remember the summer of the pandemic when we...?" You get to fill in the blanks today. What memories will you fill them with? Even if you fill the blank spots with "nothing," it can be something. It can be a summer they never forget.

Jayme Durant
EXECUTIVE EDITOR



ABOUNDING HOPE

in

Now may the God of hope fill you with all joy and peace in believing, that you may abound in hope by the power of the Holy Spirit.

(R O M A N S 1 5 : 1 3)

H E N R Y M . M O R R I S I I I , D . M I N .

article highlights

- In times of trouble, we can rest in God's promise to give us joy, peace, and hope in Him.
- That joy and peace come through our belief and confidence in God's work, and these attributes enable us to abound in hope.
- Our faith is firmly fixed on the Lord of heaven and Earth, who Scripture attests came to give us "life in His name."
- We are called to focus on heavenly things in whatever circumstances we face.

The seemingly sudden onset of the coronavirus pandemic has brought a time of trouble. The past few months have been difficult for many people in our country. Millions have lost jobs or suffered a reduced work volume and consequently face fearful financial uncertainty. And while the economy will no doubt rebound, it's likely there'll be turmoil for the tens of thousands of small businesses that

won't recover and must retool and refocus on other ventures. Small churches might not have the resources to maintain contact with their congregations under mandates to shelter in place or limit group gatherings, resulting in a trend for those members to participate in online worship with larger churches.

It's not yet clear just how all of these restrictions will change our lives and social interaction with each other, but we who are

privileged to be a part of the Lord's Kingdom shouldn't be anxious about the future. The Scriptures offer precious promises from God to His people that we can rest in during times like these.

God Fills with Joy

When the apostle Paul wrote his letter to the Romans, Rome was a corrupt empire. The active persecution of Christians was in

the early stages under the Emperor Nero, and many feared for their lives. But in his closing instructions about salvation, Paul makes no mention of the chaos and turmoil these brothers and sisters were going through, praying instead that the “God of hope” would fill the saints with “all joy and peace in believing.”

God is able to do something to us that results in an abounding hope—a work in us that “fills us to the maximum extent possible” with “all joy...in believing.” This theme runs throughout the New Testament.

- » 1 John 1:4—These things we write to you that your *joy* may be *full*.
- » John 15:11—“These things I have spoken to you, that *My joy* may remain in you, and that *your joy* may be *full*.”
- » 2 Corinthians 7:4—I am *exceedingly joyful* in all our tribulation.
- » Romans 14:17-18—The kingdom of God is not eating and drinking, but righteousness and peace and *joy* in the Holy Spirit. For he who serves Christ in these things is acceptable to God and approved by men.
- » 2 Corinthians 13:11—Finally, brethren, *farewell* (Greek “joy”). Become complete. Be of good comfort, be of one mind, live in peace; and the God of love and peace will be with you.



God is both willing and able to fill His saints with “all joy and peace in believing.” Scripture emphasizes continual joy under all circumstances, “that you may be *filled* with the *knowledge of His will* in all wisdom and spiritual understanding; that you may *walk worthy of the Lord*, fully pleasing Him, being *fruitful in every good work* and increasing in the knowledge of God; *strengthened* with all



And let the peace of God
rule in your hearts.

COLOSSIANS 3:15

might, according to His glorious power, for all *patience* and *longsuffering with joy*” (Colossians 1:9-11).

God’s Joy and Peace Produce Hope

This filling with joy is implemented by God and is to be with “all...peace in believing.” These precursors to hope are not dependent on physical experiences or circumstances. “Joy” is the English translation of the Greek word *chara*. The core meaning is a state of mind rather than a feeling. The multiple derivatives are translated by: rejoice, joy, joyful, joyous, joyfully, joyfulness, farewell, hail, greeting, God speed, be glad, and gladness.

I am exceedingly joyful in all
our tribulation.

2 CORINTHIANS 7:4

“Peace” is the English translation of the Greek word *eirene*. Again, the core meaning is a state of mind versus a feeling—the state of national tranquility; exemption from the rage and havoc of war; peace between individuals (i.e., harmony, concord); security, safety, prosperity, and felicity, because peace and harmony make and keep things safe and prosperous.

Both Joy and Peace Are Obtained Through Believing

The believing in question is faith, trust, and confidence in the work and power of the Creator administered to/for us by the Holy Spirit. The promise is that God will fill us “by the power of the Holy Spirit.” The condition of “peace” is essentially equivalent to *shalom* in Hebrew. *Shalom* carries a broad connotation: completeness, contentment, peace, quiet, soundness, tranquility, welfare. *Shalom* emphasizes well-being, health, national tranquility.

The peace described in the Old Testament is focused on the nation of Israel.

- » Isaiah 54:10—“For the mountains shall depart and the hills be removed, but My kindness shall not depart from you, nor shall My covenant of peace [*shalom*] be removed,” says the LORD, who has mercy on you.
- » Psalm 122:6—Pray for the peace [*shalom*] of Jerusalem: “May they prosper who love you.”
- » Ezekiel 34:25—“I will make a covenant of peace [*shalom*] with them, and cause wild beasts to cease from the land; and they will dwell safely in the wilderness and sleep in the woods.”

In contrast, the peace revealed in the New Testament is applied more to the individual saint.

- » John 14:27—“Peace I leave with you, *My peace* I give to you; not as the world gives do I give to you. Let not your heart be troubled, neither let it be afraid.”
- » 2 Thessalonians 3:16—Now may the *Lord of peace* Himself give you *peace always* in

every way. The Lord be with you all.

- » Colossians 3:15—And let the *peace of God* rule in your hearts, to which also you were called in one body; and be thankful.

Abounding in Hope

The English word “hope” appears 61 times in the New Testament, demonstrating the emphasis our Lord places on our working out our salvation here on Earth with the powerful confidence that hope in God’s promises brings. Please notice that God does not hope; He establishes hope in us. The precursors Paul speaks of (joy and peace) are attributes God gives to us so we might “abound” in hope: “Now may the God of hope fill you with all joy and peace in believing, that you may abound in hope by the power of the Holy Spirit” (Romans 15:13).

God has made it possible for us to be filled with the motivating purpose our Lord Jesus knew when “the joy that was set before Him” enabled Him to endure the awful judgment in our place on the cross (Hebrews 12:2). That kind of joy is available from our Creator, as is the “peace of God, which surpasses all understanding” (Philippians 4:7) to fill us so that we can “abound in hope.”

Basically, all of this boils down to our believing what God can do for us. He gives us His joy and His peace so that we can abound in hope. That joy and peace come through belief in the work of the triune Godhead. For a twice-born believer, that should be easy. We trusted Him for our salvation, and we rest in our sins being forgiven. Why, then, would we have trouble believing that His joy is available or that His peace is ready to fill us?

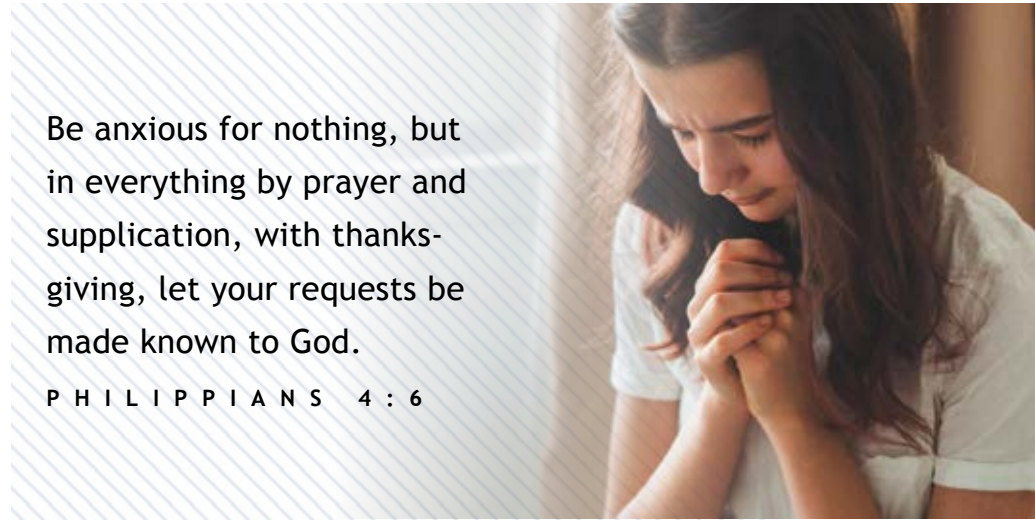
Perhaps we have trouble when we don’t keep fresh in our minds who the Lord of heaven and Earth really is. Maybe we get so caught up in the momentary frustrations of our circumstances that we fail to seek His face in prayer—or fail to keep our minds engaged in learning the great truths in the Scriptures. The Lord has given us abundant evidences of His omnipotence and omniscience.

For instance, there is the power of His miracles of creation recorded in John’s gospel.

- » Turning water into wine (John 2:1-11)
- » The healing of the nobleman’s son (John 4:46-54)
- » The healing of the paralytic (John 5:1-9)
- » Feeding the 5,000 (John 6:1-14)
- » Walking on water (John 6:16-21)
- » The healing of the blind man (John 9:1-7)
- » The raising of Lazarus (John 11:1-44)

are not written in this book; but these are written that you may believe that Jesus is the Christ, the Son of God, and that believing you may have life in His name. (John 20:31)

Like John’s original readers, we too can use this record of the Savior’s earthly ministry to affirm our belief that He is indeed “the Christ, the Son of God” who has given us



Be anxious for nothing, but in everything by prayer and supplication, with thanksgiving, let your requests be made known to God.

PHILIPPIANS 4 : 6

Then there are our Savior’s seven great “I am” statements that identify Him as God in the flesh.

- » “I am the bread of life” (John 6:35, 48, 51).
- » “I am the light of the world” (John 8:12; 9:5).
- » “I am the door” (John 10:7, 9).
- » “I am the good shepherd” (John 10:11, 14).
- » “I am the resurrection and the life” (John 11:25).
- » “I am the way, the truth, and the life” (John 14:6).
- » “I am the true vine” (John 15:1).

Jesus specifically said, “If I do not do the works of My Father, do not believe Me; but if I do, though you do not believe Me, believe the works, that you may know and believe that the Father is in Me, and I in Him” (John 10:37-38). The beloved apostle John closed his account of the Lord’s ministry with this statement:

And truly Jesus did many other signs in the presence of His disciples, which

“life in His name.” It is He who gifts us with the “joy and peace in believing” that allow us to “abound in hope.” In closing, remember that we can, like the believers of Paul’s day, focus on the things of heaven no matter what external circumstance we face:

Be anxious for nothing, but in everything by prayer and supplication, with thanksgiving, let your requests be made known to God; and the peace of God, which surpasses all understanding, will guard your hearts and minds through Christ Jesus. Finally, brethren, whatever things are true, whatever things are noble, whatever things are just, whatever things are pure, whatever things are lovely, whatever things are of good report, if there is any virtue and if there is anything praiseworthy—meditate on these things. (Philippians 4:6-8) ✨

Dr. Morris is Chief Executive Officer of the Institute for Creation Research. He holds four earned degrees, including a D.Min. from Luther Rice Seminary and an MBA from Pepperdine University.



Free Online ICR Live Science Presentations

*Use Zoom or Facebook to attend free ICR events online!
 Discover how science confirms creation even when you're at home.*

At the time of this writing, ICR's public events are postponed due to the coronavirus situation. We look forward to gathering in person again when the time is right, so as the country re-opens please check for the latest updates at ICR.org/events.

In the meantime, we've moved our events online so you can still learn faith-building science facts! Using platforms like Zoom or Facebook, students, educators,

families, and small groups can enjoy free livestream presentations with our team of scientists. Learn about dinosaurs, fossils, the Ice Age, and more—all from a biblical perspective.

Follow us on Facebook @ICRscience to view our scheduled presentations, or go to ICR.org/virtual-classroom to learn how you can host a private online session for your educational or ministry group.



Sixth graders from Prestonwood Christian Academy, Texas, attend an online virtual field trip with Dr. Brian Thomas



Over 200 students from the country of Trinidad attend one of our live virtual classrooms



Dr. Tim Clarey explains North America's Dinosaur Peninsula to his online class



Zoologist Frank Sherwin teaches a virtual class on dragons and dinosaurs



Our small homeschool co-op in Minnesota had the privilege of listening and interacting with Dr. [Randy] Guliuzza for an hour. Wow!

My two boys and I were impressed, excited, and equipped. Thank you! I'm grateful for ICR committing to sharing science and the love of truth and logic with all, including these students, my kids.

— K. D.



I am a homeschool mom who directs the Challenge 1 Classical Conversations program for seven students, grades 9-11. I have been a gigantic fan of your ministry for a least a decade now! Sign me up!

— T. T.

able to bring something to encourage the fellowship, that would be good. Thanks, and every good blessing to you.

— Pastor G. C.



Thanks again so much for offering to do this for us! My students will be ecstatic!

— M. L.



We are a small evangelical church in Cornwall, UK. We hold the Scriptures as divinely given, and certainly Genesis 1, v. 1. If you are



I have a 7-year-old at home who LOVES science, and we so enjoy ICR. I am very interested in this class! Thanks!

— C. M.



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

Flood Model Solves Antarctica Rainforest Mystery

A recent study published in *Nature* has evolutionary scientists baffled. The researchers reportedly found an ancient rainforest in Antarctica, of all places. The study's authors claim this part of Antarctica was very close to the South Pole at the time the forest thrived, at about 82° south latitude.¹

How could a temperate rainforest exist this close to the South Pole and survive four-plus months of total darkness each year? A biblical perspective solves this mystery.

Johann Klages of the Alfred Wegener Institute and a consortium of European scientists used a drill ship to take a sediment core off West Antarctica's Amundsen Sea between February and March 2017.² The sediments were claimed to be between 84 and 94 million years old, placing them within the Cretaceous system.¹ Ashley Strickland of CNN reported:

CT scans of the sediment core revealed pristine samples of forest soil, pollen,

spores and even root systems so well preserved that [the researchers] could identify cell structures. The soil included examples of pollen from the first flowering plants found this close to the South Pole.²

Based on these plant fossil types, the scientists determined the area had an average daytime temperature of 53°F, roughly two degrees higher than present-day Germany.^{1,2} This is much warmer than today's Antarctic temperatures, which fluctuate between -76 and 14°F.² Study co-author and Imperial College London professor Tina van de Flierdt told CNN:

The preservation of this 90-million-year-old forest is exceptional, but even more surprising is the world it reveals...Even during months of darkness, swampy temperate rainforests were able to grow close to the South Pole, revealing an even warmer climate than we expected.²

Could forests like this really grow so far south and survive through months of total darkness? It's highly doubtful, and none of these plant types grow today in polar climates with that little sunlight. What's going on here?

Secular scientists have created different plate tectonic configurations that they believe existed throughout the deep time required by their evolutionary worldview. During the Cretaceous, they place this part of Antarctica close to the South Pole. The plants reported in the study would thus have grown in this extreme southerly position. But in a global Flood model, these plants grew only

article highlights

- Scientists discovered evidence of an ancient rainforest in Antarctica.
- The forest is too far south to have thrived if secular geology models are correct.
- This Antarctic rainforest provides additional evidence for the Genesis Flood and ICR's Flood model.

about 4,400 years ago on land that was much farther north.

Most creation geologists believe the tectonic plates moved rapidly during the Flood year.³ The Flood model we've developed at ICR holds that Antarctica was part of a Pangaea-like supercontinent when these fossils plants were growing.⁴ They were buried late in the Flood as the waters were nearing their zenith. In fact, our pre-Flood continental configuration has the Antarctic plant fossils growing near 45° south latitude, about the equivalent to southern New Zealand.⁴ Not surprisingly, these types of trees and flowering plants are exactly the types we find in that area today. As Ashley Strickland reported, "The forests were similar to those now found on New Zealand's South Island, the researchers said."²

The baffling discovery of a lush rainforest near the South Pole isn't a mystery if the book of Genesis is viewed as an accurate historical record. These trees and plants grew in a temperate climate far from the South Pole and were buried, fossilized, and rapidly moved to their present position during the Flood year just 4,400 years ago. These fossils bear strong testimony to the accuracy of the Genesis narrative. ✉

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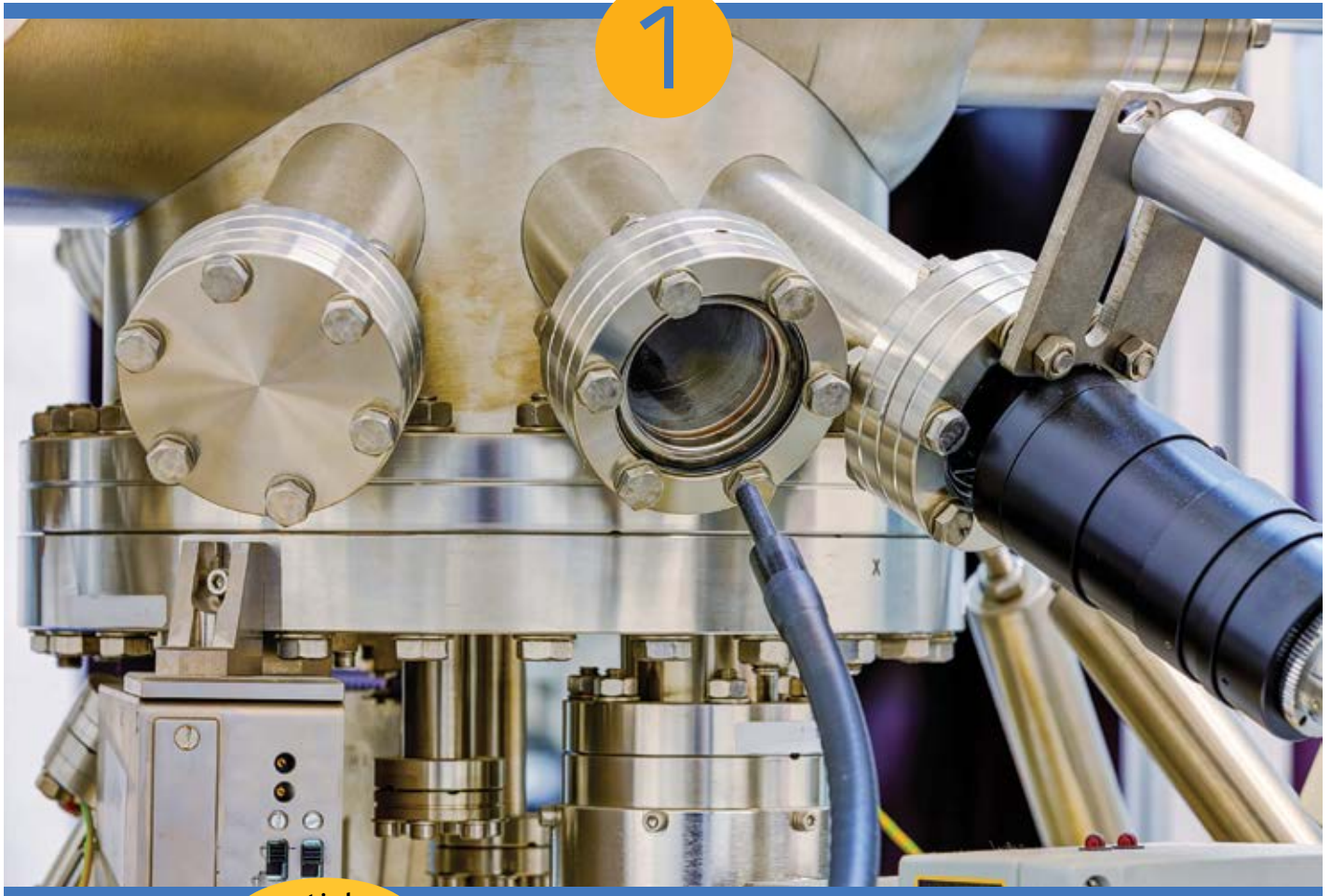
Tina van de Flierdt and Johann Klages work on the sample of ancient fossil soil

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Revisiting the Isochron Age Model

PART

1



article highlights

- Rock materials are dated according to the decay rate of certain radioactive isotopes.
- An isochron is a line on an isotope ratio diagram of rock samples.
- The y-intercept of the isochron line provides the ratio of the daughter isotopes when the rock first formed, and the line's slope supposedly provides an age.
- But a well-known "mixing problem" appears to give spurious results and therefore nullifies the isochron model as an accurate dating method.

Radioactive dating is based on the decay rate of a starting radioactive isotope (the parent) into its stable counterpart (the daughter). An age is assigned to an object by measuring the quantity of each isotope and calculating how long it would take for the parent to decay into the daughter. Since the mid-20th century, the isochron age model has been the standard for dating rocks, minerals, and crystals via the decay of certain radioisotopes they contain.

This model had its origins in a rather obtuse paper published in 1960.¹ Ironically, even the authors of this paper admitted that the potassium feldspars from the granitic rocks they analyzed gave a wide

range of supposed ages. It's widely claimed that this model eliminates the need for any assumptions about the initial amount of the daughter isotopes when dating an object using the decay of specific isotopes within that object. But does it?

In the next two articles we'll take a closer look at the isochron age model and evaluate its ability to accurately assess the absolute historical age of an object. We will use the Rb-Sr (rubidium-strontium) decay pair for demonstration since it employs the least number of secondary assumptions among the various decay pairs used in radioisotope dating.

The Basics of the Isochron Age Model

The derivation of the mathematical framework for the general isochron age model begins with the basic radioisotope decay equation:

$$P = P_0 \times e^{-\lambda t_a} \quad (1)$$

Let's define some symbols:

- P ≡ Number of parent isotopes present at the time of measurement
- t_a ≡ Time from solidification of the measured crystal or rock suite to the present time, or the initial time of formation (t_0) to the final time of measurement (t_f), i.e., $t_a = (t_f - t_0)$
- P_0 ≡ Initial number of parent isotopes when decay begins
- D ≡ Total number of daughter isotopes present at time t_a
- D_0 ≡ Number of daughter isotopes present at t_0 , or when the crystal/rock suite formed
- D_a ≡ Number of daughter isotopes added to the crystal/rock suite via decay of the parent
- P_r ≡ Number of parent nuclei that have decayed since the time of crystal/rock suite formation
- ξ ≡ The fraction of decays ($0 < \xi \leq 1$) that actually results in the daughter isotope of interest. This number is called the *branching ratio*.

In a closed system:

$$D_a = \xi \cdot P_r \quad (2)$$

and

$$P_r = P_0 - P \quad (3)$$

A closed system is one in which no parent or daughter atoms can escape or enter from outside. If the rock suite, mineral, or crystal exists as a closed system for millions of years, then no daughter atoms can leave or enter the system. This means any increase in the number of daughter atoms can *only* be due to radioactive decay:

$$D = D_0 + D_a \quad (4)$$

Then, subtracting D_0 from both sides of Equation (4) and substituting for D_a and P_r :

$$D - D_0 = \xi \cdot (P_0 - P) \quad (5)$$

Adding D_0 to both sides:

$$D = D_0 + \xi \cdot (P_0 - P) \quad (6)$$

Substituting for P_0 :

$$D = D_0 + \xi \cdot (P e^{\lambda t_a} - P) \quad (7)$$

Then:

$$D = D_0 + P \xi \cdot (e^{\lambda t_a} - 1) \quad (8)$$

If we divide both sides of the equation by a stable index isotope (D_i) from the daughter's isotopic family (i.e., one that has the same number of protons but a different number of neutrons), then we have the basic isochron dating model equation:

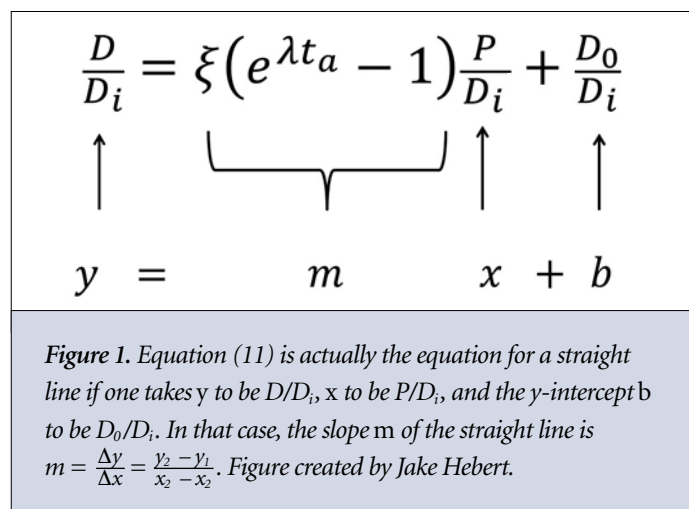
$$\frac{D}{D_i} = \frac{D_0}{D_i} + \frac{P}{D_i} \cdot \xi (e^{\lambda t_a} - 1) \quad (9)$$

The equation for a straight line is:

$$y = mx + b \quad (10)$$

Here, m is the slope, a measure of the steepness of the line, and b is the y -intercept, the value of y when x equals 0. Note that if we treat D/D_i as the dependent variable y , P/D_i as the independent variable x , and D_0/D_i as the y -intercept b , then Equation (9) is also an equation for a straight line. This is a little easier to see if we rearrange the terms on the right-hand side of Equation (9) to give:

$$\frac{D}{D_i} = \xi (e^{\lambda t_a} - 1) \frac{P}{D_i} + \frac{D_0}{D_i} \quad (11)$$



Here, the slope m is equivalent to the factor in “front of” P/D_i in Equation (11). (See Figure 1.) Traditionally, the above equation is viewed as a linear equation in the isotope ratio variables $y = \frac{D}{D_i}$ and $x = \frac{P}{D_i}$. With this view in hand, one can plot the two isotope ratios on a linear graph with the dependent variable $y = \frac{D}{D_i}$ and the independent variable $x = \frac{P}{D_i}$ and then measure the slope of the resulting straight line ($m = \frac{\Delta y}{\Delta x}$); where $\Delta y \equiv (y_2 - y_1)$ and $\Delta x \equiv (x_2 - x_1)$. When calculating the slope, the points (x_1, y_1) and

(x_2, y_2) should be far apart and all data points should be used.² Scientists use a computer program to find the best-fit straight line through the data points and to find the slope of this best-fit line. It would seem to be a straightforward action to set the slope (m) equal to the multipliers of the independent variable x.

Note there is an additional factor (ξ) in this equation that's not normally seen in many textbooks, although Faure does make allowance for it if ^{40}K decay to ^{40}Ar is being used.³ Its inclusion is usually not an important point; since most of the radiometric decay pairs used in dating the branching ratio are so close to 1, its inclusion in the model equation is moot.

By assumption, at the time, $t = 0$, that the lava or magma cools and hardens, the relative abundance of the daughter isotope, D_0/D_i , is the same everywhere in the lava, although the values of P_0/D_i can vary. This means that, in theory, the data points should form a flat, horizontal line at $t = 0$. This horizontal line is $y = b = D_0/D_i$. This problem manifests itself in the dating model because a second independent variable, i.e., time (t), has been inserted into the equation for a constant. However, as time passes, some of the parent atoms will decay into daughter atoms and project as an evolving straight line with decreasing amounts of the parent nuclei and increasing amounts of the daughter nuclei. (See Figure 2.)

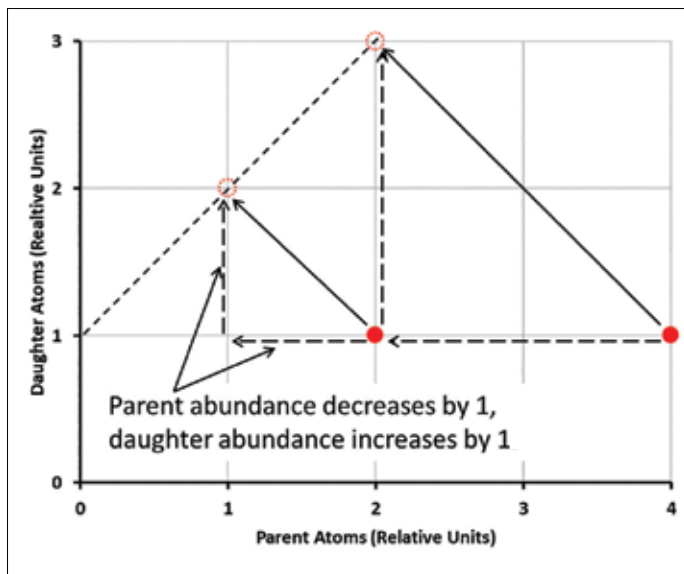


Figure 2. Diagram illustrating the theory behind the isochron method. At time $t = 0$, the values of relative daughter/parent abundances should lie on a horizontal line. As illustrated by the leftmost red dot, when the abundance of parent atoms decreases from 2 to 1 due to radioactive decay, the abundance of daughter atoms must increase from 1 to 2 since the total number of atoms (parent plus daughter) remains the same. This causes the leftmost red dot to move diagonally up and to the left. One key aspect of radioactive decay and a consequence of Equation (1) is that the number of decays occurring in a given amount of time

is directly related to the number of parent atoms. Because the starting abundance of parent atoms for the rightmost red dot is twice as large as the leftmost dot (4 as opposed to 2), the rightmost sample will experience twice as many decays (2 as opposed to 1) in the same amount of time. This causes the rightmost red dot to move left 2 units and up 2 units. The net effect is that the red dots continue to lie on a straight line but the slope of that line increases with time. In theory, the slope of this line should give the age of the sample, per Equation (11). This figure is based on Figure 6.3 in Steve Austin's *Grand Canyon: Monument to Catastrophe* and adapted for use by Jake Hebert.⁴

In a closed system, this means that when the parent isotope decays, the parent to index daughter isotope ratio (x) must decrease, and simultaneously the radioactively produced daughter isotope to index daughter (y) must increase by the same amount. Secular geologists interpret an isochron's positive slope as a reflection of radioactive decay. However, this pattern can also be explained by an isotope mixing model.

For the moment let's ignore these distinctions and proceed to how the above equation is used to produce an age for a group of crystals or rock samples. Setting the multiplier of the parent to index daughter isotope ratio equal to the slope for a linear relationship, we have:

$$m = \xi \cdot (e^{\lambda t_a} - 1) \tag{12}$$

Solving for t_a :

$$t_a = \frac{1}{\lambda} \ln \left(\frac{m}{\xi} + 1 \right) \tag{13}$$

Model Implications

This is the basic equation used to estimate ages with the isochron age model. Note that nowhere in the analysis has t_a been treated as a variable in the linear equation from which it was derived. Time in this equation is essentially a derived quantity in that what's actually measured are the ratios for the parent and daughter isotopes relative to an index isotope in a given sample from which the slope and intercept of the model are determined. Also note that for any noticeable slope, the age equation almost *guarantees* deep time because the $\frac{1}{\lambda}$ term completely dominates the \ln term in the age equation. Figure 3 demonstrates an actual isochron of data from the Bass Rapids diabase sill in the Grand Canyon, with notations illustrating the relation of Equation (11) to a straight line.⁵

A recent analysis of the isochron dating model was done by Robert B. Hayes in the periodical *Nuclear Technology*.⁶ He observes that the effects of differential isotopic mass diffusion aren't taken into account in the isochron age model and that this can yield spurious results. He concludes that the most rigorous method to mitigate iso-

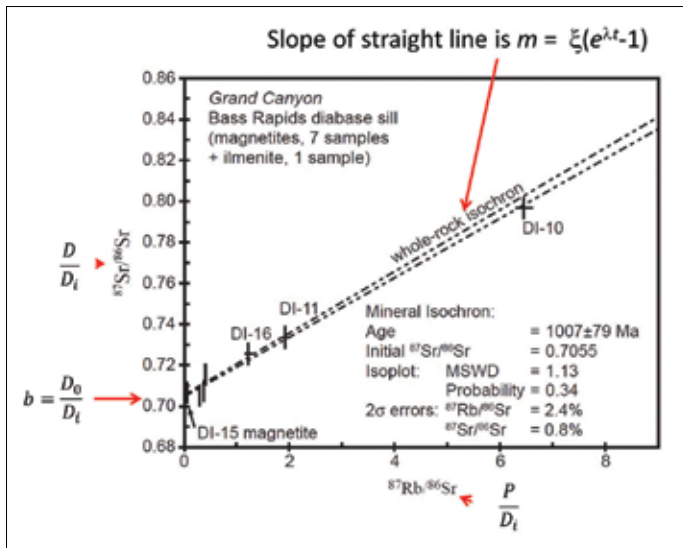


Figure 3. A rubidium-strontium isochron graph showing the relationships between Equation (11) and the equation for a straight line. This graph is a ^{87}Rb - ^{87}Sr analysis of mineral samples from the Grand Canyon Bass Rapids diabase sill. Data taken from the RATE project.⁵

topic mass diffusion in dating applications, especially over geological time frames, is to not utilize isotopic ratios at all.

The only variables in the isochron dating models that are affected by the differential diffusion mechanism are the daughter and parent isotopes, which Hayes discusses in his paper. Aside from the problem of differential isotopic mass diffusion, there are also the problems of possible hydrothermal transport, isotope mixing, and fractionation processes that need to be considered. There's also the fact that the method fails to take into account past accelerated nuclear decay.⁷

Conclusion

So, what can be said about the isochron age model? It appears more like a mixing model than a model clock. Gunter Faure points out⁸ that a study of strontium isotopes contained in alkalic rocks from the Birunga and Toro-Ankole regions of equatorial Africa produced a fictitious isochron.⁹ Y.-F. Zheng stated:

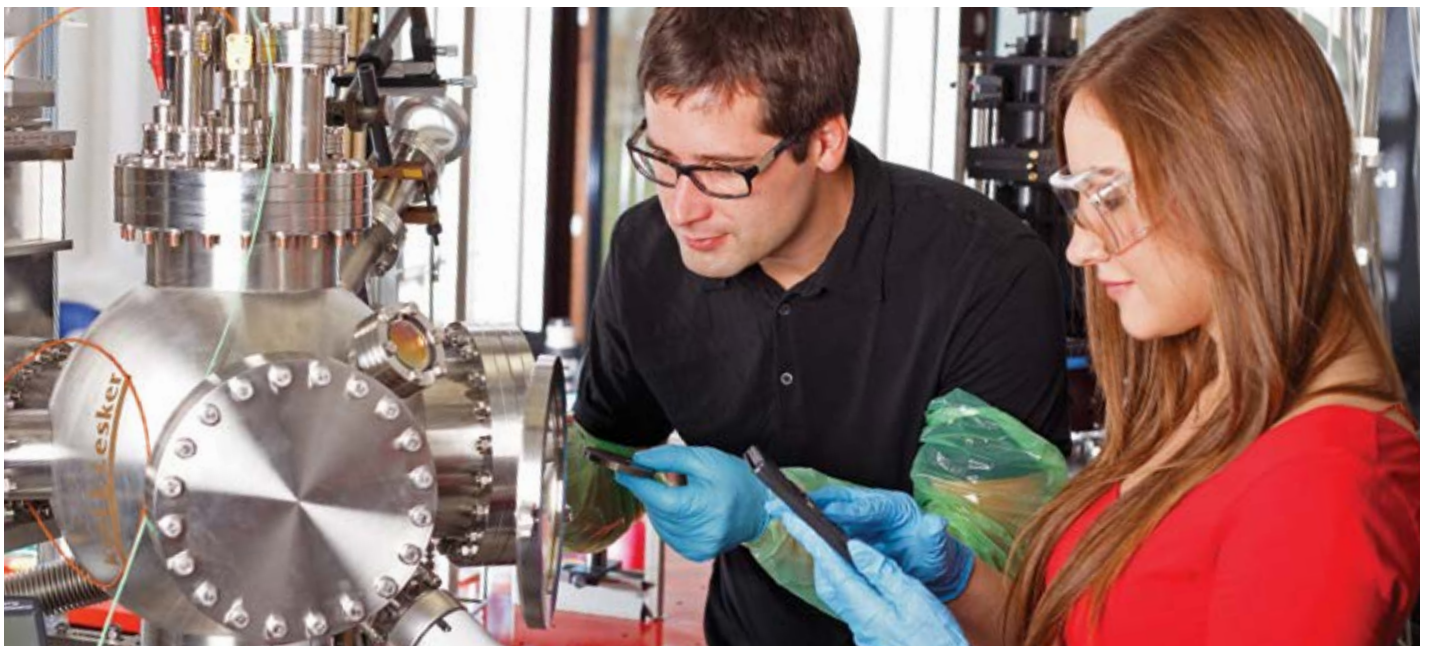
It is clear that mixing of pre-existent materials will yield a linear array of isotopic ratios. We need not assume that the isotopes, assumed to be daughter isotopes, were in fact produced in the rock by radioactive decay. Thus, the assumption of immense ages has not been proven. The straight lines, which seem to make radiometric data meaningful, are easily interpreted to be the result of simple mixing.¹⁰

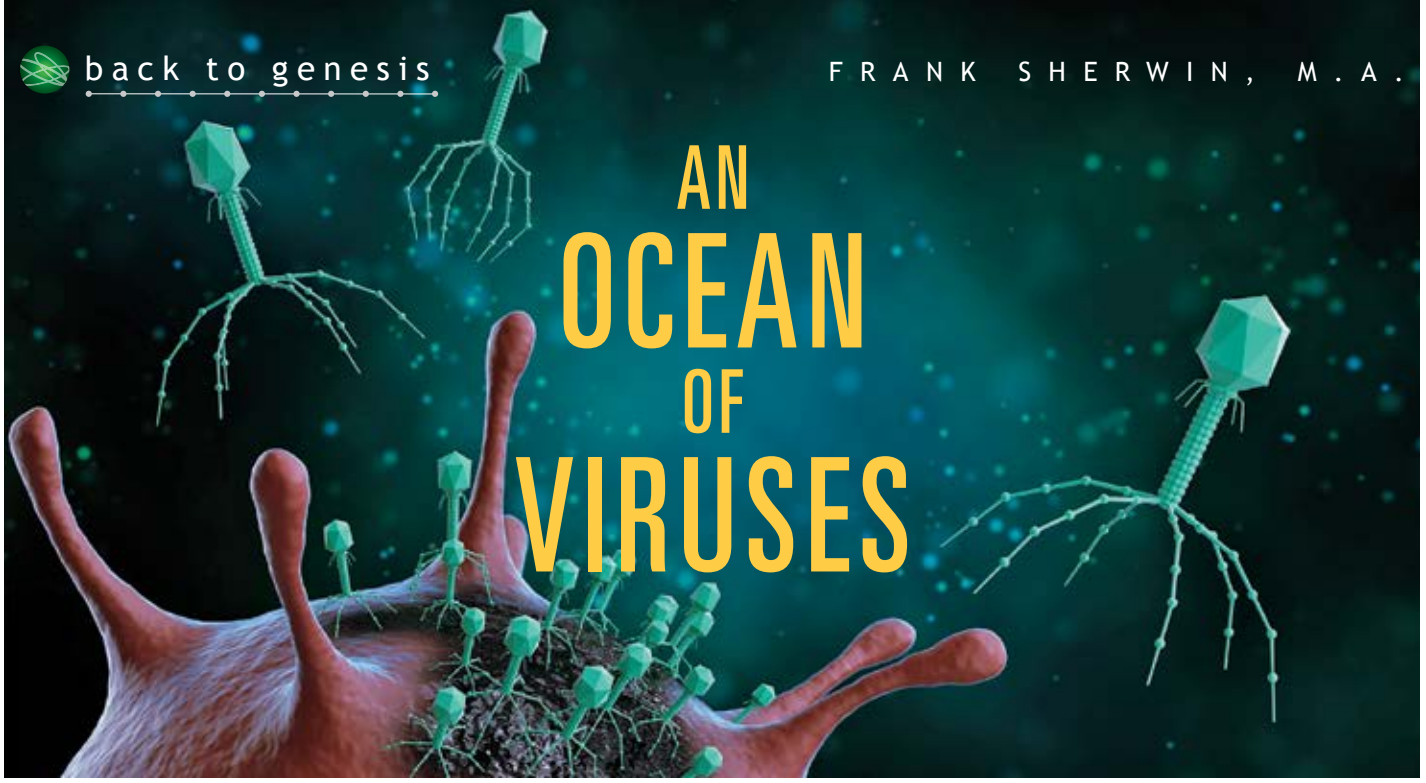
The mainstream geological community still continues to treat the results from isochron model dating as absolute scientific fact, but it's been clearly known for 30 years there are unresolved problems with the model. The more analysis is done on the iconic isochron model, the more dubious it appears. ☹️

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AN OCEAN OF VIRUSES

A virus is a very tiny structure that, in its simplest definition, is some nucleic acid (either DNA or RNA) packed inside a protein coat. Viruses can't live on their own—they are designed to replicate *inside* living cells.

Not all viruses are bad. The disease-causing ones such as COVID-19 get all the news coverage. Creation scientists believe viruses were created in the beginning and that many underwent mutations, such as the more common flu viruses, after the Curse.

Viruses are found virtually everywhere, especially in the world's oceans where their numbers are astounding. In just a few drops of surface seawater there can be as many as 10 to 100 million of them per milliliter.¹ Marine microorganisms, including viruses, make up about 70% of the oceanic biomass, and all those tiny creatures together are called the *marine microbiome*.² Biologists estimate marine viruses are in concentrations of approximately three billion per ounce of seawater.

The *carbon cycle* is a critical part of Earth's ecosystem and is the largest of all biochemical cycles. The microbial community plays an important part in the marine carbon cycle. It's an example of God's design found in complex ecological interactions.

article highlights

- Viruses regularly make the news, but not all of them are harmful.
- A virus can't exist without a host, a living entity that can reproduce the virus.
- Viruses are found in the ocean in astounding numbers, where they help control bacterial growth.
- Viruses were created as viruses in the beginning and are vital to maintain balance in Earth's ecological systems.



The oceans also have vast numbers of bacteria that are constantly reproducing in prodigious numbers. They would become overwhelming in a relatively short time if it weren't for specially designed viruses called *bacteriophages* (or phages). Under a powerful electron microscope, these viruses (called *T-even* or *E. coli* phages) look like tiny lunar landers with long spindly legs. Bacteriophages are significantly smaller than these bacteria. The phages are designed to “land” on their host's surface and inject their genetic material into the bacterial cell when the phage's “legs” contract. The cellular machinery of the bacterium then starts to produce more phages

due to new instructions from the phage. In a short time, the bacterial cell breaks apart (lyses), releasing more T-even phages that then go on to infect other oceanic bacteria.

This is called the *lytic cycle*. In this way, the levels of bacteria are controlled by these important phages, called *femtoplankton*.

There are also other kinds of microorganisms in the oceans called *cyanobacteria* (formerly called blue-green algae). This large and diverse group of bacteria contains the pigment chlorophyll and therefore can undergo the complex process of *photosynthesis*.³ Their vast numbers are controlled by viruses called *phycoviruses*.

Taken together, we can see the interactions of viruses with their hosts (bacteria, cyanobacteria, and even fish) in the marine ecosystem⁴ as part of God's grand design of keeping the oceans and our world balanced and healthy. 🌊

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How Not to Date Hominid Remains

A recent Neanderthal study in the journal *Science* mixed detailed archaeological finds with stories about human origins. As is typical, the report's age assignments for fossils fit evolutionary time instead of the Bible's much shorter timeline of thousands of years. Its age-dating exercises reveal more about what these scientists believe than what the rocks and fossils actually show.

The Neanderthal human remains were found in a cave on the Portuguese coast. The *Science* report dated them "to ~86 to 106 thousand years ago."¹ What evidence demands that we accept this age instead of the Bible's historical timeline?

Researchers can begin the process of age dating by assigning predetermined age designations like MIS (marine isotope stage) to rocks or fossils. MIS designations derive from isotope ratios that vary according to the depth of the seafloor sediment core they're drawn from. But can anyone know when each variation happened? Secular scientists use astronomical cycles that assume old ages in the first place to pin long ages on the isotope fluctuations. That's circular reasoning, not good science.

ICR physicist Jake Hebert critiqued sediment core research that produced names like MIS 3. He showed how the scientists who built these evolutionary time charts contrived apparent agreement be-



Three entrances to Figueira Brava cave on the coast of Portugal

Image credit: Pedro Souto/João Zilhão. Copyright © 2020 J. Zilhão et al. Used in accordance with federal copyright (fair use doctrine) law. Usage by ICR does not imply endorsement of copyright holders.

article highlights

- In a recent study of Neanderthal remains, the reported ages were forced to fit established secular timelines.
- Rather than being based on sound science, dates and dating methods used in such studies employ circular reasoning and are correlated with each other to bring about contrived agreement.
- The methods the Neanderthal researchers used to reconcile their discordant results essentially rendered all their numbers meaningless.
- The Bible's historical timeline needs no bias or tortured rationalization to demonstrate its validity.

tween features like isotope variations and deep time.² They stretched or squished the variations until they "fit." More bad science.

The Neanderthal researchers might not care about such contrivances as long as the timeline fits evolution. The archaeology team wrote in *Science*, "This site has been assigned to MIS 3 or MIS 4 on the basis of anchoring OSL dating results to radiocarbon chronologies, though the latter must be minimum ages only."¹ OSL refers to optically stimulated luminescence. If OSL actually worked as an accurate dating method, then nobody would need to anchor it to an outside chronology. And if radiocarbon chronologies were real, then workers would take them at face value instead of sidelining them as "minimum ages only."

The 171-page Supplemental Materials that accompanied this study show more mishandling. How did the study authors reconcile a radiocarbon result for one of the cave's limpet shells of $2,677 \pm 28$ BP into their 86,000-year age assignment for the remains?³ The team conveniently claimed that this and other shells were younger but

somehow got "reworked" into older layers.⁴ If they can claim *these* samples entered much older sediments, then couldn't any or all of the *other* samples also derive from other times? Deep-time expectations, not data, opened the door to dismiss age results the researchers didn't like.

Some of their radiocarbon ages also disagreed with uranium-series dating used on tiny mineral layers in cave formations called *speleothems*. The study authors wrote, "However, the radiocarbon ages obtained for them [the shells] are significantly younger than the speleothems sealing the deposit they were found in."⁵ Oops.

To add insult to injury, the team's radiocarbon "ages" showed exactly the wrong relative age order as their top-to-bottom order! The authors reported, "In addition, the complete set of Entrance 3 radiocarbon dating results features a fully reversed relationship between age and stratigraphic depth."⁵ Oops again.

The team invoked bacterial activity, precipitation of carbonates, and isotope exchange as processes that may have altered the carbon isotope ratios and given bad dates. By that logic, one or all three of these factors could have ruined all the radiocarbon ages. Responsible science would reject the whole lot as meaningless numbers.

Buried beneath bold claims like "over 80,000 years ago" lies an underground ant bed of workers who scrub results until they confirm deep-time beliefs. Discordant, reverse-ordered, and subjectively dismissed or approved "ages" pose no threat to the Bible's eyewitness history. ✂

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Missing Ice Age Forests Fit Flood/Ice Age Model

J A K E H E B E R T , P H . D .

Secular scientists say Earth has experienced many Ice Ages. But the evidence for multiple Ice Ages is very weak.¹ There is strong geological evidence for only the most recent of the supposed Ice Ages, which these scientists call the Last Glacial. They call the coldest part of this period the Last Glacial Maximum.

The best scientific explanation is that the Genesis Flood caused this one and only Ice Age.¹ During the Flood, new sea-floor formed very rapidly. Extruded magma heated the world's oceans, greatly increasing evaporation from the sea surface. This resulted in more precipitation, including large amounts of snow-

article highlights

- Geological evidence points to only one Ice Age lasting hundreds of years that's best explained by the Genesis Flood.
- Mature forests take hundreds of years to grow. Since the Ice Age started soon after the Flood ended, one would expect thick Ice Age forests to be rare.
- A global or near-global dearth of evidence for Ice Age forests, mainly fossil tree pollen, might confirm this expectation.
- The data are consistent with the biblical Flood/Ice Age model.

fall at high latitudes and on mountaintops.

Residual volcanism continued for centuries after the Flood, and the aerosols from the explosive eruptions reflected sunlight back into space, resulting in cooler summer temperatures. The cooler summers prevented snow and ice from melting, allowing them to accumulate and form thick ice sheets. As the oceans cooled and volcanic activity decreased, the Ice Age slowly came to an end.¹

A Barren Post-Flood Landscape

Initially, the post-Flood ground would have been barren, since the world's vegetation was destroyed by the Flood. Although grasses sprouted up fairly quickly, thick forests took much longer to grow back. One expert estimated that a self-seeded forest needs 600 to 1,000 years to take over a tract of land.²

Creationists estimate the post-Flood Ice Age lasted about 700 years. If a mature forest requires at least 600 years to grow, we might expect thick, mature forests to be rare during the Ice Age. This would be true not only in glaciated areas but also in areas *not* covered by ice, since insufficient time had elapsed after the Flood for forests to mature.

Inferring Past Forest Locations

Paleontologists estimate the sizes and locations of past forests using fossils, especially fossil pollens.

As we cannot directly observe the forests of the past, to answer these questions [about locations and sizes of past forests] we need to reconstruct past forests indirectly using the fossil record. This involves the study of seeds, fruits, leaves, wood, and charcoal (macrofossils) and of microscopic pollen grains, spores, cells (e.g. stomata), and charred particles (microfossils) preserved in lake, bog, alluvial, and other sediments where organic material can be preserved.³

There are uncertainties in this method. A low amount of fossil pollen is difficult to interpret, since it could indicate a small, scattered population of plants or pollen that was transported by wind from other locations. Likewise, cold temperatures and other factors cause some trees to reduce pollen production.³

We don't know exactly how long the Ice Age lasted; the 700-year figure is an esti-

mate. It's possible that abundant Ice Age precipitation may have allowed some forests to grow more quickly than normal. There is also evidence that small refugia (isolated pockets) of trees existed during the Ice Age in some locations.

According to ICR's Flood model, we expect the transition between Flood and post-Flood rocks to generally be at what secular scientists call the Pliocene/Pleistocene boundary.⁴ However, there will be exceptions in which this boundary is a little higher or lower in the rocks.

Keeping these caveats in mind, we ask: Is the fossil Ice Age tree pollen data broadly consistent with the biblical model?

Many Ice Age Forests Are Missing

Secular scientists have long noted that forests were rare during the Ice Age.⁵

Accompanying the general cooling trend of the Pliocene [the epoch just before the Pleistocene] was, as already mentioned, an increased aridity. This led to a number of noteworthy changes in the environment. The Mediterranean Sea dried up completely and remained plains and grasslands for the next several million years. Another environmental change was the replacement of many forests by grasslands.^{6,7}

These scientists claim that the reduction of forests was due to drier and colder conditions, apparently because they don't know how else to explain it. There doesn't seem to be clear evidence that trees were lacking in Antarctica at the start of the Ice Age, although this is hardly surprising since any such evidence would have to be found under the thick ice sheets. But in other places, this deforestation seems to have been widespread.

Australia

Uniformitarians think Australian forests were rare during the Ice Age.

The northern ice cap formed about 2.4 Ma, resulting in a very arid phase in Australia. At this time Australia had only remnants of the closed canopy rainforests it had at the time it separated from Gondwana [the southern portion of the original supercontinent]. . . . Overall, Australian forests and woodlands became much more restricted during glacial times, grasslands replacing many of them.⁸

One secular expert said, speaking of Ice Age Australia, "Forests disappeared, animals went extinct; major areas of Australia would have been deprived of surface water."⁹ However, creation researcher Michael Oard thinks the Australian deposits have been seriously misdated and that Ice Age Australia likely received abundant precipitation.¹⁰

Africa

Trees are scarce on the African savannah today, and forests seem





to have been rare even in tropical Africa during the Ice Age.

In tropical Africa, the Ice Ages were dominated by dry and cold conditions, especially from 1.05 Myr BP. During these dry periods, the fossil pollen record exhibits a sharp reduction in tree species in favour of grass species, suggesting that the savannah expanded and the rainforests withdrew to isolated refugia.¹¹

One Ph.D. student described the Ice Age African rainforest as “an archipelago of trees in a sea of grass.”¹²

Europe and Northern Asia

Evidence for missing Ice Age forests is strong in northern Asia and Europe.

Whereas fossil evidence indicates extensive treeless vegetation and diverse grazing megafauna in Europe and northern Asia during the last glacial, experiments combining vegetation models and climate models have to-date simulated widespread persistence of trees.¹³

A popular-level article describing the above research said, “Previous computer simulations of vegetation during the last ice age had suggested that trees may have persisted in ice-free areas of Europe and northern Asia. But, curiously, there has never been any sign of trees in fossils from the region.”¹⁴

In other words, secular Ice Age models expected widespread trees in ice-free areas during an Ice Age, but this was contradicted by the geological evidence. Secular scientists suggested, perhaps in desperation, that forest fires caused by careless early humans burned down these Ice Age forests!¹⁵

North America

There is also strong evidence that Ice Age forests in North America were scarcer than today.

By comparing modern forests and the pollen records they leave behind to pollen records from thousands of years ago, [University of Minnesota ecologist Margaret] Davis has created a picture of ancient forests. Her meticulous studies of North America’s

fossil pollen record show that although trees associated with modern forests existed many thousands of years ago, forests as we know them today—dense, continuous stands of trees whose branches form a closed canopy overhead—were likely very rare at the last glacial maximum.¹⁶

Stephen Jackson, a University of Wyoming botanist, concurs with Davis:

It appears that in upland regions, woody vegetation was indeed sparse, and canopies were relatively open. Whether this was savanna-like, with clumps of trees separated by open, non-woody vegetation, or parkland, with low tree density, remains unresolved. But I suspect, based on the pollen data, that “forests” as we think of them today were restricted [in North America during the Last Glacial Maximum] to riparian areas along rivers and other sources of water.¹⁶

Other researchers agree that “[North American] tree-cover densities during the last glacial maximum were low relative to present, and have increased since.”¹⁷ And “forest vegetation of N America and Europe has no history longer than 10 kyr [10,000 years] (at best).”¹⁸

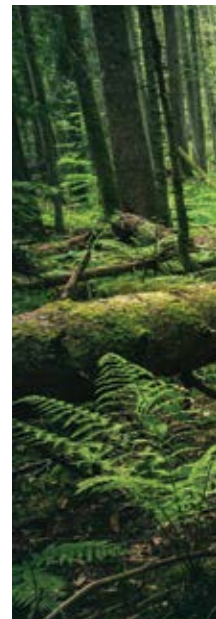
The second statement is especially intriguing. By secular reckoning, the last Ice Age ended about 12,000 years ago. But these age scales are greatly inflated. This scientist is acknowledging that North American and European forests were generally absent until around the end of the Ice Age! By creationist reckoning, this would have been roughly 3,800 rather than 12,000 years ago—a good fit for the Bible’s timeline.

South America

The extent of South American Ice Age forests is disputed among secular researchers. Some claim that South American Ice Age rainforests thrived, at least in the Amazon basin.¹⁹ But the University of Michigan’s Dr. Paul A. Colinvaux, a proponent of this view, acknowledged that this claim is contrary to what most researchers have long thought.

These data will come as quite a shock to many paleoclimatologists....They contradict the widespread belief that a drier climate during the last Ice Age turned the Amazon lowlands into a savannah with isolated pockets of rainforests.¹⁹

Other researchers who think there were significant Ice Age rainforests in tropical South America nevertheless acknowledge that there were “biome shifts largely associated with ecotonal areas [transitional areas between two different biomes]—downslope expansion of montane [mountain] grasslands in the Andes at the expense of montane forest, and savanna expansion at the expense of rainforest and gallery forest at the Amazon basin margins.”²⁰





In other words, in both the Andes and Amazon regions of South America, grasslands were more widespread and forests smaller than today. It's possible that varying amounts of Ice Age rainfall in different locations may have caused these forests to grow faster than in other locations, but it's also possible that secular researchers are misinterpreting the small amount of data available. Researchers have described an "extreme paucity"²⁰ of "meagre"²¹ South American Last Glacial Maximum²² pollen data, particularly in the Amazon. So, South America may have been an exception to the rule, but even this exception is uncertain.

Conclusion

Figures 1 and 2 show secular estimates for the locations of thick forests both at the peak of the Ice Age (Last Glacial Maximum) and

Last Glacial Maximum (18,000 ¹⁴C years ago)

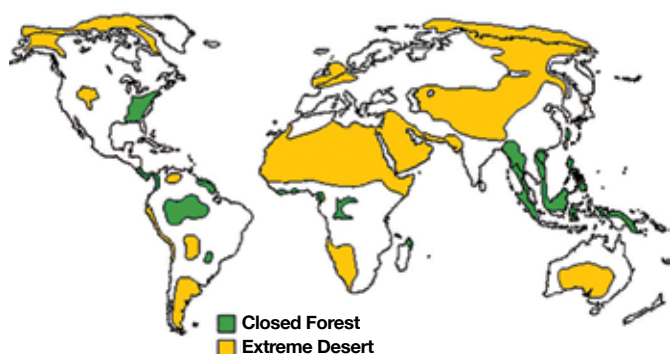


Figure 1. Green patches show estimated locations of closed forests (more than 70% canopy cover) at the Last Glacial Maximum, about 500 years after the Flood.

Image credit: Jonathan Adams. Courtesy of Oak Ridge National Laboratory, U.S. Dept. of Energy.

after the Ice Age. Since all the trees on Earth were uprooted during the Flood, and since mature forests take hundreds of years to grow back, thick Ice Age forests should have been rare. Although this is an ongoing area of research, preliminary results seem to broadly support this conclusion and match the biblical Flood/Ice Age model. ☞

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Mid Holocene (5,000 ¹⁴C years ago)

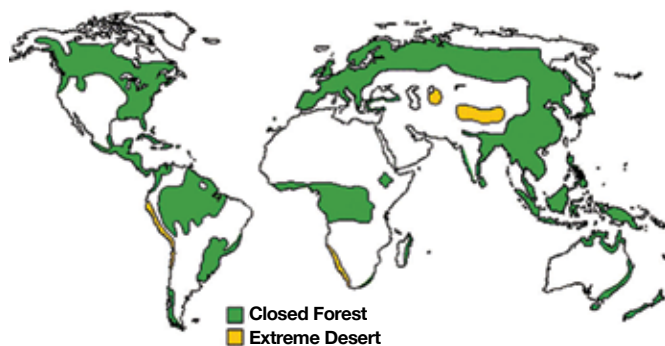


Figure 2. Closed forests soon after the Ice Age. Extreme deserts were rare at this time, consistent with the abundant Ice Age rainfall predicted by the biblical Flood/Ice Age model.

Image credit: Jonathan Adams. Courtesy of Oak Ridge National Laboratory, U.S. Dept. of Energy.

Q: Does Scripture Say Anything about Climate?

A Climate change conversations squeeze their way into so many different topics, yet climate research is rife with confusion. Which scientists are right—those who say manmade pollution and greenhouse gases cause most global warming, or those who say these may only play a minor role? Even expert opinions vary to extremes. In contrast, Genesis makes confident statements about Earth’s climate.

The 2009 Climategate fiasco illustrates the confusion inside climate research.¹ Extracted emails exposed how certain climate researchers suppressed the work of scientists who disagreed with them. An embarrassing placard at Glacier National Park in Montana also shows confusion. The old sign said human activity warms the world enough to melt glaciers. It stated, “Computer models indicate the glaciers will all be gone by the year 2020.” But the glaciers in the park remain today—so park officials changed the sign.² Whether through scientific suppression or waffling words, climate science seems to shift like the daily weather forecast.

In contrast, the Word of God stands forever.³ For example, Genesis lists three big famines that fit Ice Age climate shifts. Noah’s

Flood warmed oceans and powered volcanoes that caused Earth’s Ice Age.⁴ Centuries later, oceans cooled, volcanoes calmed, and ice sheets melted. As the Ice Age faded, the Middle East transitioned from lush to arid.⁵ Abram traveled across today’s Iraq to Egypt across a “well watered” land that stands dry today.⁶ After he arrived in Canaan, Genesis 12:10 says, “Abram went down to Egypt to dwell there, for the famine was severe in the land.” Crops won’t grow without rain. He headed to Egypt since ancient Egyptians relied more on the Nile River when rains failed to fall on their fields.

Scripture records the next major drought during Isaac’s time, saying, “There was a famine in the land, besides the first famine that was in the days of Abraham.”⁷ Later, the Lord used Joseph as top leader in Egypt to save many people through a third drought recorded in Genesis.⁸ Seven years without rain certainly counts as climate change! That extreme weather had nothing to do with industrial pollution. Scripture’s history and clues on the ground together show that today’s dry Middle East had a wet past.

While Christians should lead in protecting God’s creation, no Bible believer should buy into climate alarmism. This says that human activity can destroy the planet. What about God’s promise to Noah? After the Flood, He said, “While the earth remains, seedtime and harvest, cold and heat, winter and summer, and day and night shall not cease.”⁹ God promised farmable land, not a destroyed earth.

The Creator doesn’t make junk. He made Earth’s atmosphere strong enough to sustain the people He loves—even when some of those people fail to take care of His creation. Mankind makes mistakes. Our faults bleed into science and society. In contrast, three droughts and a Genesis promise show the certainty of our great Creator’s words. ✉

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- Human perspectives on climate change vary from one extreme to the other, but the Bible’s position on climate is rock solid.
- Genesis describes three droughts and God’s promise to maintain the overall stability of Earth’s climate.

article highlights

The official bird of Norway is *Cinclus cinclus*, the white-throated dipper, an ordinary-looking bird that behaves in very extraordinary ways.¹ It's designed to forage under water, but not like a dabbling duck. Rather, this bird dips, flies, rows, and even walks under water to catch its food. Unsurprisingly, evolutionists have no plausible explanation for how this behavior originated, much less why this small bird is so skilled in these strategic submarine stunts.²

The dipper is known to range all of Norway as a year-round resident.³ This bird needs running fresh water because that's where its primary food source resides. And Norway offers lots of fast-running fresh water as mountain snow melts and flows in crevices, waterfalls, streams, and other drainage pathways to the sea. This passerine (perching songbird) is thus deemed an "aquatic" bird due to its familiar habit of dipping into fresh water and "walking" across streambeds as it fishes for underwater insect larvae and other edible morsels.

The dipper has two behavioral movements that fit its name. As it perches near quick-flowing streams, it often suddenly bobs with its tail propped up (somewhat like a wren) close to the water. And sometimes after wading into the water's edge, it dives into the flowing water and then submerges by quickly plunging with a small splash. As it maneuvers under water, its wings appear to "fly" like a penguin's does when it swims. When the current is stronger, at times the bird vigorously "rows" its sturdy wings like oars to resist the current in order to steady its position.

Amazing! How does the dipper know to perform these underwater behaviors? An unprogrammed or otherwise undirected "trial and error" process isn't an adequate explanation because failures equal drownings. A drowned dipper wouldn't get a second chance



article highlights

- Norway's white-throated dipper flies and walks under water to reach its food.
- Its acrobatic aquatic skills are too precisely fitted to have evolved.
- God designed this incredible bird to thrive in its watery feeding ground.

to evolve such underwater survival skills. Dippers, like other birds, need providential programming in place to fill their special niches.⁴

The dipper also uses its strong prehensile toes to grab on to projecting substrates on the bottom of a stream, while straining its muscles and keeping its head under water to prevent it from rising to the surface—thus giving the appearance of walking on the bottom of the stream! The food the dipper collects is often epibenthic (located atop the stream-bottom sediments) such as caddisfly and other insect larvae, as well as small freshwater mollusks, fish, amphibians, and the thin amphipod shrimp.

What a strange bird! It uses specially designed anatomy and strength to get its food, even appearing to defy gravity while it does. God equipped this bird with the remarkable skills it needs

to reap the riches of freshwater streams to supply its daily needs.⁵ 🌿

The Bird That Walks and Flies Under Water

References

1. Also known as the European dipper, it has a mix of colors—brown head, white throat/bib, chestnut belly, and blackish back and tail—unlike the American dipper (*Cinclus mexicanus*, the "water ouzel"), which is dark black all over.
2. Animal behaviors that purposefully and beneficially utilize providential anatomies and physiologies cannot be explained as accidentally acquired habits gained by trial and error because one error, such as miscalculating how much food energy is needed to migrate during migration, often would be fatal and stop reproductive success. Johnson, J. J. S. 2018. Withstanding Winter Weather. *Acts & Facts*. 47 (7): 21.
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A Believer's Response to Challenging Times

article highlights

As I write this, stay-at-home mandates due to the COVID-19 pandemic are still in force across much of the country. The resulting economic turmoil has caused worry, with many wondering how much longer this can, or should, go on. But even if these problems linger, Christians and Christ-honoring ministries like ICR can rest in God's promises to never forsake us and to always supply our needs (Hebrews 13:5; Philippians 4:19). Indeed, the benefits of God's faithfulness to us are inexhaustible, far outweighing the present challenges.

Financial difficulties occur for all of us from time to time. Remember the Great Recession of 2009–2010 or the collapse of the technology stock market in 2001–2002? Times were tough then, and ICR certainly felt our share of the financial pressure. But while the world views these seasons as bad, God doesn't necessarily see them the same way. God's Word is filled with examples showing that times of stress can actually be a great benefit to His people. Consider David's song of resting in the Lord in Psalm 37 or Paul's encouragement to the believers in Corinth in 2 Corinthians 8. God uses trying times to deepen our faith in Him and focus anew on our efforts to point people to Christ.

No matter how dark things might appear, God is with His people. As believers in Christ, we can find joy and contentment even in the worst of circumstances—and our responses should show it. Here are just a few gleaned from God's Word.

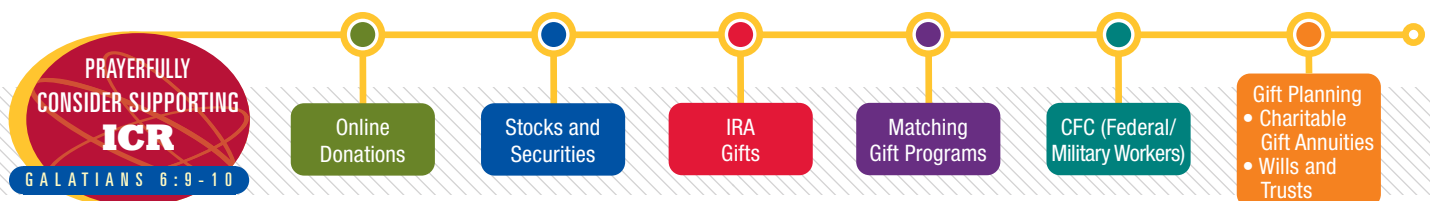
- **Be thankful.** Christians, above all other people in the world, have countless reasons to be thankful. Reflect on the blessings and assurances we have in Christ and take 1 Thessalonians 5:18 to heart by giving thanks “in everything”—including the hard times.
- **Trust God.** When resources run low, remember we are only stewards of the portion our Creator allows us to manage. He still owns “the cattle on a thousand hills” and “the earth...and all its fullness” (Psalm 50:10; 24:1). We can trust Him to provide what we truly need.
- **Rejoice always.** When the world reacts in fear and panic, believers can be a powerful witness because our security doesn't rest on our bank accounts. Our treasure is in heaven (Matthew 6:20), which no earthly crisis can touch. “Rejoice in the Lord always. Again I will say, rejoice!” (Philippians 4:4). And let others see your joy.
- **Pray continuously.** Paul commanded us to pray “without ceasing,” as he himself did (Romans 1:9; 1 Thessalonians 5:17; 2 Timothy 1:3). Prayer should be an integral part of our lives, especially during times like these. Paul reminds us, “Be anxious for nothing, but in everything by prayer and supplications, with thanksgiving, let your requests be made known to God” (Philippians 4:6). Like the old hymn “What a Friend We Have in Jesus” says, “Take it to the Lord in prayer!”
- **Give generously.** Times of financial hardship provide abundant opportu-

- God promises to never leave us as we face challenges and hardship.
- Difficult circumstances can strengthen our faith, and we can still be thankful and trusting as we rest in His promises.
- Even in tough times, Christians throughout history have stepped up and given generously, knowing God is faithful to provide all their needs.
- Prayerfully consider helping ICR at this time.

nities for generosity. We see this in the Macedonian churches who, “in a great trial of affliction” and “deep poverty,” gave “beyond their ability” in response to Paul's call to help the suffering believers in Jerusalem (2 Corinthians 8:1-4). This same spirit of Christian generosity lives today, and the current times give even more occasion to “do good to all, especially to those who are of the household of faith” (Galatians 6:10). Look for them, and respond as the Spirit leads.

If ICR has been an encouragement to you, we welcome your gifts to support the unique work God has called us to do. The bottom of this page highlights a variety of ways to show “the proof of your love” for our ministry (2 Corinthians 8:24). We'll put those gifts to good and effective use for the cause of our Creator, the Lord Jesus Christ. ✉

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



Visit [ICR.org/donate](https://www.icr.org/donate) and explore how you can support the vital work of ICR ministries. Or contact us at Stewardship@ICR.org or **800.337.0375** for personal assistance. ICR is a recognized 501(c)(3) nonprofit ministry, and all gifts are tax-deductible to the fullest extent allowed by law.

Image credit: Joel Kautz



★★★★★ Loved this place! So happy to see people way smarter than me proving God's existence through science and providing resources to those of us who don't study science in engaging and creative ways. **For anyone who is questioning if God is real because of science, go here!** They have endless resources to read and also provide a great magazine [*Acts & Facts*]. Such a cool place, hope they are blessed through their work.

— E. P.

My family did a Dallas vacation over spring break, and one of our goals was to visit the new ICR [Discovery Center for Science & Earth History] museum since we've been supporters and have followed the progress of its construction....It was very refreshing to visit ICR and get a dose of biblical reality regarding Earth's origins. Keep up the good work!

— T. L.



In [regard to] the [March 2020 *Acts & Facts* article] "Mystery of Godliness" by Dr. Henry Morris III, I have an enlightening and somewhat humorous incident to share. My parents were linguists with Wycliffe Bible Translators among the Huambisa people group in the jungles of Peru in the 1950s and '60s. Dad and Mom were struggling over the translation of the Wedding at Cana of Galilee. I remember seeing Dad on his knees, his head in his hands on his hard-backed office chair, struggling over translation issues and related matters when I would come downstairs in the morning. One morning I asked Mom what was the matter? Here was her answer: They couldn't understand why the Huambisa translation helpers didn't see Jesus' miracle of turning the water into wine as a *miracle*. They just weren't impressed. **Finally, the reason came out: They thought we did the same miracle every time we opened a package of Chicha Morada (like our Kool-Aid) and poured it into a pitcher of water.**

— T. D.



"In the beginning God created the heavens and the earth." There is nothing as comforting to me as knowing that nothing, absolutely nothing, can happen in a different way than how the Lord says it. That is why biblical creationism increased my faith dra-

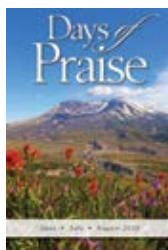
...matically. God created the heavens and the earth in six days, not because He couldn't have done it otherwise, but because He had the authority to do it the way He wanted, and nothing and no one could change it.

— J. W.



LinkedIn I really appreciate seeing articles like this [Dr. Randy Guliuzza's "Darwinian Medicine Is Poison to Health Care," March 2020 *Acts & Facts*] made available to the general population especially at a time like this. If only to plant a small seed of "hmmm?" in the minds of all who blindly conform without employing any critical thinking skills. Funny how, more than ever, it's becoming increasingly evident that your beliefs dictate your actions. And if you're an evolutionist at a time of worldwide pandemic, your algorithm for action is greatly impacted by your belief in evolution. **If, on the other hand, you're a creationist, then take heart and live out your purpose fearlessly till you draw your last breath!**

— A. C.



Thank you for these [*Days of Praise*] devotionals! **They have been life-changing for me, and I actually am able to learn something new every day.** I have been in the faith several years, and I have been tired of spiritual milk. I feel these devotionals are real spiritual meat like the Bible analogy states.

— A. R.



Ms. [Jayme] Durant, A special blessing was the April issue of *Acts & Facts*....The articles on the search for a new [ICR] leader and the tribute to Dr. Whitcomb were especially blessed to read. And you always write a beautiful introductory article in each issue. Our LORD has blessed you with a gifted pen.

— K. S.

My thanks to Jayme Durant for her beautiful editorial in this [May's] *Acts & Facts*. **Ms. Durant is always a gifted writer, but this essay in response to the pandemic was especially moving.** May God bless her, her family, and all your team.

— R. B.



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