# Institute for Creation Research
# Research Update

## Prestonwood Baptist Church
## Examine Class
## March 19, 2023

Jake Hebert, Ph.D.

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# Last Decade of Ice Age Research

# New Biology Focus

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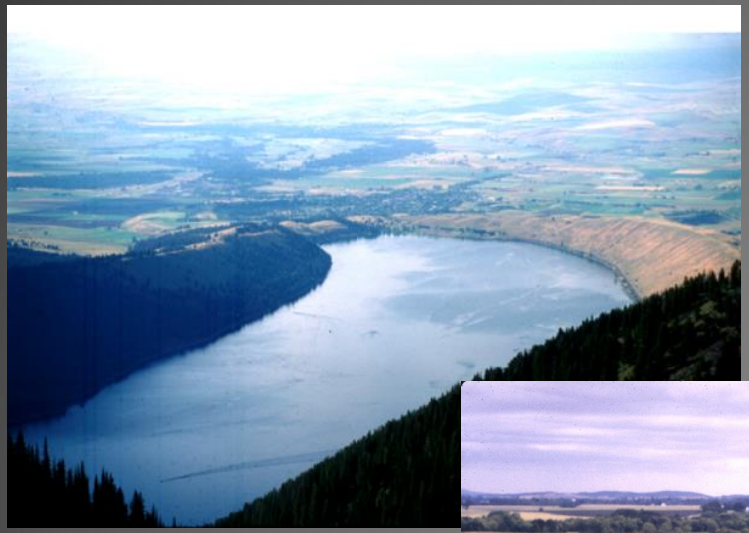

Image Credits:
Michael Oard

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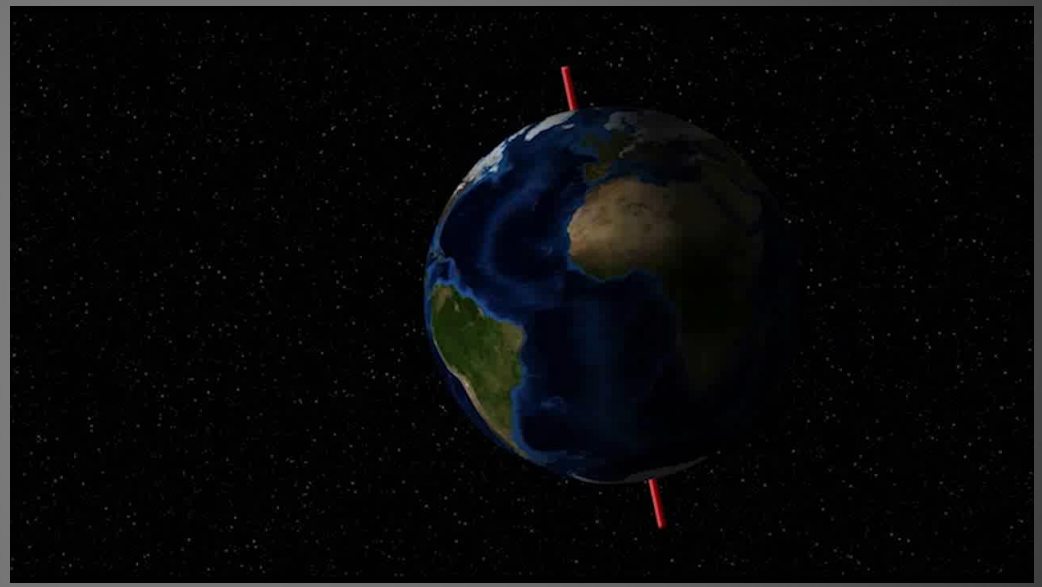
# Ice Age: Strong Geological Evidence

# “Milankovitch (Astronomical) Theory”



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# Astronomer Sir Fred Hoyle

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“If I were to assert that a glacial condition could be induced in a room liberally supplied during winter with charged night-storage heaters

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“If I were to assert that a glacial condition could be induced in a room liberally supplied during winter with charged night-storage heaters simply by taking an ice cube into the room, the proposition would be no more unlikely than the Milankovitch theory.”

Hoyle, F. 1981. *Ice: The Ultimate Human Catastrophe*. New York: Continuum, 77.

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# Noah’s Flood Caused the Ice Age

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# “But there’s no evidence for a Global Flood.”

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# What if a Global Flood really happened?

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These water-deposited sediments are from the Genesis Flood.

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## Related Articles

- A Global Catastrophic Event Wiped Out Ancient Forests
- Stunning New Evidence of a Higher Ancient Sea Level
- Transcontinental Sedimentation and the Flood
- Red Butte: Remnant of the Flood

## Why Does Nearly Every Culture Have a Tradition of a Global Flood?

by John D. Morris, Ph.D.

# Hundreds of Flood accounts from around the world.

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## Uniformitarianism

"The present is the key to the past."

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# The Apostle Peter's Prophecy

". . . Knowing this first: that scoffers will come in the last days, walking according to their own lusts, and saying, "Where is the promise of His coming? For since the fathers fell asleep, all things continue as they were from the beginning of creation."

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For this they willfully forget: that by the word of God the heavens were of old, and the earth standing out of the water and in the water, by which the world that then existed perished, being flooded with water.

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But the heavens and the earth which are now preserved by the same word, are reserved for fire until the day of judgment and perdition of ungodly men.”

2 Peter 3:3-9

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# Of course scoffers will deny the reality of past and future judgment!

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# Michael Oard: "Mr. Ice Age"

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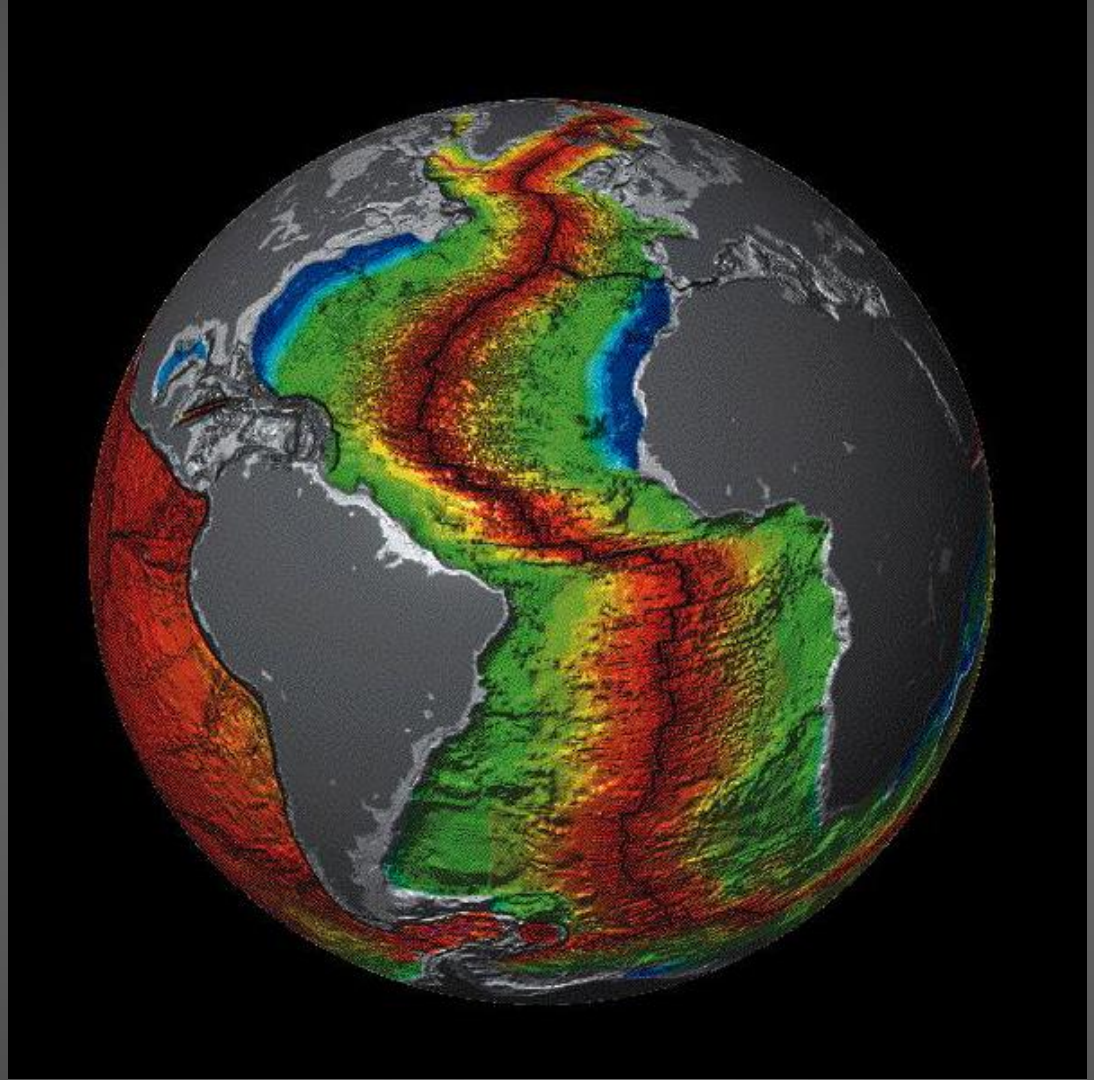

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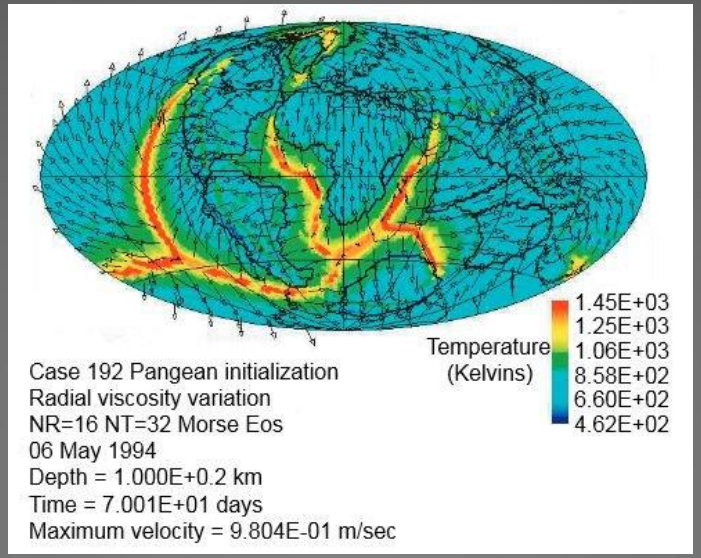
Dr. John Baumgardner




Baumgardner, J. R. 1994. Computer Modeling of the Large-Scale Tectonics Associated with the Genesis Flood. *Proceedings of the Third International Conference on Creationism*, ed. R. E. Walsh, pp. 49-62. Pittsburgh, Pennsylvania: Creation Science Fellowship. Image used by permission of Creation Science Fellowship.

"... the world's pre-eminent expert in the design of computer models for geophysical convection."

Burr, Chandler. "The Geophysics of God". *U. S. News & World Report*. June 16, 1997, pp. 55-58.

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Larry Vardiman, Ph.D.
Emeritus ICR Scientist

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ICR DVD Series *Unlocking the Mysteries of Genesis*

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# A Decade of ICR Ice Age Research (2014-2023)

1. Refuting the Milankovitch Ice Age Theory

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10 December 1976, Volume 194, Number 4270 SCIENCE

# Variations in the Earth's Orbit: Pacemaker of the Ice Ages

For 500,000 years, major climatic changes have followed variations in obliquity and precession.

J. D. Hays, John Imbrie, N. J. Shackleton

For more than a century the cause of fluctuations in the Pleistocene ice sheets has remained an intriguing and unsolved scientific mystery. Interest in this problem has generated a number of possible explanations (*1*, *2*). One group of theories invokes factors external to the cli-

hypothesis has been formulated so as to predict the frequencies of major Pleistocene glacial fluctuations. Thus it is the only explanation that can be tested geologically by determining what these frequencies are. Our main purpose here is to make such a test.

the last interglacial on the basis of these curves have ranged from 80,000 to 180,000 years ago (*22*).

The second and more critical problem in testing the orbital theory has been the uncertainty of geological chronology. Until recently the inaccuracy of dating methods limited the interval over which a meaningful test could be made to the last 150,000 years. Hence the most convincing arguments advanced in support of the orbital theory to date have been based on the ages of 80,000, 105,000, and 125,000 years obtained for coral terraces first on Barbados (*15*) and later on New Guinea (*23*) and Hawaii (*24*). These structures record episodes of high sea level (and therefore low ice volume) at times predicted by the Milankovitch theory. Unfortunately, dates for older terraces are too uncertain to yield a definitive test (*25*).

More climatic information is provided by the continuous records from deep-sea cores, especially the oxygen isotope record obtained by Emiliani (*26*). However, the quasi-periodic nature of both the iso-

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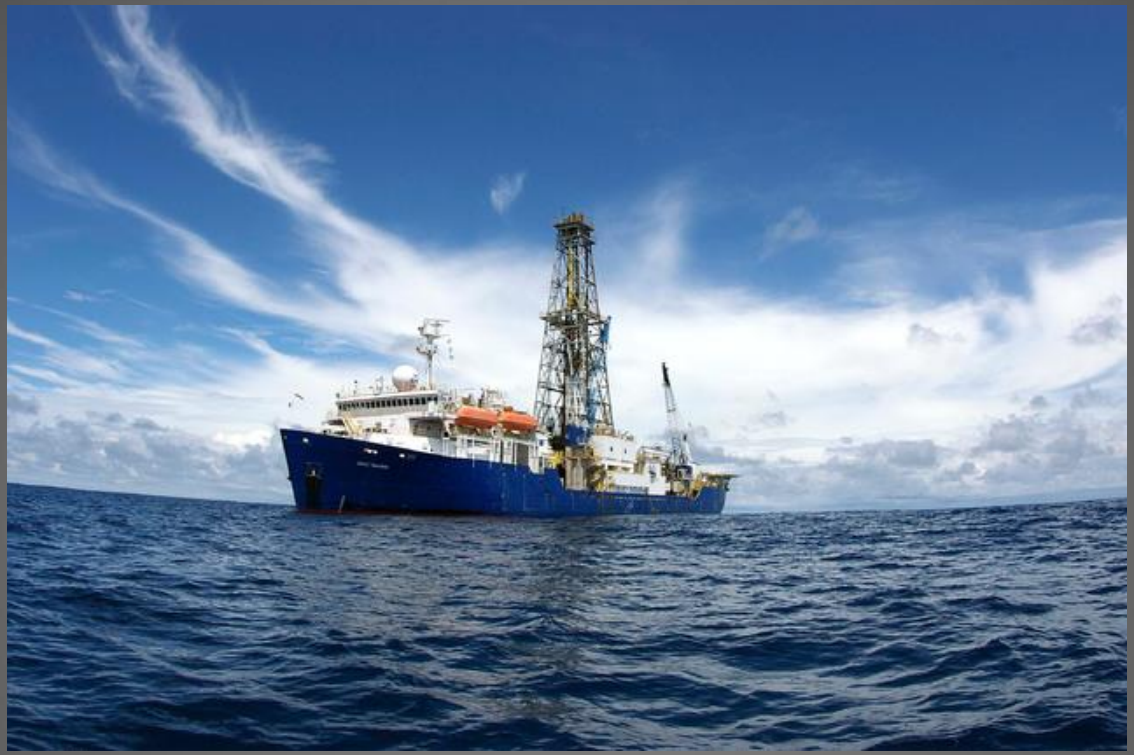

Image Here and Later: Arito Sakaguchi & IODP/TAMU

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# Deep-sea sediment cores

Image Here and Later: National Science Foundation

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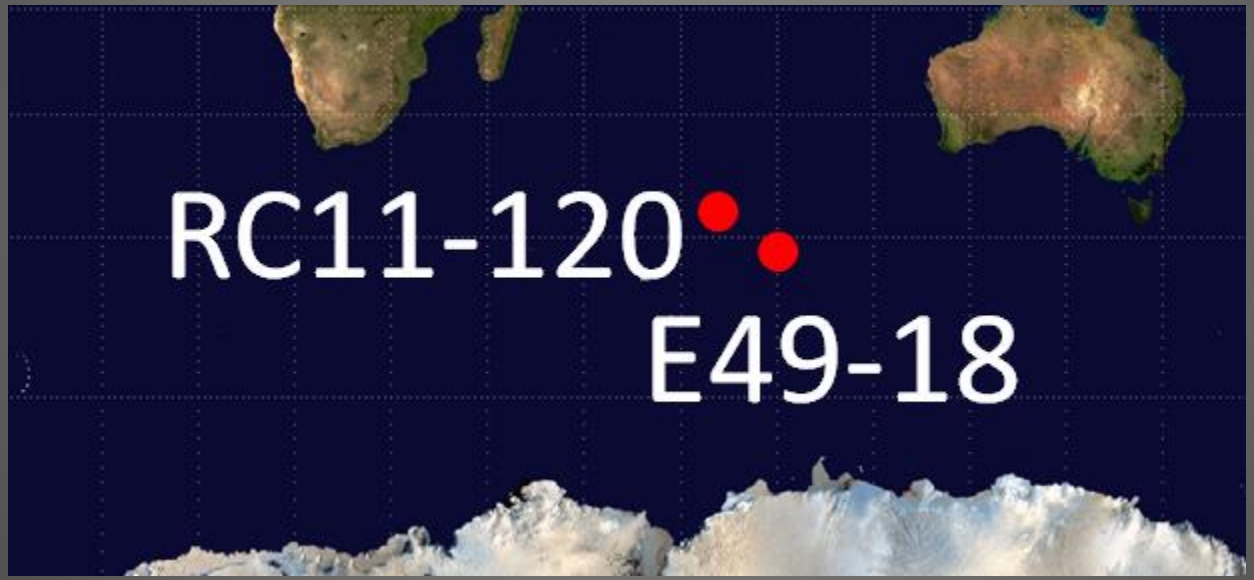
# Pacemaker Paper:

## Assigned ages and analyzed “wiggles” in two southern Indian Ocean sediment cores




Mercator Map Credits here and elsewhere:
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# Scientists used a third core to date the sediments in the two Indian Ocean cores.

Core V28-238:
"Ice Age Rosetta Stone"

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# Core V28-238:
# Evidence the Earth's geomagnetic field flipped

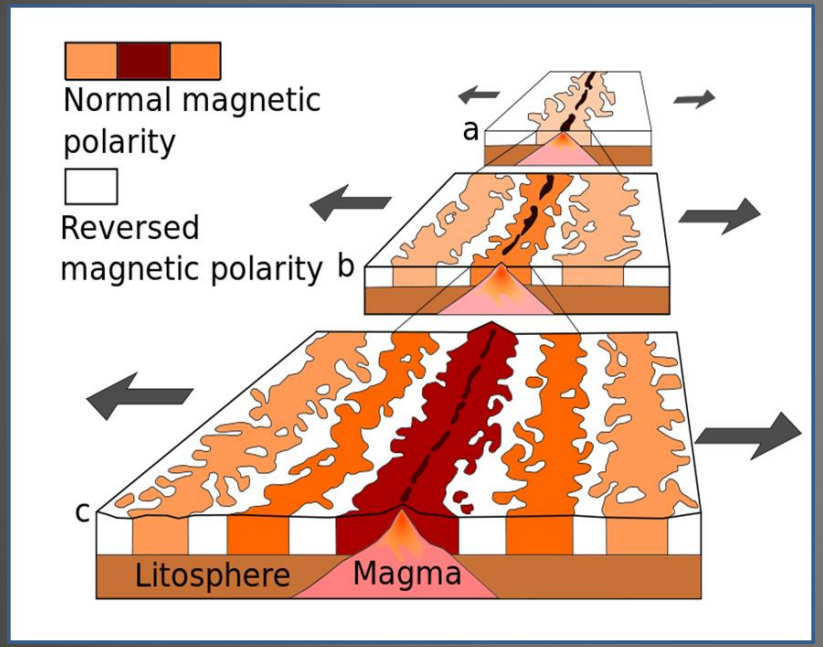


Image:
US Geological Survey

"Brunhes-Matuyama magnetic reversal" 700,000 years ago

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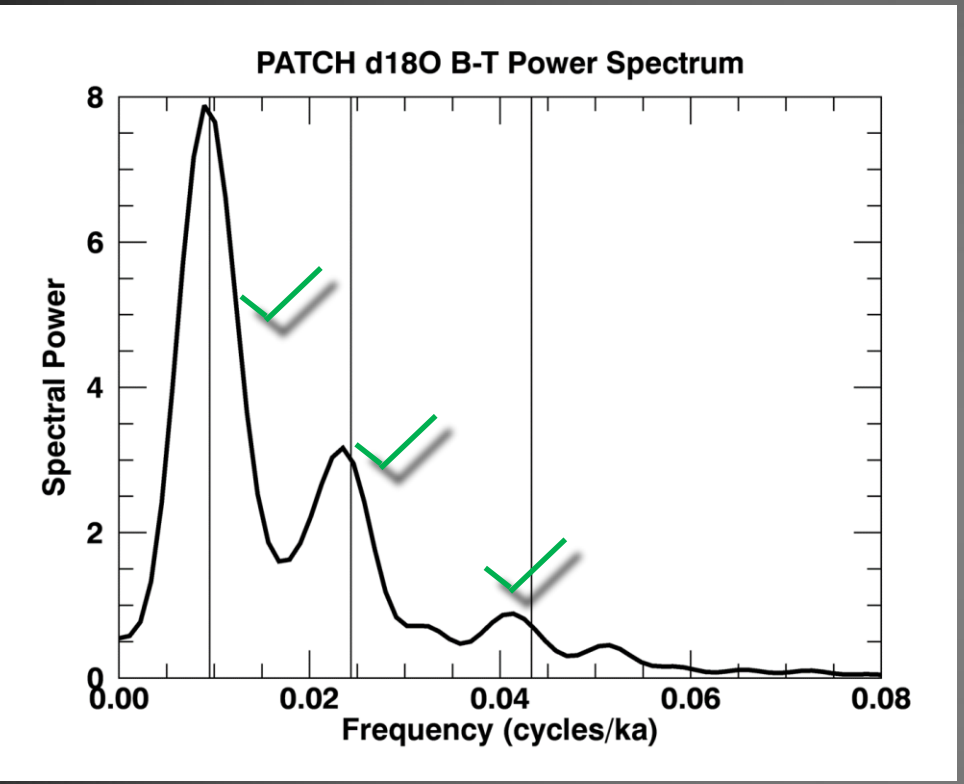


Astronomical frequencies predicted by theory "matched" frequencies of climate cycles inferred from deep-sea cores.

700,000 years

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# Age of 700,000 years used in “Pacemaker” paper.

## Around 1992, scientists revised this age to 780,000 years.

# Brunhes–Matuyama reversal

From Wikipedia, the free encyclopedia

The **Brunhes–Matuyama reversal**, named after Bernard Brunhes and Motonori Matuyama, was a geologic event, approximately 781,000 years ago, when the Earth's magnetic field last underwent reversal.[1][2] Estimations vary

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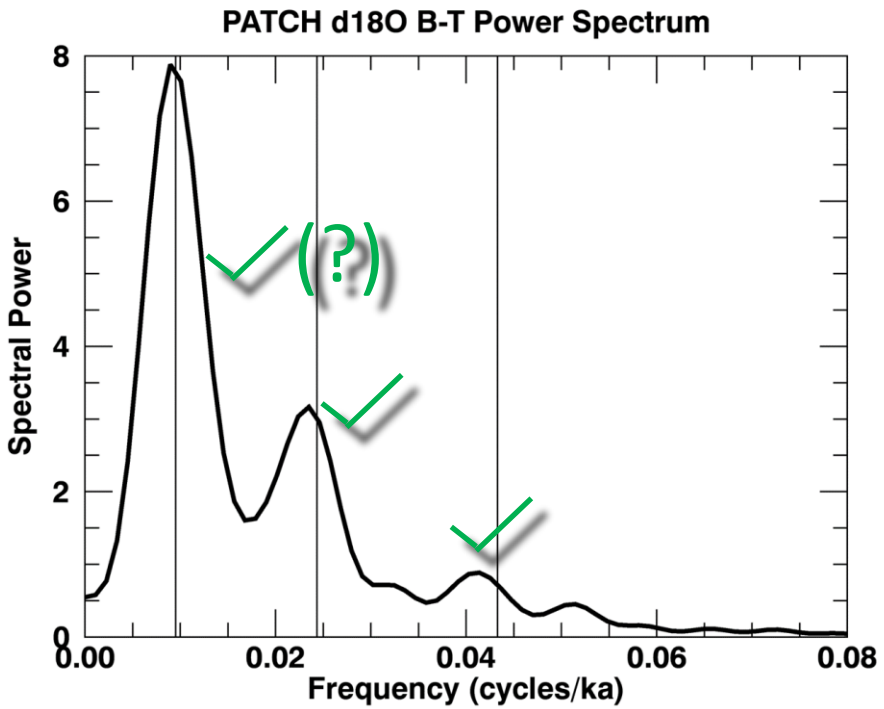
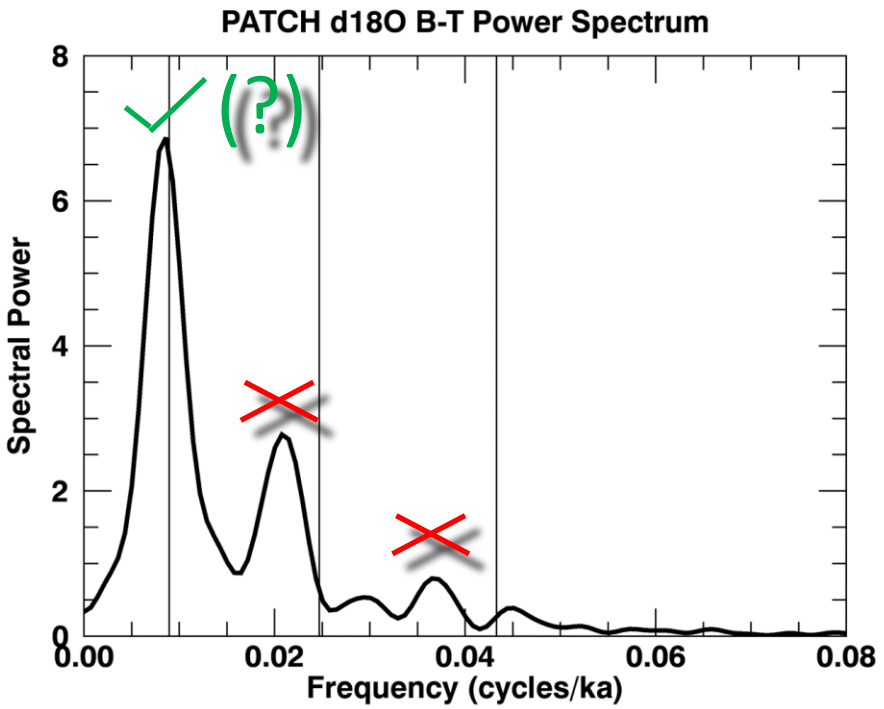



700,000 years




780,000 years

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# The Milankovitch Theory:
# An Argument for Catastrophic Global Warming!

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# At first, no one seemed to notice.

Image Credit: Warner Brothers

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# But in 1996 geochemist Wallace Broecker called a private meeting of scientists.

Image Credit: Gregorio Borgia/AP

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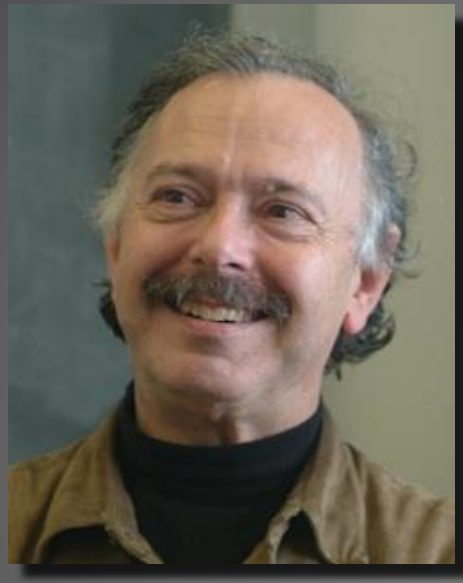

## Dr. Richard A. Muller

http://www.profrichmuller.com/

Dr. Richard Muller of Berkeley was making astute criticisms of the Milankovitch theory.

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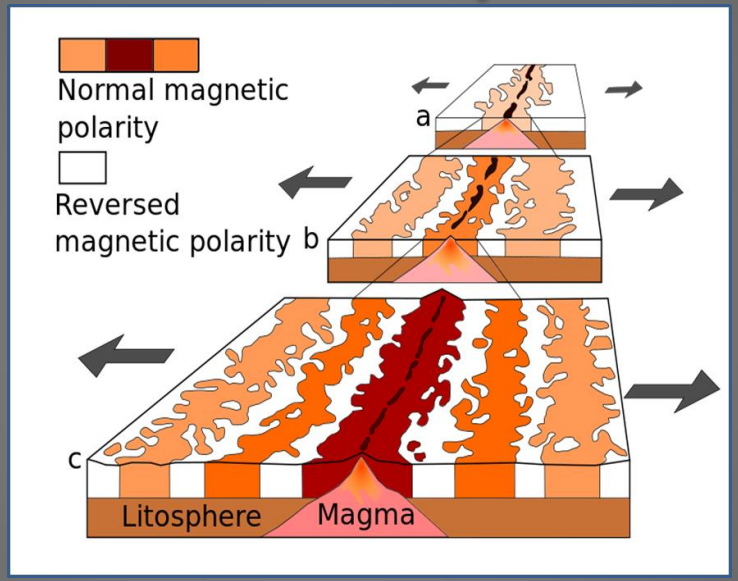
# Did the age of the Brunhes-Matuyama magnetic reversal come up at this meeting?




# Did they realize the Pacemaker results were no longer valid?

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Muller's criticisms hit home with many researchers. "He scared the [expletive] out of them, and they deserved it," says [climate scientist W. S.] Broecker.

Monastersky, R. The Big Chill: Does Dust Drive Earth's Ice Ages? *Science News* 152 (October 4, 1997): 220-221.

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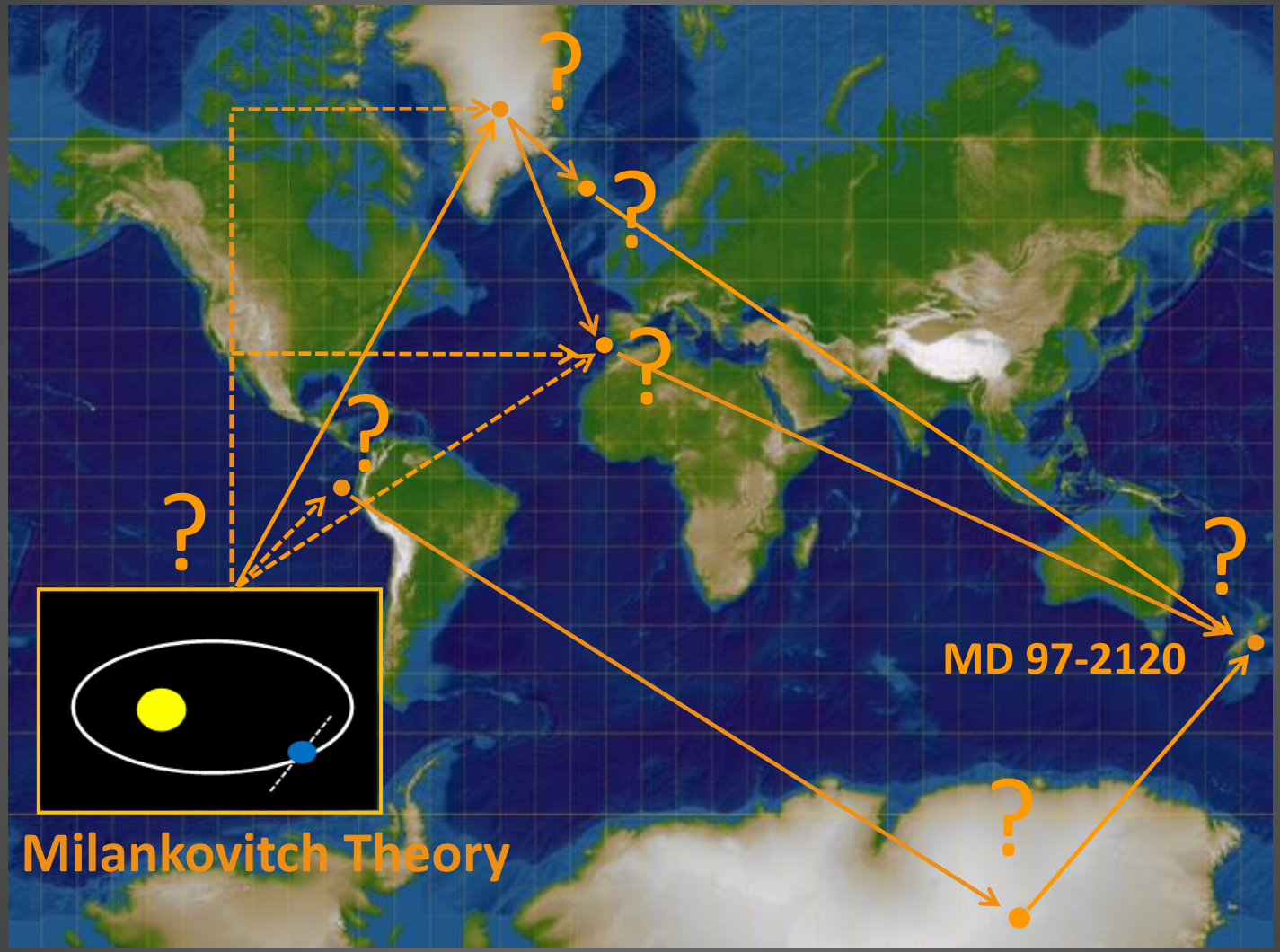


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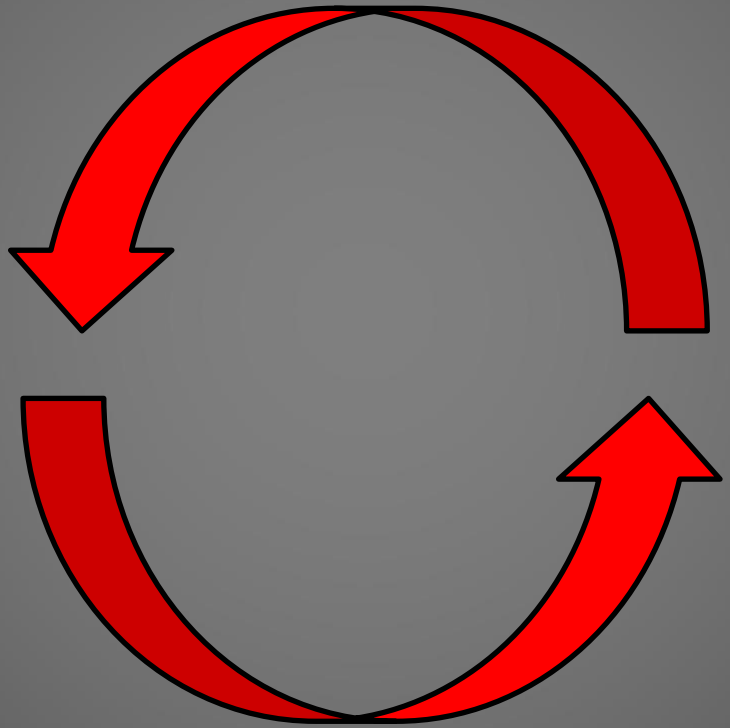
# Circular Reasoning



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Circular reasoning?
That’s just a creationist talking point!

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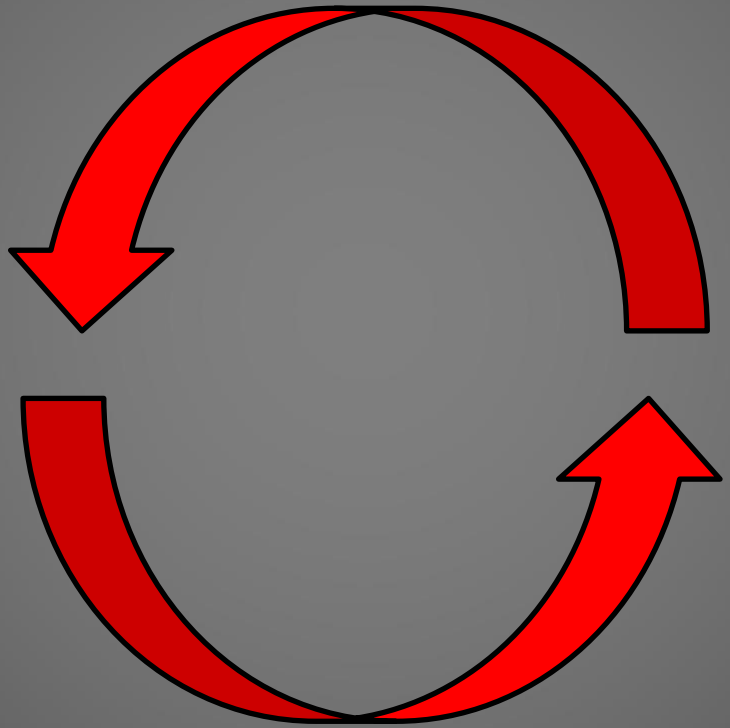
# Circular Reasoning



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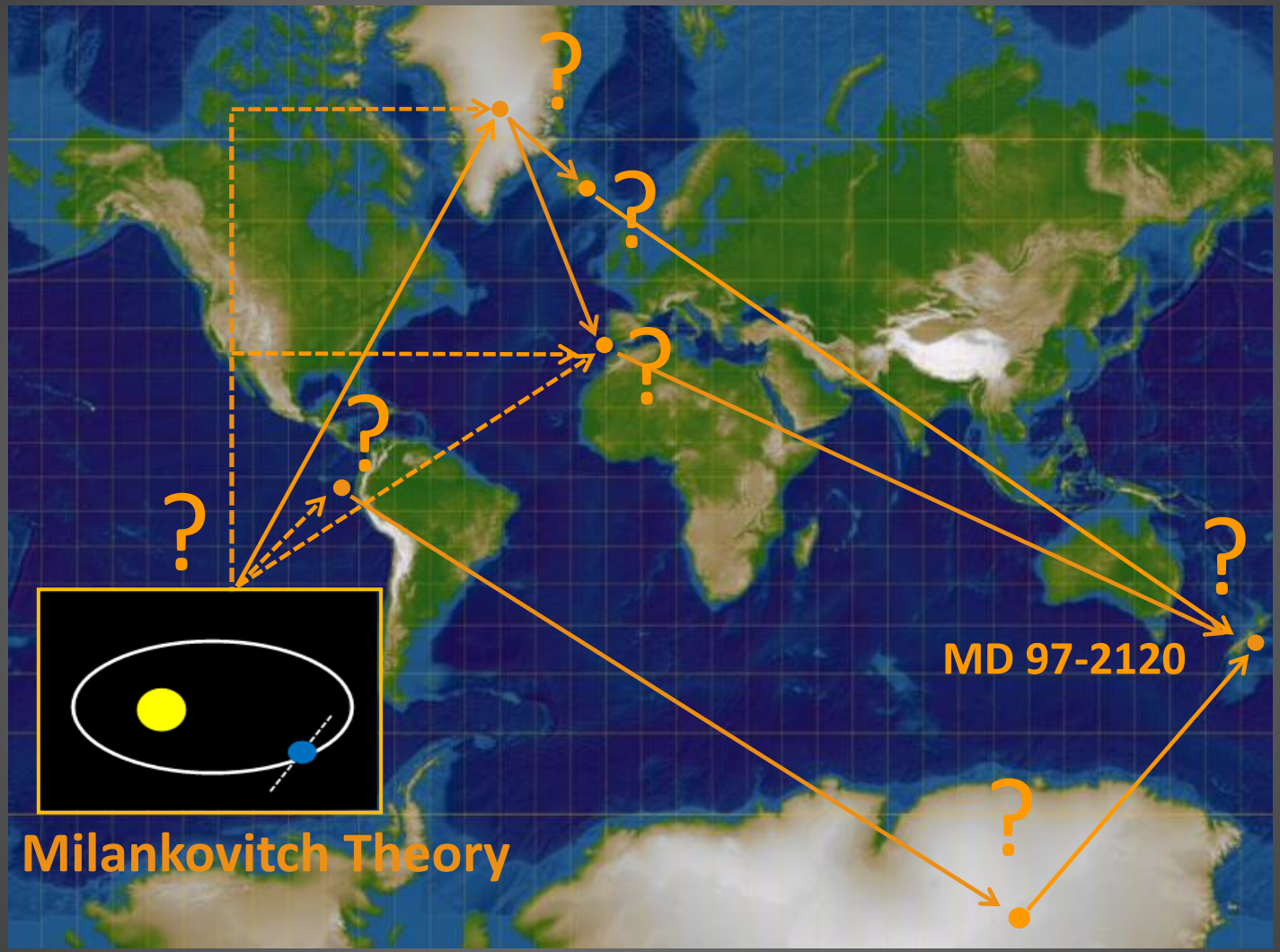


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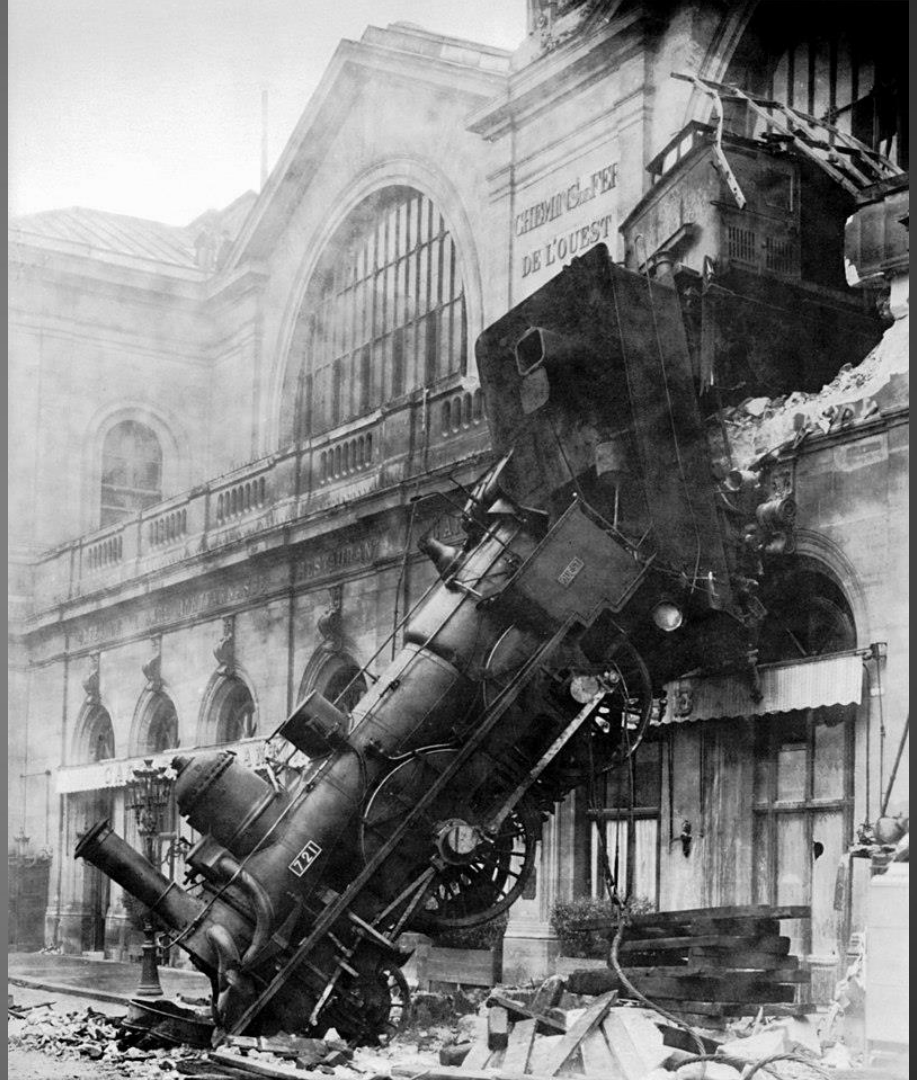
Hundreds, Perhaps *Thousands*, of Uniformitarian Age Assignments Called into Question.

A Chronological Train Wreck!

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Oceanographers soon rose to the challenge. In the August [1997] PAELOCEANOGRAPHY, Maureen E. Raymo of the Massachusetts Institute of Technology presents an untuned sediment record that corroborates the ice age dates determined by tuning.

Image Credit: Kalman Zabarsky

http://www.bu.edu/bostonia/winter08/ice-age/

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PALEOCEANOGRAPHY, VOL. 12, NO. 4, PAGES 577-585, AUGUST 1997

# The timing of major climate terminations

M. E. Raymo

Department of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology, Cambridge

**Abstract.** A simple, untuned "constant sedimentation rate" timescale developed using three radiometric age constraints and eleven $\delta^{18}O$ records longer than 0.8 Myr provides strong support for the validity of the SPECMAP timescale of the late Quaternary [*Imbrie et al.*, 1984]. In particular, the present study independently confirms the link between major deglaciations (terminations) and increases in northern hemisphere summer radiation at high latitudes and shows that this correlation is not an artifact of orbital tuning. In addition, the excess ice characteristic of late Quaternary "100-kyr" climate cycles typically accumulates when July insolation at 65°N has been unusually low for more than a full precessional cycle, or >21 kyr, and once established does not last beyond the next increase in summer insolation. Thus, the timing of the growth and decay of large 100-kyr ice sheets, as depicted in the deep sea $\delta^{18}O$ record, is strongly (and semipredictably) influenced by eccentricity through its modulation of the orbital precession component of northern hemisphere summer insolation.

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JOURNAL OF CREATION 33(1) 2019 || PAPERS

# Have uniformitarians rescued the 'Pacemaker of the Ice Ages' paper?

*Jake Hebert*

The current dominant Ice Age explanation is the astronomical, or Milankovitch, theory. This theory posits that slow changes in Earth's rotational and orbital motions 'pace' the timing of ice ages by modulating the manner in which solar radiation incident on the earth is distributed with season and latitude. This theory is widely accepted because of an influential 1976 paper entitled "The Pacemaker of the Ice Ages". However, the paper's results were critically dependent upon an assumed age for the most recent geomagnetic reversal, an age which even uniformitarian scientists no longer accept as valid. If one re-does the calculations using the new uniformitarian age assignment, the results are greatly weakened. Although additional evidence for the Milankovitch theory seems weak, a 1997 paper seems to 'rescue' the results of this iconic paper. However, this 'rescue' may be influenced by 'selection bias' and arguably requires arbitrary, capricious handling of seafloor sediment data. Hence, these 1997 results are not terribly convincing.

Did not include the "Ice Age Rosetta Stone" in the analysis.

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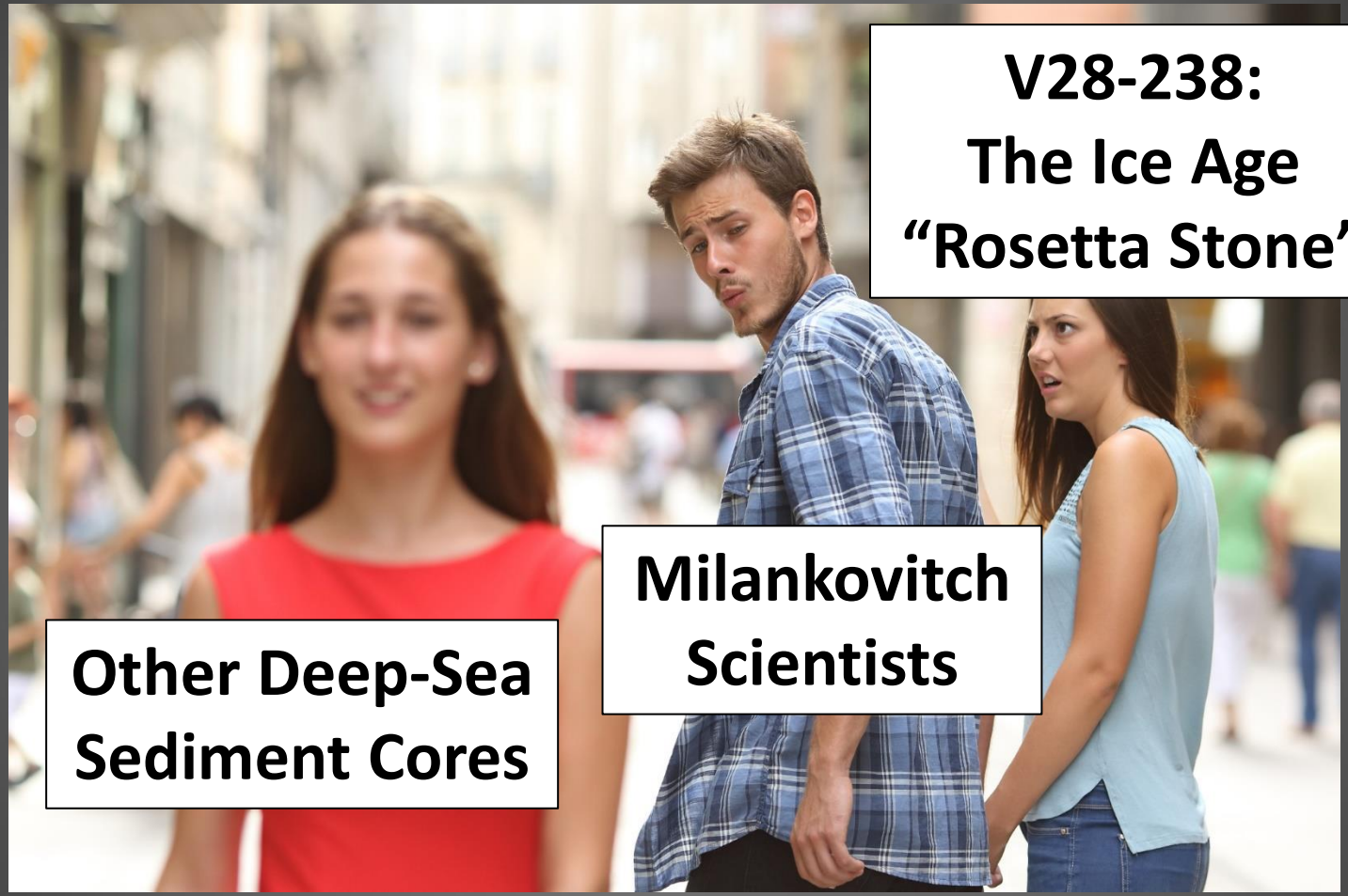


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# A Decade of ICR Ice Age Research (2014-2023)

1. Refuting the Milankovitch Ice Age Theory

2. Additional Fossil Evidence for the Flood

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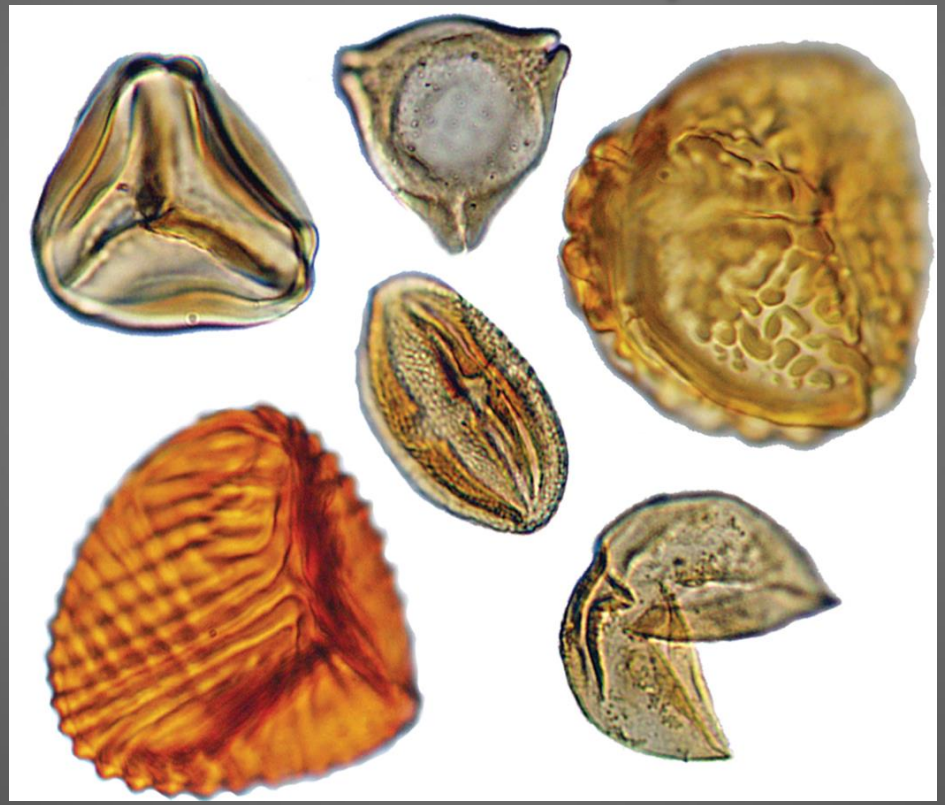
# Scientists can use fossil pollen to infer the locations of past forests.



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“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.”

Peel, A. Rapid climate change ruled out ice age trees. *Phys.org*. Posted May 17, 2013 at phys.org, accessed September 23, 2022.

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# Ice Age tundra and grasslands

Leo Li. Wikimedia Commons.
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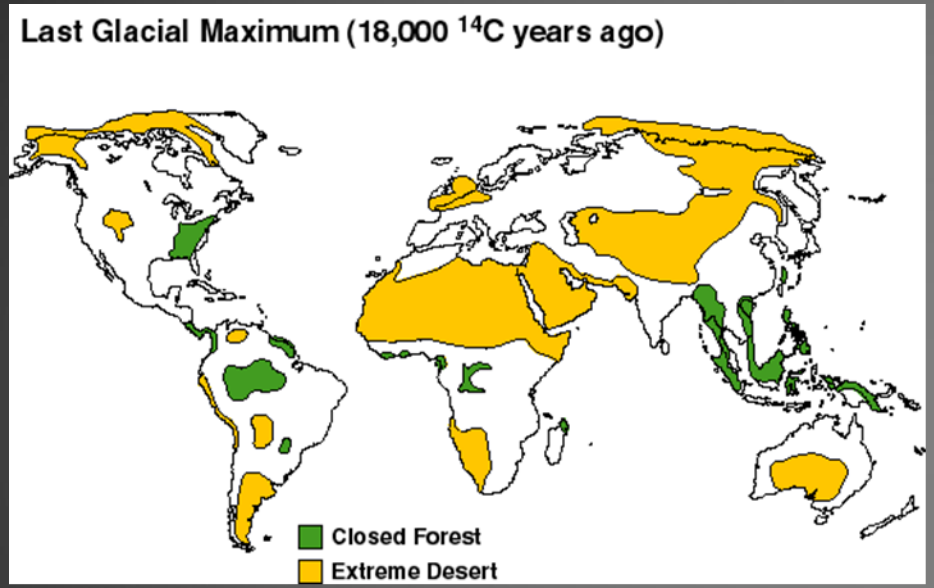


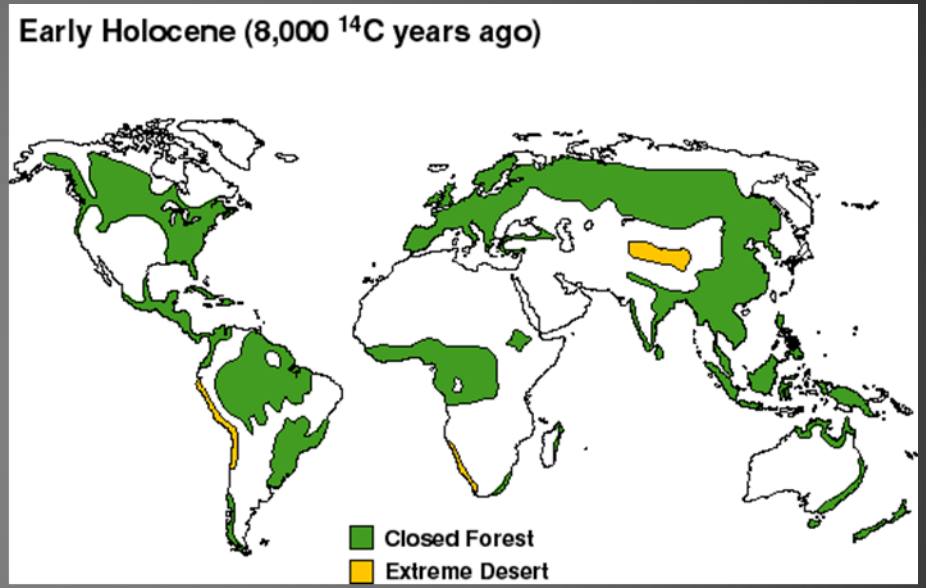


Image Credits: Jonathan Adams. Courtesy of Oak Ridge National Laboratory, U.S. Department of Energy.

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Every tree on the planet was killed during the Flood.
Forests had to completely “start over.”

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Karen Frances Eng

Feb 18, 2015 · 9 min read · Listen

**How to Grow a Forest Really, Really Fast**

Shubhendu Sharma is working to reforest the world, one tiny patch at a time

600-1000 years for a thick, naturally-seeded forest to grow.

The Ice Age lasted ~700 years.

Thick, heavily-canopied Ice Age forests were rare.

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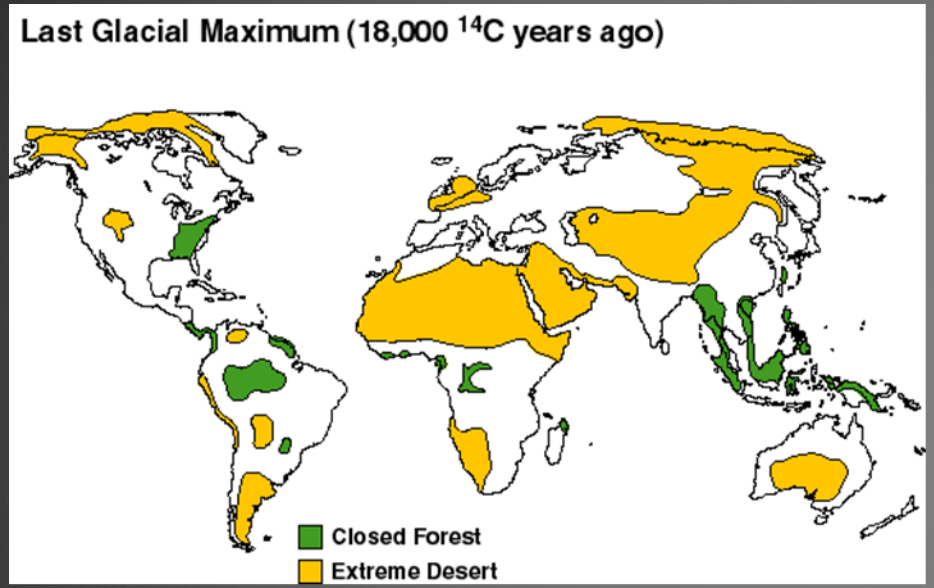


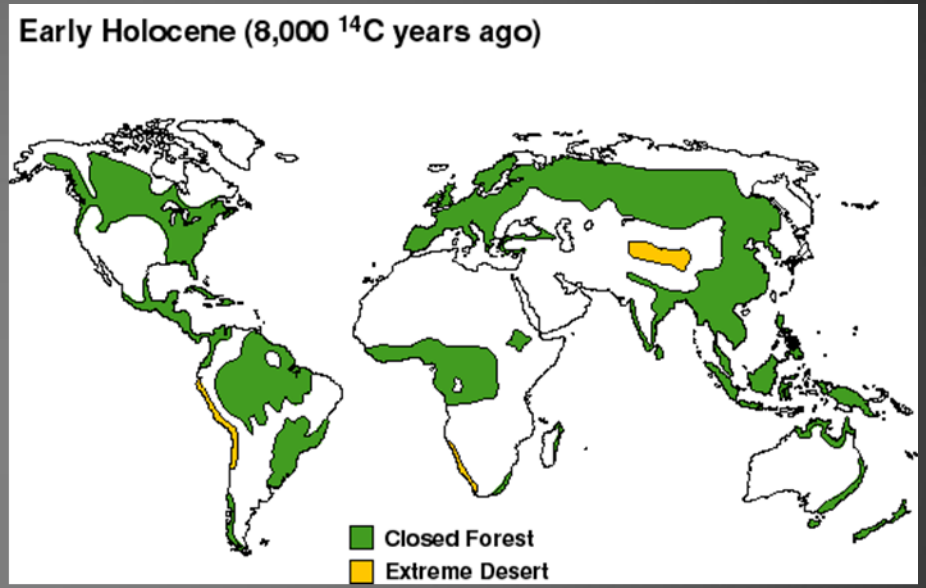


Image Credits: Jonathan Adams. Courtesy of Oak Ridge National Laboratory, U.S. Department of Energy.

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# Missing Ice Age Forests Fit Flood/Ice Age Model

JAKE HEBERT, PH.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 seafloor 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.

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# A Decade of ICR Ice Age Research (2014-2023)

1. Refuting the Milankovitch Ice Age Theory
2. Additional Fossil Evidence for the Flood
3. Advances in Creationist Ice Sheet Modeling

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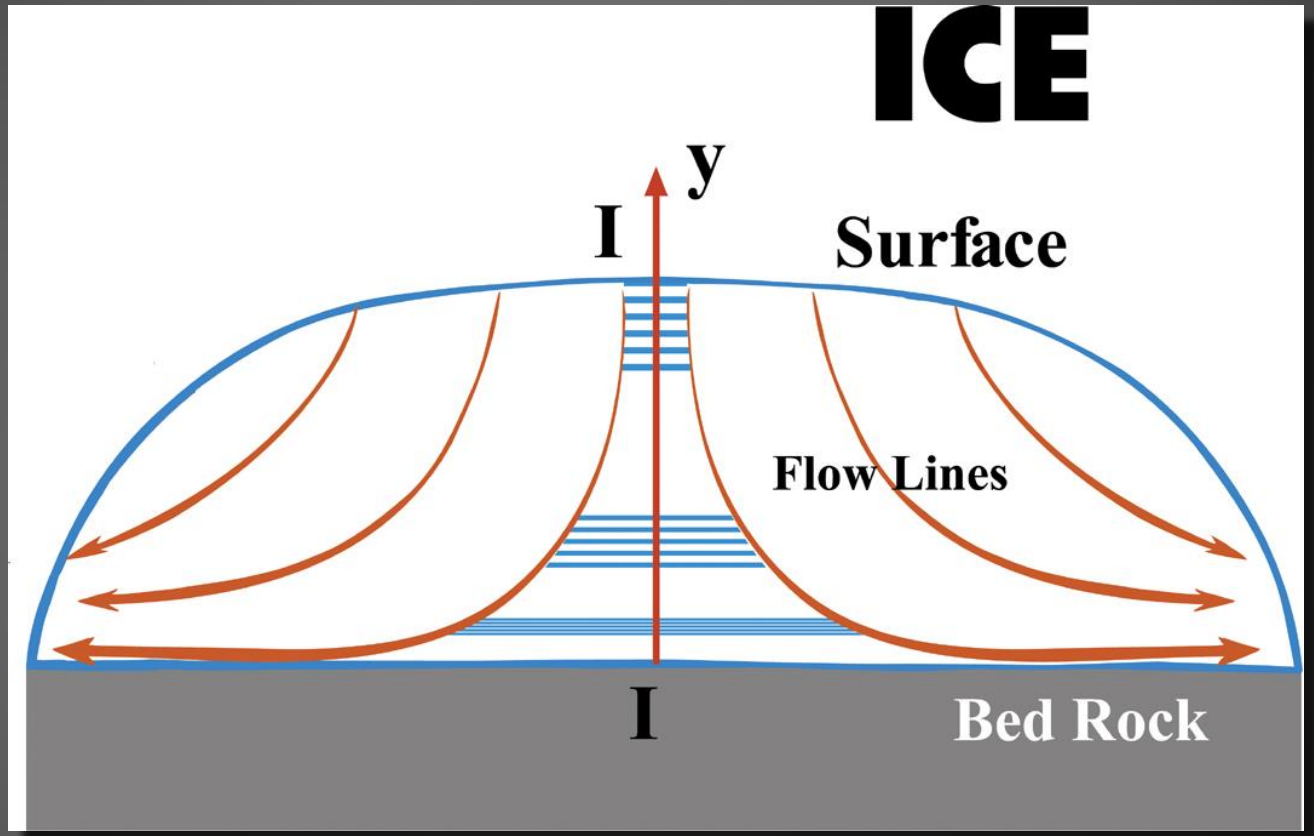


# Ice Flow Models

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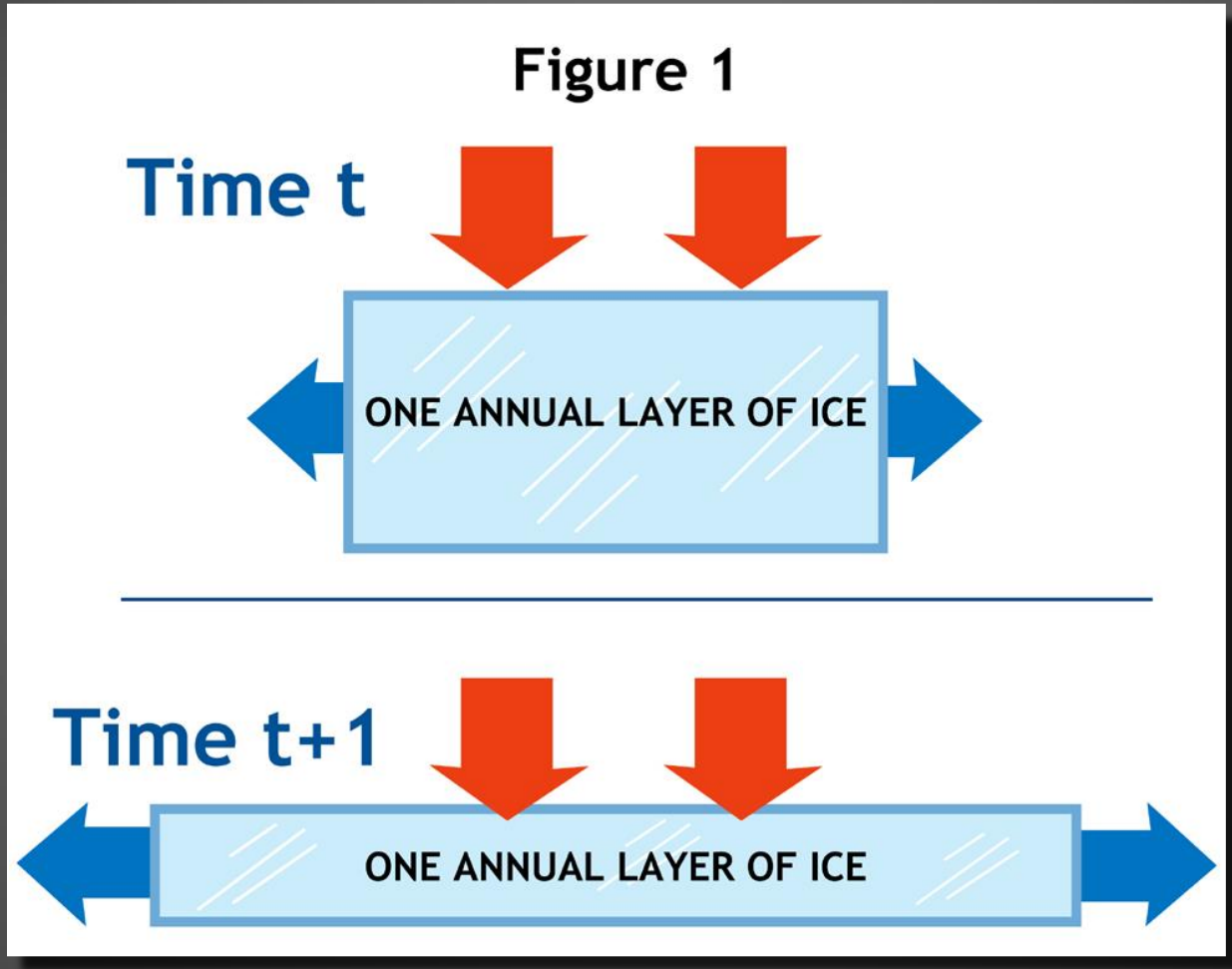


Image Credit:
Michael Oard

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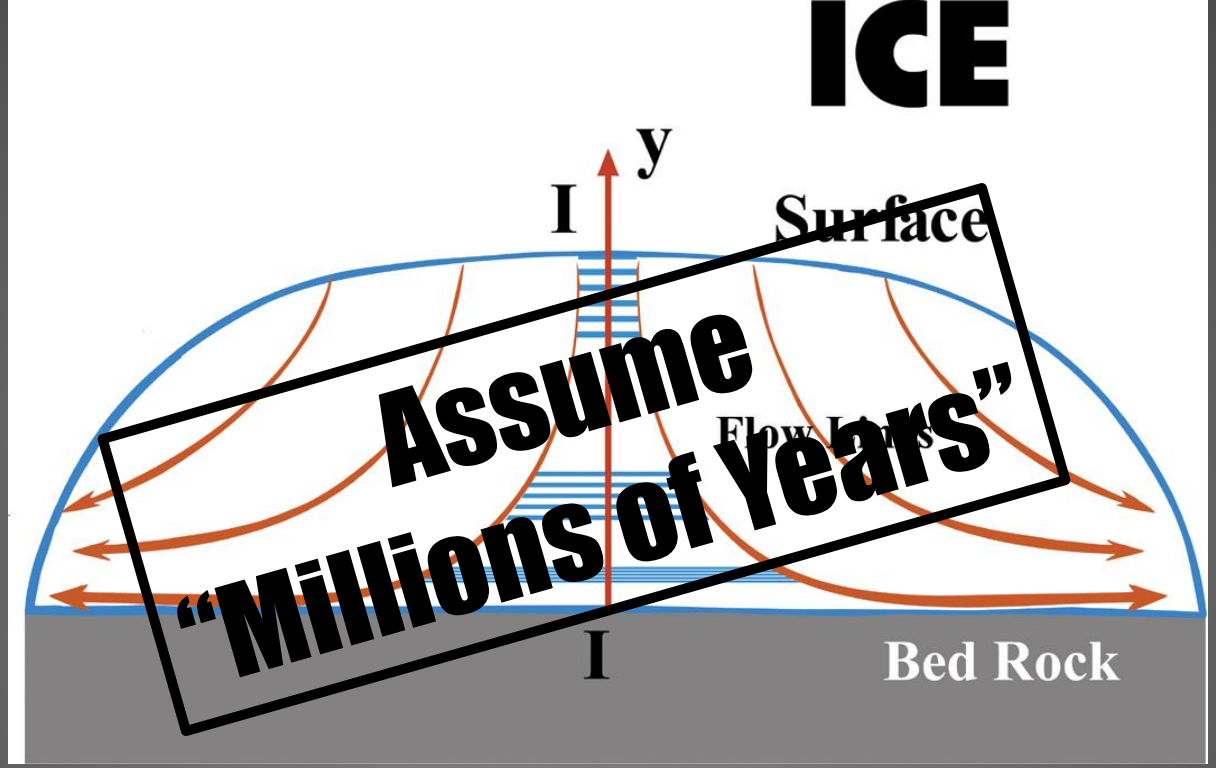


Uniformitarian "Analytical" Ice Flow Models assume a constant height for the ice sheet.

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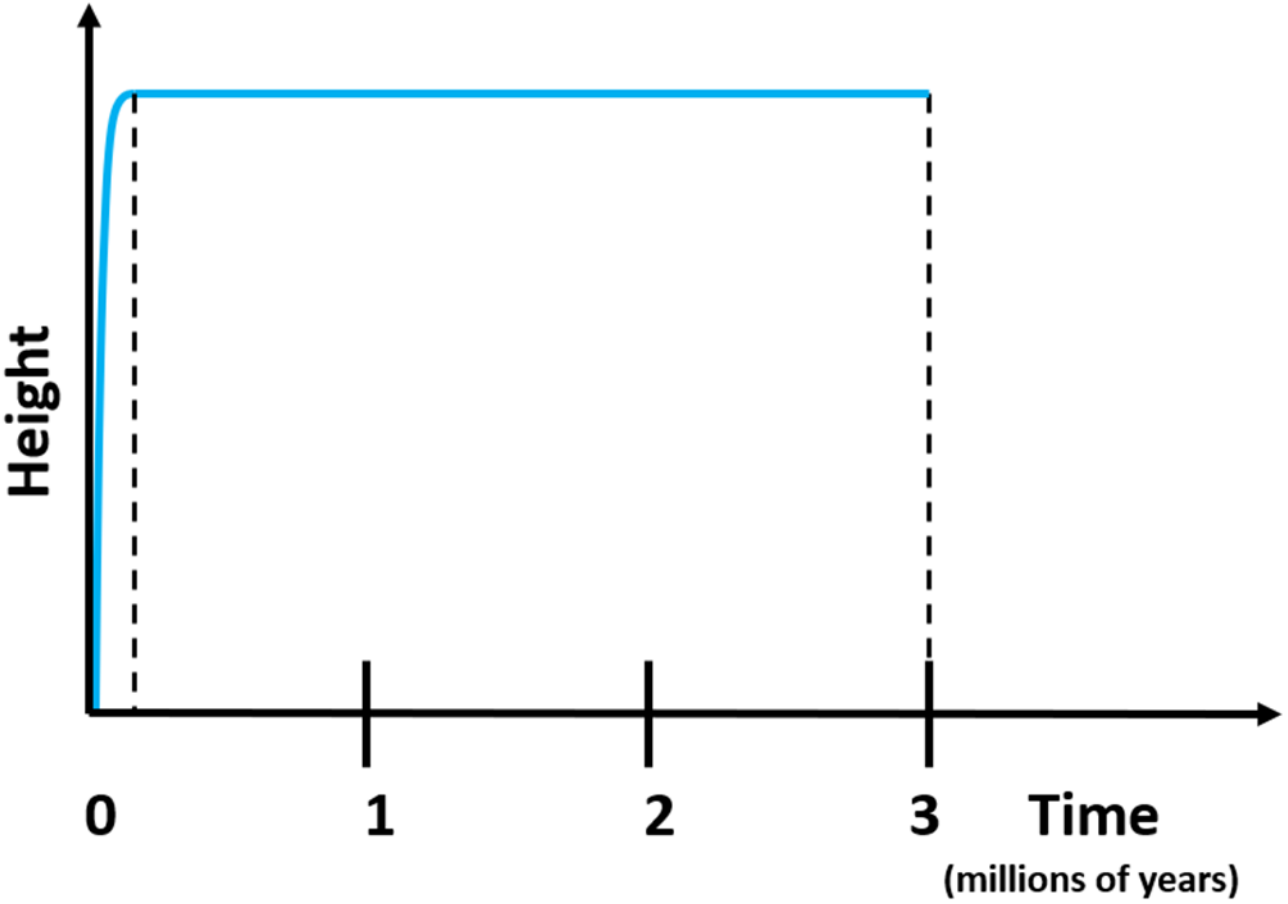


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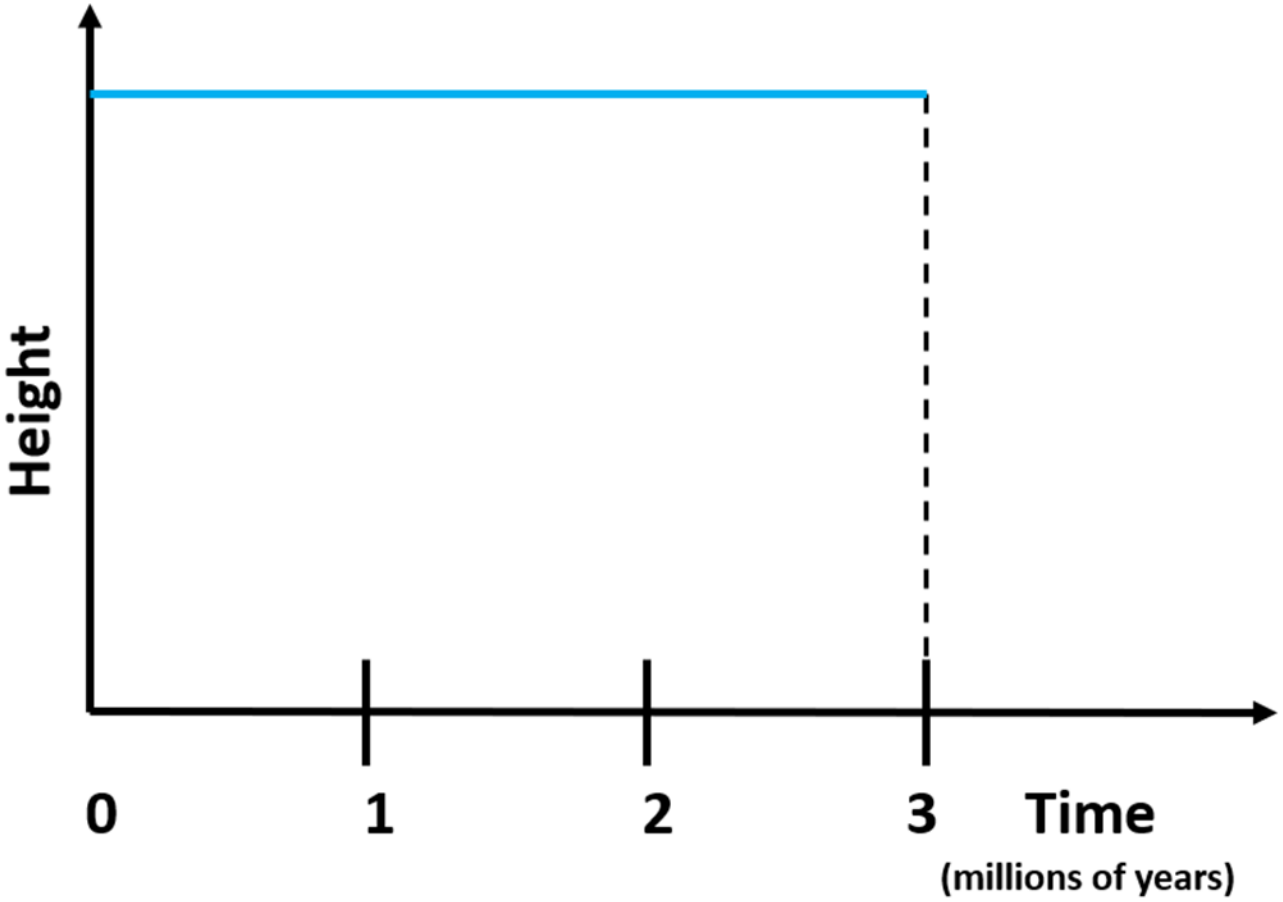


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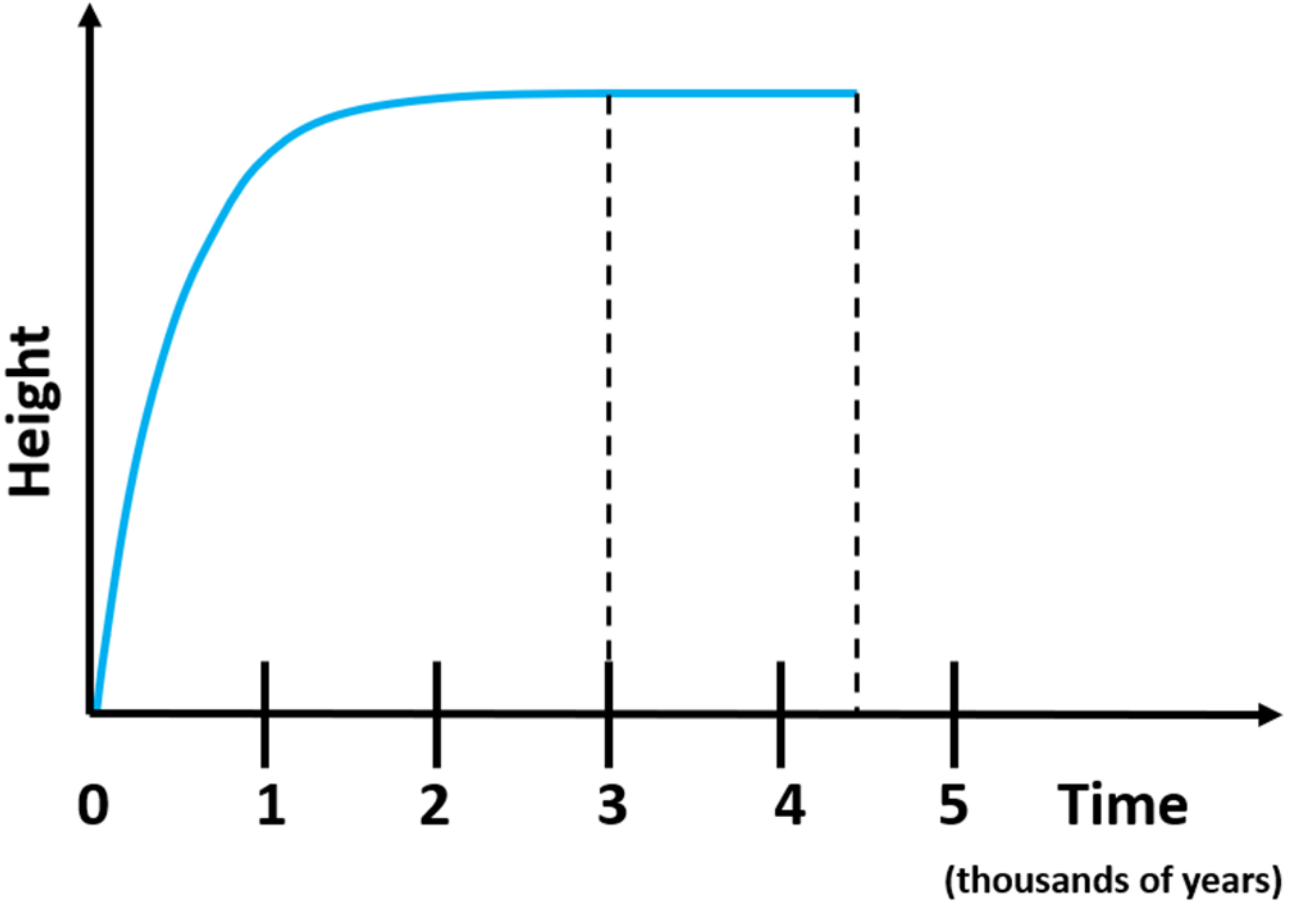


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# Larry Vardiman

The Proceedings of the International Conference on Creationism

Volume 3
Print Reference: Pages 561-568

Article 60

1994

## An Analytical Young-Earth Flow Model of the Ice Sheet Formation During the "Ice-Age"

Larry Vardiman
*Institute for Creation Research*

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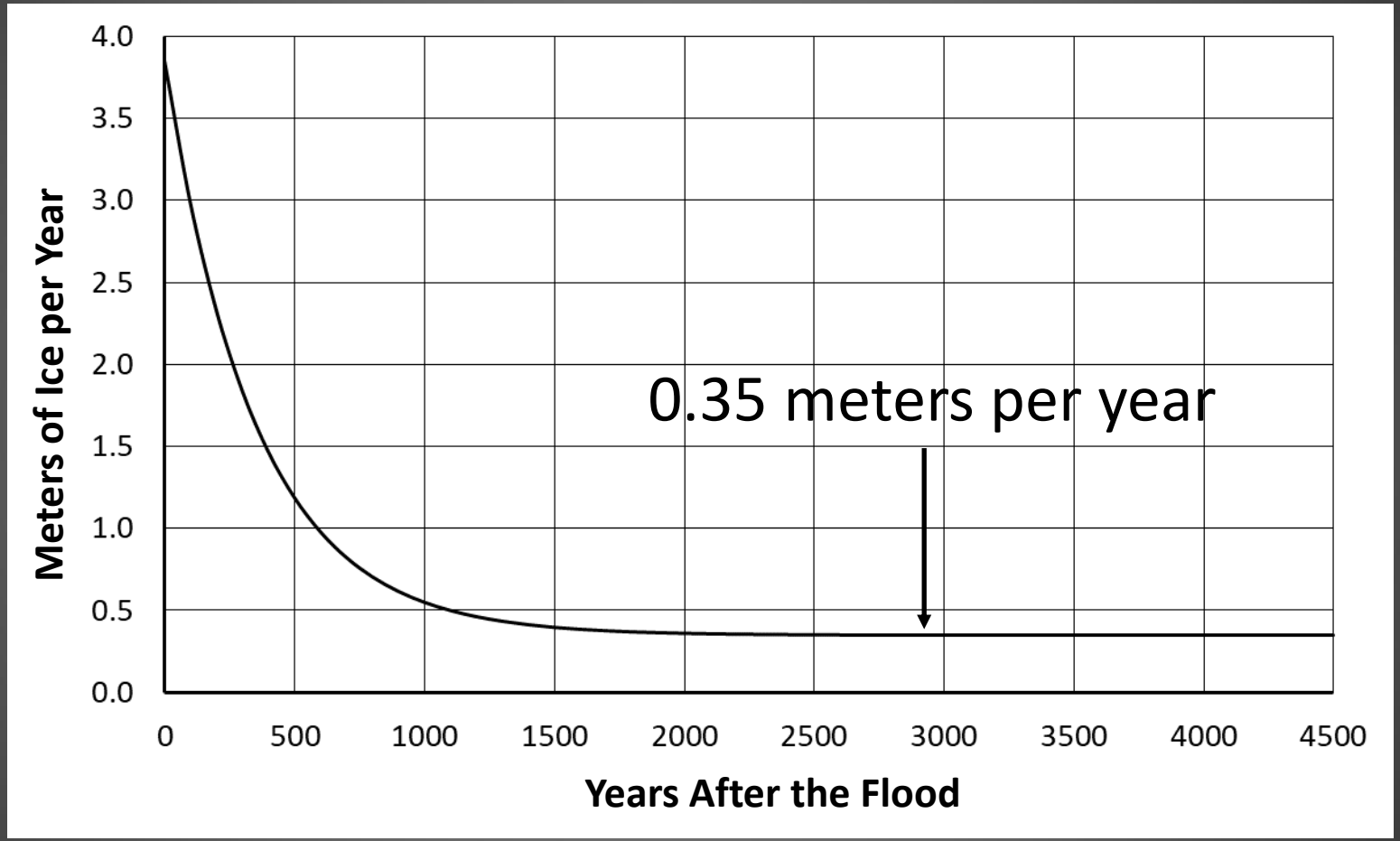


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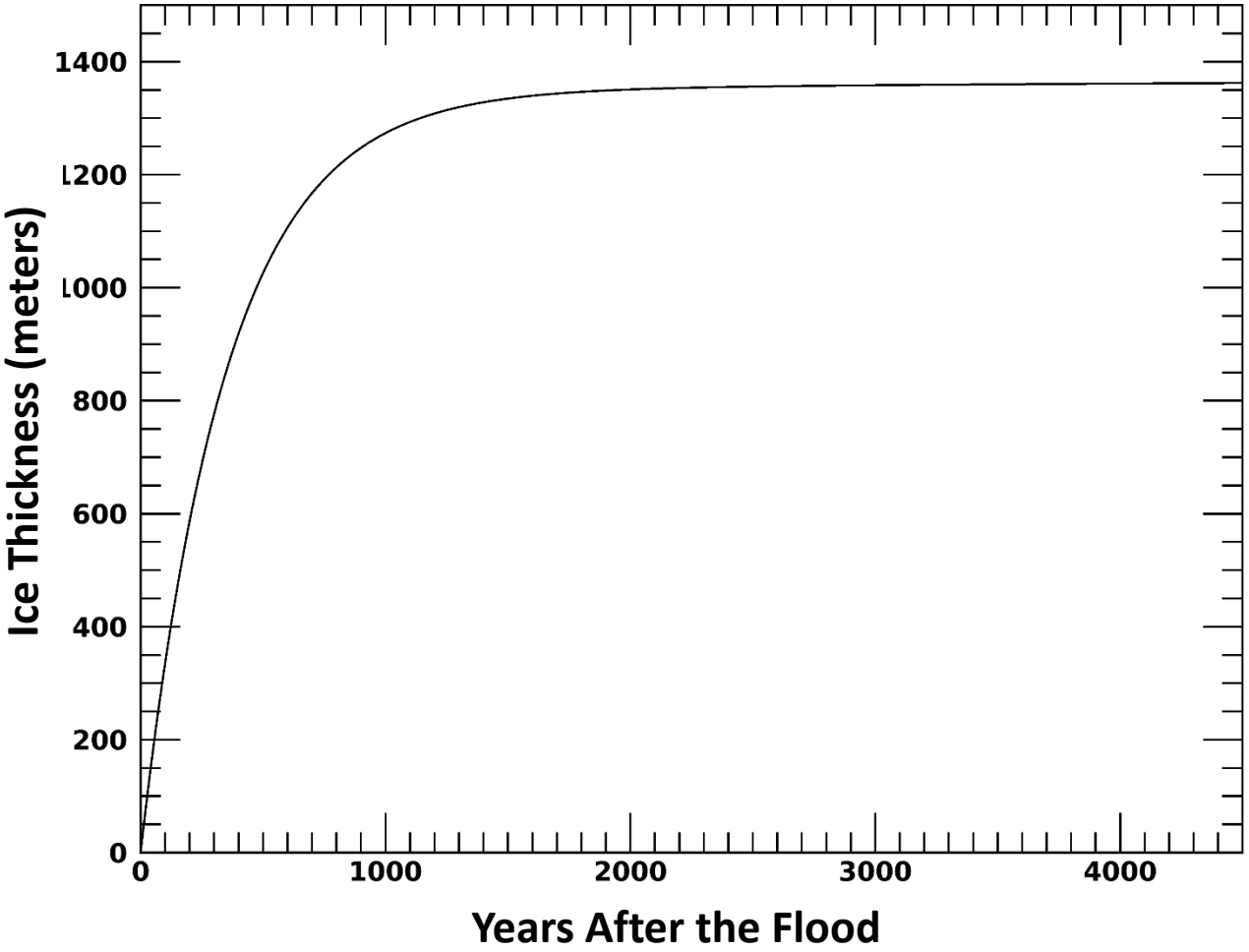


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*Creation Research Society Quarterly* 2021 57:175–185

# Using Vardiman's Young-Earth Ice Sheet Model and a Simple Computer Code to Estimate Annual Layer Thicknesses

**Jake Hebert***

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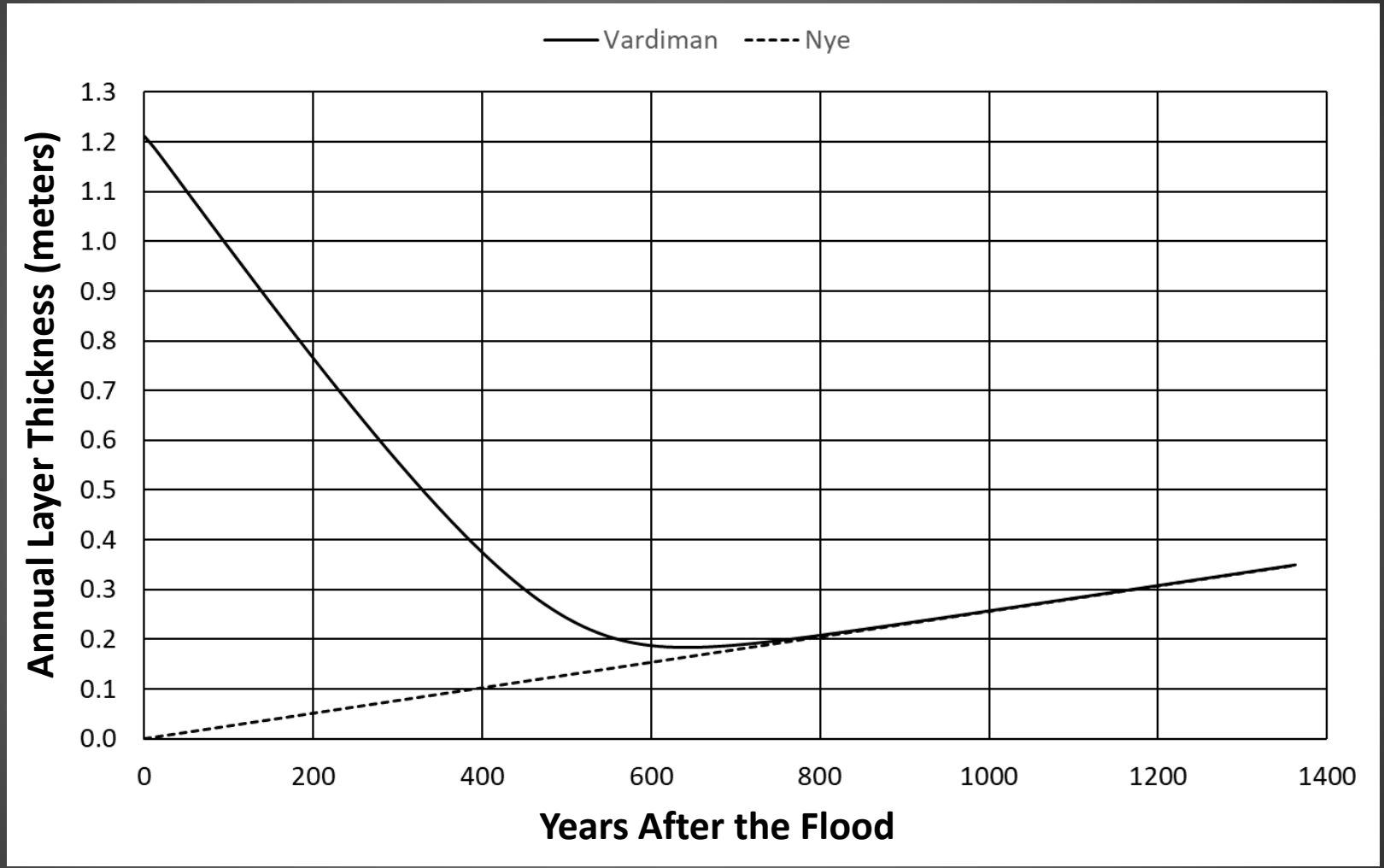


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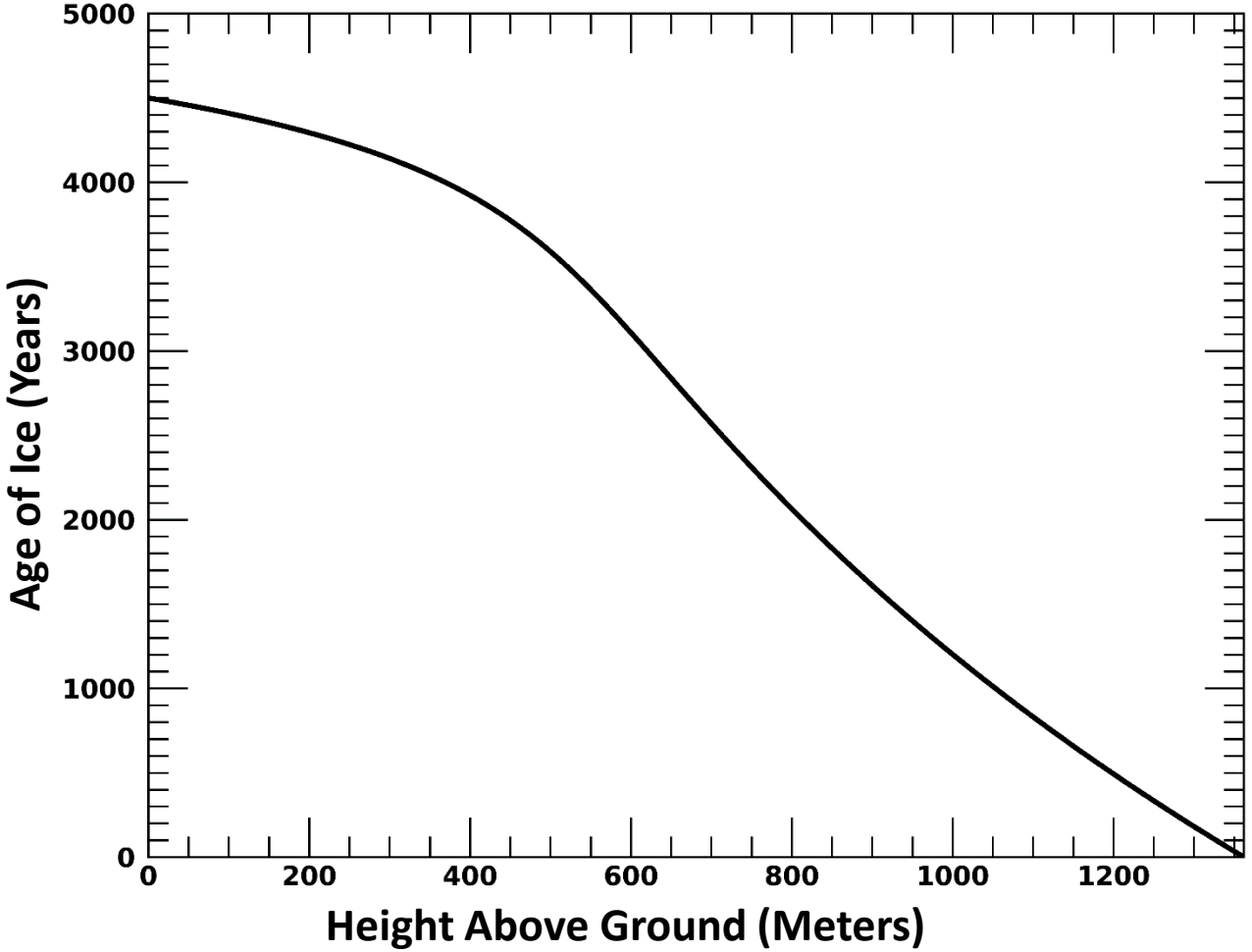


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*Creation Research Society Quarterly* 2022 58:262–272

# Towards a More Realistic Young-Earth Ice Sheet Model: A Shallow, Isothermal Ice Dome with a Frozen Base

**Jake Hebert***

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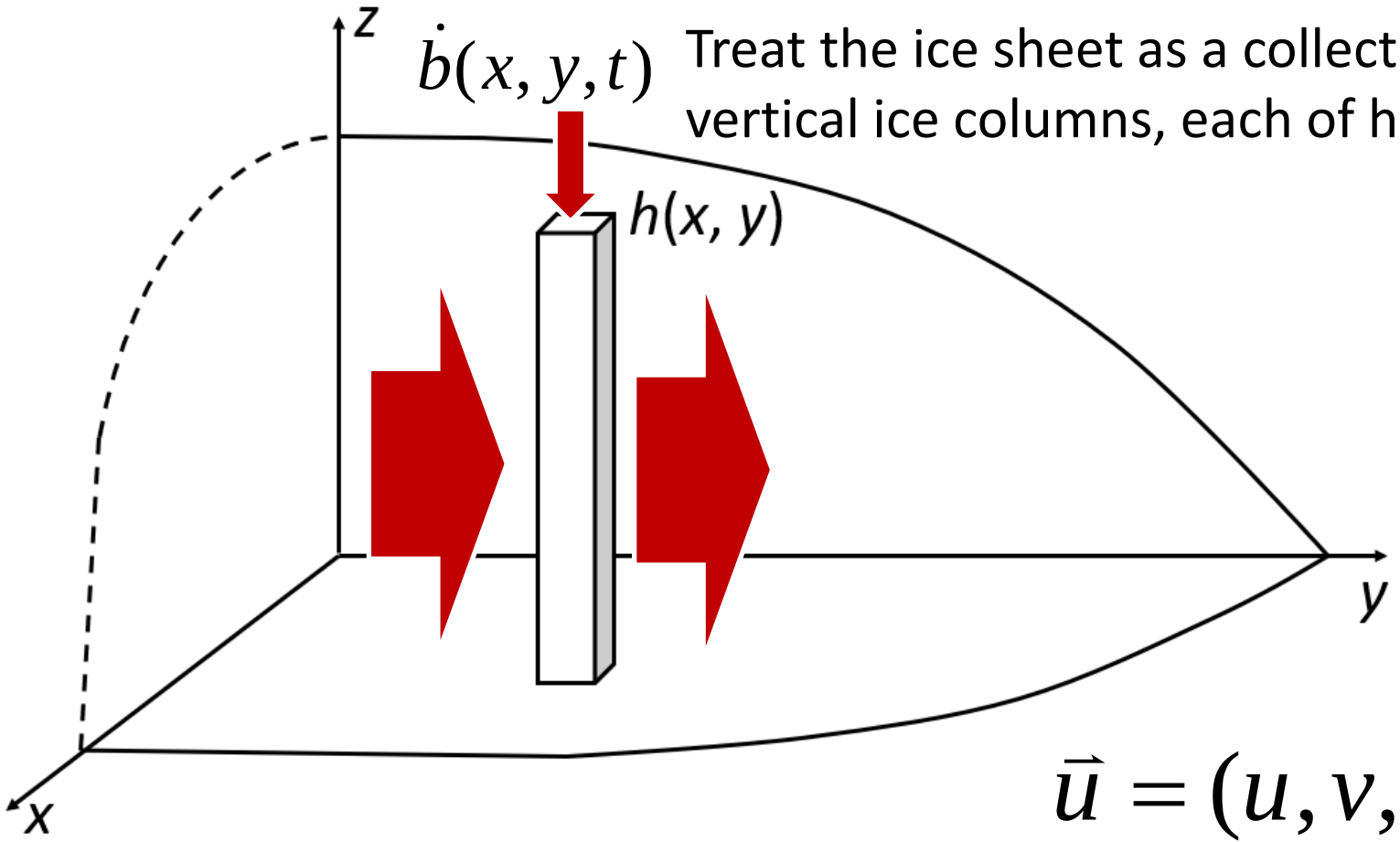
## "Mahaffy Ice Sheet Computer Model"




Treat the ice sheet as a collection of vertical ice columns, each of height $h(x,y)$

$$\vec{u} = (u, v, w)$$

$$q_x = \int_{z=0}^{z=h} u\,dz \qquad q_y = \int_{z=0}^{z=h} v\,dz$$

Governing Equation

$$\frac{\partial h}{\partial t} = \dot{b} - \frac{\partial q_x}{\partial x} - \frac{\partial q_y}{\partial y}$$

Vertical contribution to height

Horizontal contribution

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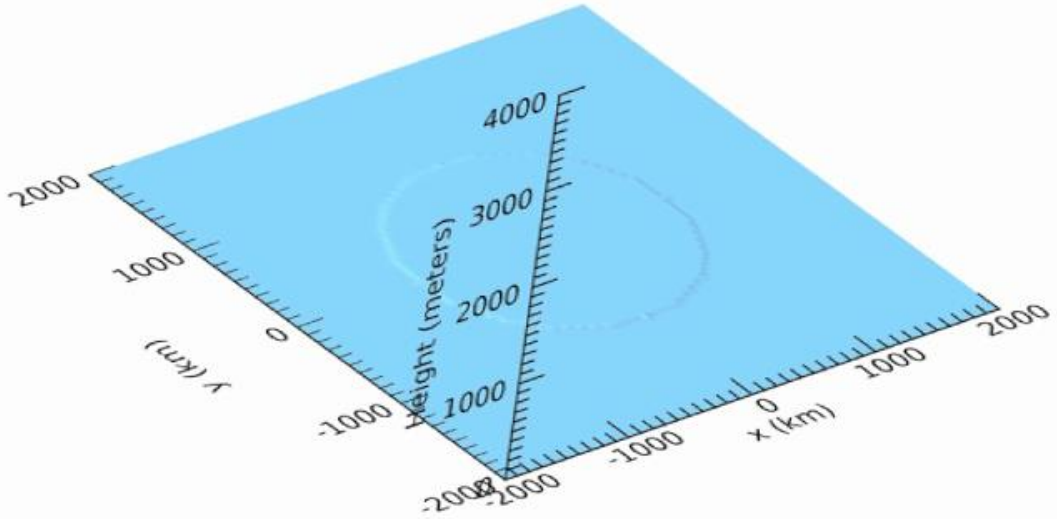


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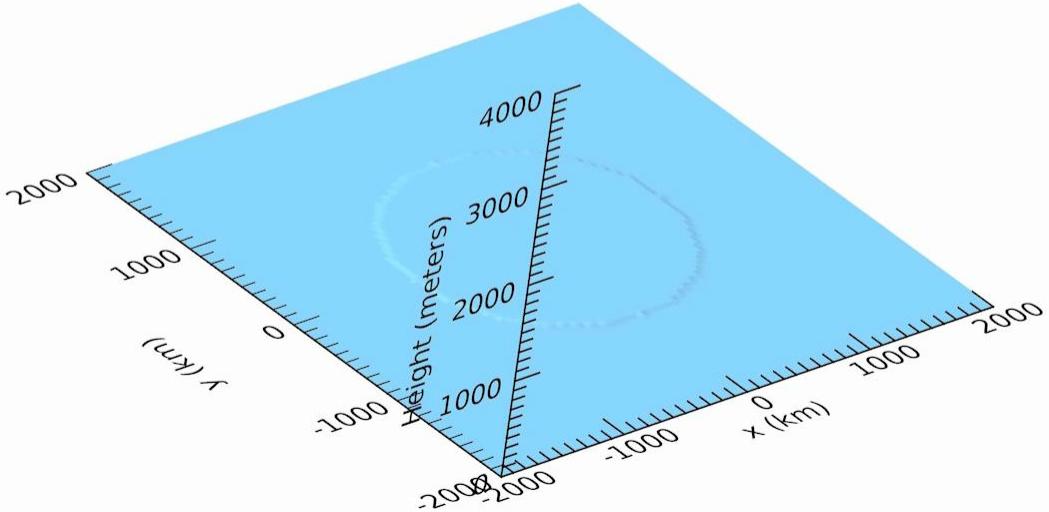
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Height (meters)
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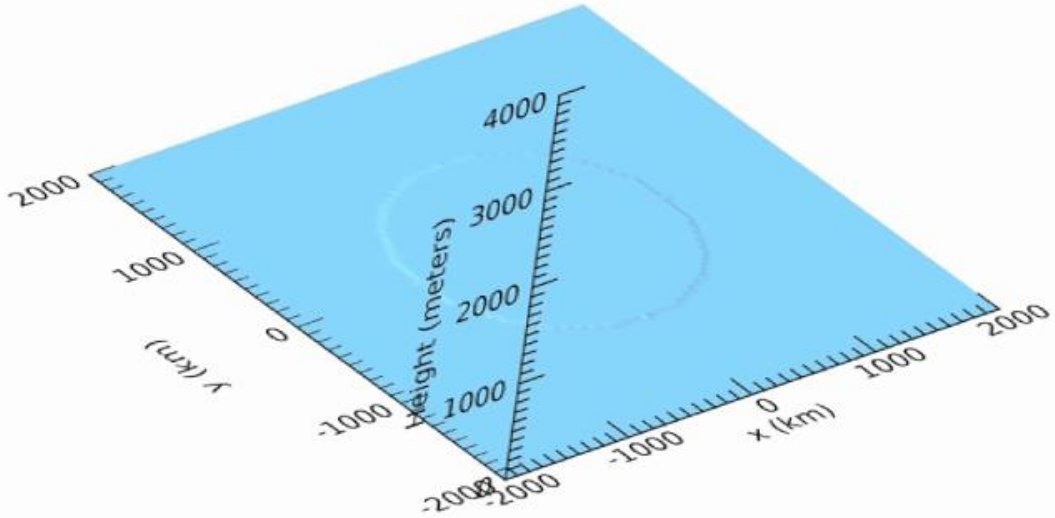
# t = 0 years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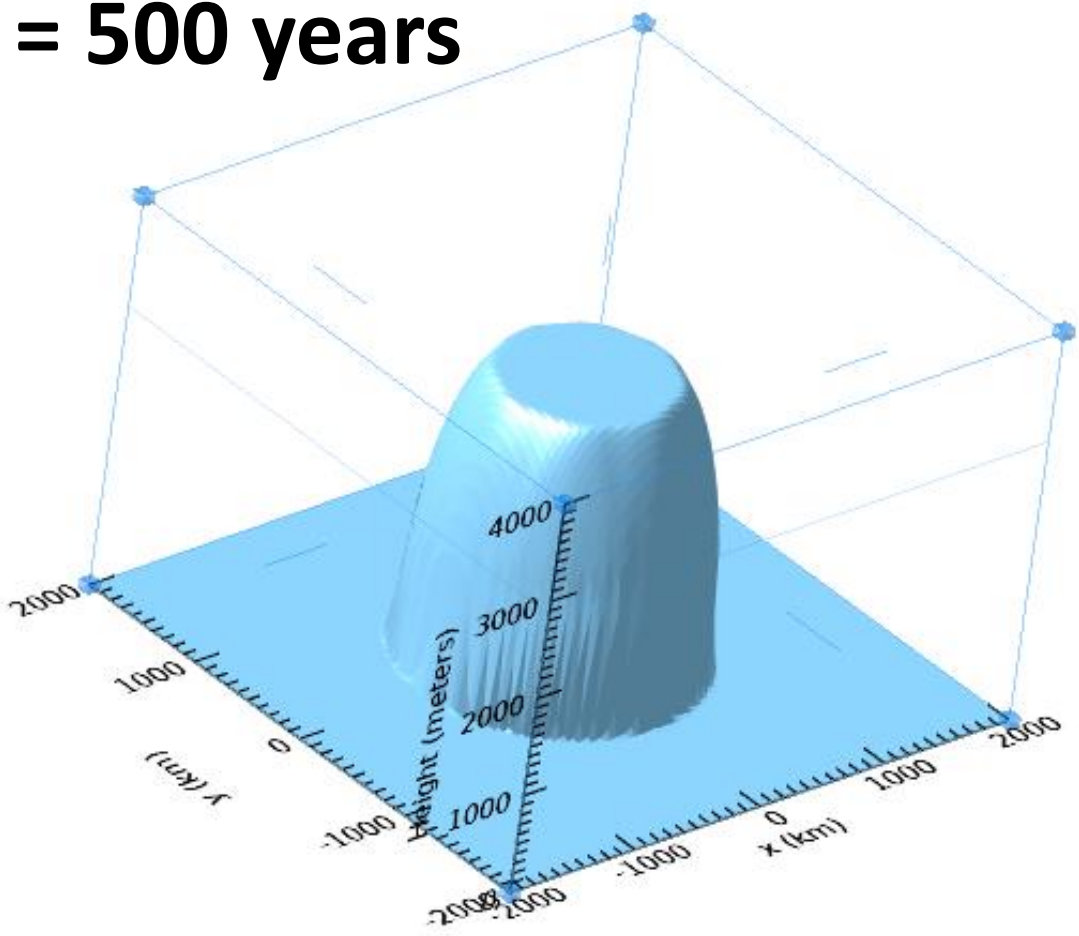
# t = 500 years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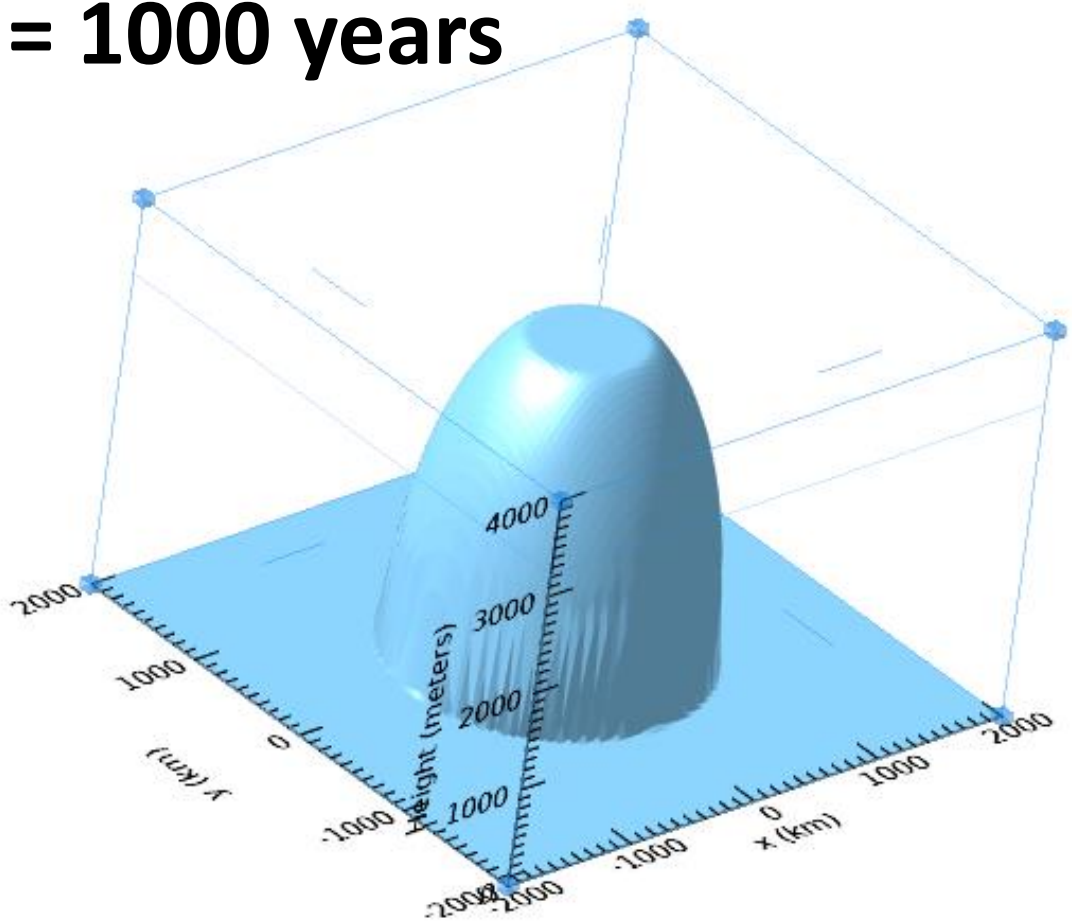
# t = 1000 years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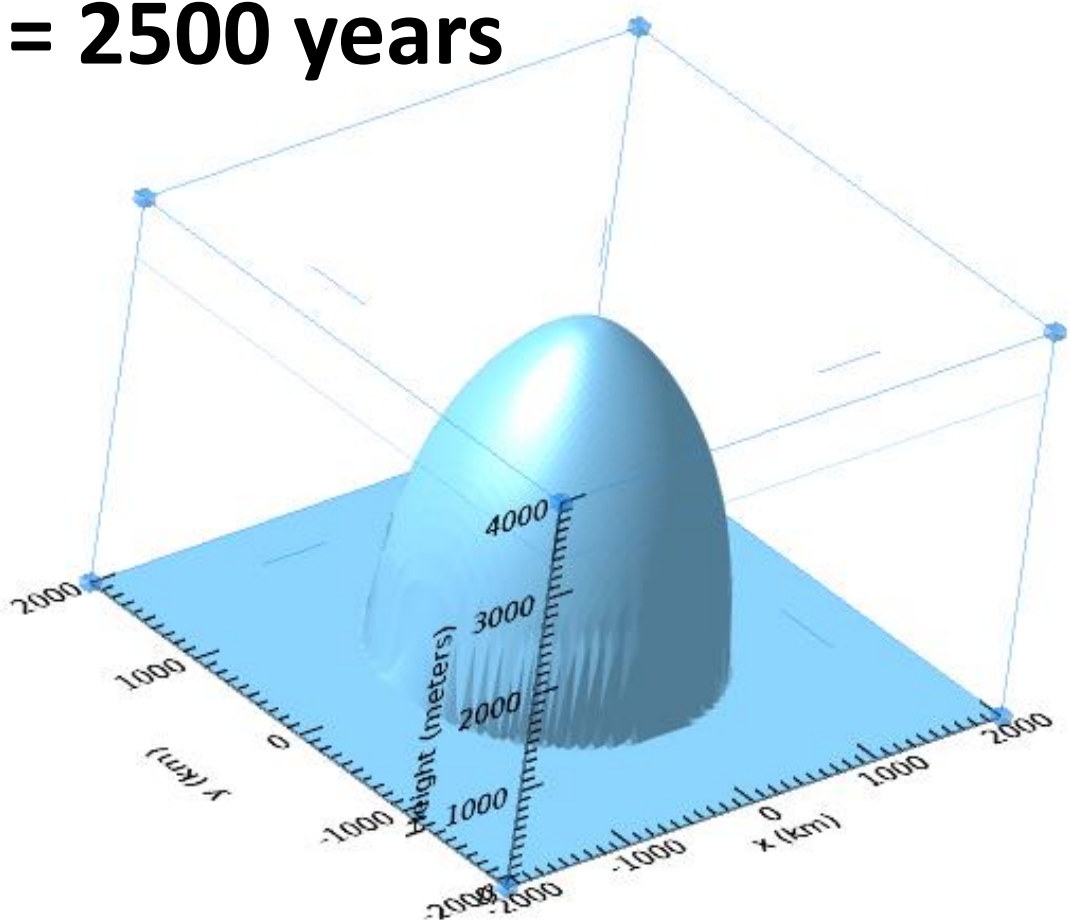
# t = 2500 years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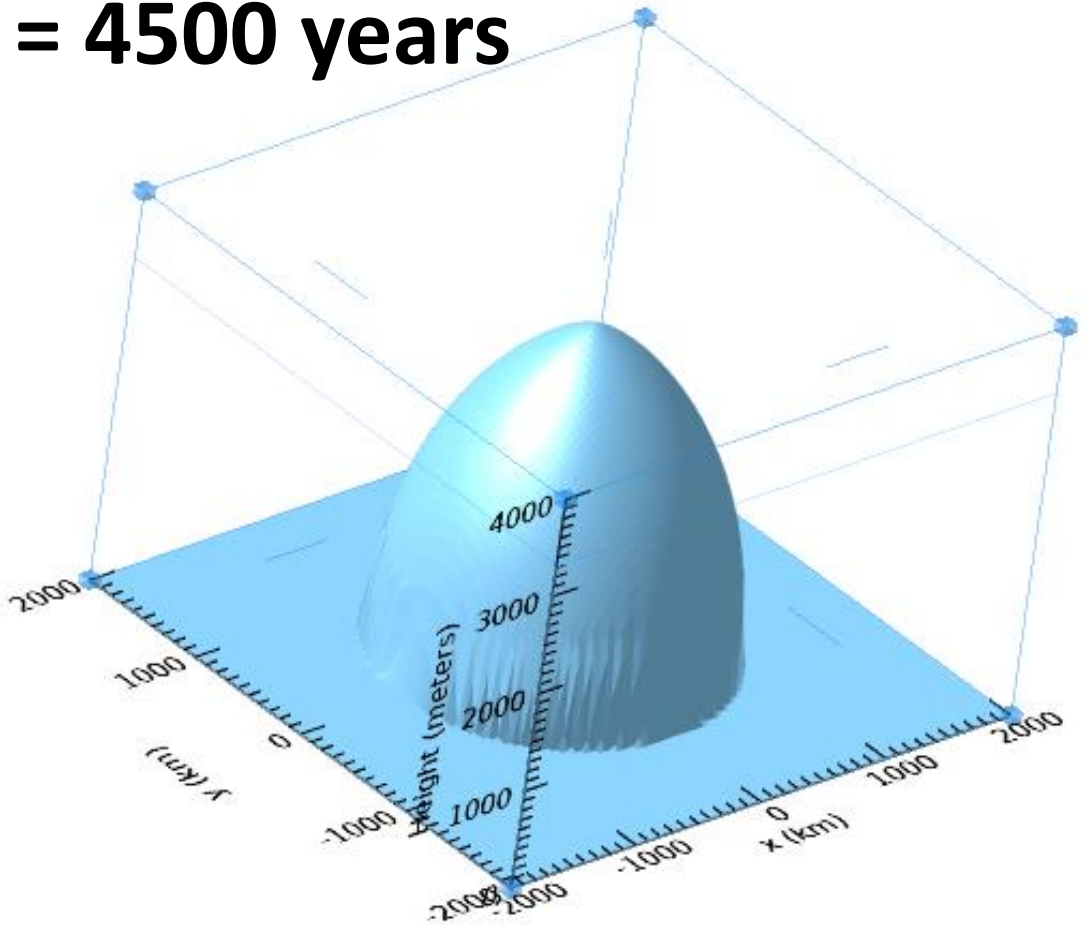
# t = 4500 years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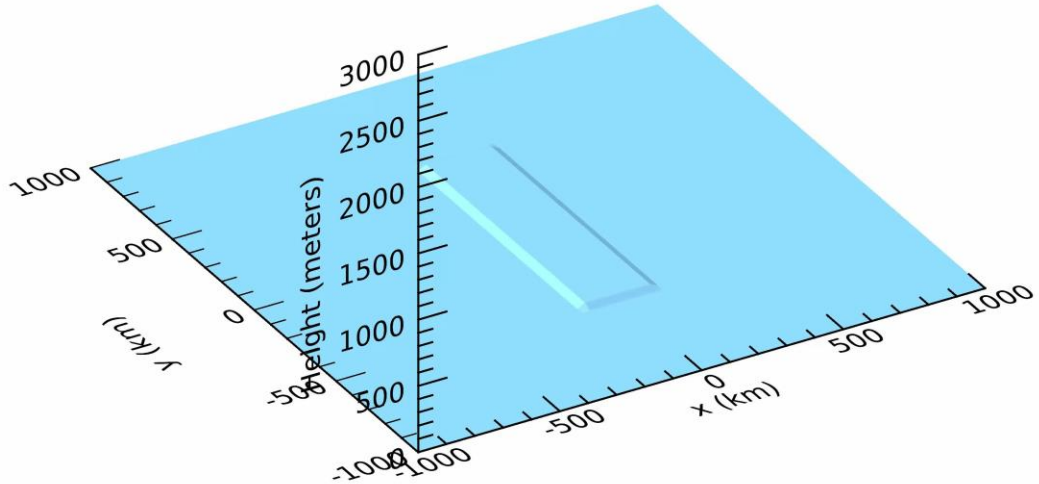
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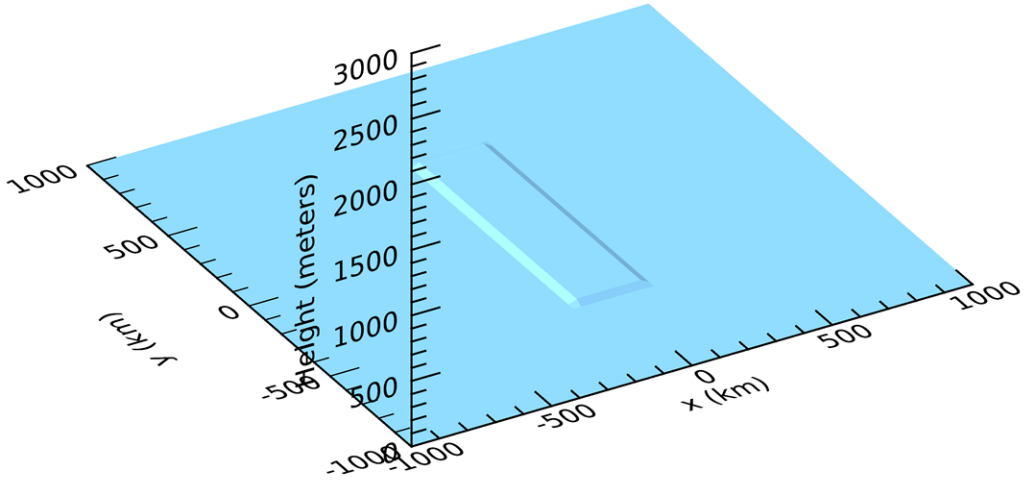
x (km)

# t = 0 years

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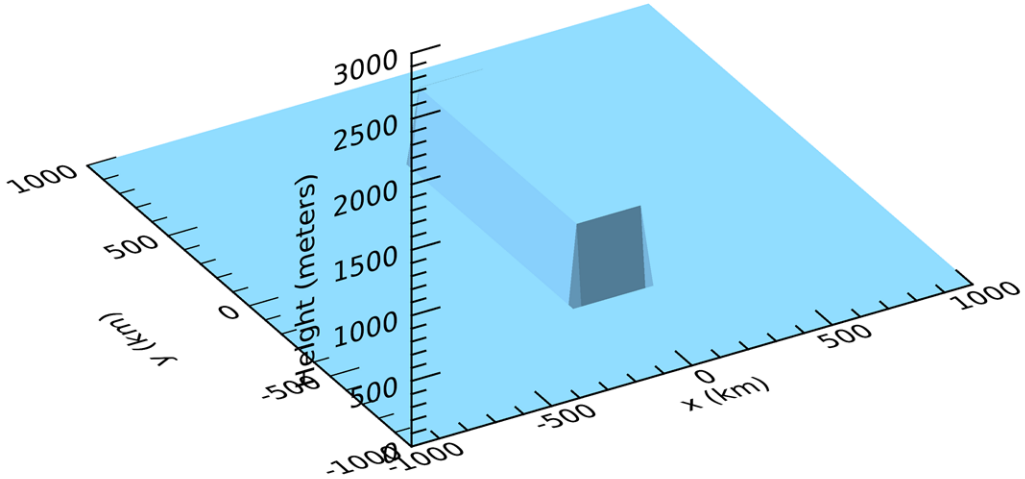
# t = 40 years

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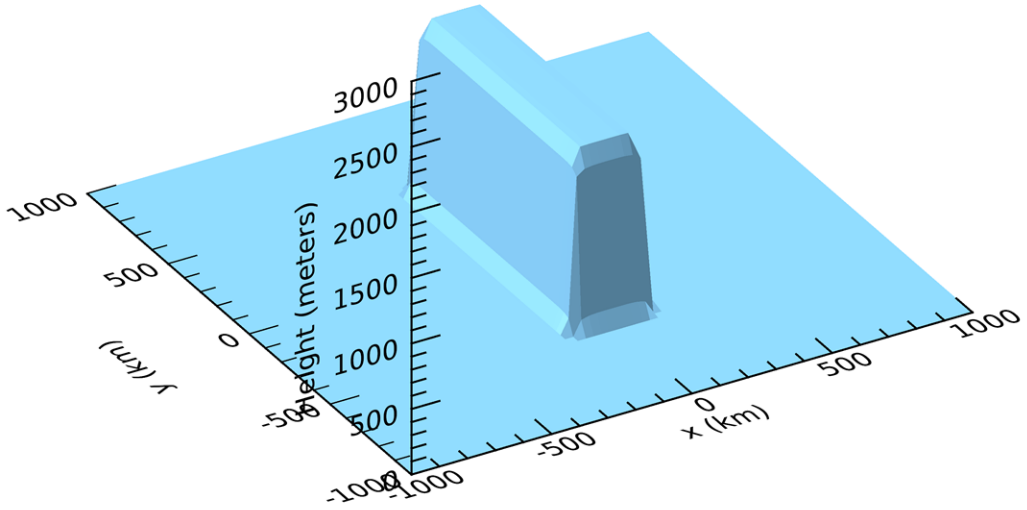
# t = 100 years

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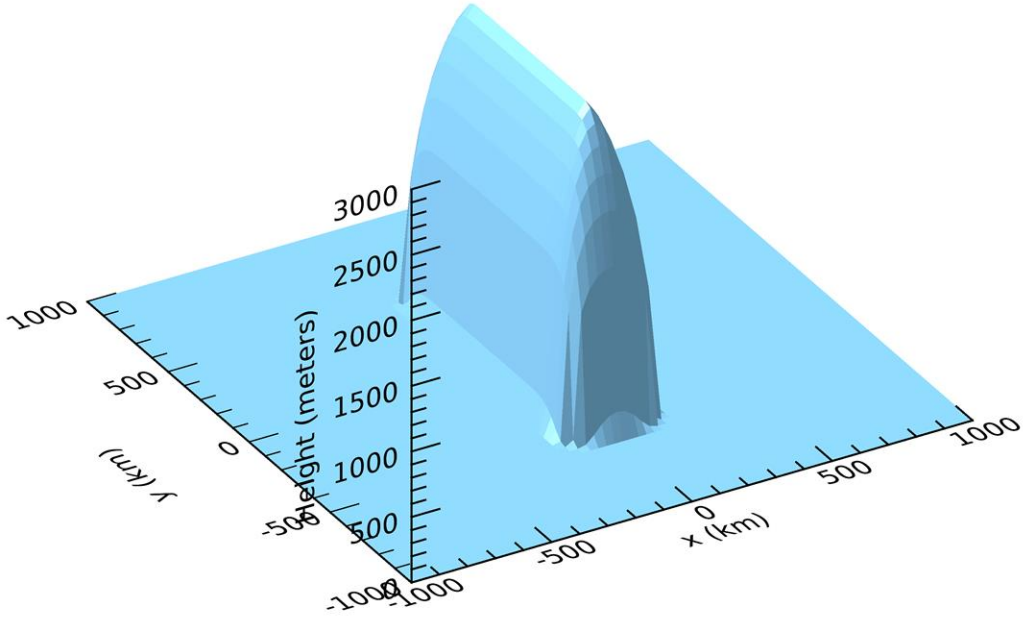
# t = 200 years

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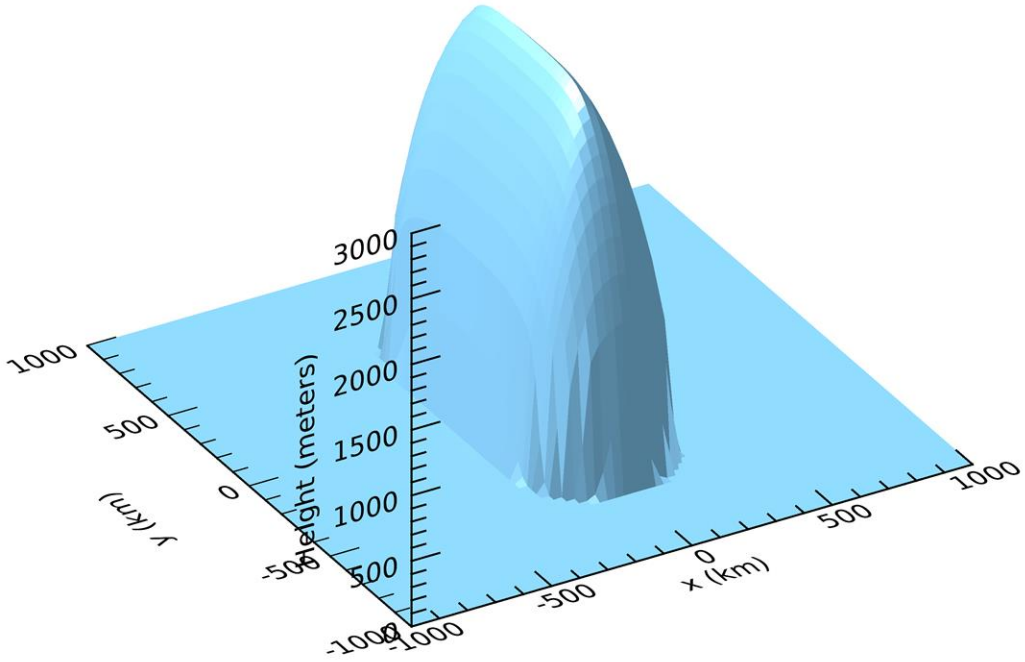
# t = 500 years

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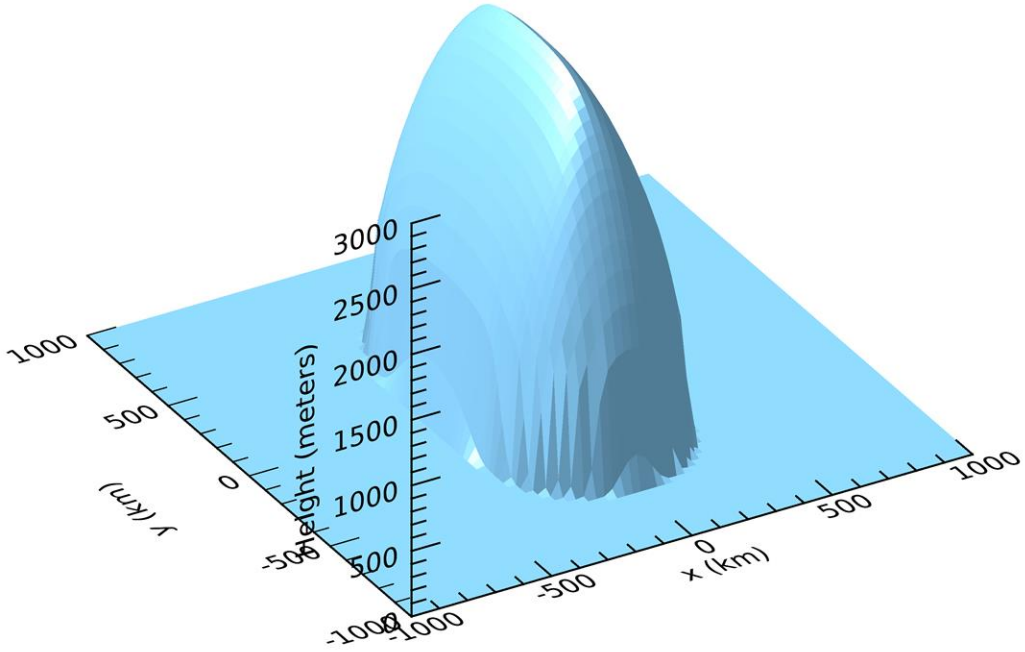
# t = 1000 years

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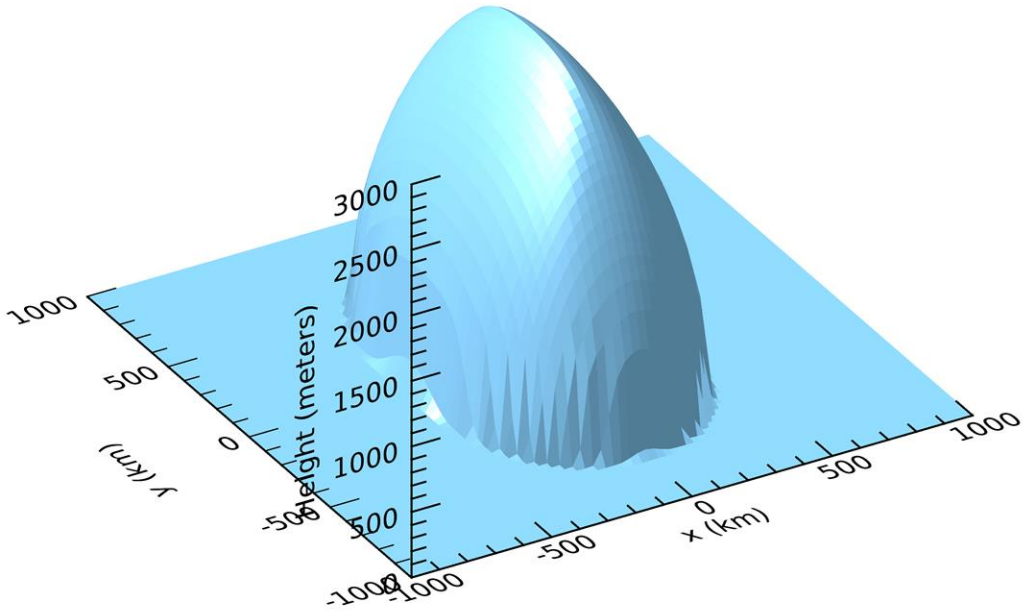
# t = 2500 years

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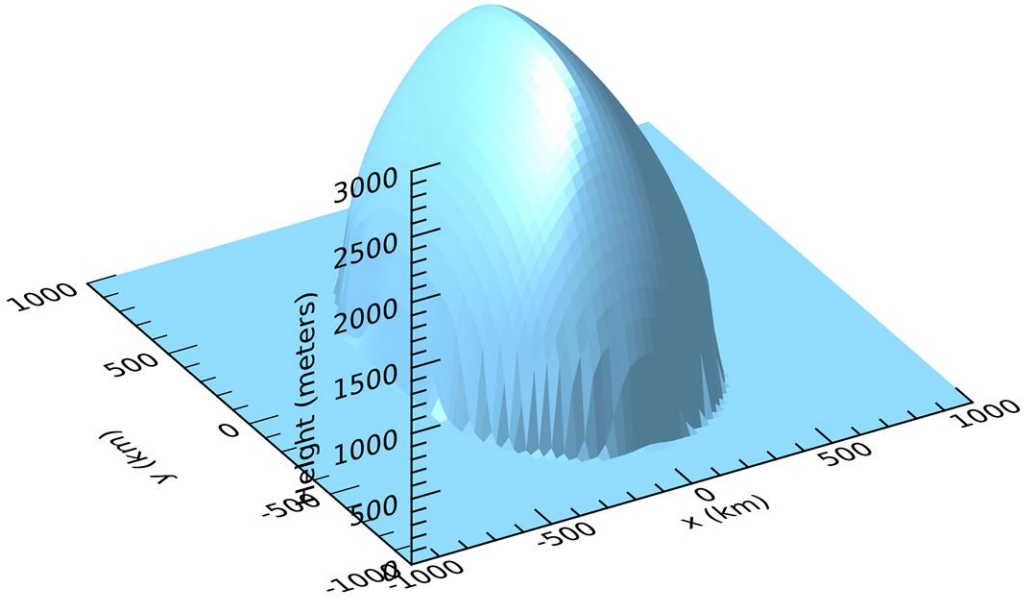
# t = 4500 years

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# A Decade of ICR Ice Age Research (2014-2023)

1. Refuting the Milankovitch Ice Age Theory
2. Additional Fossil Evidence for the Flood
3. Advances in Creationist Ice Sheet Modeling
4. Evidence the Ice Sheets are Young

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NEWS CREATION SCIENCE UPDATE ICE CORES FIT WITH RECENT CREATION

## Bill Nye, PBS Highlight Young-Earth Evidence

BY JAKE HEBERT, PH.D. * |
FRIDAY, APRIL 27, 2018

Some Bible skeptics claim the Greenland ice cores prove an old Earth.

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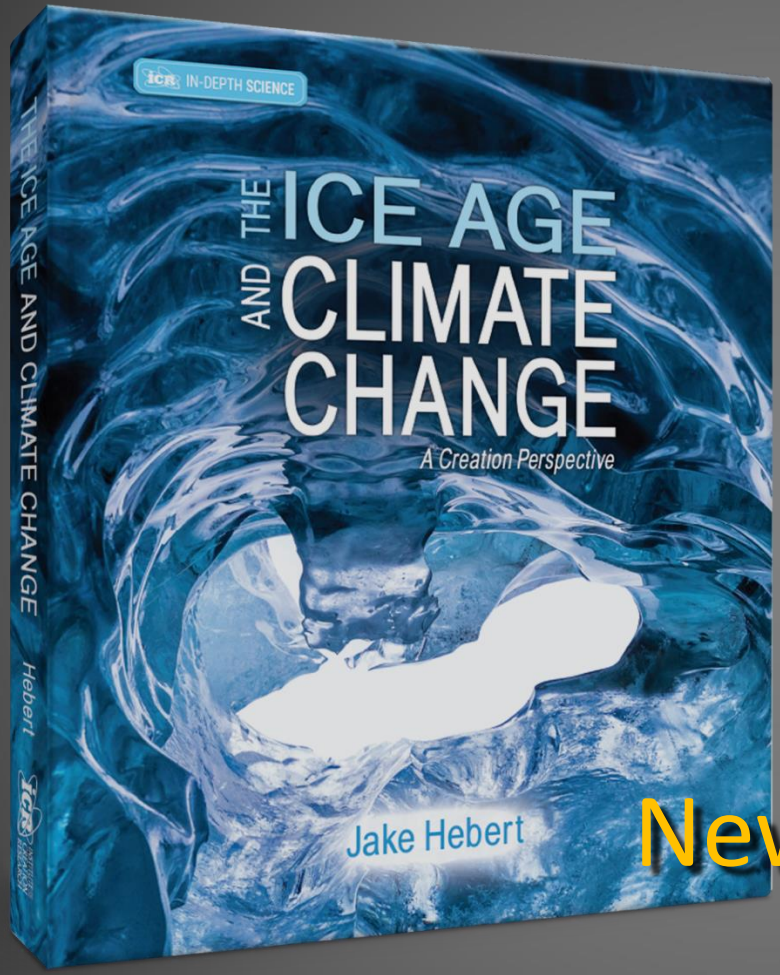
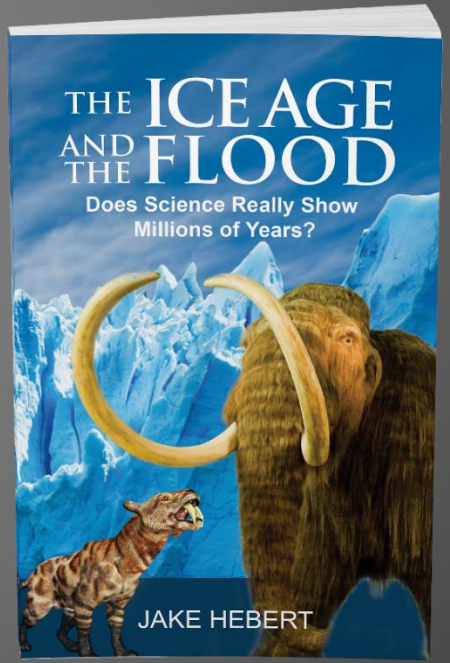



New!

Creation scientists can plausibly account for 'overcounting' in Greenland ice cores.

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# Tephra layers – volcanic ash or debris – often appear in ice cores.

US Geological Survey

Image Credit:
Lonnie Thompson, Byrd Polar Research Center
Ohio State University

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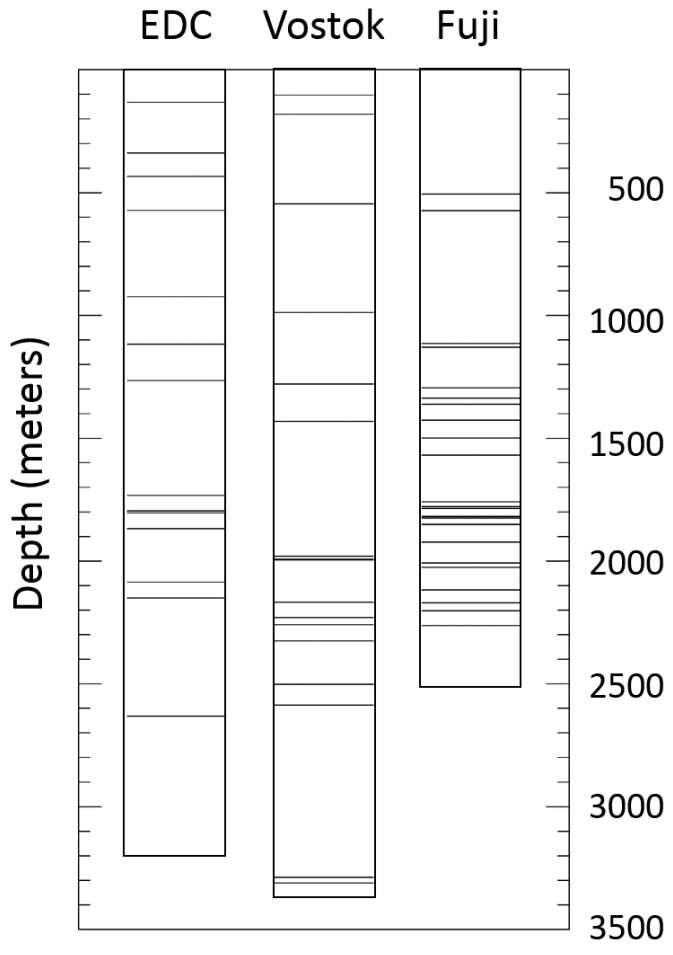


Old-Earth age models assign too much time to deep ice cores.

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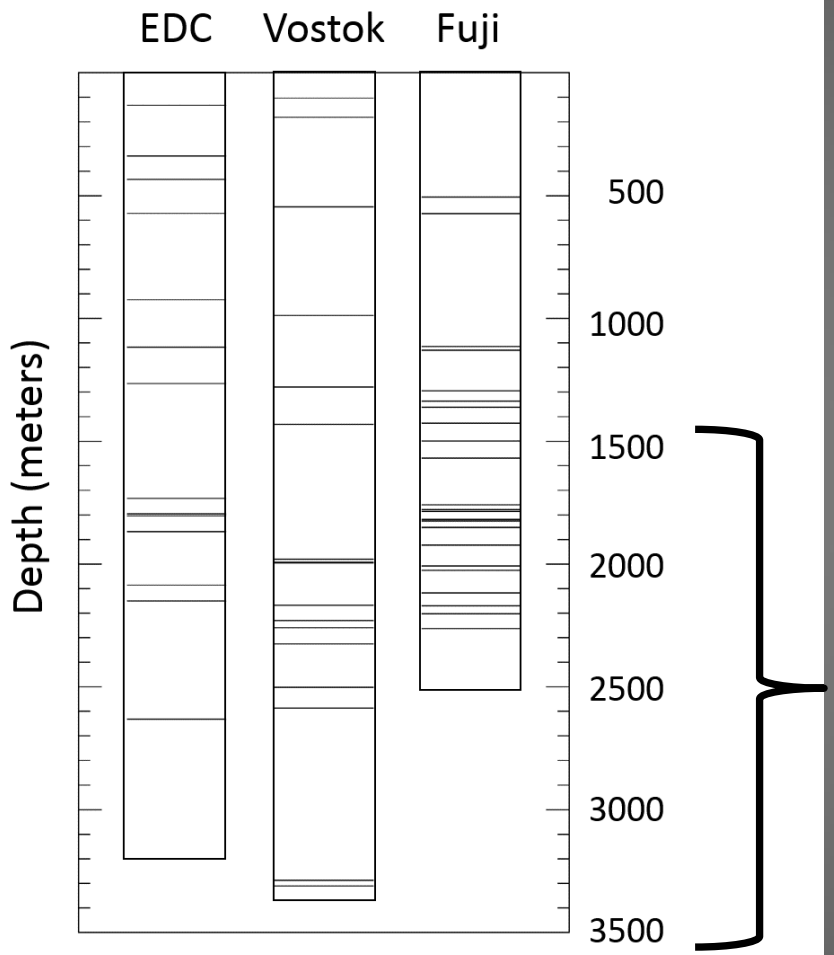


Nearly all the time is assigned to the bottom halves of the cores.

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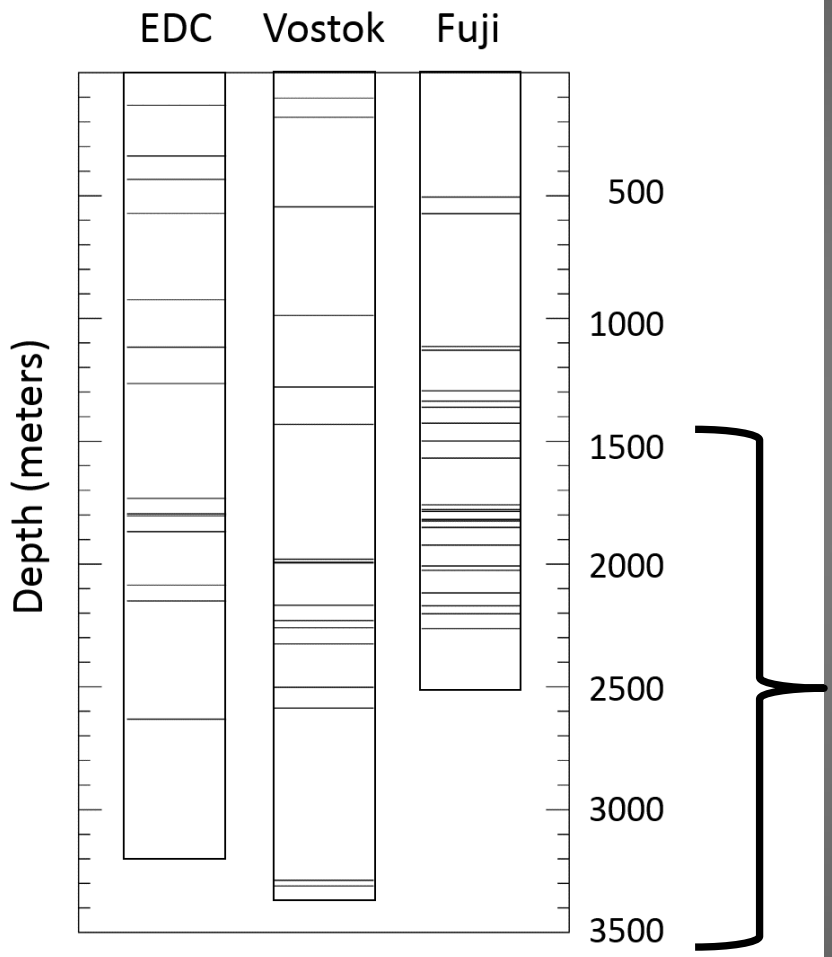


multiple hundreds of thousands of years

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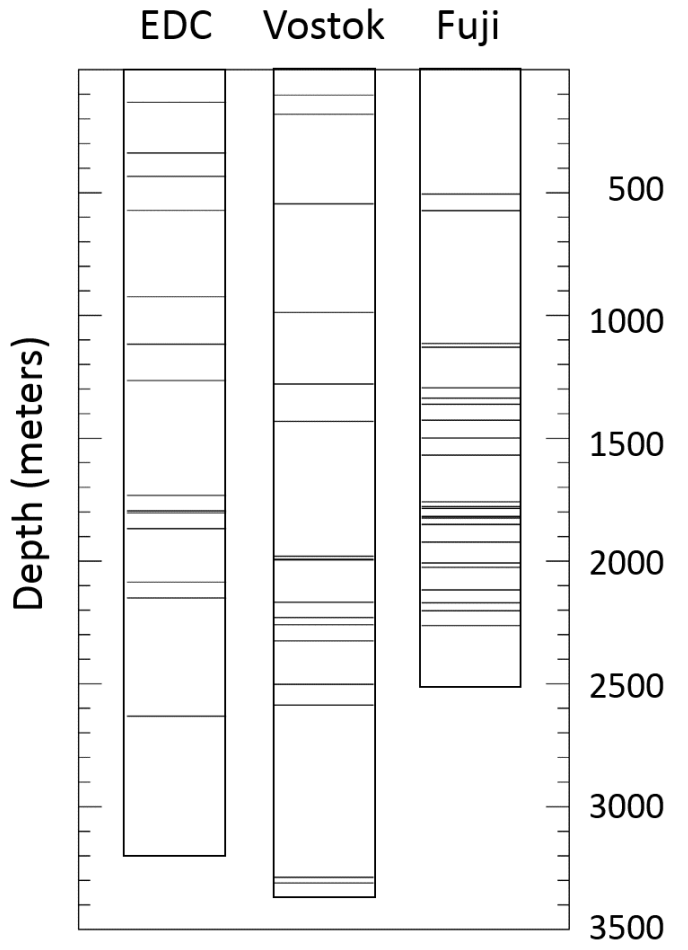


If this time is imaginary, volcanic layers in the bottom halves of the core will seem very infrequent.

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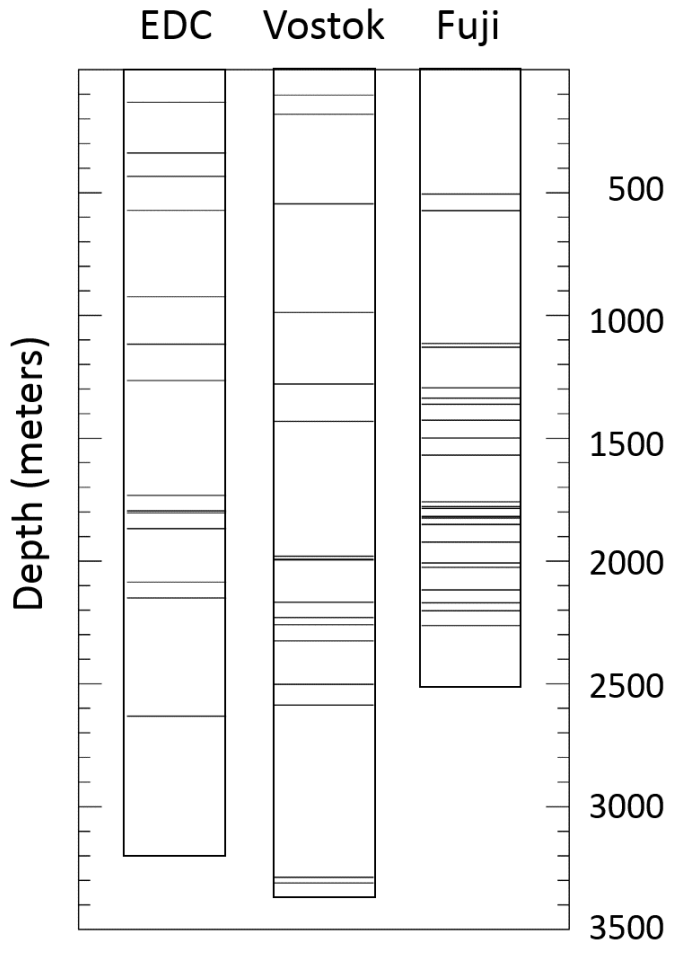


Is this the case?

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# Yes.

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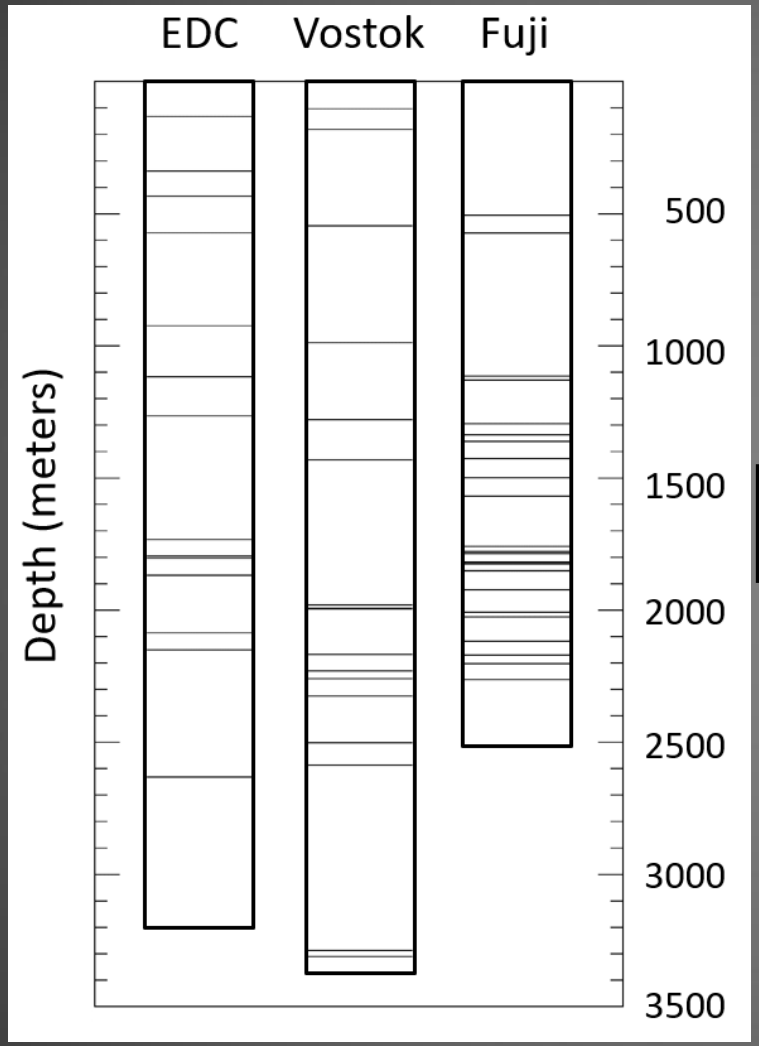


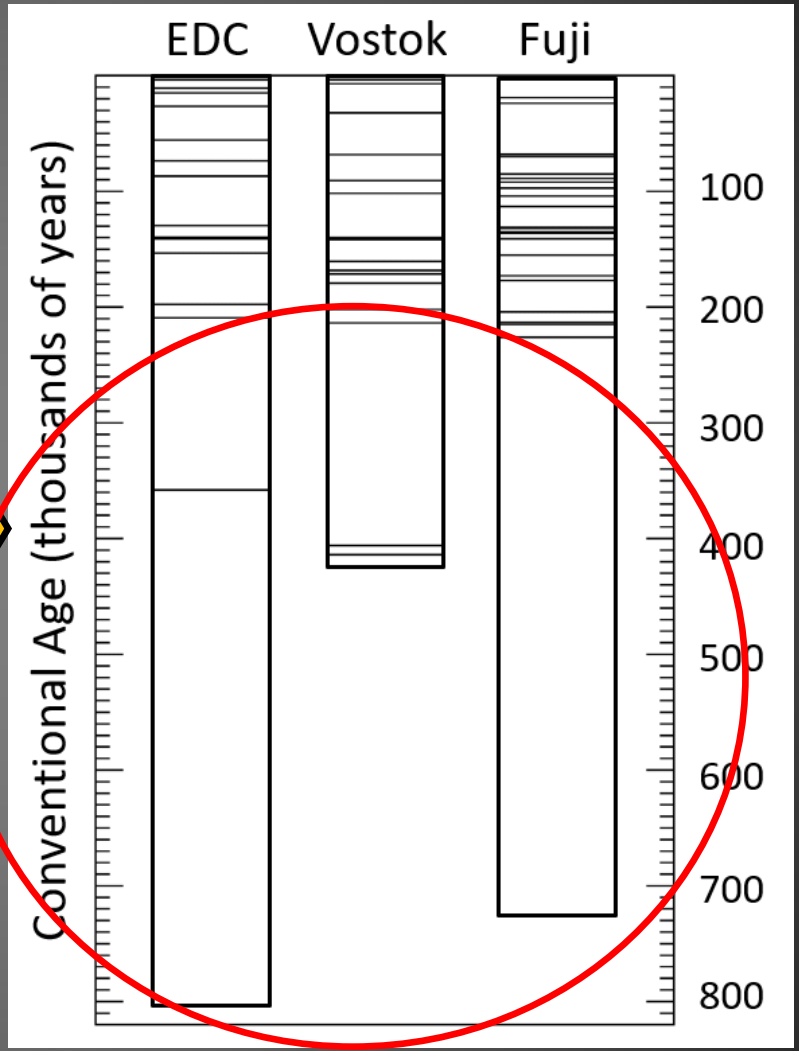


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impact

For the serious science reader

JAKE HEBERT, PH.D.

# Earth's Thick Ice Sheets Are Young

**article highlights**

- Secular scientists believe polar ice cores prove "millions of years."
- Volcanic ash layers known as *tephra* strongly suggest that secular ages for the bottom halves of long Antarctic cores are greatly inflated.
- The rock surface beneath the Antarctic ice sheet isn't eroded enough to have been ground by moving ice for millions of years.

Secular scientists have assigned vast ages—multiple hundreds of thousands of years—to the Dome Fuji, Vostok, and EPICA Dome C ice cores in Antarctica.[1,3] They also claim to have counted more than 110,000 annual layers in

plates moved much faster during the Flood than they do today, leading to the rapid creation of hot new seafloor. The resulting heating greatly warmed the world's oceans.[6] This caused increased evaporation, putting much more moisture into the atmosphere, which led to

Why would ashfalls be so incredibly infrequent in the distant past?

This violates uniformitarianism!

This apparent infrequency is caused by their erroneous timescale.

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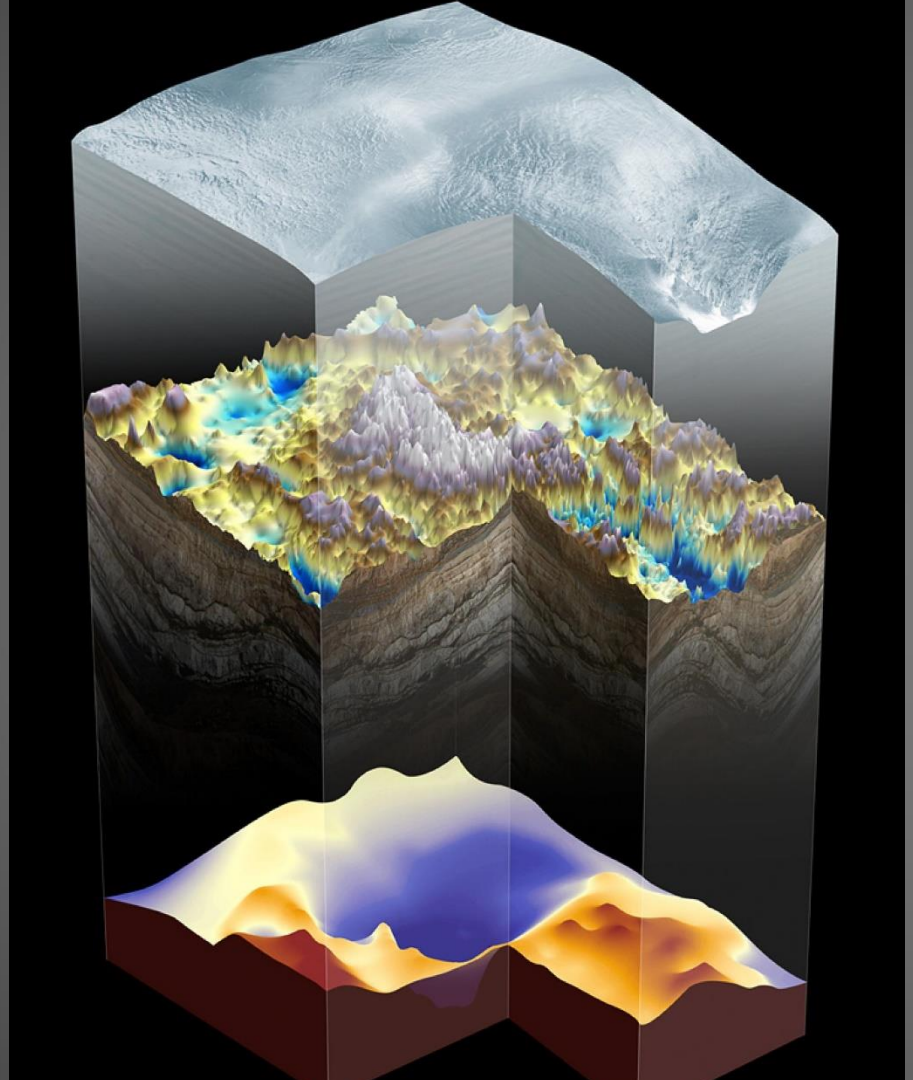

Image Credit Here and Later:
British Antarctic Survey

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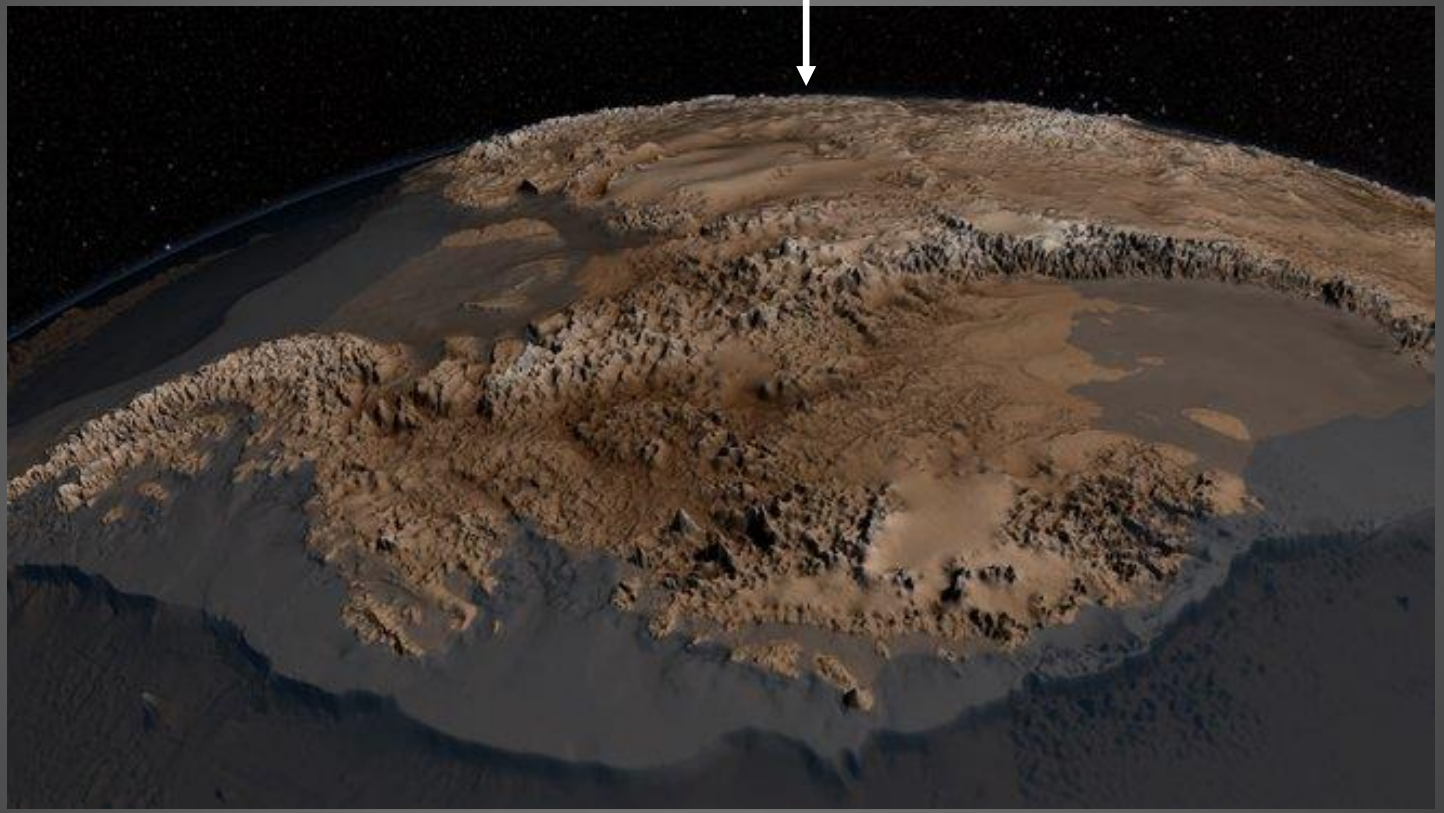
# Gamburtsev Mountains



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Yet, she added, the truly mysterious part of the hidden mountains is not *that* they exist, but how they *still* exist. The inexorable march of geological time erodes mountains away (if we came back in 100 million years, the Alps would be gone, Bell said) and the Gamburtsevs, at the ripe old age of 900 million to a billion years old, should have been worn down eons ago.

Mustain, A. Antarctica's Biggest Mysteries: Secrets of a Frozen World. *LiveScience*. Posted on livescience.com December 14, 2011, accessed July 18, 2018. [emphasis in original]

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There is no good explanation for how this mountain range exists . . . . It is like opening the door of an Egyptian pyramid and finding an astronaut inside. There is no good reason for an astronaut to be inside an Egyptian pyramid just as there is no good reason for a major mountain range in the middle of East Antarctica.

The Gamburtsev Mountains. Lamont-Doherty Earth Observatory. https://www.ldeo.Columbia.edu/res/pi/gambit/Gamburtsevs.html Accessed November 3, 2020.

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# Hi, there!

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# A Decade of ICR Ice Age Research (2014-2023)

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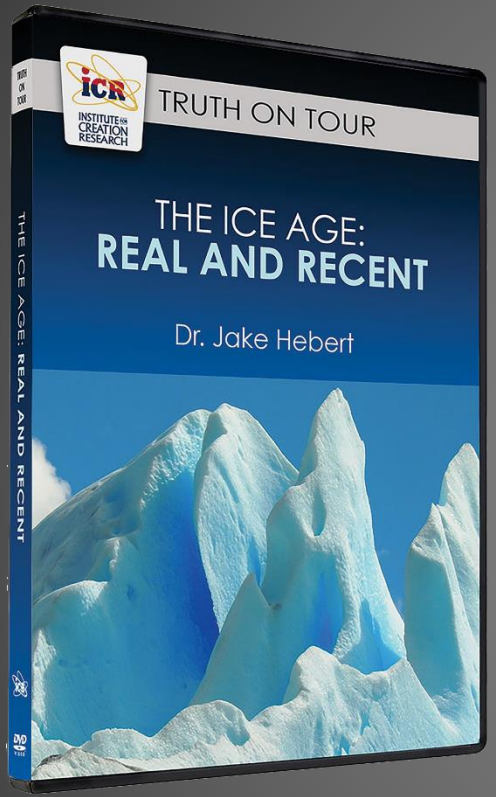


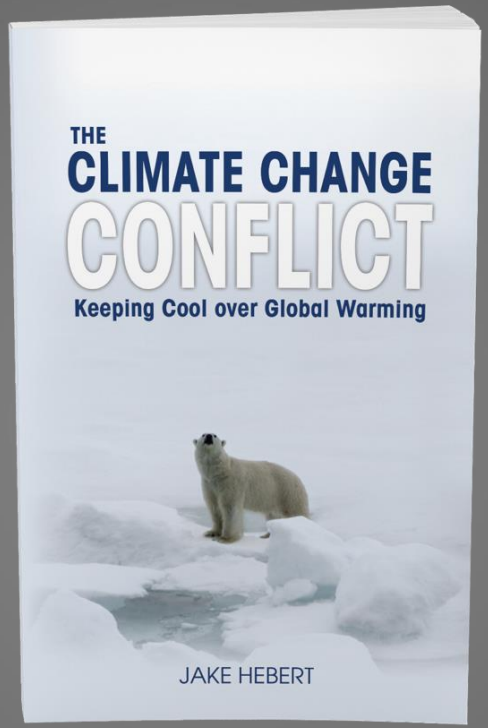


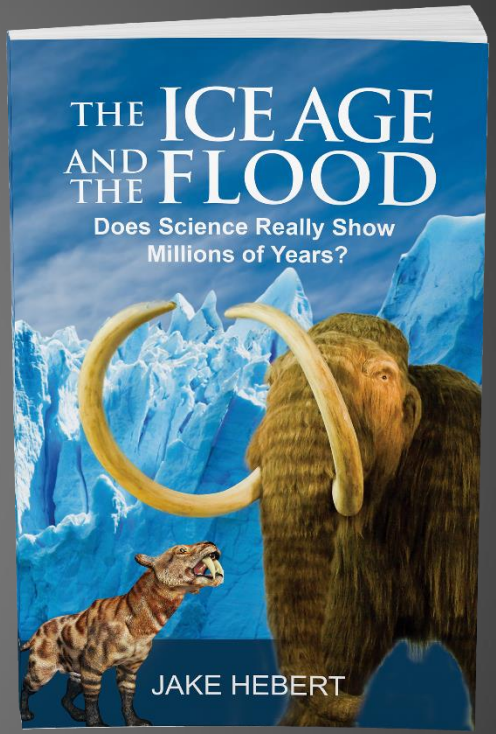


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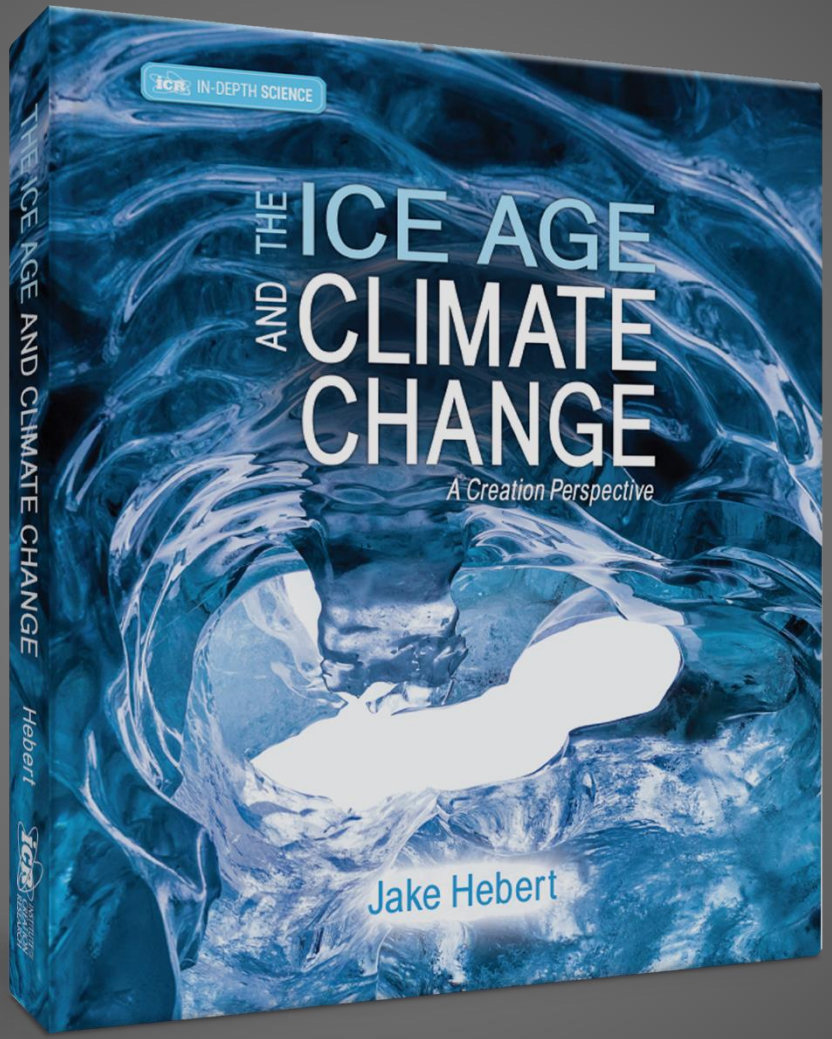


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# New Biology Focus

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# Blind Cave Fish: ‘Poster child’ for natural selection

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But these changes are happening rapidly, not slowly.

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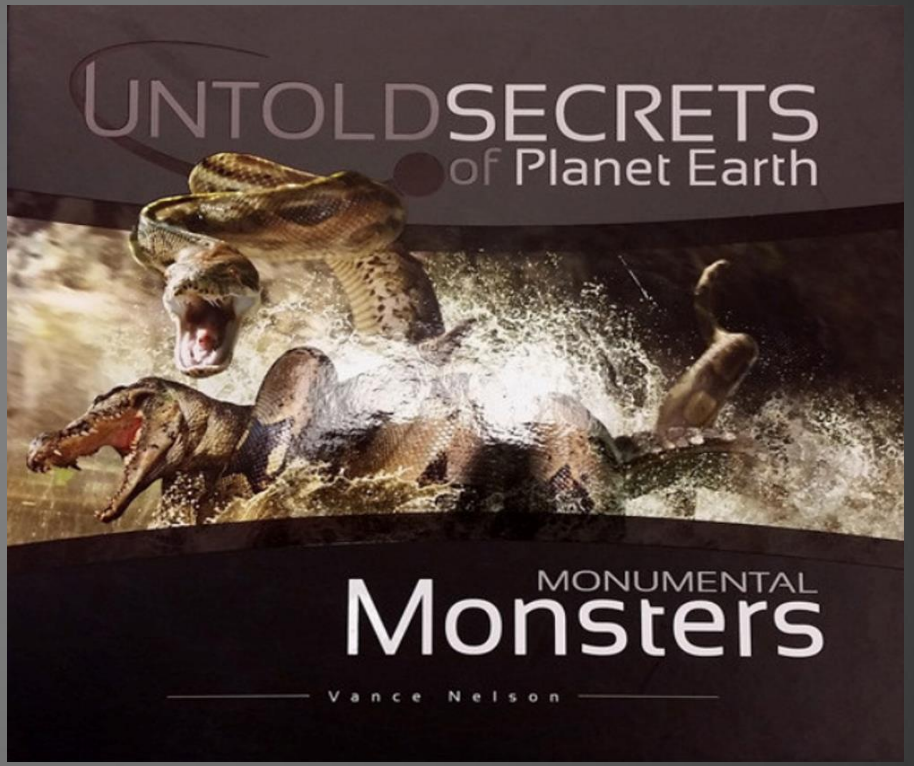
I've long been fascinated by giantism in the fossil record and the extreme longevity of humans in the pre-Flood world.

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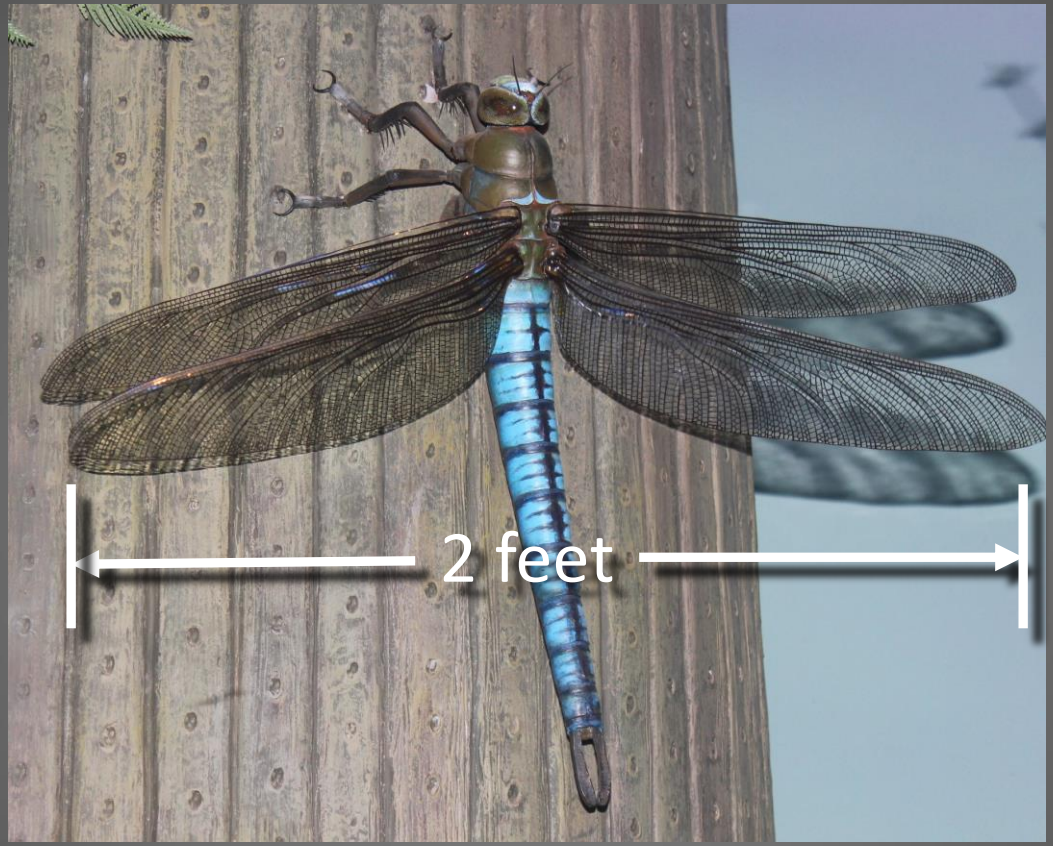


# Giant Dragonflies

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# Giant Alligators

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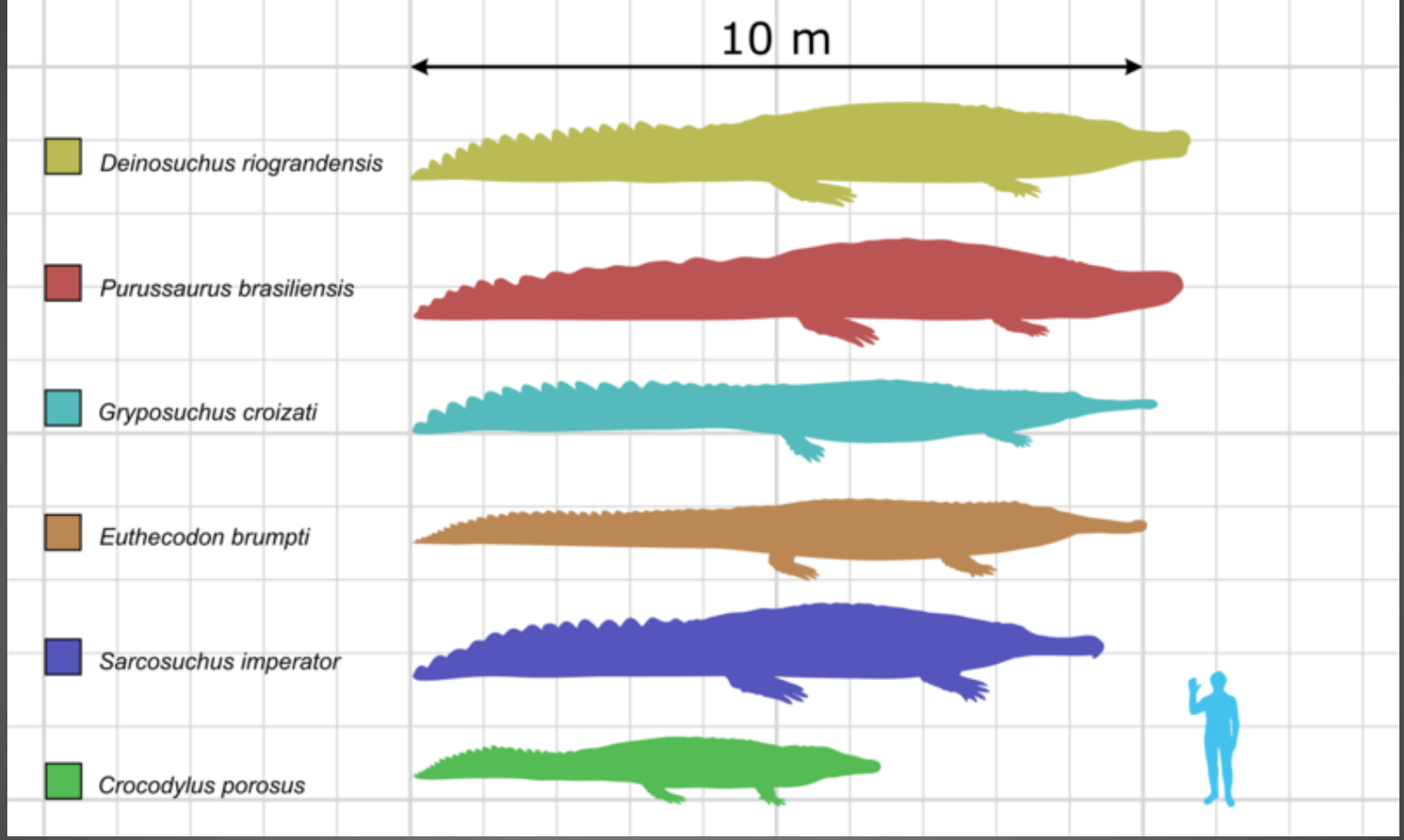


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Image Credit: Smokeybjb, CCA-SA 3.0

# Giant Sharks

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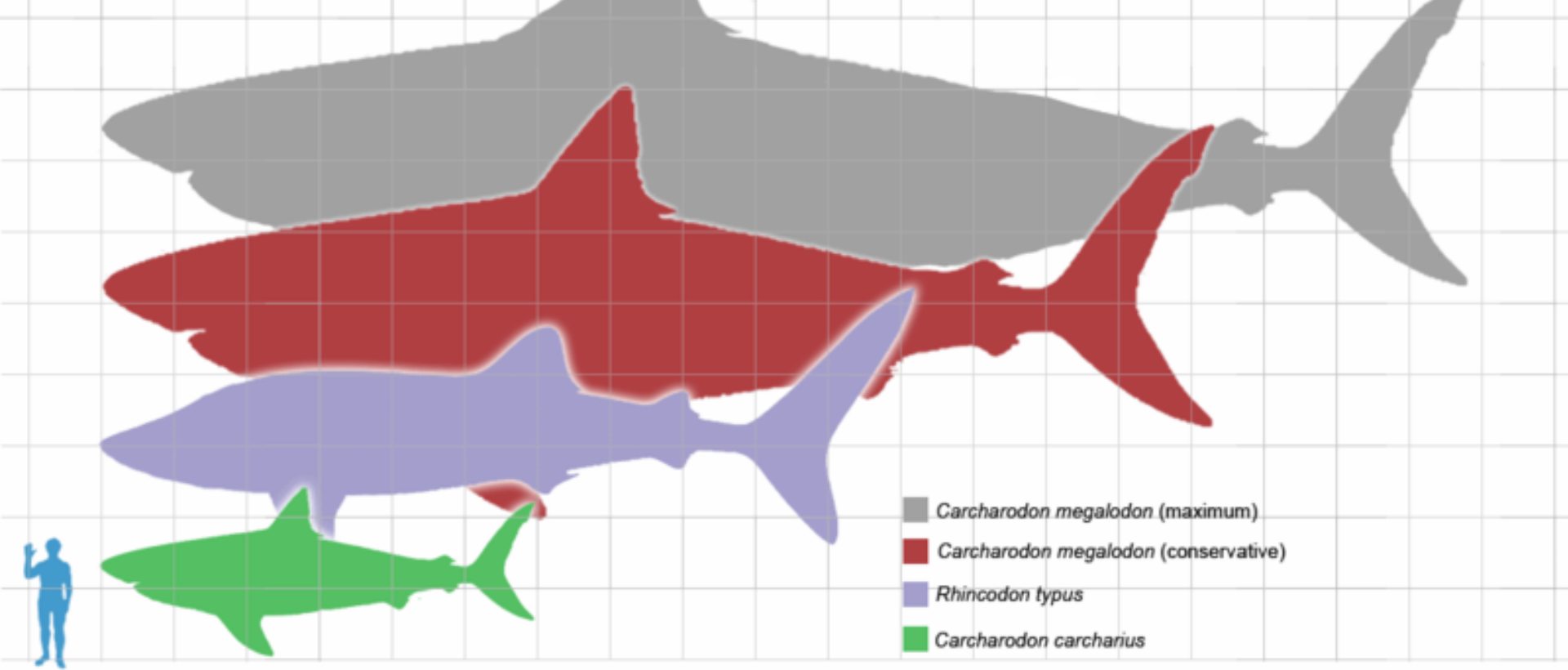


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Image Credit: Matt Martyniuk, CCA-SA 4.0 International

# Were People Bigger Before the Flood?

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# “Biological Scaling”

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# Why are Organisms the Sizes that They Are?

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# Why Are Different Body Parts the Sizes That They Are?

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# Allometry

$$Y = Y_0 M^a$$

$$\log Y = a \log M + \log Y_0$$

$$y \quad m \quad x \quad + \quad b$$

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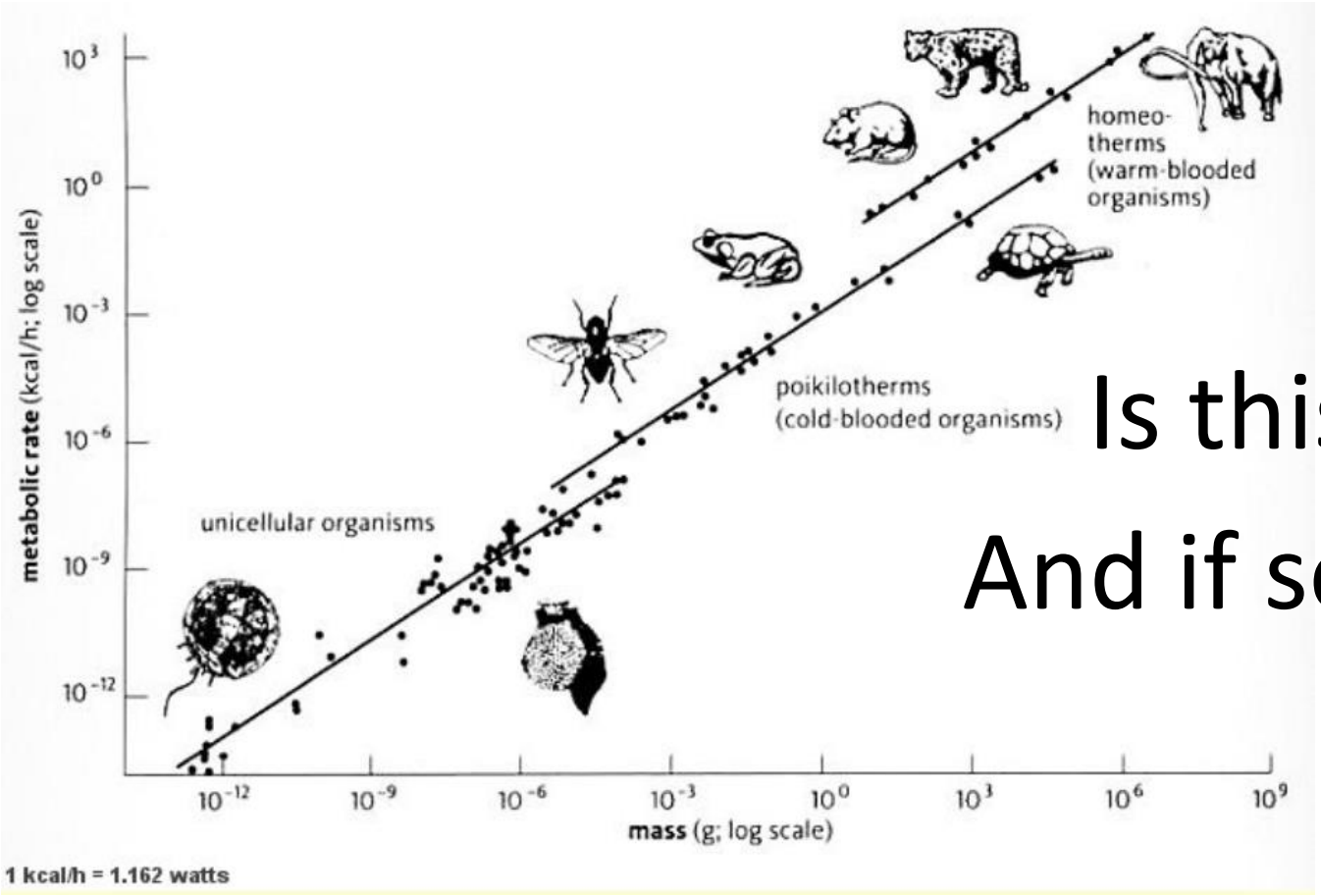
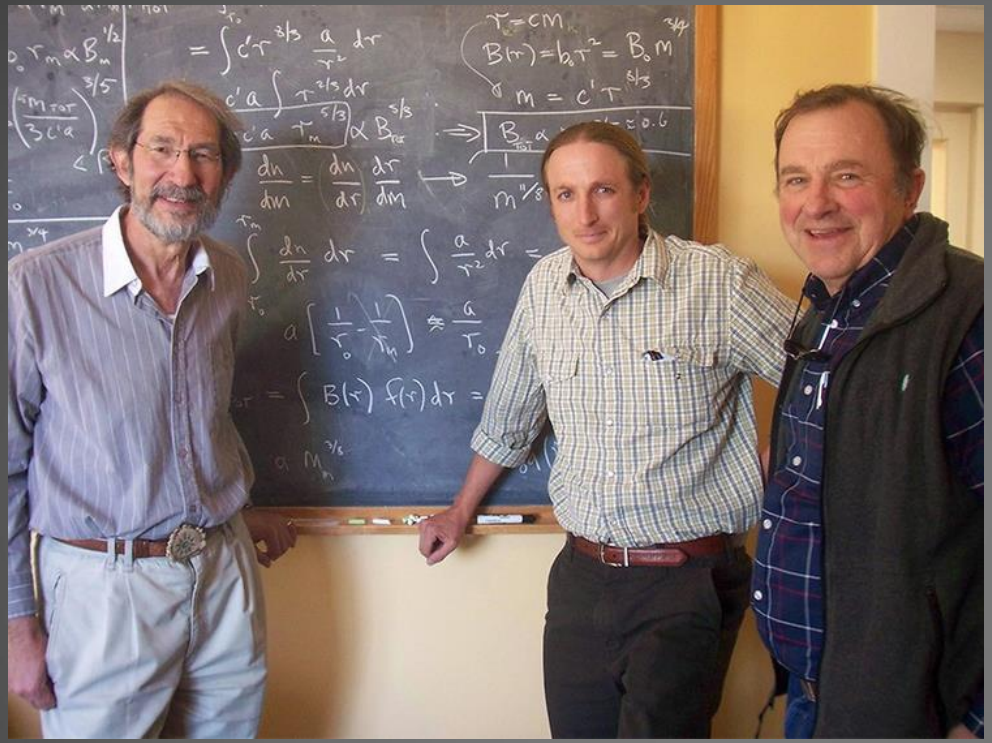
# Kleiber's Law

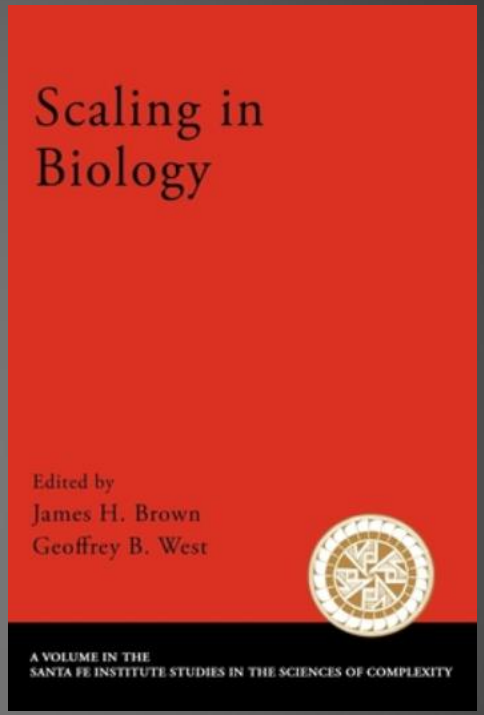



$$B = B_0 M^{\frac{3}{4}}$$

Is this correct?

And if so, why?






Geoffrey West (physics), Brian Enquist and James Brown (ecology)

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https://www.c-span.org/video/?428806-1/scale

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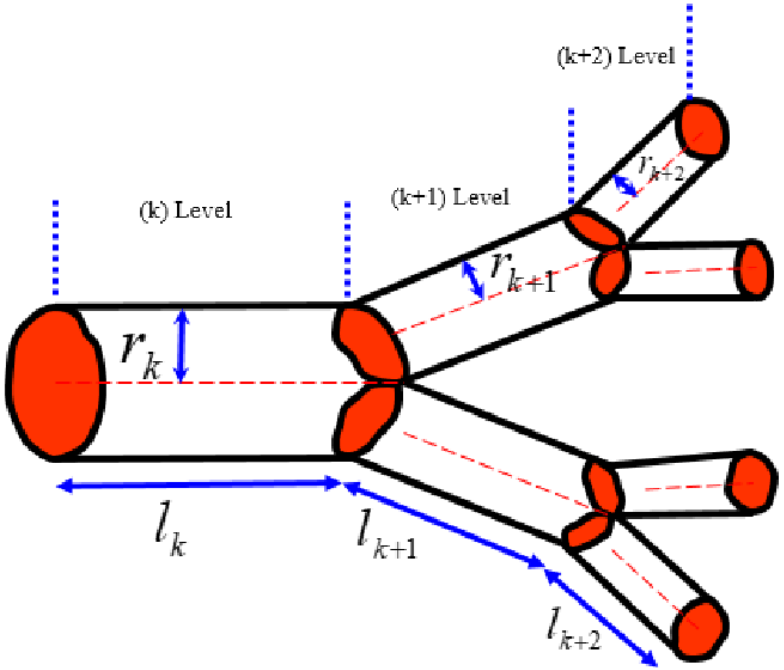
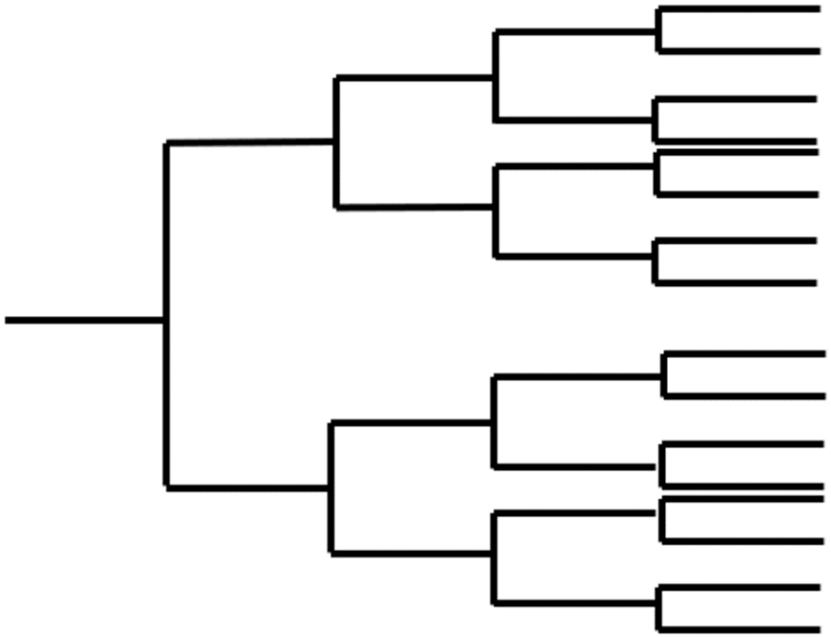



# A Branching Network

# Branch Ratio, *n* = 2



| k | 0 | 1 | 2 | 3 | 4 . . . . . N |
|---|---|---|---|---|---|
| $N_k = 2^k$ | 1 | 2 | 4 | 8 | 16 . . . . . $2^N$ |

# Three Assumptions of Their Model

1. The final branch (e.g., capillary or petiole) of the network is size invariant.

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“Capillaries in dinosaurs are the same size as capillaries in mice.”

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# Three Assumptions of Their Model

1. The final branch (e.g., capillary or petiole) of the network is size invariant.

2. A "space-filling" hierarchical branching pattern is needed for a network to supply an organism's entire volume.

Cough! Cough!

3. Organisms have evolved to minimize the energy needed to transport materials through the network.

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"The optimal design features of the mammalian cardiovascular system have been marveled at by us *Homo sapiens* for many decades."

Li, John K-J. 2000. Scaling and Invariants in Cardiovascular Biology. In *Scaling and Biology*, J. H. Brown and G. B. West, eds. Oxford University Press: 111-113.

"The mammalian circulatory system is essentially a fluid transport system. An important part of this system is the arterial tree, which may be considered as a branching conduit system having the function of delivering blood to the tissues with a minimum loss of energy."

Shirazi, Mehdi. 1972. *Theory of Arterial Circulation*. United States Aerospace Medical Research Laboratory: 2.

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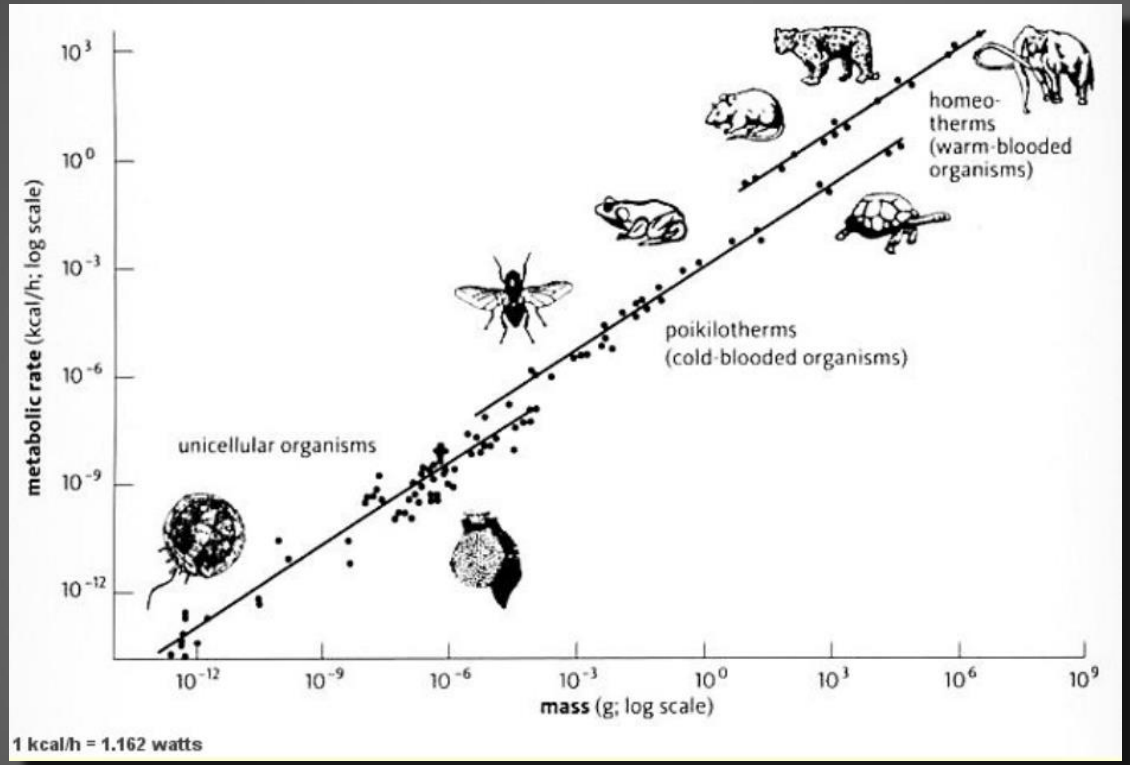


# This screams 'design'!

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**Could the WEB Metabolic Theory (or a Similar Theory) Help Explain the Larger Sizes of Some Pre-Flood Creatures?**

**Could the WEB Metabolic Theory (or a Similar Theory) Help Explain the Great Longevity of the Antediluvian Patriarchs?**

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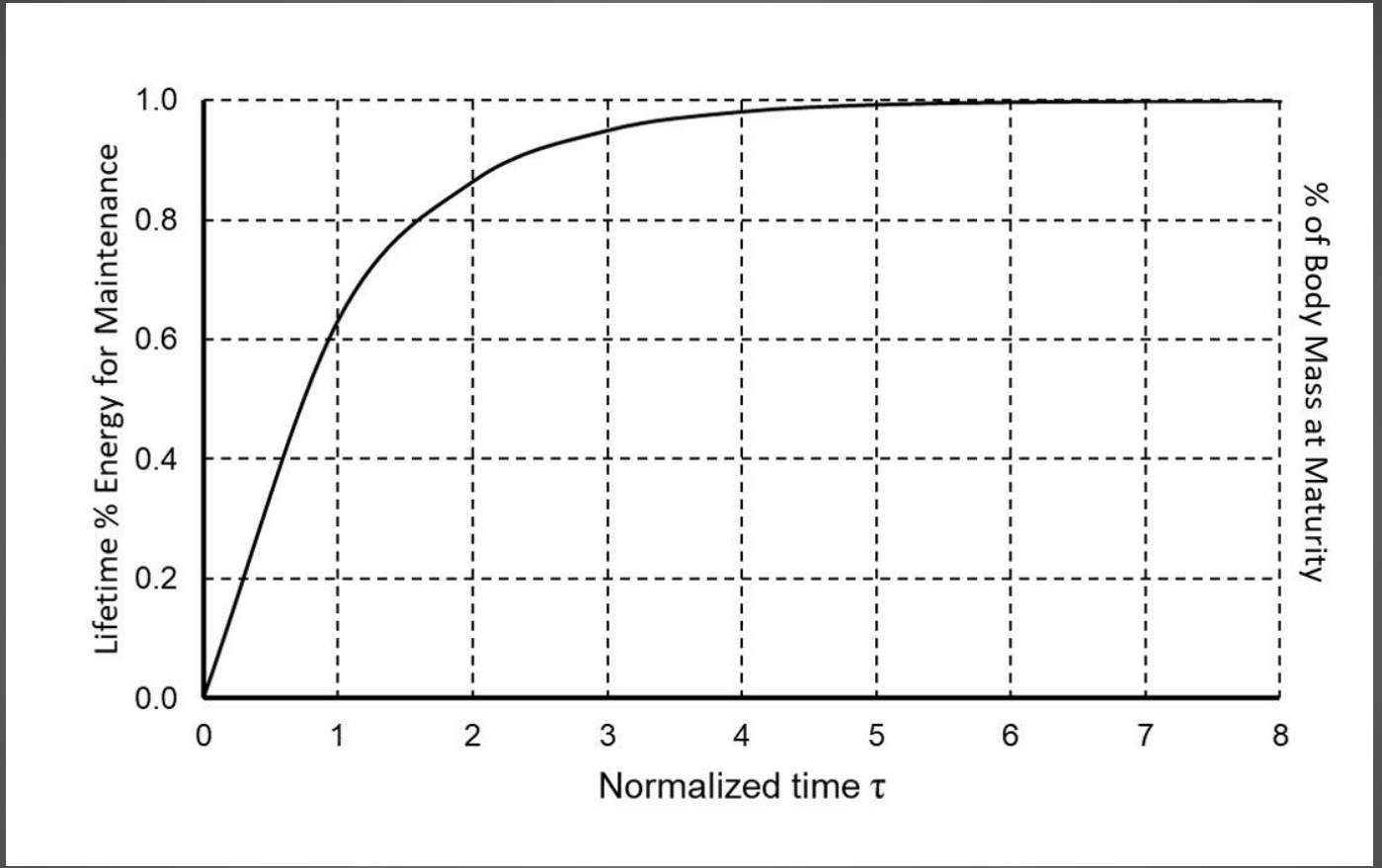


# Living Things: Characteristic "Growth Curve"

"In mammals, maximum adult life span has been shown to correlate with age at maturity (22), and growth rates have been negatively correlated with demographic aging rates (23)."

de Magalhaes, J. P., and G. Church. 2007. An Analysis of the Relationship Between Metabolism, Developmental Schedules, and Longevity Using Phylogenetic Independent Contrasts. *The Journals of Gerontology Series A Biological Sciences and Medical Sciences* 62(2): 149-160. Footnotes in original.

Longer-living creatures take longer to mature.

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# Genesis 5 Patriarchs

| Name | Age at Birth of Descendant | Age at Death |
|---|---|---|
| Seth | 105 | 912 |
| Enos | 90 | 905 |
| Cainan | 70 | 910 |
| Mahalaleel | 65 | 895 |
| Jared | 162 | 962 |
| Enoch | 65 | N/A |
| Methuselah | 187 | 969 |
| Lamech | 182 | 777 |

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# Genesis 11 Patriarchs

| Name | Age at Birth of Descendant | Age at Death |
|---|---|---|
| Arphaxad | 35 | 438 |
| Salah | 30 | 433 |
| Eber | 34 | 464 |
| Peleg | 30 | 239 |
| Reu | 32 | 239 |
| Serug | 30 | 230 |
| Nahor | 29 | 148 |
| Terah | 70 | 205 |

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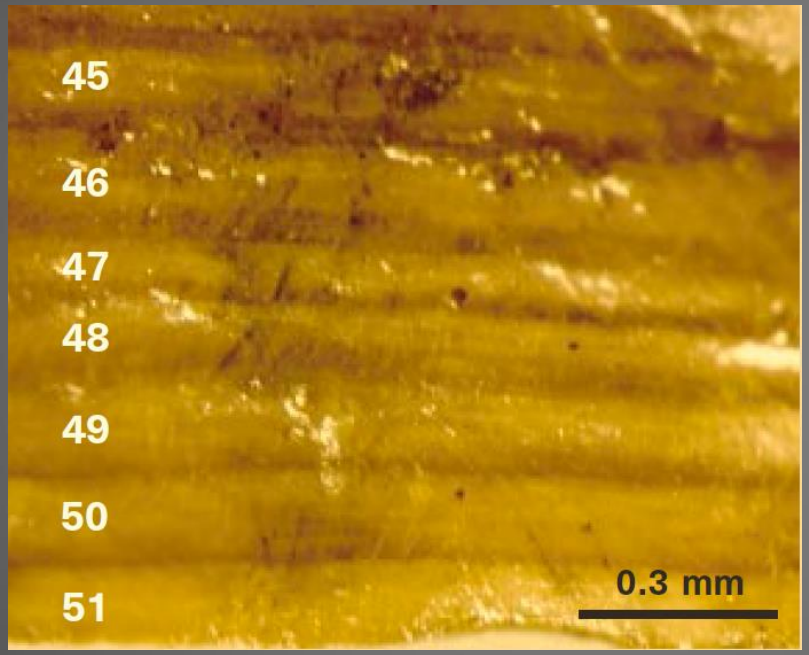
# Evidence of Extreme Longevity in the Pre-Flood Animal Kingdom?




"Growth Rings"

Erickson, G. M. and C. A. Brochu. 1999. How the 'terror crocodile' grew so big. *Nature* 398 (6724): 205-206.

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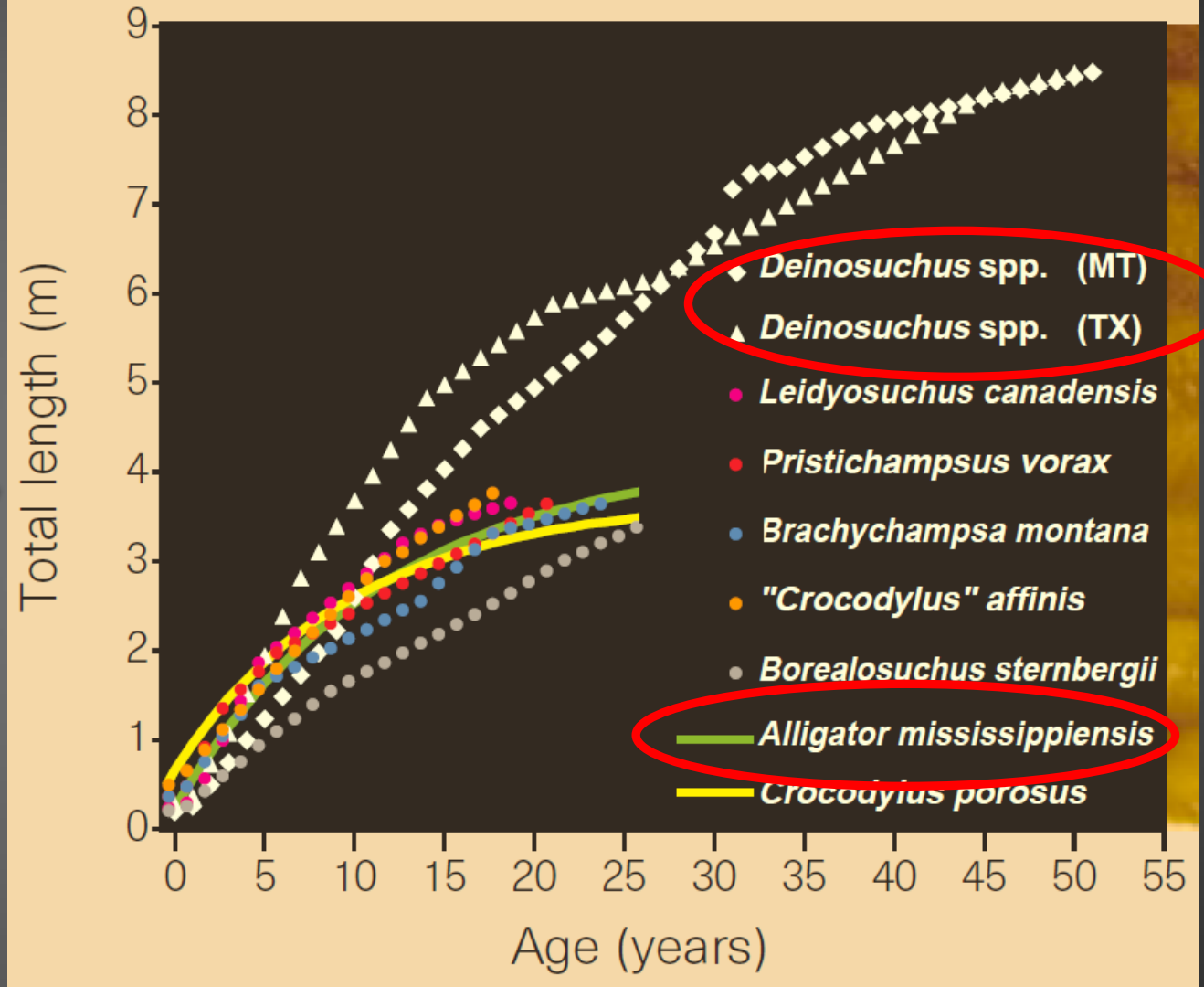
Erickson and Brochu, 1999.

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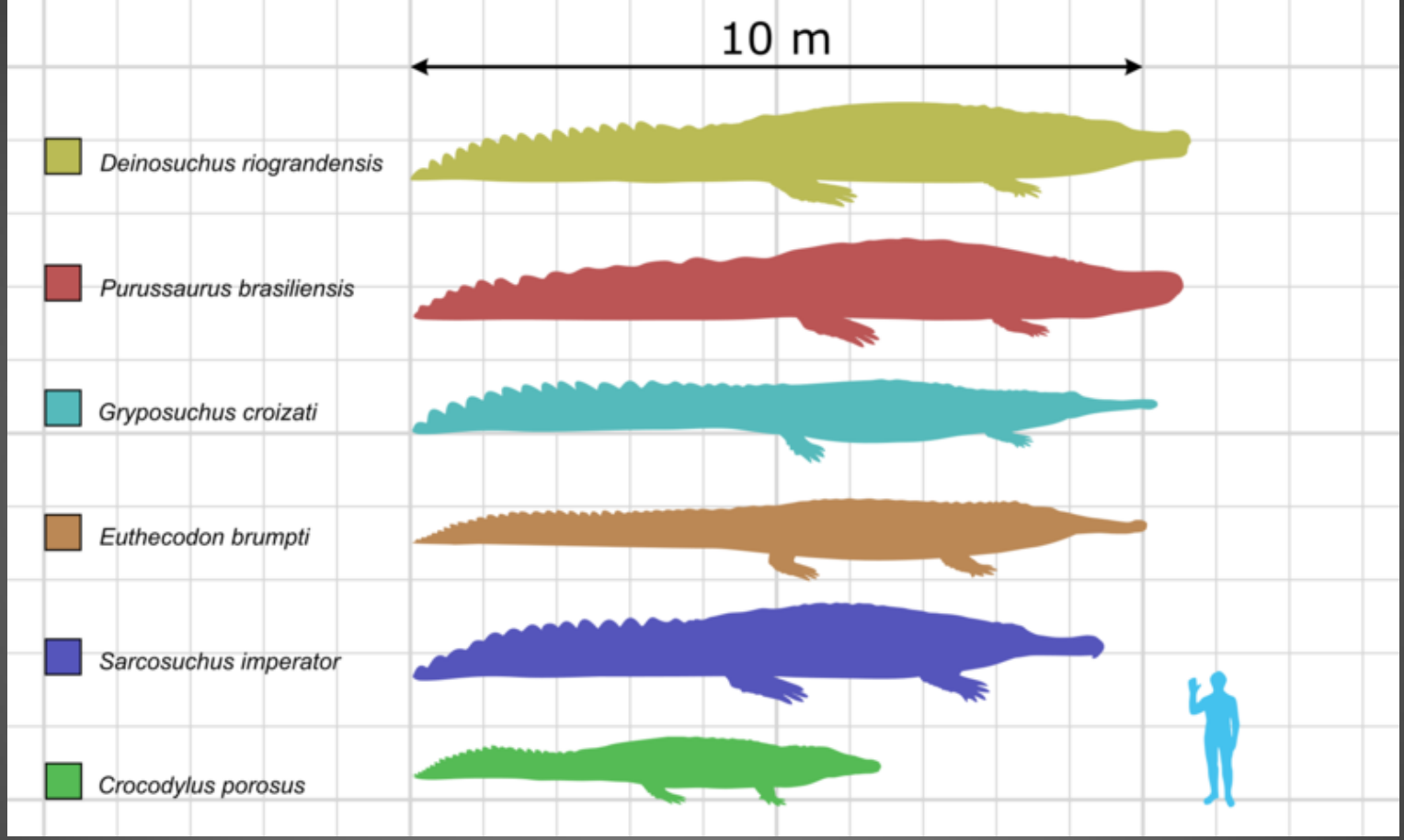


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BY: FRANK SHERWIN, D.SC. (HON.)

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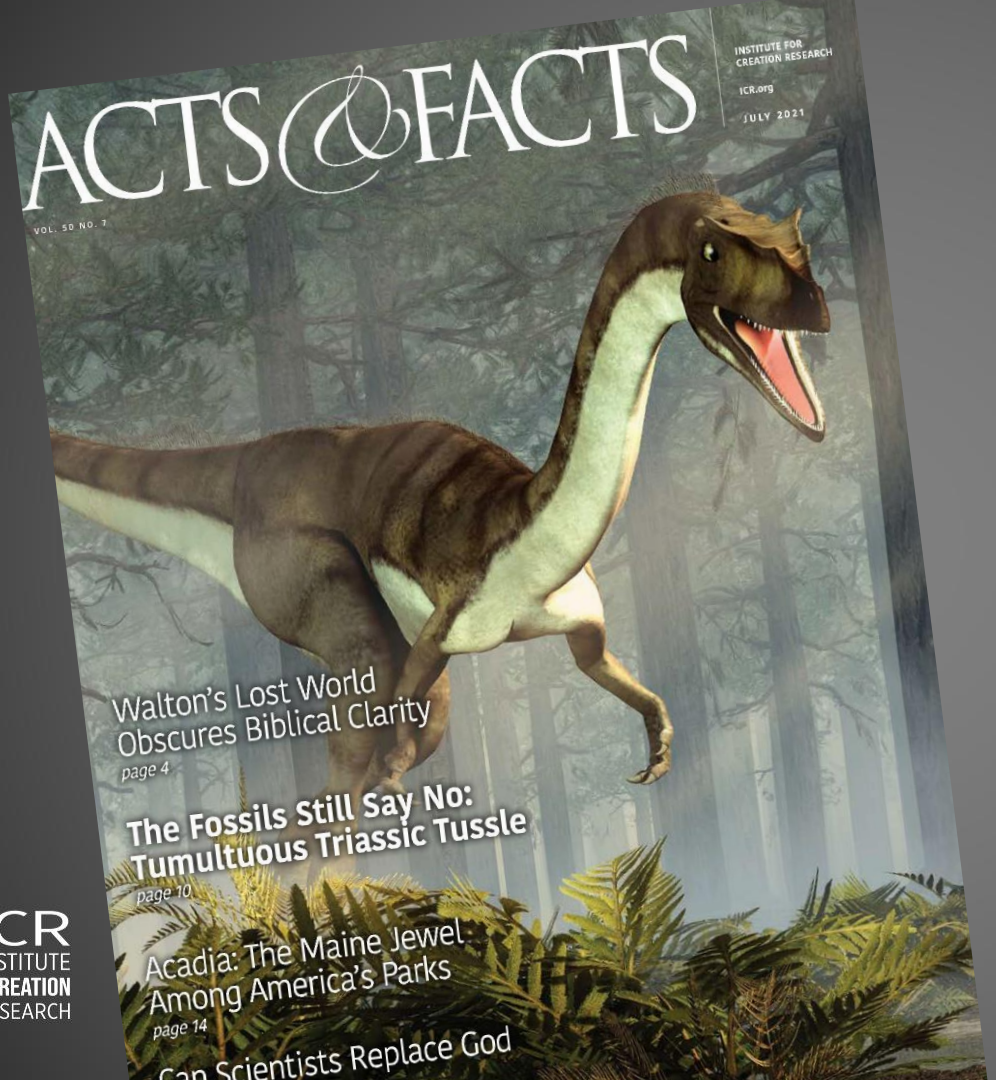


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