

Bill Nye 'the Uninformed Guy'

Examining Nye's Claims in His Debate with Ken Ham

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Introduction

On February 4, 2014 Ken Ham of Answers in Genesis and Bill Nye "the science guy" debated before an online audience of millions the question: "Is creation a viable model of origins in today's modern scientific era?" Ham argued the affirmative, Nye the negative.¹

With Christians throughout history, Ham believes the Bible is the inerrant word of God and that it teaches that thousands of years ago² God miraculously created the universe, including the earth and its various kinds of life forms, over the course of six normal days and that he brought a worldwide flood as a judgment on mankind in the days of Noah. Ham accordingly seeks to understand the data of nature in terms of that revelation. His question is how those data can be understood in a way that is consistent with the absolutely trustworthy testimony of God.

Nye is an atheist. For him, the data of nature are to be assessed without any regard to the affirmations of Scripture. So the two men are at fundamentally different starting points. Nye insists that the biblical creation model of origins is far too improbable to be believed, but in weighing the probability of its truthfulness he ignores what for Ham is the greatest piece of evidence, the revelation of the eternal and omniscient Creator. If God has indeed revealed what Ham and countless Bible believers throughout history have understood him to have revealed, it necessarily shapes how one interprets the data of nature. In that case, one must account for both the data of nature and the witness of Scripture not just the data of nature alone.

When Nye asserts that the creation model is not *viable* in the modern scientific era, he means that scientific discoveries have rendered it impossible for one reasonably or rationally to be a biblical creationist. In other words, he is claiming that science has established conclusively the falseness of the creation model and thus one can no longer rationally believe both that the Bible is the word of God and that it reveals that the creation model is true. At least one of those convictions must be jettisoned or else one is left in the position of denying the undeniable.

In this modern age, many well-meaning Bible believers rush to assure everyone that Scripture does not affirm the key elements of the creation model. They insist that creationism stems from a naïve misreading of the texts by the dreaded "fundamentalists." When properly understood, Scripture is compatible with the creation story told by people like Nye, complete with billions of years, universal common ancestry, animals arising in evolutionary order, rampant predation and death prior to the arrival of mankind, and the first human being conceived and birthed by an animal. So they see this as a tempest in a teapot, a needlessly fabricated conflict that should not concern the more knowledgeable and sophisticated Bible student.

Biblical creationists are well aware of the many interpretations that have been proposed that remove from Scripture any affirmation about the time, manner, or duration of creation, leaving the bare (yet profound) message that God in some way at some time in the past created

¹ I am grateful to Answers in Genesis for graciously providing me a transcript of the debate.

² Ham and many others are convinced the correct understanding of the genealogies in Scripture leads to a creation date of just over 6,000 years ago. However, David McGee's "[Creation Date of Adam from the Perspective of Young-Earth Creationism](#)," published in *Answers Research Journal*, a journal produced by Ham's ministry, acknowledges the possibility of extending that date back as far as 12,000 years. So presumably Ham includes this position within his definition of the "creation model."

all things. Though that flexibility may be culturally convenient, they remain convinced on exegetical, theological, and historical grounds that their understanding of Scripture in this matter is correct (see, e.g., the articles collected at [Biblical Issues](#)). Many creationists are also convinced that the effort to deny this interpretation in the name of preserving the Bible's reputation in our scientific age ultimately undermines the Bible by draining it of objective content, turning it into a Rorschach test that can mean all things to all people.

Nye's claims and arguments are worth examining because he is a self-appointed science expert who had ample time to prepare his attack on the creation model. During that time he no doubt consulted with like-minded scientists on how best to go about refuting creationist claims. So it is reasonable to assume that Nye presented in this debate what are considered the premier objections to biblical creation. I encourage the reader to check the many articles for which I provide links in deciding whether Nye has left no room for the creation model.

I. Nye's Opening Remarks

A. It's only Ken Ham and his followers

In his opening remarks, Nye changed the debate question from "Is creation a viable model of origins in today's modern scientific era?" to "Does *Ken Ham's* creation model hold up? Is it 'viable?'" As became clear during the debate, this was the first note of a rhetorical strategy designed to portray belief in a young earth as the eccentric conviction of one man and the few within his orbit, what Nye refers to repeatedly as "Mr. Ham and his followers/associates." That is false, of course, as the young-earth view, to the distress of Nye and his ilk, is held by millions of people in America and around the world who have no connection with Ham, including thousands of scientists. The fact Nye at the very beginning of the debate sought to create a false impression in service of his cause, trusting that he had plausible deniability, was a clue to what was coming.

B. Distinction between historical and experimental science is unique to Ham

In response to Ham's point that there is a difference between historical science and experimental or observational science, Nye said that no such distinction is made on the various CSI television programs where investigators examine crime scenes to determine what took place prior to their investigation. But it is not the least bit surprising that a television drama dedicated to attracting an audience by featuring the crime-solving power of forensic science has no interest in a philosophical question about the nature of science. Nye then declared:

And on CSI there is no distinction made between historical science and observational science. These are constructs *unique to Mr. Ham*. We don't normally have these *anywhere else in the world except here* [i.e., at Ken Ham's ministry of Answers in Genesis]. Natural laws that applied in the past apply now. That's why they're natural laws; that's why we embrace them. That's how we made all these discoveries that enabled all this remarkable technology. . . . When you go

to a crime scene and find evidence, you have clues about the past. And you trust those clues and you embrace them and you move forward to convict somebody.

Here Nye works to reinforce his theme that Ken Ham is alone in a world of his own making, an almost tragic figure reduced to fabricating a distinction within the scientific enterprise that is recognized by no one else. The truth, however, is that the distinction between historical and experimental or observational science is not unique to Ken Ham; on the contrary, it is well known. Either Nye is unaware of that fact or he is relying on the audience being unaware of it and not caring enough to pursue it.

Many have remarked on the qualitative difference that exists between experimental or observational science and the science that is involved in the reconstruction of past events. For example, in his 1999 Pulitzer-Prize winning book, *Guns, Germs, and Steel*, evolutionary biologist Jared Diamond, who is a member of the National Academy of Sciences, distinguished between experimental and historical sciences. He wrote (p. 421), "Historical sciences in the broad sense (including astronomy and the like) share many features that set them apart from nonhistorical sciences such as physics, chemistry, and molecular biology. I would single out four: methodology, causation, prediction, and complexity." That same year, Henry Gee, editor of the prestigious science journal *Nature*, declared in *In Search of Deep Time: Beyond the Fossil Record to a New History of Life* (p. 5, 8) that hypotheses about the remote past "can never be tested by experiment, and so they are unscientific. . . No science can ever be historical." The renowned evolutionary biologist Ernst Mayr wrote in "Darwin's Influence on Modern Scientific Thought" in *Scientific American* (July 2000, p. 80), "Evolutionary biology, in contrast with physics and chemistry, is a historical science—the evolutionist attempts to explain events and processes that have already taken place. Laws and experiments are inappropriate techniques for the explication of such events and processes. Instead one constructs a historical narrative, consisting of a tentative reconstruction of the particular scenario that led to the events one is trying to explain."

In the last fifteen years there has been much discussion among philosophers of science about the distinction between historical and experimental science. Carol Cleland, for example, has argued that the fundamental differences in methodology between historical and experimental sciences do not make historical science inferior in terms of testing hypotheses.³ Derek Turner, on the other hand, has argued that the disadvantages of historical science vis-à-vis experimental science are more significant than Cleland allows.⁴ In his 2007 book *Making History: Historical Science and the Scientific Realism Debate*, published by Cambridge University Press, he argues that the inability to manipulate the past and the destruction of evidence over time do indeed put science at a relative disadvantage when it comes to knowing the past.

Science educator Phil Seok Oh acknowledged the distinction between historical and experimental science in *Science Education in the 21st Century* (2008) (pp. 263-264):

The dominant pattern of reasoning employed in earth science proceeds backward "from effect (traces) to causes" rather than "from causes (test condition) to

³ See, e.g., Carol E. Cleland, "Historical science, experimental science, and the scientific method," *Geology* 29 (November 2001), 987–990.

⁴ See, e.g., Derek Turner, "Local Underdetermination in Science," *Philosophy of Science* 72 (January 2005), 209–230.

effects" (Cleland, 2002, p. 484). That is to say, the focus of earth scientific research is on explaining existing natural phenomena with long past events or unobservable causes at present while the major work of classical experimental sciences is making a prediction and testing it in a controlled laboratory setting (Ault, 1998; Cleland, 2002; Dodick & Orion, 2003; Kleinhans, Buskes, & de Regt, 2005). For example, earth scientists 'read' the structural and compositional characteristics of rock layers to make interpretations about the processes that shaped the strata through the geologic time. Retrodictive (or, more broadly, postdictive) tasks of this sort calls [sic] for a scientific method which differs from the hypothetico-deductive method of experimental sciences and also characterizes earth science as an *interpretive* and *historical* science (Frodeman, 1995).

This distinction between historical and experimental science even generated a doctoral dissertation in 2008 at Australian National University by Ben Jeffares titled *Testing Times: Confirmation in the Historical Sciences*. Jeffares tellingly writes (pp. 9-10, emphasis supplied):

The problem of confirmation in the historical sciences is one that has a number of facets. The most obvious of these, and the one that most concerns the popular observer, is the fact that the historical sciences appear to have a problem unlike that of the experimental sciences when it comes to observational access. *The past cannot be witnessed, so there is no way of knowing "for sure" what happened. This is true, and there is no easy way to answer the die-hard sceptic. If nothing else, the history of metaphysics and epistemology demonstrate that there is no knockdown answer to pig-headed scepticism.* But the question for the less obtuse is one of probabilities.

Of course, if the Bible is the word of God, as biblical creationists believe, then it is not "pig-headed" to be skeptical about any proposed historical reconstruction that contradicts what the Bible affirms. That is merely trusting God and seeking understanding from within that framework, which is what Christians have done for millennia. Doubting inferences drawn from data about what occurred in the past is not the same as rejecting the data.

But the point of all of this is that Nye's assertion that the distinction between historical and experimental science is some fantasy "unique to Mr. Ham" is blatantly false. And yet, Nye was willing to make the claim with great confidence. That is a large caution signal regarding his other claims.

C. Distinguishing between historical and experimental science is denying the consistency of natural laws

Notice also Nye's confusion, putting it most charitably, in suggesting that distinguishing between historical and experimental science is denying that natural laws have applied throughout history. Later he falsely charges, "And your assertion that there's some difference between the natural laws that I use to observe the world today and the natural laws that existed 4,000 years ago is extraordinary and unsettling." In his First 5-Minute Rebuttal he stated, "So this idea that you can separate the natural laws of the past from the natural laws that we have now I think at

the heart of our disagreement. I don't see how we're ever going to agree with that if you insist that natural laws have changed." In his Second 5-Minute Rebuttal he said, "So next time you have a chance to speak, I encourage you to explain to us why we should accept your word for it, that natural law changed just 4,000 years ago, completely, and there's no record of it."

It is true that biblical creationists, in agreement with all Christians, believe that God has worked miracles at different times throughout history, but they accept that the laws of nature that were established by God have been in operation since creation was completed (see, e.g., Carl Wieland, [The uniformity of natural law](#)). In any event, the distinction between historical and operational science is not based on a claim that the laws of nature have changed over time; it is based on the fact scientific access to the present is different from scientific access to the past.

D. Scoffing at a worldwide flood and feasibility of Noah's ark

Nye expressed (here only briefly) his personal incredulity regarding a worldwide flood that had a major impact on the planet and suggested it was not reasonable to think there was "a 500 foot wooden boat and eight zookeepers for 14,000 individual animals, every land plant in the world under water for a full year." Of course, creationists have addressed at length the evidence for a worldwide, catastrophic flood and the feasibility of the account of Noah. See, for example, the following, some of which I cite again when Nye repeats or embellishes on his skepticism about Noah and the flood:

Answers in Genesis Staff
[Ark construction crew](#)

Ginger Allen
[How Did Plants Survive and Disperse After the Flood?](#)

Steven Austin et al.
[Catastrophic Plate Tectonics: A Global Flood Model of Earth History](#)

Don Batten et al.
[What about continental drift?](#)

Don Batten et al.
[How did the animals fit on Noah's Ark?](#)

John Baumgardner
[Catastrophic plate tectonics: the geophysical context of the Genesis Flood](#)

John Baumgardner
[Catastrophic Plate Tectonics: The Physics Behind the Genesis Flood](#)

John Baumgardner
[Computer Modeling of Large-Scale Tectonics Associated with the Genesis Flood](#)

John Baumgardner
[3-D Simulation of Global Tectonic Changes Accompanying Noah's Flood](#)

John Baumgardner
[Numerical Simulation of Large-Scale Tectonic Changes Accompanying the Flood](#)

John Baumgardner
[Runaway Subduction as the Driving Mechanism for the Genesis Flood](#)

John Baumgardner & Daniel Barnette
[Patterns of Ocean Circulation Over the Continents During Noah's Flood](#)

Leonard Brand
[Geology Before, During, and After the Biblical Flood](#)

Paul Garner
[Time for an Upgrade? What CPT can explain](#)

Ken Ham & Tim Lovett
[Was There Really a Noah's Ark & Flood?](#)

Brad Harrub & Bert Thompson
[An Examination of Noah's Ark and the Global Flood](#)

Mark Horstemeyer & John Baumgardner
[What Initiated the Flood Cataclysm?](#)

John Morris
[What Happened to Land Plants During the Flood?](#)

John Morris
[How Did Noah Gather the Animals?](#)

Raj Prabhu et al.
[Ocean Circulation Velocities Over the Continents During Noah's Flood](#)

Marcus Ross
[Recounting the Animals on the Ark](#)

Ariel Roth
[Flood Stories - Can They Be Ignored?](#)

Jonathan Sarfati
[Problems with a Global Flood?](#)

Jonathan Sarfati
[How did all the animals fit on Noah's Ark?](#)

Andrew Snelling
[A Catastrophic Breakup](#)

Andrew Snelling
[Geologic Evidences for the Genesis Flood](#)

Andrew Snelling
[Can Catastrophic Plate Tectonics Explain Flood Geology?](#)

Andrew Snelling & Steven Austin
[Startling evidence for Noah's Flood in Grand Canyon Sandstone](#)

Monty White
[Flood Legends](#)

Kurt Wise
[Sinking a Floating Forest](#)

Todd Wood
[Two of Every Kind](#)

John Woodmorappe
[Fitting the animals on the ark and caring for them](#)

John Woodmorappe
[Caring for the Animals on the Ark](#)

David Wright
[How Did Plants Survive the Flood?](#)

E. Grand Canyon fossils are segregated by layers

Nye noted that the fossils in the Grand Canyon are found in layers and declared "[t]here is not a single place in the Grand Canyon where the fossils of one type of animal cross over into the fossils of another." He takes this segregation as disproving that the sedimentary layers were laid down in any phase or phases of the Flood event because he is certain that animals would be more chaotically distributed if that were the case.

What is noticeably lacking in his mention of the Grand Canyon is any awareness of the difficulty posed for his view by the thousands of feet of marine sediment that were deposited on the continent. The ocean-floor rocks are denser than the continental crust so they sink lower into the mantle. That is what creates the ocean basin. So it is no small geophysical feat to get such massive amounts of ocean sediment onto the higher continents. It requires an increase in the volume of ocean water and/or the rising the ocean floor to push the ocean water and sediment up onto the continent. There then must be a sinking of the ocean floor to allow the water to drain off the continent. A one-time occurrence of the ocean-floor cycle can be explained by Catastrophic Plate Tectonics, but there is no mechanism for multiple occurrences of the cycle as required by the conventional geological story. See:

Don Batten et al.
[What about continental drift?](#)

Andrew Snelling
[High and Dry Sea Creatures](#)

Andrew Snelling
[Can Catastrophic Plate Tectonics Explain Flood Geology?](#)

Nor does Nye show any awareness of the folded sedimentary layers in the Grand Canyon that span some 440 million years by conventional dating. The fact these multiple layers were all folded together without fracturing indicates that all the layers from top to bottom were laid down too fast for any of them to have had time to harden before the folding. That is a strong clue that something is amiss with the conventional explanation of how these layers formed, as they would have hardened long before the alleged millions of years. See:

Steven Austin and John Morris
[Tight Fold and Clastic Dikes as Evidence for Rapid Deposition and Deformation](#)

John Morris
[Soft Sediment Deformation: Recent Flood Evidence](#)

Andrew Snelling
[Rock Layers Folded Not Fractured](#)

Andrew Snelling
[Bent Rock Layers](#)

Andrew Snelling
[Soft-Sediment Deformation Features](#) (ch. 75 of *Earth's Catastrophic Past*)

Brian Thomas
[Don't Grand Canyon Rocks Showcase Deep Time?](#)

In addition, multiple rock layers in the Grand Canyon (and elsewhere) frequently lie directly on top of sedimentary layers alleged to be tens of millions of years older. In other words, the intermediate layers are missing. And yet, the contact zone between the two layers is very flat, showing almost no signs of erosion. If the missing intermediate layers 2 through 4 had been deposited on the earlier layer 1 and then eroded away before layer 1 began receiving the deposits of layer 5, the surface of layer 1 would be quite irregular. Erosion carves the land into irregular topography as water seeks the path of least resistance in its downhill journey. The same problem exists if one claims the intermediate layers were never deposited. That would mean layer 1 was eroding for the entire tens of millions of years alleged to separate layer 5 from layer 1, so one certainly would not expect layer 1 have a flat surface. See:

John Morris
[Gaps in the Geologic Column](#)

John Morris
[Flat Gaps Between Strata](#)

Ariel Roth

['Flat gaps' in rock layers challenge long geologic ages](#)

Andrew Snelling

[The Case of the 'Missing' Geologic Time](#)

Brian Thomas

[Don't Grand Canyon Rocks Showcase Deep Time?](#)

Contrary to Nye's claim, species are found in multiple layers of the Grand Canyon,⁵ but there is indeed an order or sequence of fossils in the rocks. This order, however, is not the result of evolutionary changes over eons but is the product of a unique catastrophic flood that occurred in a world that was unlike the present world, including its habitats and ecological zones. This coupled with hydrodynamic sorting and differences among creatures in behavior and mobility can account for the general pattern. There are just too many unknowns and too much evidence favoring flood deposition to insist that the fossil order could not be a flood sequence. See:

Andrew Snelling

[Doesn't the Order of Fossils in the Rock Record Favor Long Ages?](#)

Andrew Snelling

[Order in the Fossil Record](#)

Kurt Wise

[Sinking a Floating Forest](#)

Sean Pitman

[The Fossil Record](#)

Nye's statement that one "would expect drowning animals to swim up to a higher level" is interesting in light of the fact tracks of vertebrates appear in layers below the first appearance of vertebrate bodies. This is consistent with animals that scrambled to escape the incoming sedimentary deposits and finally became exhausted, died, and were buried. See:

Andrew Snelling

[Order in the Fossil Record](#)

Andrew Snelling

[Fossilized Footprints—A Dinosaur Dilemma](#)

Andrew Snelling and Steven Austin

[Startling evidence for Noah's Flood](#)

Elsewhere there are examples of "polystrate fossils," meaning fossils that transverse multiple stratigraphic layers that are alleged to have been laid down over long ages. This indicates the layers were laid down fast enough that the top part of the fossilized organism did not have time to decompose before being protected by sediment. See:

⁵ For example, the same brachiopod, gastropod, bryozoan, pelycopod, trilobite, and coral species are found in multiple formations of the Supai Group. See Edwin D. McKee, "The Supai Group of the Grand Canyon," Geological Survey Professional Paper 1173 (Washington, D.C.: Government Printing Office, 1982).

John Morris
[What Are Polystrate Fossils?](#)

John Morris
[The Polystrate Trees and Coal Seams of Joggins Fossil Cliffs](#)

Michael Oard and Hank Giesecke
[Polystrate Fossils Require Rapid Deposition](#)

Sean Pitman
[The Fossil Record](#)

Tas Walker
[Polystrate fossils: evidence for a young earth](#)

When Nye again (during his 30-minute presentation) brings up the segregation of fossils, he declares that if one could find a single example anywhere in the world of "a higher animal mixed in with a lower one" that scientists "would embrace you, you would be a hero, you would change the world if you could find one example of that anywhere. People have looked and looked and looked; they have not found a single one." This is disingenuous because many fossils have been found in layers in which they were not expected. When that happens, the find is absorbed into the ruling paradigm simply by extending the range in which it is accepted that the organism lived. See:

Gary Bates and Lita Cosner
[Are there out-of-sequence fossils that are problematic for evolution?](#)

Michael Oard
[Evolution pushed further into the past](#)

Michael Oard
[How well do paleontologists know fossil distributions?](#)

Michael Oard
[Evolutionary fossil-time ranges continue to expand](#)

Michael Oard
[Further expansion of evolutionary fossil time ranges](#)

Michael Oard
[Are fossils ever found in the wrong place?](#)

Michael Oard
[Taxonomic manipulations likely common](#)

Michael Oard
[Fossil range extensions continue](#)

Michael Oard
[Fossil time ranges continue to be increased](#)

Michael Oard
[More expansion of fossil time ranges](#)

John Woodmorappe
[The fossil record: Becoming more random all the time](#)

F. Many religious people do not believe the earth is young

Nye pointed out that one can be religious and be part of a religious community without believing the earth is only thousands of years old. He brought this up again in his Second 5-Minute Rebuttal. That is true, of course, but the question being debated was whether the recent-creation view is a viable model of origins in today's modern scientific era. The fact there are religious people who reject a recent creation is not relevant to that question.

This was Nye implying that the recent-creation understanding of Scripture is wrong. After all, look how many religious people do not accept it. But people can reject an interpretation of Scripture for reasons unrelated to the merits of that interpretation. As I noted previously, young-earth creationists are convinced on exegetical and theological grounds that their understanding is correct (see the articles at [Biblical Issues](#)), and they have church history on their side (see, e.g., Andrew Kulikovsky, [Creation and Genesis: A Historical Survey](#)). If Nye wanted to have that discussion, perhaps he should arrange for another debate.

G. Embrace of the creation model will mean the downfall of America

Nye concluded his opening remarks with:

What keeps the United States ahead, what makes the United States a world leader is our technology, our new ideas, our innovations. If we continue to eschew science, eschew the process, and try to divide science into observational science and historic science we are not going to move forward, we will not embrace natural laws, we will not make discoveries, we will not invent and innovate and stay ahead.

Ham provided multiple examples of biblical creationists who have made discoveries, invented, and innovated, which shows beyond question that a creationist's view of history, his view of origins, does not hinder him from conducting science in the present. Rather than explain how his claim could be squared with the refutation Ham had just presented, Nye acted like Ham had offered nothing relevant to the issue.

The late Dr. Philip Skell was Emeritus Evan Pugh Professor at Pennsylvania State University and a member of the National Academy of Sciences. In 2005 he addressed the heuristic role in science of one's view of history in [Why Do We Invoke Darwin?](#), published in *The Scientist*. He stated (emphasis supplied):

While the great majority of biologists would probably agree with Theodosius Dobzhansky's dictum that 'nothing in biology makes sense except in the light of evolution,' *most can conduct their work quite happily without particular reference to evolutionary ideas,*" A.S. Wilkins, editor of the journal *BioEssays*, wrote in 2000. "Evolution would appear to be the indispensable unifying idea and, at the same time, *a highly superfluous one.*"

I would tend to agree. Certainly, my own research with antibiotics during World War II received no guidance from insights provided by Darwinian evolution. Nor did Alexander Fleming's discovery of bacterial inhibition by penicillin. *I recently asked more than 70 eminent researchers if they would have done their work differently if they had thought Darwin's theory was wrong. The responses were all the same: No.*

So Nye's suggestion that belief in the creation model will hamstring American progress and innovation and thereby spell the demise of America as a world leader is bogus. And yet,

there he was hawking the claim as though it were obviously true, a smooth talker trying to sell a worthless product.

Note again the false suggestion that one who believes in a recent creation "will not embrace natural laws." Creationists accept that the laws of nature that were established by God have been in operation since creation (see, e.g., Carl Wieland, [The uniformity of natural law](#)).

II. Nye's 30-Minute Presentation

A. Not enough time for limestone in Kentucky to have formed

Nye asserted that coral-bearing limestone under the Creation Museum in Kentucky (site of the debate) could not have been formed in the time available in a recent-creation model. He declared, "There isn't enough time since *Mr. Ham's flood* [note again the attempt to portray the creation model as an oddity of Ken Ham] for this limestone that we're standing on to have come into existence."

Less than three years earlier geologist Andrew Snelling wrote [Cincinnati – Built on a Fossil Graveyard](#) in which he argued that the very limestone deposit that Nye asserted disproved the creation model was in fact evidence for it. Nye assumes that limestone deposits necessarily are made by slow and gradual deposition taking many thousands of years to build up, but there is good evidence that the requisite material can be deposited and lithified rapidly under sufficiently catastrophic conditions. See, e.g., Steven Austin, [Were Grand Canyon Limestones Deposited by Calm and Placid Seas?](#)

In *Earth's Catastrophic Past* (Dallas, TX: ICR, 2009), 2:493-499, Snelling discusses several facts that weigh against the Grand Canyon limestones being the result of slow and gradual deposition:

First, the grain size distribution and structure of the Grand Canyon limestones differ markedly from modern lime mud deposits found in shallow tropical waters. Second, there is observational evidence of catastrophic formation of lime mud deposits caused by hurricanes. Third, many of the Grand Canyon limestone deposits cover thousands of square kilometres. Fourth, the Redwall Limestone has a fossil nautiloid bed with an estimated one billion fossils. Moreover, from those observed there is a distinct pattern to their deposition position; they generally face a NW–SE direction, which suggests a strong current depositing the remains catastrophically, and not of slow-and-gradual processes.⁶

He states later in that same volume (p. 910): "Perhaps even more remarkable is the evidence that limestones, which are usually claimed to have formed as a result of tiny lime particles slowly settling on the ocean floor with the debris from marine organisms over countless years, were instead deposited catastrophically, either as lime sands transported in sand waves

⁶ Quote from Shaun Doyle, [Flood geology vs secular catastrophism](#).

leaving behind cross-beds, or as lime muds in turbidity currents or debris flows that entombed marine organisms."

It is not clear if Nye was claiming that the coral fossils in the Kentucky limestone are part of a coral reef that grew at that location, which would raise additional issues. Similar claims have been examined by creation scientists and shown not to be as powerful as alleged. See:

John Morris
[Fossil Coral 'Reefs' Among Rock Strata](#)

Ariel Roth
[Fossil Reefs and Time](#)

Andrew Snelling
[Ancient "Fossil Reefs" – Formed in the Flood?](#)

Tas Walker
[Not ancient 'reefs' but catastrophic deposits](#)

Nye's willingness to speak beyond his knowledge in an attempt to sound authoritative is evident in his assertion that the coral animals fossilized in the Kentucky limestone are "zooxanthellae." In fact, zooxanthellae are not the coral animals that left the fossils of which Nye was speaking; they are photosynthetic algae that live in the tissues of corals.

B. Ice cores prove vast ages

Nye states that ice cores drilled from places like Greenland and Antarctica have as many as 680,000 layers, each of which represents one winter-summer cycle. That would require 170 winter-summer cycles to occur in each of the 4,000 years since Noah's flood [AiG believes the flood began more than 4,300 years ago], which obviously has not happened. So there you go; case closed.

Nye seems completely unaware of the assumptions involved in interpreting the ice core data in the way he proposed, apparently having never read any creationist literature on the subject. He suggests it is a simple and straightforward matter of counting and adding up readily visible layers in the core, like stripes on a barber's pole, each layer equaling one year (a winter-summer cycle). But that is not the case. One's assumptions about earth history have a profound impact on one's interpretation of ice cores.

Ice cores have received considerable attention from creation scientists. Meteorologist Michael Oard has written most extensively on the subject, including a technical monograph, *The Frozen Record: Examining the Ice Core History of Greenland and Antarctic Ice Sheets* (Santee, CA: ICR, 2005). Larry Vardiman, whose doctorate is in atmospheric science, and a few others have also addressed these data. The short version of what is a technical response is (abstract of [Do Greenland ice cores show over one hundred thousand years of annual layers?](#)):

Uniformitarian scientists claim to have counted 110,000 annual layers of ice down one of the ice cores drilled into the central Greenland ice sheet, but this claim is incorrect. They have used predictions from their long-age ice-accumulation models to interpret 'annual' layers using variables such as oxygen isotope ratios, cloudy bands, electrical conductivity, laser-light scattered from dust, major ion chemistry, and volcanic ash bands. Creationists view the lower portion of the ice sheet as accumulating rapidly during a 700-year Ice Age, while the upper portion represents accumulation in the 4,000 years since the Ice Age. Annual layers in the very top section of the core are easily interpreted from the ratio of oxygen isotopes, and creationists agree with these interpretations. Below this top section, the annual layers interpreted from the two models diverge significantly. Rather than annual layers in the uniformitarian model, the changes in the parameters represent multiple variations within a single year, and sometimes variations over a few days.

As Oard explains in defending his argument against a critic ([Ice cores vs. the flood](#)):

In my articles on ice cores, I reinterpreted the annual layers in the middle and lower portions of the GISP2 core as subannual layers, based on a Flood–Ice Age model, incorporating warm oceans, cooling continents and high levels of atmospheric particulates from volcanic activity. Thus, my starting assumptions assume significant climate instability post-Flood and rapid accumulation of snow and ice. In this scenario, annual ice layers would be on the order of metres.

On the other hand, uniformitarians start with an assumption of great age, generally stable conditions and Milankovitch orbital cycles to create ice ages. As a result, uniformitarians are looking for very thin annual layers on the order of centimetres and even millimetres near the bottom of the ice sheet.

The resulting difference in age-interpretation is a result of the starting paradigm; the data is the same and does not speak for itself. What we believe colours what we see.

Nye tried to "snow" the audience by misrepresenting the complexity of determining annual layers of ice and ignoring the role that one's assumptions about history play in that process. For further explanation and details, see the following, some of which are more technical than others:

Jake Hebert
[Circular Reasoning in the Dating of Deep Seafloor Sediments and Ice Cores](#)

Jake Hebert
[Earth's Thick Ice Sheets Are Young](#)

Jake Hebert
[Ice Cores, Seafloor Sediments, and the Age of the Earth: Part 1](#)

Jake Hebert
[Ice Cores, Seafloor Sediments, and the Age of the Earth: Part 2](#)

Jake Hebert and Tim Clarey
[Ice Cores, Seafloor Sediments, and the Age of the Earth: Part 3](#)

Michael Oard
[Are Polar Ice Sheets Only 4500 Years Old?](#)

Michael Oard
[Do Greenland ice cores show over one hundred thousand years of annual layers?](#)

Sean Pitman
[Ancient Ice](#)

Michael Oard
[Do ice cores show many tens of thousands of years?](#)

Brian Thomas and Jake Hebert
[Do Ice Cores Disprove Recent Creation?](#)

Michael Oard
[Ice cores vs. the flood](#)

Larry Vardiman
[Ice Cores and the Age of the Earth](#)

Michael Oard
[New ice core records 120,000 years?](#)

Larry Vardiman
[Rapid changes in oxygen isotope content of ice cores](#)

Michael Oard
[Still Trying to Make Ice Cores Old](#)

Larry Vardiman
[Out of Whose Womb Came the Ice?](#)

Michael Oard et al.
[Superficial interpretation of ice core data](#)

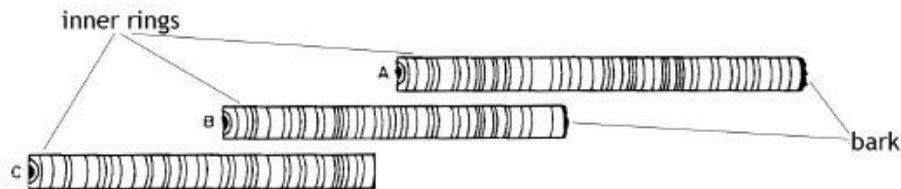
John Woodmorappe
[Greenland ice cores: implicit evidence for catastrophic deposition](#)

Michael Oard
[Wild ice-core interpretations by uniformitarian scientists](#)

C. A stand of bristlecone pine trees that are 6,800 years old and a tree that is 9,550 years old disprove an earth and a global flood that are younger than those dates

The question is whether these trees are really as old as Nye asserts. That is by no means clear, but Nye once again pretends it is a simple open-and-shut case, as though age is a datum instead of an inference.

No single bristlecone pine tree is alleged to be 6,800 years old. Rather, as Nye acknowledges by the word "stands," the claim is that bristlecone pine trees (plural) have been growing in the White Mountains of California for 6,800 years (and some contend even longer). This claim is based on a process called cross-dating where a series of rings in a living tree are correlated with a series of rings in nearby dead trees to extend the ring count beyond the ring number of the living tree.



This extended ring count equates to an absolute age only if each ring represents a year and if the matched rings in the sequence spanning multiple trees were in fact produced at the same time. There is room for questioning both of these conditions.

There is evidence that different conditions can induce bristlecone pine trees to produce more than one ring per year. This possibility is magnified by the dramatically different environment in the first thousand or so years after the flood. During that time, climactic conditions and weather patterns were extremely variable. See:

Don Batten

[Tree ring dating \(dendrochronology\)](#)

Jake Hebert et al.

[Do Varves, Tree-Rings, and Radiocarbon Measurements Prove an Old Earth?](#)

Frank Lorey

[Tree Rings and Biblical Chronology](#)

Mark Matthews

[Evidence for multiple ring growth per year in Bristlecone Pines](#)

John Morris

[Tree ring dating](#)

Brian Thomas

[Do Tree Rings Disprove the Genesis Chronology?](#)

Regarding the cross-matching of rings, various kinds of non-climatic, external disturbances can cause trees to produce anomalous ring patterns for a number of years. That pattern would be reproduced in other trees if the same kind of disturbance later affected those trees. In that case, matching the ring patterns from the recurrent external disturbance would create a staggered sequence of rings in what were in fact trees of the same age, thus yielding a false chronology. See John Woodmorappe, [Biblical Chronology and the 8,000-Year-Long Bristlecone Pine Tree-Ring Chronology](#) and [Tree Ring Disturbance-Clustering for the Collapse of Long Tree-Ring Chronologies](#). The potential for such recurrent disturbances could have been much greater in the early post-flood age. John Woodmorappe writes (citations omitted):

Many different events are known to "overprint" incipient tree rings at different times in each tree. One notable form of time-transgressive activity is that of downslope ground movements, including slow-acting landslides. These can perturb tree rings recurrently on a time scale of at least several centuries, with individual suppression-release "overprints" on tree rings lasting anywhere from a few years to a few decades. Earth surface movements can be facilitated by earthquakes, which often cause a range of immediate to time-delayed surface activity. Edaphic effects themselves can impose an age-staggered imprint on trees even when the causative event itself is not time transgressive. Consider earthquakes, for instance. On tree, growing in loose material, may undergo perturbation of roots (and consequent small rings) as a result of an earthquake, whereas a nearby tree, rooted in solid substrate, is unaffected. Owing to the fact

the postFlood regolith was undergoing large-scale lithification, with the nonlithified/lithified "front" changing with time, regional earthquakes must have left extensive "time-transgressive" marks on trees.⁷

Woodmorappe also mentions pulsed releases of subterranean CO₂ that migrated with time as a possible time-transgressive phenomenon that would disturb tree-ring growth in a similar manner. The point is that things may have occurred in the past that render the cross-matching uncertain. And the larger point is that inferring age is always more ambiguous than the scoffers wish to acknowledge.

As for Old Tjikko, the age of 9,550 years that Nye asserted as a fact is another conclusion based on unprovable assumptions. This date is not based on tree rings but on carbon dating of the root system under the tree. I must explain a bit about carbon dating to show why Nye's claim about this tree is not as advertised.

Carbon is common throughout the biosphere. A tiny fraction of this carbon is C-14, which is radioactive. C-14 is constantly decaying into N-14, but it is also constantly being created in the atmosphere. Every living thing has C-14 in it. It picks this up in the "great cycle of life." When the living thing dies, it ceases to interact with the environment and thus ceases to take in any more carbon, including any more C-14. So the amount of C-14 in every living thing begins to decrease at death as the C-14 decays or is transformed into N-14. This means the ratio of C-14 to C-12 gets smaller (since the amount of C-12 remains constant). If one knows the ratio of C-14 to C-12 at death and knows the rate of C-14 decay, one can calculate the amount of time from death by determining the present ratio of C-14 to C-12.

The problem with Nye's claimed date is that it assumes the ratio of C-14 to C-12 in the world of Noah's day was the same as today. There are good reasons, however, for believing that the ratio of C-14 to C-12 in Noah's day was significantly less than it is today. If that is correct, then the currently measured ratio of C-14 to C-12 translates into a significantly shorter amount of time. If one starts from a point of less C-14 then less time was needed to reduce the C-14 to the currently measured level.

The claim of a lower C-14 to C-12 ratio in Noah's day is supported by the fact the fossil record, including the great reservoirs of fossil fuels, shows that the flood removed from the biosphere (by burial) vast amounts of carbon (in the biospheric ratio), so that the amount of C-14 that has accumulated subsequently is a greater percentage of the total carbon in the biosphere. Imagine that once per year a drop of red dye falls into a container holding a million drops of water. After 5 years, the ratio of dye to water would be five parts per million. If you suddenly removed 1/2 of the dyed water from the container, the ratio of dye to water in the remaining 1/2 still would be five parts per million. But the next drop of red dye would increase the ratio of dye to water more than the previous drops had increased it. Instead of being one part per million, it would be two parts per million (or one part per 500,000 parts). The water represents the total carbon in the biosphere, the red dye represents the accumulation of C-14 over time, and the

⁷ John Woodmorappe, "Collapsing the Long Bristlecone Pine Tree Chronologies," in *Proceedings of the Fifth International Conference on Creationism*, ed. R. L. Ivey, Jr., (Pittsburgh: Creation Science Fellowship, 2003), 497.

removal of 1/2 of the dyed water represents the removal of vast amounts of carbon in the biosphere during the flood.

There also is good reason for believing that the earth's magnetic field was stronger in the past. This stronger magnetic field would deflect cosmic rays away from the earth more efficiently than today which would decrease the rate at which C-14 is produced in the atmosphere. See:

Don Batten et al.
[What About Carbon Dating?](#)

John Morris
[Doesn't Carbon Dating Prove the Earth is Old?](#)

Mike Riddle
[Doesn't Carbon-14 Dating Disprove the Bible?](#)

Andrew Snelling
[Radiocarbon Dating: Questions Answered](#)

D. Rocks of the Grand Canyon are in layers

According to Nye, the rocks of the Grand Canyon could not have been deposited in a flood because they are in layers. He claims that in a flood the different types of sediments would all be mixed together and could not be deposited in a segregated manner. But experiments show that sediments in flowing water can indeed be deposited in segregated layers, and there is evidence that this process has formed geologic strata. See:

Guy Berthault
[Experiments in Stratification](#)

Carl Froede, Jr.
[The rapid formation of siliciclastic stratigraphy](#)

Guy Berthault
[Sedimentation experiments: is extrapolation appropriate?](#)

Pierre Y. Julien et al.
[Experiments on stratification of heterogeneous sand mixtures](#)

Guy Berthault
[Time Required for Sedimentation Contradicts the Evolutionary Hypothesis](#)

John Morris
[Lateral Layers of Geologic Strata](#)

Guy Berthault et al.
[Rapid formation of Cambrian–Ordovician sandstone sequence](#)

Andrew Snelling
[Sedimentation Experiments: Nature Finally Catches Up!](#)

Geologist Snelling states:

However, as discussed previously at length (see chapters 63-67), there is abundant, convincing evidence that the sediments that compose most sedimentary rock layers, whether sandstones, shales or limestones, were deposited under catastrophic conditions on a scale unlike normal, or even catastrophic, conditions and rates of geologic processes experienced today. For example, the cross-beds in

sandstones are remnants of underwater sand waves that testify to the sand being transported and deposited by fast-moving currents in deep water, which would have resulted in thick beds of regional extent in a matter of hours to days. Even the thin layers of laminae frequently abundant in fine-grained shales, often considered to represent successive seasonal deposition over long time periods, have been shown instead to have been rapidly deposited all at once by hurricane-velocity, surging sediment-laden water and turbidity currents.⁸

As I pointed out in section I.E. (see linked articles there), the fact multiple rock layers allegedly spanning hundreds of millions of years were folded together without fracturing is good evidence that these layers were all deposited rapidly, too quickly for any of them to harden before folding. The missing intermediate rock layers with almost no signs of erosion in the surface of the underlying layer likewise calls into question the conventional explanation of the layering.

E. Sedimentary deposits could not have hardened into rock

Nye stated, "This is what geologists on the outside do, study the rate at which soil is deposited at the end of rivers and deltas, and we can see it takes a long, long time for sediments to turn to stone." But as geologist John Whitmore points out in [Aren't Millions of Years Required for Geological Processes?](#), "The process of lithification is not time dependent, but rather dependent upon whether the rock becomes compacted or not and whether a source of cement is present (usually a mineral like quartz or calcite). If these conditions are met, sediment can be turned rapidly into rock." As he notes, creationists have documented many examples of rock forming rapidly. A clock, a sparkplug, and keys have been found cemented in sedimentary rock, and bolts, anchors, and bricks have been reported in beach rock. Indeed, Australian scientists have developed a chemical process that turns loose sediment into rock in just days (see Tas Walker, [Rapid Rock](#)).

Pitman reports in [The Geologic Column](#) an interesting experiment that was detailed in a 1998 issue of the journal *Sedimentary Geology*:

There is debate on how much time lithification takes. Accounts of carbonate lithification say that the process is rapid, while other researchers say that lithification requires long periods of time. Friedman tells of his account with lithification while on a visit to Joulter Cay, Bahamas. On a previous year excursion, Friedman placed a sardine can in an area of sea-level highstands. He found the sardine can one year later and found that it was lithified with approximately 382 g of hard oolitic limestone comprised mostly of aragonite. The results of this have huge implications. This proves that lithification can be a rapid process, depending on conditions.

One also needs to keep in mind that the conditions for lithification may have been greatly enhanced during the Flood. Snelling writes:

⁸ Andrew A. Snelling, *Earth's Catastrophic Past: Geology, Creation & the Flood* (Dallas: ICR, 2009), 2:910.

Of course, during the Flood, the waters would have contained many chemicals from the weathering products eroded on a massive scale from across the earth's surface, plus the chemicals introduced into the Flood waters by all the concurrent volcanic activity. So as sediments were deposited, the chemical-laden waters would have been trapped in the pore spaces between the sediments. With compression of the overlying sediments, the chemical conditions changing the pore spaces of the buried sediments would have resulted in potentially rapid precipitation of the dissolved chemicals, thus facilitating rapid lithification of the sediments.⁹

F. Grand Canyons would be on every continent

Nye stated, "if this great flood drained through the Grand Canyon, wouldn't there have been a Grand Canyon on every continent? How can we not have Grand Canyons everywhere if this water drained away in this extraordinary short amount of time, 4,000 years?" This is a rather bizarre claim. He simply assumes that there could be no local conditions, events, or circumstances during the tumult of the global flood that could produce unique features on different continents. But the flood pictured by creationists was a complex event involving a number of different mechanisms at various stages, and the conditions on different continents would have varied. There is no reason to think it necessarily would produce identical effects on all the continents. One could just as easily ask Nye why his proposed mechanism has not produced Grand Canyons elsewhere.

Regarding formation of the Grand Canyon, creationists presently have two main theories: the breached-dam theory and the receding-waters theory. For more details on the former, see Scott Rugg and Steven Austin, [Evidences for Rapid Formation and Failure of Pleistocene "Lava Dams" of the Western Grand Canyon](#). For more on the latter, see Peter Scheele, [A receding flood scenario for the origin of the Grand Canyon](#).

G. Could not be animals with skulls that are similar to modern human skulls

I am not sure I understand the point Nye was trying to make in saying, as he showed a slide of fifty-one different skulls, "If, as Mr. Ham and his associates claim, there was just man and then everybody else, there were just humans and all other species, where would you put modern humans among these skulls? How did all of these skulls get all over the earth in these extraordinary fashion, where would you put us?" He seems to be claiming that the existence of skulls having greater and lesser degrees of similarity to modern human skulls means that humans could not have been created separately from animals. That is a *non sequitur*.

⁹ Andrew A. Snelling, *Earth's Catastrophic Past: Geology, Creation & the Flood* (Dallas: ICR, 2009), 2:914.

Adam and Eve and Noah and his family could have been endowed with a sufficient degree of genetic variability to account for significant variation in skull shape among their descendants. Most creationists would include fossil specimens that are dubbed *Homo erectus/ergaster* and *Homo neanderthalensis* in that category. The now extinct, ape-like animals known as Australopithecines (and other similar kinds) likewise could have had significant potential for skull variation through generations. If Nye's claim is that God would not have created animals with skull shapes (or the potential to generate skull shapes) more similar to humans than those of modern apes, I would like to know how he knows that.

For more specific information on various hominid fossils, see:

David DeWitt

[Analysis of *Australopithecus sediba*](#)

Peter Line

[Fossil evidence for alleged apemen – part 2](#)

Brad Harrub and Bert Thompson

[The Truth About Human Origins](#) (book)

Casey Luskin

[Human Origins and Intelligent Design](#)

Peter Line

[Australopithecus sediba—no human ancestor](#)

Kurt Wise

[Lucy Was Buried First](#)

Peter Line

[Fossil evidence for alleged apemen – part 1](#)

John Woodmorappe

[The non-transitions in 'human evolution'](#)

For additional articles on human evolution generally, see those collected at [Matters Relating Specifically to Human Origins](#).

H. Animals could not migrate to Australia from the Middle East

Nye is flabbergasted by the "extraordinary claim" that "places like Australia are populated . . . by animals who somehow managed to get from the Middle East all the way to Australia in the last 4,000 years." Well, I am flabbergasted by how consistently Nye reveals no awareness of creationist literature. He acts like each of his utterances is a *coup de grace*, when in fact he has nothing new to say. See:

Don Batten et al.

[How did animals get from the Ark to places such as Australia?](#)

Bodie Hodge

[Animal migrations](#)

Dominic Stratham

[Biogeography](#)

Dominic Stratham

[Migration After the Flood](#)

Paul Taylor

[How Did Animals Spread All Over the World from Where the Ark Landed?](#)

Michael Oard

[Post-Flood log mats potentially can explain biogeography](#)

I. Not enough time for ark animals to diversify into the species of today

Nye states, "So we'll take a number which I think is pretty reasonable, 16 million species today. Okay? If these came from 7,000 kinds, that's let's say we have 7,000 subtracted from 15 million, that's 15,993, we have 4,000 years, we have 365 and a quarter days a year. We would expect to find 11 new species every day." He continues sarcastically:

So you'd go out into your yard, you wouldn't just find a different bird, a new bird, you'd find a different kind of bird, a whole new species of bird every day, a new species of fish, a new species of organism you can't see, and so on. I mean this would be enormous news. The last 4,000 years people would have seen these changes among us. So the Cincinnati Enquirer I imagine would carry a column right next to the weather report: "Today's new species." And they would list these 11 every day, but we see no evidence of that. There's no evidence of these species, there just simply isn't enough time.

There is so much wrong here that it is hard to believe Nye is not being dishonest. In the first place, Nye's estimate of the number of species is pulled from thin air. Only about 1.5 million species have been identified and classified. A 2011 study estimated the total number of eukaryotic¹⁰ species on Earth at 8.7 million (+/- 1.3 million) ([Number of species on Earth](#)); a 2013 study put the number at 5 million (+/- 3 million) ([Can We Name Earth's Species](#)). Nye incorrectly labels the 8.7 million estimate as "the very, very lowest estimate" and then simply asserts, as a setup for settling on his figure of 16 million, that "a much more reasonable estimate is it is 50 million or even a 100 million when you start counting the *viruses* and the *bacteria* and all the beetles that must be extant in the tropical rainforest that we haven't found." Nye's confusion is evident here, as viruses (at least traditionally) and bacteria are not classified as eukaryotes, so they have no relevance to the estimate of 8.7 million that he is rejecting.

But more importantly, whatever guess one adopts for the number of eukaryotic species on earth, it includes many millions of species that no one claims originated from the occupants of the ark. The ark held only *air-breathing* (or nostril-breathing, which would exclude insects) *land animals*, whereas eukaryotes include animal species that live in water and the myriad species of amoeboids, slime molds, flagellate protozoa, fungi, choanoflagellates, Radiolaria, algae, and land plants. This is a red-herring plain and simple. As Daniel Criswell observes ([Speciation and the Animals on the Ark](#)):

However, it is not correct to assume that a few thousand species would have produced the millions of species extant (alive) today. There are fewer than 30,000 extant species of mammals, birds, reptiles, and possibly land-reproducing amphibians (many salamanders) that were represented on the Ark. The millions of

¹⁰ Eukaryotes are organisms whose cells contain a nucleus and other organelles enclosed within membranes.

other species are the invertebrates (>95 percent of all animal species), fish, and a few aquatic mammals and reptiles that survived in the water during the Flood.

Regarding the kinds of animals on the Ark, see:

Don Batten et al.

[How did the animals fit on Noah's Ark?](#)

Marcus Ross

[Recounting the animals on the Ark](#)

Todd Wood

[Noah's Ark – How many animals?](#)

John Woodmorappe

[How Could Noah Fit the Animals on the Ark and Care for Them?](#)

Moreover, creationists believe that the various kinds of air-breathing land animals that were on the ark were designed or programmed to diversify rapidly after the flood to adapt to and exploit the new environment as they repopulated the earth. See:

Daniel Criswell

[Speciation and the Animals on the Ark](#)

Georgia Purdom and Bodie Hodge

[What are 'Kinds' in Genesis?](#)

Ken Ham

[The True Origin of the Species](#)

Jonathan Sarfati

[Variation and natural selection versus evolution](#)

Tom Hennigan et al.

[Creation's Hidden Potential](#)

Jonathan Sarfati with Michael Matthews

[Argument: Natural selection leads to speciation](#)

Nathaniel Jeanson and Jason Lisle

[On the Origin of Eukaryotic Species' Genotypic and Phenotypic Diversity](#)

Evan Loo Shan

[Transposon amplification in rapid intrabaraminic diversification](#)

Pierre Jerlström

[Jumping wallaby genes and post-Flood speciation](#)

Todd Wood

[Mediated Design](#)

Jean Lightner

[Life: Designed by God to Adapt](#)

Todd Wood

[Terrestrial Mammal Families and Creationist Perspectives on Speciation](#)

J. Boulders on the surface of the ground in Washington and Oregon disprove a young earth and Noah's flood

Nye is even more cryptic than usual here, declaring, "But here are these enormous rocks right on the surface and there's no shortage of them. If you go driving in Washington State or Oregon they're readily available. So how could those be there if the earth is just 4,000 years old? How could they be there if this one flood caused that?" Whatever his point, he is clearly unaware that it has been explained at length how these boulders are strong evidence for at least one understanding of the Flood event. Nye offered no explanation for them, being content simply to

assert they were incompatible with the creation model, but the conventional explanations that have been offered are deficient. See:

John Hergenrather
[Noah's long-distance travelers](#)

Michael Oard et al.
[Flood transported quartzites - part 1](#)

Michael Oard et al.
[Flood transported quartzites - part 2](#)

Michael Oard et al.
[Flood transported quartzites - part 3](#)

Michael Oard et al.
[Flood transported quartzites - part 4](#)

K. Noah and his family could not have gotten the animals on the ark and would not have been able to care for them

Offering no evidence or argument, Nye expressed his personal incredulity that all the animals could be brought to the ark and be fed by Noah and his family: "they had to get all of these animals on there, and they had to feed them." He then acknowledged "that Mr. Ham has some explanations," but rather than identify them and deal with their substance he dismissed them with a declaration that he finds them "extraordinary." A bit later he asked rhetorically, "Is it reasonable that Noah and his colleagues, his family, were able to maintain 14,000 animals and themselves, and feed them aboard a ship that was bigger than anyone has ever been able to build?"

What an atheist like Nye finds "extraordinary" is not the test of whether he has disproved the creation model. These are old objections that have been rebutted repeatedly. See:

Don Batten et al.
[How did the animals fit on Noah's Ark?](#)

Ken Ham & Tim Lovett
[Was There Really a Noah's Ark & Flood?](#)

Brad Harrub & Bert Thompson
[An Examination of Noah's Ark and the Global Flood](#)

John Morris
[How Did Noah Gather the Animals?](#)

John Woodmorappe
[Fitting the animals on the ark and caring for them](#)

John Woodmorappe
[Caring for the Animals on the Ark](#)

L. Noah his family could not have built a wooden ship the size of the ark that was seaworthy

Nye reported that a large, early-20th century wooden ship called the *Wyoming* leaked badly as a result of twisting it experienced at sea. He then stated, "These guys were the best in the world at wooden ship building and they couldn't build a boat as big as the ark is claimed to have been. Is that reasonable? Is that possible that the best ship builders in world couldn't do what 8 unskilled people, men and their wives, were able to do?"

First, it is unknown whether those who worked on the ship were limited to Noah's family. The text is silent on the matter (see AiG Staff, [Ark construction crew](#)). Second, God is the one who directed the building of the Ark, and the Bible records that he at other times endowed craftsmen with the skill necessary to accomplish what he had commanded (e.g., Ex. 28:3, 31:6-11; 35:30-36:2). So even if the construction crew had no prior ship-building expertise, the charge of incompetence holds no water.

Finally, the notion that God's expertise in designing a huge wooden vessel could not surpass that of early 20th-century shipbuilders is silly. In fact, in 1994 engineers from the Korea Research Institute of Ships and Engineering published an analysis demonstrating that a vessel like the ark could be seaworthy (S. W. Hong, et al., [Safety investigation of Noah's Ark in a seaway](#); see also, Tim Chaffey, [Bill Nye the Straw Man Guy and Noah's Ark](#)). Beyond that, the statement in Gen. 8:1 that "God *remembered* Noah and all the beasts and all the livestock that were with him in the ark" is suggestive of divine care.

M. Discovering *Tiktaalik* in anticipated rock layer proves the predictive power of the establishment view of origins which sets it apart from the creation model

Nye stated, "And people realized that if this – with the age of the rocks there as computed by traditional scientists, with the age of the rocks there, this would be a reasonable place to look for an animal, a fossil of animal that lived there. And indeed, scientists found it, *Tiktaalik*, this fish-lizard guy. . . . In other words they made a prediction that this animal would be found and it was found. So far, Mr. Ham and his worldview, the Ken Ham creation model, does not have this capability. It cannot make predictions and show results." In

Presumably Nye meant to refer to *Tiktaalik* as a "fish-amphibian guy" rather than a "fish-lizard guy." *Tiktaalik* was indeed found where its discoverer, Neil Shubin, was deliberately looking, in rocks conventionally dated between 380 and 363 million years old. He was looking there because the lobe-finned fish, which are considered ancestral to tetrapods, date from 390 to 380 million years whereas the earliest tetrapod dated (at that time) from 363 million years. Since he was looking for the transition from lobe-finned fish to tetrapod, he assumed it would be found in that gap. *Tiktaalik* is dated at 375 million years.

What is interesting about citing this as an example of a fulfilled prediction of the establishment view of origins is that in 2010, six years after *Tiktaalik* was discovered, a clear tetrapod trackway was discovered at a site in Poland that was conventionally dated at 397 million years, some 22 million years *earlier* than *Tiktaalik*. (And remember that ten million years is roughly the length of time it allegedly took a dog-like creature to evolve into a whale, so 22 million years is no trivial length of time even from an evolutionary perspective.) So though Shubin found a transitional-looking creature where his view of origins led him to expect it, it turns out his view had misdirected him to rocks that were tens of millions of years too recent. What he found was not the transitional creature he was seeking. Taking this as vindication of the theory that produced the erroneous prediction is like holding up a counterfeit treasure as vindication of the theory that led one to search in that spot for the real thing. See:

Casey Luskin
[Tiktaalik blown 'out of the water'](#)

Casey Luskin
[Tiktaalik updated](#)

Frank Sherwin
[Banner fossil for evolution is demoted](#)

David Tyler
[Lobbing a grenade into the tetrapod evolution picture](#)

Tas Walker
[Is the famous fish fossil finished?](#)

On *Tiktaalik* more generally, see:

John Curtis
[What's so great about *Tiktaalik*?](#)

Casey Luskin
[Tiktaalik roseae: Where's the Wrist?](#)

Casey Luskin
[An "Ulnare" and an "Intermedium" a Wrist Do Not Make](#)

David Mention
[Tiktaalik and the fishy story of walking fish](#)

David Mention
[Tiktaalik and the fishy story of walking fish, part 2](#)

Elizabeth Mitchell
[Did Tiktaalik's Pelvis Prepare Fish to Walk on Land?](#)

Elizabeth Mitchell
[Fish fins are not fingers that failed](#)

Nye's charge that the creation model, which he again minimizes as "the *Ken Ham* creation model," cannot make predictions and produce results is simply false. See:

David DeWitt

[Does the Creation Model Make Predictions? Absolutely!](#)

AiG Staff

[Successful Predictions by Creation Scientists](#)

N. Fewer parasitic infections among sexually-reproducing topminnows proves the predictive power of the establishment view of origins

Nye referred to a study finding that sexually reproducing topminnows had fewer parasitic infections than those that reproduced asexually. This is attributed to the mixing of genes that occurs in sexual reproduction which presumably renders the offspring of sexual reproduction less susceptible to the parasite. Nye then declared that "the explanation provided by evolution made a prediction, and the prediction is extraordinary and subtle, but there it is. How else would you explain it?"

There is confusion here. On the one hand, Nye seems to be saying that there is no way to explain the existence of sexual reproduction other than by appeal to an evolutionary process (see last quoted sentence). That, of course, is silly. Creationists attribute sexual reproduction to God's creation design. Is Nye insisting that God could not create what blind evolutionary processes stumbled upon?

On the other hand, Nye seems to be saying only that evolutionary theory predicts the existence of sexual reproduction and thus the fact sexual reproduction exists is support for the correctness of evolutionary theory. The problem is that Nye is wrong in claiming that evolutionary theory predicts the existence of sexual reproduction. On the contrary, as he acknowledged, sexual reproduction has been a longstanding *problem* for evolution theory (see, e.g., Bert Thompson and Brad Harrub, [The Origin of Gender and Sexual Reproduction Part 1](#) and [Part 2](#) and Jonathan Sarfati, [Argument: Evolution of Sex](#)). The fact he now thinks an explanation has been found that can be squared with evolutionary theory certainly is not a prediction of the theory! If it were predicted it would never have been a problem.

Evolutionary theory cannot predict in advance any behavior or features that will arise in a lineage as a result of random mutation and natural selection. It can only, as here, attempt to explain after the fact how a given state may have arisen in an evolutionary manner. And there is no limit to their imagination and creativity.

O. Big Bang disproves the creation model

Nye rambled about the evidence in favor of the Big Bang, pointing to the expanding universe and cosmic background microwave radiation. He made a number of misstatements in this portion of his presentation, including the claim that the microwave radiation detected by the COBE satellite "matched exactly, exactly the astronomers' predictions." Astronomer Danny

Faulkner points out that the COBE data did not agree with the predictions (see [Is Bill Nye an Expert in Astronomy?](#)). He states:

The prediction was that spatial temperature fluctuations on the order of one part in 10,000 must exist in the CMB. But the COBE data showed a perfectly smooth CMB with regard to temperature. It was not until the application of a very sophisticated statistical analysis by George Smoot and his team that they were able to tweak out of the COBE data temperature fluctuations an order of magnitude lower, at one part in 100,000.

Nye says that those "in the outside world," meaning everywhere except at Answers in Genesis, accept the Big Bang, but there are secular cosmologists and physicists who have grave doubts about the theory. In May 2004, thirty-four such scientists published an open letter to the scientific community in *New Scientist*. That letter has since been signed by hundreds more scientists, engineers, and independent researchers. See [An Open Letter to the Scientific Community](#). For the Big Bang generally, see:

David Berlinski
[Was There a Big Bang?](#)

Ashby Camp
[Summary of Big-Bang Creation Story](#)

Danny Faulkner
[Problems with the Big Bang](#)

Danny Faulkner
[The Big Bang, Multiverse, and Other Tales about Outer Space](#)

John Hartnett
[Cosmologists Can't Agree and Are Still in Doubt!](#)

John Hartnett
[Crisis in cosmology continues with conference of big-bang dissidents](#)

John Hartnett
[Quasars again defy a big bang explanation](#)

John Hartnett
[20 big bang busting bloopers](#)

Jonathan Henry
[The elements of the universe point to creation](#)

Ashwini Kumar Lal
[Big Bang Model? A Critical Review](#)

Jason Lisle
[Does the Big Bang Fit with the Bible?](#)

Branyon May et al.
[The Big Bang: A Scientific Critique \(Part 1\)](#)

Bert Thompson et al.
[The Big Bang: A Scientific Critique \(Part 2\)](#)

Roger Patterson
[The Big Bang?](#)

P. Radiometric dating disproves the creation model

Nye, in his less-than-clear fashion, claims that the radiometric decay of rubidium into strontium acts as a clock that permits one to determine the age of lava flows, which turn out to be far older than the creation model allows. All such dating techniques rely on several assumptions to yield an absolute age, each of which is subject to challenge. As the articles listed below demonstrate, creation scientists have devoted much attention to this issue. The following

illustration (from my article) may help set the stage for the more detailed discussion in the articles.

Imagine you walk into a friend's house and see water dripping from the ceiling. Under the drip spot is a fish tank filled with 10 gallons of water. You time the leak and see that it is dripping at the rate of 1 gallon per hour. So you conclude that the leak has been dripping into the tank for 10 hours -- it drips at 1 gallon per hour and you've got 10 gallons.

When you think about it more, however, you realize that the correctness of your conclusion depends on certain unproven assumptions. You assumed that there was no water in the tank when it was placed under the leak, you assumed that no water entered the tank from another source or exited the tank after it was placed under the leak, and you assumed that the leak always was dripping at the rate of 1 gallon per hour.

If your friend left a note saying, "I put the tank under the leak at 1:00 p.m. on Saturday" and you arrived at 2:00 p.m., you could either believe your friend, which would mean rejecting one or more of those assumptions, or continue to accept the assumptions, which would mean disbelieving your friend. This is like the situation we face with the Bible and radiometric dating. We can believe the Bible and reject certain assumptions or continue to accept those assumptions and disbelieve the Bible. (A third alternative is to claim that the Bible does not affirm anything about the age of creation – about when the tank was put under the leak. As I have said, biblical creationists do not find this approach credible. See, e.g., the articles collected at [Biblical Issues](#).)

For a general explanation of radiometric dating and a brief summary of its problems as proof of long ages, see (and also the articles on carbon dating at the end of section II.C.):

Ashby Camp
[Radiometric Dating](#)

Mark Riddle
[Does Radiometric Dating Prove the Earth Is Old?](#)

Andrew Snelling
[Radiometric Dating \(part 1\) - Back to Basics](#)

Andrew Snelling
[Radiometric Dating \(part 2\) - Problems with the Assumptions](#)

Andrew Snelling
[Radiometric Dating \(part 3\) - Making Sense of the Patterns](#)

For additional information and for more detailed and documented discussions of the subject, see (some are technical):

Steven Austin & Andrew Snelling
[Discordant Potassium-Argon Model and Isochron 'Ages' for Grand Canyon](#)

Steven Austin
[Do Radioisotope Clocks Need Repair?](#)

Steven Austin
[Excess Argon from Lava Dome at Mount St. Helens Volcano](#)

Steven Austin
[Excessively Old 'Ages' for Grand Canyon Lava Flows](#)

John Baumgardner
[C-14 Evidence for a Recent Global Flood and a Young Earth](#)

John Baumgardner
[Carbon Dating Undercuts Long Ages](#)

John Baumgardner et al.
[Measurable C-14 in Fossilized Organic Materials](#)

Eugene Chaffin
[A Mechanism for Accelerated Radioactive Decay](#)

Eugene Chaffin
[Accelerated Decay: Theoretical Considerations](#)

Eugene Chaffin
[Accelerated Decay: Theoretical Models](#)

Russell Humphreys
[A Tale of Two Hourglasses](#)

Russ Humphreys
[Argon diffusion data supports RATE's helium age](#)

Russell Humphreys et al.
[Helium Diffusion Age of 6,000 Years Supports Accelerated Nuclear Decay](#)

Russell Humphreys et al.
[Helium Diffusion Rates Support Accelerated Nuclear Decay](#)

Russell Humphreys
[Helium Evidence for a Young World Remains Crystal Clear](#)

Russell Humphreys
[New RATE Data Support a Young World](#)

Russell Humphreys
[Nuclear Decay: Evidence for a Young World](#)

Russell Humphreys
[Young Helium Diffusion Age of Zircons Supports Accelerated Nuclear Decay](#)

Jim Mason
[Response to Geochronology: Understanding the Uncertainties](#)

Sean Pitman
[Radioactive Clocks and the 'True Age'](#)

David Shormann
[⁴⁰Ar/³⁹Ar Calibration against Novarupta](#)

Andrew Snelling
[Andesite Flows at Mt. Ngauruhoe and Implications for Potassium-Argon 'Dating'](#)

Andrew Snelling
[Conflicting 'Ages' of Tertiary Basalt and Contained Fossilized Wood](#)

Andrew Snelling
[Dating dilemma: fossil wood in 'ancient' sandstone](#)

Andrew Snelling
[Dating' of the Somerset Dam Layered Mafic Intrusion](#)

Andrew Snelling
[Dubious Radiogenic Pb Places U-Th-Pb Mineral Dating in Doubt](#)

Andrew Snelling
[Excess Argon': The 'Achilles Heel' of Potassium-Argon and Argon-Argon 'Dating' of Volcanic Rocks](#)

Andrew Snelling
[Fission Tracks in Zircons: Evidence for Abundant Nuclear Decay](#)

Andrew Snelling & Dallel Gates
[Implications of Polonium Radiohalos in Nested Plutons of the Tuolumne Intrusive Suite](#)

Andrew Snelling
[Isochron Discordances and the Role of Inheritance and Mixing of Radioisotopes in the Mantle and Crust](#)

Andrew Snelling
[Isotope Systematics and Recent Andesite Flows](#)

Andrew Snelling
[Polonium Radiohalos: The Model for Their Formation Tested and Verified](#)

Andrew Snelling
[Potassium-Argon and Argon-Argon Dating of Crustal Rocks and the Problem of Excess Argon](#)

Andrew Snelling
[Radioactive 'dating' failure](#)

Andrew Snelling
[Radioactive 'dating' in conflict!](#)

Andrew Snelling
[Radiocarbon Ages for Fossil Ammonites and Wood in Cretaceous Strata](#)

Andrew Snelling
[Radiocarbon in Diamonds Confirmed](#)

Andrew Snelling & Mark Armitage
[Radiohalos - A Tale of Three Granitic Plutons](#)

Andrew Snelling
[Radiohalos - Significant and Exciting Research Results](#)

Andrew Snelling
[Radiohalos - startling evidence of catastrophic geological processes on a young earth](#)

Andrew Snelling
[Radiohalos in Granites: Evidence for Accelerated Nuclear Decay](#)

Andrew Snelling
[Radiohalos in the Coomba Metamorphic Complex](#)

Andrew Snelling
[Radiohalos in the Shap Granite](#)

Andrew Snelling
[Radioisotope Dating of Grand Canyon Rock: Another Devastating Failure for Long-Age Geology](#)

Andrew Snelling
[Radioisotopes and the Age of the Earth](#)

Andrew Snelling et al.
[Radioisotopes in the Diabase Sill at Bass Rapids](#)

Andrew Snelling
[Significance of Highly Discordant Radioisotope Dates for Amphibolites in Grand Canyon](#)

Andrew Snelling
[Testing the Hydrothermal Fluid Transport Model for Polonium Radiohalo Formation](#)

Andrew Snelling
[The failure of U-Th-Pb 'dating' at Koongaara](#)

Andrew Snelling
[The Fallacies of Radioactive Dating of Rocks](#)

Andrew Snelling
[U-Th-Pb Dating: An Example of False Isochrons](#)

Andrew Snelling
[Young radiocarbon date for ancient fossil wood](#)

Q. There is no place in Kentucky to get a degree in nuclear medicine

Nye stated, "Now, my Kentucky friends, I want you to consider this. Right now there is no place in the Commonwealth of Kentucky to get a degree in this kind of nuclear medicine, this kind of drugs associated with that. I hope you find that troubling. I hope you're concerned about that. You want scientifically literate students in your commonwealth for a better tomorrow for everybody. You can -- you can't get this here; you have to go out of state."

I do not know what to make of this. It sounds as though he is blaming the absence of a Kentucky degree program in nuclear medicine on the fact Answers in Genesis is headquartered in Kentucky. Even if there were no such degree programs in the state, it would be absurd to lay that absence at the feet of AiG or creationist beliefs. But, as it turns out, Nye's charge and various incidental remarks leading up to it were factually incorrect (see [Letter to Nye from a radiologist](#)).

R. Distant starlight disproves the creation model

Nye stated, "And so by measuring the distance to a star you can figure out how far away it is, that star, and then the stars beyond it and the stars beyond that. There are billions of stars, billions of stars, more than 6,000 light years from here. A light year is a unit of distance, not a unit of time. There are billions of stars. Mr. Ham, how could there be billions of stars, more distant than 6,000 years, if the world's only 6,000 years old? It's an extraordinary claim."

Nye thinks he has another silver bullet, but this is a common objection that has been addressed repeatedly, especially in the last twenty years. There are various creationist solutions to this problem, some of which involve time dilation in the cosmos pursuant to known laws of physics. See:

Philip Dennis
[Consistent Young Earth Relativistic Cosmology](#)

Jason Lisle
[Does Distant Starlight Prove the Universe Is Old?](#)

Danny Faulkner
[Solving the Light Travel Time Problem](#)

Jason Lisle
[Anisotropic Synchrony Convention - A Solution to the Distant Starlight Problem](#)

Danny Faulkner
[A Proposal for a New Solution to the Light Travel Time Problem](#)

Tichomir Tenev et al.
[A Solution for the Distant Starlight Problem Using Creation Time Coordinates](#)

John Hartnett
[A Biblical Creationist Cosmogony](#)

I applaud the efforts to construct a cosmological model that is consistent with Scripture and maximizes God's working according to known laws of physics. I think we need to keep in mind, however, that God may have miraculously accelerated processes in the universe relative to the earth (by dilating time) without following the physics of white holes or gravitational time dilation; he simply may have willed it. (The article by Faulkner that is linked above is along these lines.) After all, God created the heavenly lights on Day 4 to give light on the earth, thereby delegating to them the regulation of day and night, and to serve as markers for seasons, days, and years. That requires some means of getting the light from the heavenly bodies to earth by nightfall. Time dilation would allow light that actually originated from the most distant stars (as opposed to information being created in the beam) to reach earth by nightfall. No such dilation would be necessary for objects in or near our solar system, as the 12 hours of daylight on Day 4 would be enough time for light to reach Pluto and be reflected back to the earth.

In any event, there are a number of possibilities here; one just has to think outside of the proverbial box. The fact they strike Nye as "extraordinary," assuming he is aware of them, is of no consequence.

III. Nye's First 5-Minute Rebuttal

A. Dating conflict between fossil wood and basalt result of old rock sliding over a tree

Ham mentioned that woody material found in a basalt layer in Australia was radiometrically dated to around 45,000 years whereas the basalt was dated to around 45 million years. Nye responded, "[I]f you find 45 million year old rock on top of 45,000 year old trees, maybe the rock slid on top. Maybe that's it. That seems a much more reasonable explanation than it's impossible."

As Ham had indicated and repeated after Nye's response, the wood was embedded in the basalt not under it. See Andrew Snelling, [Radioactive 'dating' in conflict!](#)

B. Repeated translation of the Bible casts doubt on its trustworthiness

Nye stated, "So I understand that you take the Bible as written in English, translated countless – oh, not countless, but many, many times over the last three millennia, as to be a more accurate, more reasonable assessment of the natural laws we see around us than what I and everybody in here can observe. That to me is unsettling, troubling." A bit later he added, "I give you the lion's teeth, you give me verses as translated into English over, what, 30 centuries? So, that is not enough evidence for me. If you've ever played telephone, I did I remember very well in kindergarten, where you have a secret and you whisper it to the next person, to the next person, to the next person. Things often go wrong."

This is embarrassing for someone who assumes the role of a public intellectual. Bible translations are made from the original texts as discerned via textual criticism from the thousands of manuscripts, ancient versions, and ancient citations that are available. They are not made from a series of prior translations. So each translation is not more removed from the original text as in Nye's illustration of the telephone game, and thus translations do not progressively stray from the original writing.

C. Carnivores like lions could not have descended from animals that were vegetarians

Nye stated, "So, your assertion that all of the animals were vegetarians before they got on the Ark, that's really remarkable. I have not been – spent a lot of time with lions, but I can tell they have got teeth that really aren't set up for broccoli. That these animals were vegetarians until this flood is something that I would ask you to provide a little more proof for."

In the first place, Nye misunderstood Ham's remark about *humans* not being *permitted* to eat meat until after the flood to mean that *animals* did not eat meat until after the flood. Most creationists, Answers in Genesis included, think animal carnivory began at the Fall rather than the flood. See:

Robert Gurney
[The Carnivorous nature and suffering of animals](#)

Andrew Lamb
[Feeding Carnivores on the Ark](#)

James Stambaugh
[Creation's Original Diet and Changes at the Fall](#)

John Woodmorappe
[Clarification on carnivory](#)

The fact lion teeth function well for a carnivorous diet does not mean they could not also function for a vegetarian diet. Pandas have very sharp teeth, and yet live on bamboo. The teeth of fruit bats certainly could tear flesh, but they live primarily on fruit. Bears have teeth that are well suited for carnivory, but they readily eat fruits and vegetables. In fact, crocodiles recently surprised researchers with the extent to which they eat fruit. See:

Daniel Criswell
[Predation Did Not Come from Evolution](#)

Elizabeth Mitchell
[Fruit-Eating Crocodiles Dispel Carnivorous Misconceptions](#)

Brian Thomas
[Why Did God Create Such Terrible Teeth?](#)

Moreover, even if lion teeth required a carnivorous diet, the claim ignores the possibility of anatomical changes arising after the Fall within the cat kind(s). The cat kind(s) may have been created originally with the genetic information to generate these teeth, which information was switched on after the Fall as creatures engaged the cursed world. See:

Don Batten et al.
[How did bad things come about?](#)

Andy McIntosh & Bodie Hodge
[How Did Defense/Attack Structures Come About?](#)

D. Ham's interpretation of Scripture contradicts what one can observe in nature

Nye stated, "So, I want everybody to consider the implications of this. If we accept Mr. Ham's point of view, that – Mr. Ham's point of view that the Bible as translated into American English serves as a science text, and that he and his followers will interpret that for you, just, I want you to consider what that means. It means that Mr. Ham's word, or his interpretation of these other words, is somehow to be more respected than what you can observe in nature, what you can find literally in your back yard in Kentucky." During the Q & A he stated, "This is to say, your interpretation of a book written thousands of years ago, as translated into American English, is more compelling for you than everything that I can observe in the world around me." And again, "The exception is you, Mr. Ham; that's the problem for me. You want us to take your word for what's written in this ancient text to be more compelling than what we see around us."

Of course, Ham's understanding of Scripture is the historic understanding (see, e.g., Andrew Kulikovsky, [Creation and Genesis: A Historical Survey](#)) and one that biblical creationists remain convinced is the correct one (see, e.g., the articles collected at [Biblical Issues](#)). To say that the creation model derived from this understanding contradicts what one can observe in nature confuses what one can observe with the inferences one draws from that observation. Nye seems oblivious to this distinction. Creationists do not deny the data of nature; they interpret it differently because their scales include the additional datum of Scripture.

IV. Nye's Second 5-Minute Rebuttal

A. Pyramids are older than the flood.

After mentioning claims he previously made (ice cores, generating today's species from the kinds on the ark, and Noah's alleged incompetence as a shipbuilder), Nye declared that there are pyramids older than 4,000 years, which was the round number he was using for the age of the flood. But Egyptian chronology is too uncertain to state this as fact. See:

Gary Bates
[Egyptian chronology and the Bible – framing the issues](#)

Patrick Clarke
[Resolving alleged conflicts between the Bible and other accounts of Egyptian history](#)

Matt McClellan
[Ancient Egyptian Chronology and the Book of Genesis](#)

Elizabeth Mitchell
[Doesn't Egyptian Chronology Prove That the Bible Is Unreliable?](#)

Elizabeth Mitchell
[Radiocarbon Dating Shortens the Timeline for Ancient Egypt](#)

B. The creation model does not fit with the New Testament

Nye stated, "Ken Ham's creation model is based on the Old Testament. So when you bring in – I'm not a theologian – when you bring in the New Testament, isn't that a little out of the box?" Nye's point is not clear, but he seems to be indicating that the New Testament is in some way at odds with the creation and flood accounts of the Old Testament. As he says, he is not a theologian. The New Testament is in complete accord with and supports the creation model drawn from the Hebrew Bible. See:

Keith Burton
[The Faith Factor: New Testament Cosmology in Its Historical Context](#)

Lita Cosner
[The global flood—according to the New Testament](#)

Russell Grigg
[What does the New Testament say about Creation?](#)

Ekkehardt Mueller
[Creation in the New Testament](#)

Jonathan Sarfati
[Genesis: Bible authors believed it to be history](#)

Rev. D. Swincer
[New Testament doctrines and the creation basis](#)

C. Establishment science celebrates challenges to its orthodoxy

In keeping with his portrait of science as a kind of unbiased, apolitical enterprise (think Vulcans in lab coats), Nye declared, "For us in the scientific community I remind you that when we find an idea that's not tenable, that doesn't work, that doesn't fly, doesn't hold water, whatever idiom you'd like to embrace, we throw it away, *we're delighted*. . . . If could you show that somehow the microwave background radiation is not a result of the big bang, come on, write your paper, tear it up." In a response during the Q & A he stated, "If a scientist – if anybody makes a discovery that changes the way people view natural law, *scientists embrace him or her*; this person's fantastic." That may be the ideal, but the reality is far from it. See, for example, the following:

[An Open Letter to the Scientific Community](#)

Jerry Bergman
[A Brief History of Intolerance in Modern Cosmology](#)

Stephen Meyer
[Danger: Indoctrination](#)

Discovery Institute Staff
[Dr. Caroline Crocker Expelled](#)

John West
[Guillermo Gonzalez's Denial of Tenure by Iowa State University](#)

[US Congressional Committee Report: Intolerance and the Politicization of Science at the Smithsonian](#)

V. Miscellaneous Claims in Nye's Q & A Responses

A. Multiple "clocks" indicate the earth is ancient and cannot all be wrong

Nye put the point this way, "If you go into a clock store and there's a bunch of clocks, they're not all going to say exactly the same thing. Do you think that they're all wrong?" What he fails to acknowledge is that many so-called "clocks" yield radically younger ages for the

earth. He chooses to explain away those extrapolations while thinking it unreasonable for one to do the same with his "clocks." See:

Don Batten
[101 evidences for a young earth](#)

Ashby Camp
[Additional Clues That Something Is Wrong with Conventional Dates](#)

Russell Humphreys
[Evidence for a young world](#)

AiG Staff
[Evidences confirming a young earth](#)

B. Rate at which continents moved apart can be determined magnetic reversals recorded in sea floor

This illustrates well Nye's complete blindness to the assumptions under which he operates in pontificating about the age of the earth. He stated, "The reason that we acknowledge the rate at which continents are drifting apart – one of the reasons – is we see what's called sea floor spreading in the Mid-Atlantic. The earth's magnetic field has reversed over the millennia, and as it does, it leaves a signature in the rocks, as the continental plates drift apart. So you can measure how fast the continents were spreading; that's how we do it on the outside."

Nye assumes that magnetic reversals always occurred at the rate they occur today and thus can serve to establish the rate at which the sea floor spread in the past. But the theory of catastrophic plate tectonics that Ham was discussing predicts rapid reversals of the earth's magnetic field as a consequence of the cool oceanic crust descending into the core/mantle boundary. This theory was developed by a team of Ph.D. scientists, including a geophysicist who was described by *U. S. News and World Report* as "the world's pre-eminent expert in the design of computer models for geophysical convection." But Nye cannot be bothered to read their papers. It is so much easier to pretend that one's claims are indisputable. See:

Steven Austin et al.
[Catastrophic Plate Tectonics: A Global Flood Model of Earth History](#)

Don Batten et al.
[What about continental drift?](#)

John Baumgardner
[Catastrophic plate tectonics: the geophysical context of the Genesis Flood](#)

John Baumgardner
[Catastrophic Plate Tectonics: The Physics Behind the Genesis Flood](#)

John Baumgardner
[Computer Modeling of Large-Scale Tectonics Associated with the Genesis Flood \(T\)](#)

John Baumgardner
[3-D Simulation of Global Tectonic Changes Accompanying Noah's Flood](#)

John Baumgardner
[Numerical Simulation of Large-Scale Tectonic Changes Accompanying the Flood](#)

John Baumgardner
[Runaway Subduction as the Driving Mechanism for the Genesis Flood](#)

John Baumgardner & Daniel Barnette
[Patterns of Ocean Circulation Over the Continents During Noah's Flood](#)

Paul Garner
[Time for an Upgrade? What CPT can explain](#)

Mark Horstemeyer & John Baumgardner
[What Initiated the Flood Cataclysm?](#)

Andrew Snelling
[A Catastrophic Breakup](#)

Andrew Snelling
[Can Catastrophic Plate Tectonics Explain Flood Geology?](#)

Andrew Snelling
[Geologic Evidences for the Genesis Flood](#)

Andrew Snelling
[More Evidence of Rapid Geomagnetic Reversals](#)

C. The second law of thermodynamics is fully compatible with evolutionary theory

Asked how one can balance evolutionary theory with the second law, Nye claimed the answer was that the earth is not a closed system because it receives energy from the sun. In his words, "But the fundamental thing that this questioner has missed is the earth is not a closed system. So there's energy pouring in here from the sun, if I may, day and night – ha-ha – because the night, it's pouring in on the other side. And so that energy is what drives living things on earth, especially for, in our case, plants." At the very least, the compatibility of evolutionary theory with the laws of thermodynamics is less certain than Nye claims, and his idea that energy from the sun resolves the matter is unsound. See:

Jeff Miller
[God and the Laws of Thermodynamics](#)

Jeff Miller
[Laws of Thermodynamics Don't Apply to the Universe](#)

Granville Sewell
[A second look at the second law](#)

Granville Sewell
[Entropy, Evolution and Open Systems](#)

Granville Sewell
[Evolution's Thermodynamic Failure](#)

D. Nature provides no inference of intelligent design because evolutionary processes add complexity through natural selection

I think I have captured what Nye was saying when he stated, "Evolution is a process that adds complexity through natural selection. This is to say nature has its mediocre designs eaten by its good designs. And so the perception that there's a designer that created all this is not necessarily true because we have an explanation that is far more compelling and provides predictions and things are repeatable."

The notion that blind, unintelligent processes are sufficient to account for the specified complexity found in living things is an article of faith rather than science. The inability of purposeless processes to produce such results is increasingly being recognized. See, for example, the articles collected at [Problems with the Darwinian Mechanism](#).