

Chapter 7:

Did Hippos Evolve into Whales?

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Why is this Chapter Important?

Biology textbooks use illustrations of “ancient” land-dwelling mammals turning into modern whales over millions of years to illustrate their version of history—evolution. For example, Miller & Levine’s high school biology textbook prominently displays six creatures leading up to modern whales.¹⁴² This Chapter will review how these “pre-whale” animals don’t line up in any such fashion. We will show instead that these fossils represent extinct marine or land animals that never evolved into whales. Further, we will review some impossibilities with the idea in secular circles that some wolf-sized animals evolved into 360,000-pound sea-dwelling whales. Even evolutionists’ own models show that these changes cannot be made given their own timescale. In the end, we wish our readers to gain confidence in the fact that so-called “whale evolution” falls far short of what its proponents say about it. In fact, we hope you will see not only how evolution fails whales, but how well the fossils fit into biblical history.

Overview

Whales are one of God's most magnificent creations. They are even mentioned specifically in the King James Bible translation: "And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind..." (Genesis 1:21).¹⁴³ To begin our discussion on the evolution of whales, let's begin with a quick description of what makes whales so unique.

Let's start first with the obvious—whales are massive. They are the largest animals on Earth, with the 100-foot long female blue whale at the top of the list. This animal weighs in at 360,000 pounds (the equivalent of 2,000 people), has a tongue the size and weight of an African elephant, and a heart that is the size of a small car that pumps 2,640 gallons of blood.¹⁴⁴

Baleen whales have specially designed comb-like bristles in their mouths called "baleen" that enable them to eat tiny krill as they move through the ocean at speeds up to 30 miles per hour (requiring over 1,000 horsepower to do so!). Much of this power is generated by a tail that is 25 feet wide. Blue whales can dive over 1,500 feet and communicate with each other up to 1,000 miles away. Baleen whales feed by the enormously energetic process of 'lunge feeding,' and have a unique sensory organ to coordinate this so their jaws don't shatter. This organ senses the "dynamic rotation of the jaws during mouth opening and closure [and] provides the necessary input to the brain for coordinating the initiation, modulation and end stages of engulfment."¹⁴⁵ To say the least, these are amazing creatures.

Evolutionists insist that these wonderful marine creatures, outfitted as they are with an array of specifications precisely targeted for successful life in water, evolved from ancestors that once had none of those specifications. These people write state-sponsored textbooks, yet have plenty

of explaining to do. How, step-by-step, and without using words like “evolution,” “selection,” or “emerged,” could whales have evolved in the manner they describe?

Evolution faces a whale of a challenge, not just from a theoretical basis but from the standpoint of observational science. What creature kinds have served as the best candidates for evolutionary whale ancestry? The founder of the theory of evolution himself, Charles Darwin, had an idea. In the first edition (1865) of his well-known book, *The Origin of Species*, Darwin wrote:

In North America the black bear was seen... swimming for hours with widely open mouth, thus catching, like a whale, insects in the water. Even in so extreme a case as this, if the supply of insects were constant, and if better adapted competitors did not already exist in the country, I can see no difficulty in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, with larger and larger mouths, till a creature was produced as monstrous as a whale.¹⁴⁶

While this section was removed from later editions of the book, in 1903 he stated that he still maintained his position of bears evolving into whales: “I still maintain that there is no special difficulty in a bear’s mouth being enlarged to any degree useful to its changing habits.”¹⁴⁷ Clearly, Darwin believed that any creature has an unlimited potential to change its form. He was wrong about this, and other places in this book tell why.

Fast-forward to the 1970s. Bears are now *out* of the evolutionary “whale line” and textbooks report other animal candidates as whale ancestors such as *Mesonychids*, known from fossils.¹⁴⁸ Then, in the 1980s, *Pakicetus* took first position.¹⁴⁹ Twenty years later, a large group of evolutionists

selected the *hippopotamus*, while another group placed pigs into the “evolving” evolutionary ancestry of whales.¹⁵⁰

What’s next? Fortunately, from a biblical creation standpoint, God made whales on the Day 5 of Creation, each creature after their own *kind*. And this view hasn’t changed since these words of Scripture were penned about 3,500 years ago!

If whale evolution is true, then we would expect many other transitional “in-between” whale-like animals, either living or fossil, each stepping up along the evolutionary tree. Just take a look at the differences between some of these “starter” animals, which were land mammals, and the whales into which they supposedly evolved. As Dr. Carl Werner points out:

Consider how miraculous it would be for a wolf or a bear or any such creature to evolve into the 13 families and 79 species of whales, from the finless porpoise measuring about four feet long, to the blue whale measuring 100 feet. The latter weighs 360,000 pounds (the equivalent of 2,000 people); its tongue is the size and weight of an African elephant; its heart is the size of a small car; its heart pumps 2,640 gallons of blood; and a human could swim through its massive aorta.¹⁵¹

A prominent evolutionary biologist now known for expressing doubt about some Darwinist claims, Dr. Richard Sternberg, studied whale evolution in depth. He concluded that there is simply not enough time within evolutionary time stamps to make *even a few of the changes* necessary to reorganize a land creature into a whale.¹⁵² Some of these changes had to include:

- Counter-current heat exchanger for intra-abdominal testes (to keep them cool)
- Ball vertebra (to enable the tail to move up and down instead of side to side)
- Tail flukes and musculature
- Blubber for temperature insulation
- Ability to drink sea water (reorganization of kidney tissues)
- Nurse young underwater (modified mammae)
- Forelimbs transformed into flippers
- Reduction of hindlimbs
- Reduction/loss of pelvis and sacral vertebrae
- Reorganization of the musculature for the reproductive organs
- Hydrodynamic properties of the skin
- Special lung surfactants
- Novel muscle systems for the blowhole
- Modification of the teeth
- Modification of the eye for underwater vision
- Emergence and expansion of the mandibular fat pad with complex lipid distribution
- Reorganization of skull bones and musculature
- Modification of the ear bones
- Decoupling of esophagus and trachea
- Synthesis and metabolism of isovaleric acid (toxic to terrestrial mammals)

In a debate regarding the origins of life, Dr. Sternberg stated, “How could this process alone have produced fully aquatic cetaceans (whales) with their multiple, anatomical novelties, requiring many hundreds, even thousands of adaptive changes in less than 2 million years—even less than 9 million years?... I’m saying it doesn’t add up.”¹⁵³ We would need thousands of in-between examples of fossils demonstrating *each* of these requirements developing through time.

Making this evolutionary process even more difficult to believe, the jawbone of an ancient whale found in Antarctica in October 2011 was “dated” to 49 million years, which would imply that the first fully-developed whales now date to about the same time as one of the supposed whale “ancestors,” named *Ambulocetus*.¹⁵⁴

It is clear that what we have on Earth is a *created* “kind” of whales that have existed since Day 5 of Creation, and not some evolutionary line of land-mammals leading to the largest creature on Earth—a 360,000 pound blue whale that is able to swim up to 30 miles per hour, has a tongue that weighs as much as an elephant, a heart the size of a car, eats 4–8 tons of krill each day, and dives to depths of over 1,500 feet while holding its breath. By now, it should become clear that it takes more faith to believe in evolution than it does in whale Creation.

With this background in mind, we will next review and reject each of the animals that are supposedly linked together in the successive train of whale evolution.

Animals (that Don’t Belong) in the Progression of Whale Evolution

Several high school and college biology textbooks display the supposed “whale evolution” model by putting several pictures of extinct and living animals side-by-side and bonding them together in a hypothetical evolutionary explanation that one animal led to the next, on up the evolutionary tree. For example, the first two in Miller & Levine’s line-up (Ancient artiodactyls and *Pakicetus*) are land-dwelling mammals (similar to wolves), the next two (*Ambulocetus* and *Rodhocetus*) allegedly started developing fins and tails/flippers, the next two (*Basilosaurus* and *Dorudon*) are early whales, followed by the two suborders of modern whales: Mysticeti (baleen whales) and Odontoceti

(toothed whales).¹⁵⁵ Lined up this way, they seem to tell a neat evolutionary story. But as we will show, this arrangement follows more from an underlying philosophical commitment to evolution than to scientific data.

From a biblical creationist standpoint, these eight mammals are not related and have not evolved. Rather, the first two are simply extinct wolf-like creatures most likely buried and later fossilized by Noah's Flood, the next four are extinct whale-like creatures (which also likely died in the Flood), and the last two are obviously whales that still exist today.

Asserting that these eight animals are somehow all tied to the same evolutionary tree is similar to digging up a golf ball, baseball, and soccer ball in your backyard and saying, "See! This must be proof of ball evolution!" Just because animals shared some similar features or habitats does not mean that they are related, or that one led to the other! After all, nobody has ever observed a progression of one kind evolving into another. As discussed in Chapter 6, animals can and do *adapt* by making certain adjustments, such as "Darwin's Finches," but they do not change from one kind of animal to another. Indeed, Darwin's Finches are still finches—they differ only by beak size and shape. The same is true with whales.

Each of these "evolving whale" creatures will be discussed below, along with some amazing recent admissions made by the evolutionists who originally touted them as "proof" of evolution.

Ancient artiodactyl

"Artiodactyl" is a collective term used to mean "even-toed" animals, referring to their two or four hoofs per foot. According to evolutionary fossil-age assignments, they date back some 54 million years. Animals in this category include goats, sheep, camels, pigs, cows, and deer. Other than just

saying so, there is no evidence connecting this entire group of animals to whales. By suggesting that whales evolved from some “ancient artiodactyl,” they implicitly admit that they do not have a real fossil connecting whales to other mammals, instead reaching for an imaginary, not-yet-found “ancestor.”

Pakicetus

Pakicetus means “whale from Pakistan,” but it looked nothing like a whale. It was originally represented by a few elongated *wolf-like skull fragments* that were first discovered by paleontologist Philip Gingerich in the early 1980s.¹⁵⁶ Based on these skull fragments, Gingerich asserted that the *Pakicetus* was a “perfect intermediate” between land animals and whales.¹⁵⁷ Drawings of the *Pakicetus* swimming in the ocean as a sea creature soon adorned standardized textbooks.¹⁵⁸ At the time, it was easy to pretend that *Pakicetus* had a whale-like body, since we had no body fossils.

About ten years later, more *Pakicetus* fossils were discovered, including additional body fossils associated with skull material. “All the postcranial bones indicate that pakicetids were land mammals... Many of the fossils’ features... indicate that the animals were runners, moving with only their digits touching the ground,” according to the prestigious journal *Nature*.¹⁵⁹ These led to the conclusion that the *Pakicetus* was “no more amphibious than a tapir”¹⁶⁰ Tapirs are modern browsing mammals living in South America, similar to pigs but with longer snouts. Once new fossils showed that it had well-organized, fast-running legs, was *Pakicetus* immediately removed from its iconic whale ancestry position in evolutionary textbook diagrams? Surprisingly, texts often still include *Pakicetus*. This is just bad science. Tapirs are alive today, and no one has seen these animals evolving at all, much less to anything close to a sea-dwelling whale. A

recent article in *National Geographic* reports that Gingerich now believes that whales are related to antelopes based on a “single piece of fossil” found in 2000.¹⁶¹

Just viewing the illustration of the *Pakicetus* in common biology textbooks shows these animals to have simply been extinct, wolf-like mammals.

Ambulocetus

Ambulocetus is based on a set of fossil fragments that was discovered in Pakistan in 1993. To date there have been *only two Ambulocetus* fossils found.¹⁶² One high school biology textbook includes this creature in whale evolution by stating: “The limb structure of *Ambulocetus* ‘walking whale’ suggests that these animals could both swim in shallow water and walk on land.”¹⁶³

Alligators and crocodiles are reptiles that look similar to the mammal *Ambulocetus*, and they can swim and walk on land. Why have they not also been lined up in the evolutionary train leading to whales?

In his book, *Evolution: A Theory in Crisis*, evolutionary biochemist, Dr. Michael Denton, points out that *Ambulocetus*’ backbone ends in the pelvic bone (from which powerful leg bones extend), which is typical for land mammals. In whales, on the other hand, the backbone continues right down to the tail and there is no pelvic bone at all. *Basilosaurus*, thought to have lived up to 10 million years after *Ambulocetus*, possesses a typical no-pelvis whale anatomy. There is no intermediate form between *Ambulocetus*, a typical terrestrial animal, and *Basilosaurus*, a typical whale. Note also that *Basilosaurus* is about 10 times longer than *Ambulocetus*, although evolutionary textbooks often draw them side-by-side to make the ‘transitional series’ look better. *Basilosaurus* and sperm whales have small bones independent of the backbone in their lower bodies. Some evolutionists claim

that these are shrunken leg bones. However, the bones in question more likely had functional uses in reproduction in *Basilosaurus*, whereas in sperm whales they support the reproductive organs.¹⁶⁴ Why would they have evolved into legs if they were already useful in their present state?

Dr. Carl Werner points out that the evolution “evidence” involving *Ambulocetus* consists of nothing more than *just by saying so*:

According to Dr. Annalisa Berta, an expert in aquatic mammal evolution, “*Ambulocetus is a whale by virtue of its inclusion in that lineage.*” In other words, *Ambulocetus* was defined as a “walking whale” not because it had a whale’s tail or a whale’s flippers or a blowhole, but because [some] evolution scientists believed it was on the line to becoming a whale, it became a “whale.” And since it was a land animal with four legs, it was then called a “walking whale.” Scientists who oppose evolution are quick to point out that this reasoning is circular and therefore specious.¹⁶⁵ (emphasis added)

Dr. Werner also pointed out that because *Ambulocetus* has eyes on the top of its head (like a crocodile) it should be clearly classified as a mammal with legs, having nothing to do with whales.

Rodhocetus

Rodhocetus was also found in Pakistan in 1992, and is now represented by three fossils.¹⁶⁶ The most well-known *Rodhocetus* is made up of two partial skeletons that make up an “early whale” that had short limbs, long hands, and feet.¹⁶⁷ The Levine & Miller biology textbook states that its hind limbs were “short and probably not able to bear much

weight. Paleontologists think that these animals spent most of their time in the water.”¹⁶⁸

Many of the textbook illustrations of the *Rodocetus* show it with legs and a dolphin or a common whale tail. For example, the *Proceedings of the National Academy of Sciences* showed *Rodhocetus* with a fluked tail similar to a typical whale.¹⁶⁹ Several other textbooks followed the practice, making for a convincing presentation that this animal (all three of them) was some type of transition step along the way to today’s whales.

Dr. Phil Gingerich, the paleontologist most responsible for the reconstruction and presentation of *Rodhocetus*, added a prominent tail and “fluke” (the wide fin at the end of the tail) to *Rodhocetus* when it was displayed at the Natural History Museum at the University of Michigan. When interviewed about why he added a whale fluke on *Rodhocetus*, Dr. Gingerich answered, “Well, I told you we don’t have the tail in *Rodhocetus*. So, we don’t know for sure whether it had a ball vertebrae indicating a fluke or not. So, I speculated it might have had a fluke.”¹⁷⁰

During this same revealing interview, Dr. Gingerich also acknowledged that the flippers were drawn on the diagram without fossil representation! Today he no longer believes that this animal had flippers, stating, “Since then we have found the forelimbs, the hands, and the front arms of *Rodhocetus*, and we understand that it doesn’t have the kind of arms that can spread out like flippers on a whale.” Without flippers or tail, *Rodhocetus* should be removed from its evolutionary lineup. The way its features had been imaginatively added, like those of *Pakicetus* before more complete fossils were found, clearly show whale evolution to be a product of researchers’ minds and not of scientific observation.

Basilosaurus

A total of over 100 *Basilosaurus* fossils have been found around the world including Egypt, Jordan, Pakistan, and in the United States (Mississippi and Alabama). One of the features that led evolutionists to believe that the *Basilosaurus* should be included in the “whale evolution line” are its hind “limbs.”¹⁷¹ Evolutionists frequently represent these limbs as “leftovers” from a supposed land-dwelling past. They supposedly lost their legs, evolved flippers, and became whales.

However, many leading evolutionists are now admitting that these limbs, like the small “leftover” limbs in “modern” whales, “could only be some kind of sexual or reproductive clasper.”¹⁷² These “claspers” are necessary to join multi-ton animals tightly together while mating in water and swimming, a design found in numerous other sea creatures. Whale evolutionist Dr. Gingerich wrote:

Hind limbs of *Basilosaurus* appear to have been too small relative to body size... to have assisted in swimming, and they could not possibly have supported the body on land. However, maintenance of some function is likely... The pelvis of modern whales [not a limb-supporting “pelvis”] serves to anchor reproductive organs, even though functional hind limbs are lacking. Thus hind limbs of *Basilosaurus* are most plausibly interpreted as accessories facilitating reproduction.¹⁷³

It is also interesting that apparently no transitional fossils between current whales and the *Basilosaurus* have been found, even though hundreds of each have been found. If evolution is true, one would think that over 35 million years of evolution would have produced some fossilized examples of transitions, but the fossil record “jumps” from

Basilosaurus, which was a fully aquatic animal, to modern whales, with nothing in between.¹⁷⁴ In actuality, God created whales and *Basilosaurus* separately.

Dorudon

There have been over 50 *Dorudon* fossils discovered around the world. These animals are simply extinct whales. They had nostril openings (blowholes) on top of their skulls, measured about 50 feet long, and lived in the water full-time. I described them in an online article that I wrote in 2008:

The *Dorudon* was once classified as a juvenile *Basilosaurus*, since they are very similar, long, slender marine mammals, but *Dorudon* was 5 m long and *Basilosaurus* 18 m. They are now classified as separate subfamilies of Basolosauridae. They are most likely varieties of the same created kind, much as the false killer whale (*Pseudorca crassidens*) and a bottlenose dolphin (*Tursiops truncatus*) are the same biological species given that they can produce a fertile hybrid called a wholphin...the serpentine body structure, cheek teeth and nasal bones mean that it could not have been an ancestor to modern whales. Also, the allegedly vestigial hind limbs actually had an important function as reproductive claspers.¹⁷⁵

Finally, Mysticetes include grey, blue, and humpback whales, and Odontocetes include toothed whales like dolphins and sperm whales. These modern whales are already whales, so have no place in whale evolution.

Summary

One of the certain facts that we can know from fossils is that *the animal died*. However, fossils do not come with tags showing the year they were created or buried in mud. When the evolutionist assumptions are removed, we no longer have a string of animals that led one to the other. Rather, we have various created kinds of animals that died by rapid muddy burials and then fossilized when the mud later dried.

What we can know for certain regarding the supposed story of whale evolution is that its theories have often changed—bears, mesonychids, *Pakicetus*, and now hippopotamuses have rotated through. The biblical viewpoint, however, remains *unchanged* since penned about 3,500 years ago: Whales were created as whales that can express variations within each of their kinds: some died off (many did not survive the Flood), and many are still alive today. Figure 19 shows how Biblical Creation has maintained a solid, unchanging perspective regarding the origin of whales, compared to the changing ideas of evolutionary theory.

Figure 19. Creation Theories about Whales

Creation Theories about Whales							
Time line	>4000 B.C.	3000 B.C.	2000 B.C.	1000 B.C.	0	1000 A.D.	Present Day
Evolutionary Perspective	Undetermined						Bears?
							Pakicetus?
							Antelopes?
							Hippos?
Biblical Creation	God Intentionally Created Whales by Design						

Finally, considering the number of changes that are needed to turn a wolf, bear, hippopotamus, or pig into a 360,000 pound, 100-foot blue whale doesn't even pass the common sense test. It takes more faith to believe in that type of evolution than it does to believe in biblical creation. The multiple families of whales we have were simply created that way. Dr. Duane Gish describes such "incredible faith in the evolution" this way:

Evolutionists are forced to believe that whatever the need may be, no matter how complex and unusual, random genetic errors were able to produce the structures required in a perfectly coordinated manner... It requires an enormous faith in miracles, where materialist philosophy actually forbids them, to believe that some hairy, four-legged mammal crawled into the water and gradually, over eons of time, gave rise to whales, dolphins, sea cows, seals, sea lions, walruses, and other marine mammals via thousands and thousands of random genetic errors. This blind hit and miss method supposedly generated the many highly specialized complex organs and structures without which these whales could not function, complex structures which in incipient stages would be totally useless and actually detrimental. Evolution theory is an incredible faith.¹⁷⁶

Few of the members depicted in textbook illustrations of whale evolution belong there. Each shows evidence that it was a uniquely created creature, having no anatomical link to whales. Instead of showcasing evolution, the wonderful and integrated design features that make whale life possible should showcase their great Creator, the God of the Bible.

Endnotes



- ¹ Ken Ham, “Culture and Church in Crisis,” AnswersInGenesis.com: <http://www.answersingenesis.org/articles/am/v2/n1/culture-church-crisis> (January 1, 2014) and survey data: [http://www.answersingenesis.org/articles/am/v2/n1/aig-poll \(data\)](http://www.answersingenesis.org/articles/am/v2/n1/aig-poll%20(data)) (January 1, 2014).
- ² Results for this USA Today/Gallup poll are based on telephone interviews conducted May 10–13, 2012, with a random sample of 1,012 adults, aged 18 and older, living in all 50 U.S. states and the District of Columbia.
- ³ Frank Newport, “In U.S., 46% Hold Creationist View of Human Origins: Highly Religious Americans most likely to believe in Creationism,” Gallop.com: <http://www.gallup.com/poll/155003/hold-creationist-view-human-origins.aspx> (June 1, 2012).
- ⁴ Kenneth R. Miller & Joseph S. Levine, *Biology* (Boston, Mass: Pearson, 2010): 466.
- ⁵ Introduction and Table from: “The Bible and Science Agree,” Creationism.org: <http://www.creationism.org/articles/BibleSci.htm> (January 1, 2014).
- ⁶ Ken Ham & T. Hillard, *Already Gone: Why your Kids will Quit Church and what you can do stop it* (Green Forest, AR: Master Books, 2009).
- ⁷ S. Michael Houdmann, “How and when was the Canon of the Bible put together?” Got Questions Online: <http://www.gotquestions.org/canon-Bible.html> (November 7, 2013).

- ⁸ The reader is encouraged to review these additional resources: Henry Halley, *Halley's Bible Handbook* (Grand Rapids: Zondervan Publishing House, 1927, 1965); Arthur Maxwell, *Your Bible and You* (Washington D.C.: Review and Herald Publishing Association, 1959); Merrill Unger, *Unger's Bible Handbook* (Chicago: Moody Press, 1967).
- ⁹ For example, in 1946 the Dead Sea Scrolls were discovered, which included over 900 manuscripts dating from 408 B.C. to A.D. 318. These manuscripts were written mostly on parchment (made of animal hide) but with some written on papyrus. Because these materials are fragile, they have to be kept behind special glass in climate controlled areas.
- ¹⁰ Josh McDowell, *The New Evidence that Demands a Verdict* (Nashville: Thomas Nelson Publishers).
- ¹¹ McDowell, *The New Evidence that Demands a Verdict*, p.38.
- ¹² McDowell, *The New Evidence that Demands a Verdict*, p.38.
- ¹³ Most of the 11 verses come from 3 John. See: Norman Geisler & William Nix. *A General Introduction to the Bible* (Chicago: Moody Press, 1986), 430.
- ¹⁴ Geisler & Nix, *A General Introduction to the Bible*, p. 430.
- ¹⁵ Theophilus ben Ananus was the High Priest in Jerusalem from A.D. 37 to 41 and was one of the wealthiest and most influential Jewish families in Iudaea Province during the 1st century. He was also the brother-in-law of Joseph Caiaphas, the High Priest before whom Jesus appeared. See Wikipedia and B. Cooper, *The Authenticity of the Book of Genesis* (Portsmouth, UK: Creation Science Movement, 2012).
- ¹⁶ B. Cooper, *Authenticity of the New Testament, Vol. 1: The Gospels*. Electronic book (2013).
- ¹⁷ The Digital Dead Sea Scrolls Online, Directory of Qumran Dead Sea Scroll: <http://dss.collections.imj.org.il/isaiah> (December 10, 2013).
- ¹⁸ Source for DSS: Fred Mille, "Qumran Great Isaiah Scroll," Great Isaiah Scroll: <http://www.moellerhaus.com/qumdir>.

- htm; Source for Aleppo Codes JPS: “Mechon Mamre” (Hebrew for Mamre Institute): <http://www.mechon-mamre.org/p/pt/pt1053.htm> (December 10, 2013).
- ¹⁹ Norman & Nix. *A General Introduction to the Bible*.
- ²⁰ Samuel Davidson, *Hebrew Text of the Old Testament*, 2d ed. (London: Samuel Bagster & Sons, 1859), 89.
- ²¹ Mary Fairchild, “44 Prophecies of the Messiah Fulfilled in Jesus Christ,” About.com: <http://christianity.about.com/od/biblefactsandlists/a/Prophecies-Jesus.htm> (December 18, 2013).
- ²² See: Genesis 7:19 (“all the high hills under the whole heaven were covered”); Genesis 7:21–22 (“all flesh died that moved upon the earth...all that was in the dry land”); Matthew 24:39 (“The flood came, and took them all away”); and 2 Peter 3:6 (“By these waters also the world of that time was deluged and destroyed.”). God also promised in Genesis 9:11 that there would be no more floods like the one of Noah’s day.
- ²³ Ken Ham, “They Can’t Allow “It”!” AnswersinGenesis.com: <http://www.answersingenesis.org/articles/au/cant-allow-it> (January 1, 2014).
- ²⁴ Eva Vergara & Ian James, “Whale Fossil Bonanza in Desert Poses Mystery,” Science on msnbc.com: http://www.msnbc.msn.com/id/45367885/ns/technology_and-science-science/ (November 20, 2013).
- ²⁵ D.A. Eberth, D.B. Brinkman, & V. Barkas, “A Centrosaurine Mega-bonebed from the Upper Cretaceous of Southern Alberta: Implications for Behaviour and Death Events” in *New Perspectives on Horned Dinosaurs: The Ceratopsian Symposium at the Royal Tyrrell Museum* (September 2007).
- ²⁶ Michael Reilly, “Dinosaurs’ Last Stand Found in China?” Discovery.com: <http://news.discovery.com/earth/dinosaurs-last-stand-found-in-china.htm> (January 1, 2014).
- ²⁷ Michael J. Oard, “The Extinction of the Dinosaurs,” *Journal of Creation* 11(2) (1997): 137–154.

- ²⁸ J.R. Horner & J. Gorman, *Digging Dinosaurs* (New York: Workman Publishing, 1988), 122–123.
- ²⁹ John Woodmorappe, “The Karoo Vertebrate Non-Problem: 800 Billion Fossils or Not,” *CEN Technical Journal* 14, no.2 (2000): 47.
- ³⁰ R. Broom, *The Mammal-like Reptiles of South Africa* (London: H.F.G., 1932), 309.
- ³¹ Steven Austin, “Nautiloid Mass Kill and Burial Event, Redwall Limestone (Lower Mississippian) Grand Canyon Region, Arizona and Nevada,” in Ivey Jr. (Ed.). *Proceedings of the Fifth International Conference on Creationism* (Pittsburg, Pennsylvania: Creation Science Fellowship): 55–99.
- ³² Andrew Snelling, *Earth’s Catastrophic Past: Geology, Creation & the Flood*, Vol. 2 (Dallas, TX: Institute for Creation Research, 2009), 537.
- ³³ Snelling, *Earth’s Catastrophic Past: Geology, Creation & the Flood*, p. 537.
- ³⁴ David Cloud, *An Unshakeable Faith: A Christian Apologetics Course* (Port Huron, MI: Way of Life Literature, 2011).
- ³⁵ Snelling, *Earth’s Catastrophic Past: Geology, Creation & the Flood*, p. 538.
- ³⁶ Snelling, *Earth’s Catastrophic Past: Geology, Creation & the Flood*, p. 539.
- ³⁷ Andrew Snelling, “The World’s a Graveyard Flood Evidence Number Two,” *AnswersinGenesis*: <http://www.answersingenesis.org/articles/am/v3/n2/world-graveyard> (January 1, 2014).
- ³⁸ Cloud, *An Unshakeable Faith: A Christian Apologetics Course*.
- ³⁹ Cloud, *An Unshakeable Faith: A Christian Apologetics Course*.
- ⁴⁰ N. O. Newell, “Adequacy of the Fossil Record,” *Journal of Paleontology*, 33 (1959): 496.

- ⁴¹ Darwin, *The Origin of Species*, p. 298.
- ⁴² Luther Sunderland, *Darwin's Enigma* (Arkansas: Master Books, 1998), 129.
- ⁴³ Cloud, *An Unshakeable Faith: A Christian Apologetics Course*.
- ⁴⁴ Photo by Ian Juby. Reproduced with permission. Tas Walker, "Polystrate Fossils: Evidence for a Young Earth," Creation.com: <http://creation.com/polystrate-fossils-evidence-for-a-young-earth> (January 3, 2014).
- ⁴⁵ John D. Morris, "What Are Polystrate Fossils?" *Acts & Facts*, 24 (9) (1995).
- ⁴⁶ Tas Walker & Carl Wieland, "Kamikaze ichthyosaur? Long-age Thinking Dealt a Lethal Body Blow," *Creation Magazine*, 27 (4) (September 2005). See: Creation.com: <http://creation.com/kamikaze-ichthyosaur> (December 31, 2013).
- ⁴⁷ Walker & Wieland, 2005 (figure reproduced with permission: Creation.com).
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