

How Could Noah Build Something So Large?

August 31, 2015

Imagine that you had never studied ancient monuments and had never heard of Stonehenge in England. How would you respond to someone who told you that long before the advent of modern machinery, ancient people moved 30-foot-tall, 25-ton stones a distance of 20 miles and arranged them in precise alignment with the sun on the summer solstice?

Now imagine that you had never heard of the Great Pyramid. Would you believe that thousands of years ago a pyramid was constructed in Egypt with 2.3 million limestone blocks weighing on average more than 5,000 pounds? People still marvel over the remarkable precision of its construction.

If these incredible structures weren't around anymore and we only had some historical records of them, very few people would believe that they had ever been built because we have been taught to believe that early people were incapable of such feats. So how could Noah build an enormous Ark? He had some advantages over the builders of Stonehenge and the Great Pyramid. Since people in his day had such long lifespans, think of the amount of knowledge and skills they could acquire. Also, Noah built the Ark during what was likely the technological peak of the pre-Flood world, and although we do not know the extent of their innovations, we do know they worked with iron and other metals ([Genesis 4:22](#)).

The Flood wiped out Noah's world, and, other than the knowledge and advancements Noah's family brought on the Ark, society endured a technological "reset." Yet within a few centuries and hampered by another near-technological "reset" with the language confusion at Babel, ancient people produced incredible structures that still amaze us today, such as the wonders of the Great Pyramid and Stonehenge.

Caring for the Animals on the Ark

by [John Woodmorappe](#) on March 29, 2007; last featured March 24, 2009

While it is possible that God made miraculous provisions for the daily care of these animals, it is not necessary—or required by Scripture—to appeal to miracles.

According to Scripture, Noah's Ark was a safe haven for representatives of all the kinds of air-breathing land animals that God created. While it is possible that God made miraculous provisions for the daily care of these animals, it is not necessary—or required by Scripture—to appeal to miracles. Exploring natural solutions for day-to-day operations does not discount God's role: the biblical account hints at plenty of miracles as written, such as God bringing the animals to the Ark ([Genesis 6:20; 7:9, 15](#)). It turns out that a study of existing, low-tech animal care methods answers trivial objections to the Ark. In fact, many solutions to seemingly insurmountable problems are rather straightforward.

How Did Noah Fit All the Animals on the Ark?

According to the Bible, the Ark had three decks (floors). It is not difficult to show that there was plenty of room for 16,000 animals (the maximum number of animals on the Ark, if the most liberal approach to counting animals is applied), assuming they required approximately the same floor space as animals in typical farm enclosures and laboratories. The vast majority of the creatures (birds, reptiles, and mammals) were small (the largest only a few hundred pounds of body weight). What's more, many could have been housed in groups, which would have further reduced the required space.

It is still necessary to take account of the floor spaces required by large animals, such as elephants and rhinos. But even these, collectively, do not require a large area because it is most likely that these animals were young, but not newborns. Even the largest dinosaurs were relatively small when only a few years old.

What Did the Dinosaurs Eat?

Dinosaurs could have eaten basically the same foods as the other animals. The large sauropods could have eaten compressed hay, other dried plant material, seeds and grains, and the like. Carnivorous dinosaurs—if any were meat-eaters before the Flood—could have eaten dried meat, reconstituted dried meat, or slaughtered animals. Giant tortoises would have been ideal to use as food in this regard. They were large and needed little food to be maintained themselves. There are also exotic sources of meat, such as fish that wrap themselves in dry cocoons.

IT IS NOT NECESSARY—OR REQUIRED BY SCRIPTURE—TO APPEAL TO MIRACLES FOR THE PROVISION AND DAILY CARE OF THE ANIMALS ON THE ARK. MANY SOLUTIONS TO SEEMINGLY INSURMOUNTABLE PROBLEMS ARE RATHER STRAIGHTFORWARD.

How Were the Animals Cared For?

We must distinguish between the long-term care required for animals kept in zoos and the temporary, emergency care required on the Ark. The animals' comfort and healthy appearance were not essential for emergency survival during one stressful year, where survival was the primary goal.

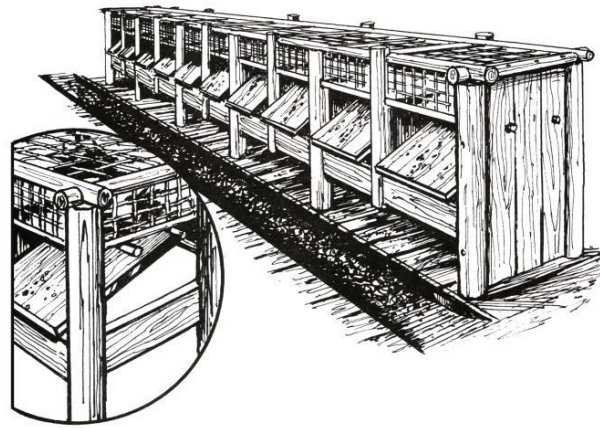
Studies of nonmechanized animal care indicate that eight people could have fed and watered 16,000 creatures. The key is to avoid unnecessary walking around. As the old adage says, “Don’t work harder, work smarter.”

Therefore, Noah probably stored the food and water near each animal. Even better, drinking water could have been piped into troughs, just as the Chinese have used bamboo pipes for this purpose for thousands of years. The use of some sort of self-feeders, as is commonly done for birds, would have been relatively easy and probably essential. Animals that required special care or diets were uncommon and should not have needed an inordinate amount of time from the handlers. Even animals with the most specialized diets in nature could have been switched to readily sustainable substitute diets. Of course, this assumes that animals with specialized diets today were likewise specialized at the time of the Flood.

How Did the Animals Breathe?

Based on my two decades of research, I do not believe that anything more was needed than a basic, non-mechanical ventilation system. The density of animals on the Ark, compared to the volume of enclosed space, was much less than we find in some modern, mass animal housing used to keep stock raised for food (such as chicken farms), which requires no special mechanical ventilation.

It is reasonable to believe that one relatively small window would have adequately ventilated the Ark. Of course if there were a window along the top center section, which the Bible allows, all occupants would be even more comfortable. It is also interesting to note that the convective movement of air, driven by temperature differences between the warm-blooded animals and the cold interior surfaces, would have been significant enough to drive the flow of air. Plus, wind blowing into the window would have enhanced the ventilation further. However, if supplementary ventilation was necessary, it could have been provided by wave motion, fire thermal, or even a small number of animals harnessed to slow-moving rotary fans.



What Did Noah and His Family Do with the Animal Waste?

As much as 12 U.S. tons (11 m. tons) of animal waste may have been produced daily. The key to keeping the enclosures clean was to avoid the need for Noah and his family to do the work. The right systems could also prevent the need to change animal bedding. Noah could have accomplished this in several ways. One possibility would be to allow the waste to accumulate below the animals, much as we see in modern pet shops. In this regard, there could have been slatted floors, and animals could have trampled their waste into the pits below. Small animals, such as birds, could have multiple levels in their enclosures, and waste could have simply accumulated at the bottom of each.

Animal enclosures with sloped, self-cleaning floors, emptying into a manure gutter or pit.

The danger of toxic or explosive manure gases, such as methane, would be alleviated by the constant movement of the Ark, which would have allowed manure gases to be constantly released. Secondly, methane, which is half the density of air, would quickly find its way out of a small opening such as a window. There is no reason to believe that the levels of these gases within the Ark would have approached hazardous levels.

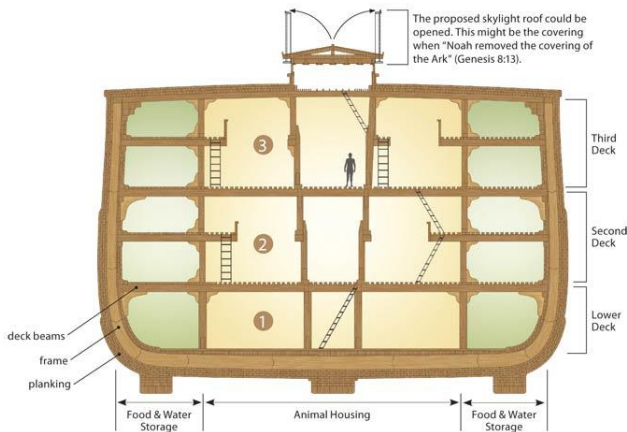
Alternatively, sloped floors would have allowed the waste to flow into large central gutters. Noah's family could have then dumped this overboard without an excessive expenditure of manpower.

The problem of manure odor may, at first thought, seem insurmountable. But we must remember that, throughout most of human history, humans lived together with their farm animals. Barns, separate from human living quarters, are a relatively recent development.

While the voyage of the Ark may not have been comfortable or easy, it was certainly doable, even under such unprecedented circumstances.

A Look Inside the Ark

This is a cross-section view of a possible design of the interior of the Ark.



Three Decks

[Genesis 6:16](#) instructs that the Ark is to be made “with lower, second, and third decks” (NKJV). In this version of the Ark’s interior, there are two levels that do not extend across the entire width of the ship. These half-floors are not separate levels.

Animal Housing

[Genesis 6:14](#) instructs Noah to “make rooms [nests] in the ark” (NKJV). These rooms or nests would simply be stalls and cages for the animals.

Stairs

Several staircases and ladders could be fitted throughout the Ark to gain quick access to another deck. Ramps near the ends of the hull (as seen in [Thinking Outside the Box](#)) could be used to get animals and heavy loads between decks.

Food & Water

Mezzanine levels improve access to food storage, utilizing gravity to supply grain and water to the animal enclosures below. Water could be directed in pipes (metal, wood, leather, bamboo, etc.) from tanks on upper levels.

Light & Ventilation

The central skylight provides lighting and ventilation to the center section of the Ark. Slatted floors maximize airflow to the lower decks.

What We Know of Noah and the Ark in the Bible

on March 28, 2014

IT IS EVIDENT THAT THE ARK DID NOT RESEMBLE A BATHTUB TOY, BUT WAS MORE LIKE A MODERN-DAY CARGO SHIP.

Noah's Ark is one of the few "stories" that most people recognize, even those that have never stepped in a church or cracked open a Bible. The beloved child's tale of the overstuffed bathtub toy filled with all sorts of lovable creatures has been a favorite of many. But, how does this story compare with the historical account that is recorded for us in the Bible? Do most of us really know what we *know* and *don't know* about Noah, his family, his task, and the world in which he lived? With the release of the [Noah movie](#), Paramount Pictures has presented their rendition of the historical global flood. In this article we will explore what information the Bible gives, what we do not know, and what everyone needs to know.

What We Know

The Bible, in Genesis 5–9, gives us the bulk of what we know about Noah and his life. Noah was married and had three sons: Shem, Ham, and Japheth. Each of the sons had his own wife. In the years Noah spent building the Ark, his grandfather Methuselah and father Lamech were alive and may have even assisted Noah in some ways. We are told that Noah walked with the Lord and found grace in His sight ([Genesis 6:8–9](#); cf. [Ezekiel 14:14, 20](#)). We know from the genealogy listed in the previous chapter that Noah was in the tenth generation of the human race, and his name is related to "comfort" and "rest" ([Genesis 5:29](#)). In other writings he is also described as a "preacher of righteousness" ([2 Peter 2:5](#)) who was motivated by faith and godly fear ([Hebrews 11:7](#)). This is not a lot of detail, but I would be ecstatic if that was how my life was summarized.

Beyond Noah's family we have the rest of the people on the earth—all descendants of Adam and Eve. Once again we are not given a lot of detail, but a summary of their behavior is given in [Genesis 6:5](#), "Then the LORD saw that the wickedness of man was great in the earth, and that every intent of the thoughts of his heart was only evil continually."

God entrusts the task of building the Ark to Noah and gives him the necessary information to complete the task—size, layout, and appropriate building materials ([Genesis 6:13–16](#)). Based on this information, it is evident that the Ark did not resemble a bathtub toy, but was more like a modern-day [cargo ship](#).

Then there are the animals. Being a veterinarian, I am still surprised by how many people are drawn to the account of Noah because of the animals. Many people, even some who are not Christians, identify Noah as being the first veterinarian. God brought the animals to Noah, but Noah was given the task of collecting rations and providing for them while on the Ark. The Lord said to Noah,

And of every living thing of all flesh you shall bring two of every sort into the ark, to keep them alive with you; they shall be male and female. Of the birds after their kind, of animals after their kind, and of every creeping thing of the earth after its kind, two of every kind will come to you to keep them alive. And you shall take for yourself of all food that is eaten, and you shall gather it to yourself; and it shall be food for you and for them. ([Genesis 6:19–21](#))

Many critics of the biblical account have claimed that the Ark could not [hold all of the animals](#). The key to answering this charge is that Noah brought two of every kind, which we currently understand to be similar to the family level of our modern classification system. Research is currently being conducted to calculate the number of animals on the Ark and to get an idea of what they may have looked like, as is evidenced by these articles:

- [Determining the Ark Kinds](#)
- [An Initial Estimate of Avian Ark Kinds](#)
- [Mammalian Ark Kinds](#)
- [An Initial Estimate toward Identifying and Numbering Extant Tuatara, Amphisbaena, and Snake Kinds](#)
- [An Initial Estimate toward Identifying and Numbering the Ark Turtle and Crocodile Kinds](#)
- [An Initial Estimate Toward Identifying and Numbering Amphibian Kinds within the Orders Caudata and Gymnophiona](#)
- [An Initial Estimate toward Identifying and Numbering the Frog Kinds on the Ark: Order Anura](#)

Noah was also instructed to bring seven (or seven pairs) of each kind of clean animal and bird. Some of these would become the animals Noah sacrificed to God after he left the Ark ([Genesis 8:20](#)). What it boils down to is that there was plenty of room on the Ark for everyone, including the [dinosaurs](#).

Where did all of this take place? We know the Ark landed in the mountains of Ararat ([Genesis 8:4](#)), but we cannot know where the Ark was built since that world was destroyed ([2 Peter 3:6](#)). Throughout biblical history, it appears that people hesitated to move and spread out as God commanded ([Genesis 9:1](#)). For example, the Tower of Babel and the early church in Acts are both points in time where major outside forces like confounding the language or government persecution forced people to scatter. Finally, there is the question of when these things took place. Utilizing the [genealogies in the Bible](#) we know the flood was close to 4,400 years ago, roughly 1,650 years after the creation. Noah was 600 when the Flood came ([Genesis 7:6](#)). From Scripture we know the date of the start of the Flood ([Genesis 7:11](#)) and when they left the Ark ([Genesis 8:14–15](#)), so we know they were on the Ark for a little over a year. Other than caring for the animals, which I can attest to being a full-time job, we do not know how they spent their time on the Ark.

What We Do Not Know

In some ways it seems that there is a lot more that we don't know about these events than what we do know. This can be intriguing, frustrating, and exciting all at the same time. The Gospel of John closes by stating, "And there are also many other things that Jesus did, which if they were written one by one, I suppose that even the world itself could not contain the books that would be written. Amen" ([John 21:25](#)). If so much could have been written about the years of Christ's ministry, it should comfort us that God hand-picked the most important information throughout history to give us in His Word.

We do not know what Noah did prior to constructing the Ark. Building a ship requires a totally different skill set than growing a vineyard, which He did after the Flood ([Genesis 9:20](#)), and there is no indication that Noah did anything like this previous to his commissioning. Noah's wife is often referred to as Mrs. Noah because she is never named, as is also the case with Noah's daughters-in-law. Did people outside of Noah's family help him build the Ark? There is nothing in the Bible that says either way. Neither does it tell us if people made fun of Noah for his faith in God and for undertaking the Ark project. This makes sense knowing how this world ridicules God's followers, but to say that happened to Noah is speculation.

From a more technical standpoint, we are not sure if it rained prior to the Flood, but [most likely it did](#). We know it did not rain during the Creation Week ([Genesis 2:5](#)), but it does not specify if that situation continued, and we do not have a scientific model for a pre-Flood environment that works without the current moisture cycle. We also believe that there were not as many phenotypes or physical species of animals, though each animal kind likely contained great genetic diversity. But we do not know what exactly these representative kinds looked like.

What Everyone Needs to Know

So not knowing everything is not the end of the world. We know that any movie or other history-based drama is necessarily going to take some creative license—giving Mrs. Noah a first name, for instance. What is more important is that we must be able to differentiate between what the Bible states and what is creative license, and identify points that may alter God’s message.

It is God’s message that everyone should know when they walk away from Noah’s account. The message that God is the Creator, that sin has consequences, and judgment is coming. The people of Noah’s time lived how they wanted to live up until the Flood took them. They never took the time to repent of their wickedness.

It is interesting that the Bible tells us there was only one door to the Ark ([Genesis 6:16](#)). Similarly, there is only one way to enter into a relationship with God. Jesus said, “I am the way, the truth, and the life. No one comes to the Father except through Me” ([John 14:6](#)). For those who believe in Him, Jesus is our one entrance into God’s redemptive grace.

The Bible warns us that a second judgment is coming—this time by fire ([2 Peter 3:7](#)). People are turning from God, rejecting Him as Creator, and putting themselves in His place. God continues to be longsuffering, as He was in Noah’s day, but there will come a time when judgment will come. During Noah’s time the question was, “Were you standing in the boat or standing out in the world?” There was no hope of survival for the people outside of the Ark, God’s means of physical salvation. In Noah’s day grace came in the shape of an Ark. Today grace comes in the shape of a Cross. The only way a person can be saved from the eternal consequences of their rebellion against God is to turn from that sin and trust in the Savior Jesus Christ—the way, the truth, and the life. Where do you stand?

No Kind Left Behind

Recounting the Animals on the Ark

by [Dr. Marcus Ross](#) on January 1, 2013

We've all seen images of giraffes, zebras, and elephants boarding Noah's Ark. But what did Noah's floating zoo really look like? The answer is sure to surprise us ... and to remind us that there's much more to the Ark than we ever imagined.

Imagine gathering all the kinds of land animals that ever lived into one place. What a zoo that would be! Recently, Answers in Genesis began work on its [Ark Encounter](#) outreach project, to build a full-sized Ark and populate it with a sampling of the animals that Noah may have brought on board. Which animals were there? How many?

Helping to find the answer is this paleontologist's dream come true. Such a project requires gathering data on every kind of creature ever discovered, sifting through the list, and calculating which ones showed up at Noah's door. In addition to rabbits, elephants, and tigers, most creationists now recognize that dinosaurs must have tromped onboard the Ark, along with flying pterosaurs. A few enterprising artists have shown kangaroos, lemurs, birds of paradise, and even saber-toothed cats and mammoths. But what about all the other unbelievable beasts in the fossil record?

Few people realize just how many bizarre-looking creatures once made earth their home—boomerang-headed amphibians; car-sized reptiles that ate plants; and giant, horned, elephant-sized mammals that look like beasts from Tolkien's *The Lord of the Rings*. These are just some of the amazing creatures known to paleontologists but little-known to the general public. These and many other extinct animals belong to "kinds" completely different from anything living today.

Did Noah have to make room for all these creatures, too? After all, every kind of air-breathing land animal had to be on the Ark. No matter how rare an animal is, a representative of its kind had to board the Ark. Yet how could they fit, especially since the number of named animal species, living and extinct, exceeds one million?

First Step: Biblical Clues

The first step is to examine the Bible to see what instructions God gave to Noah concerning animals and the Ark. Only “living creatures” (Hebrew: *nephesh*) were to be brought on the Ark ([Genesis 6:19–20](#); [7:2–3](#); [7:8–9](#)). That excludes plants, bacteria, and fungi. The only plants brought on board the Ark were used for food. All other plants were presumably left outside.

NOAH DID NOT NEED TO BUILD AN AQUARIUM FOR THE ARK!

Also excluded were fish and other aquatic organisms. After all, Noah did not need to build an aquarium for the Ark!

Noah’s job was to care only for flying creatures and air-breathing land animals: “Bring into the ark two of all living creatures, male and female, to keep them alive with you. Two of every kind of bird, of every kind of animal and of every kind of creature that moves along the ground will come to you to be kept alive” ([Genesis 6:18–20, NIV](#)).

The term “living creatures” is the same as in Genesis 1, which includes birds, larger domestic and wild animals, and small, scurrying animals. This list likely includes small vertebrates, such as rodents and lizards, and possibly invertebrates, such as insects.¹

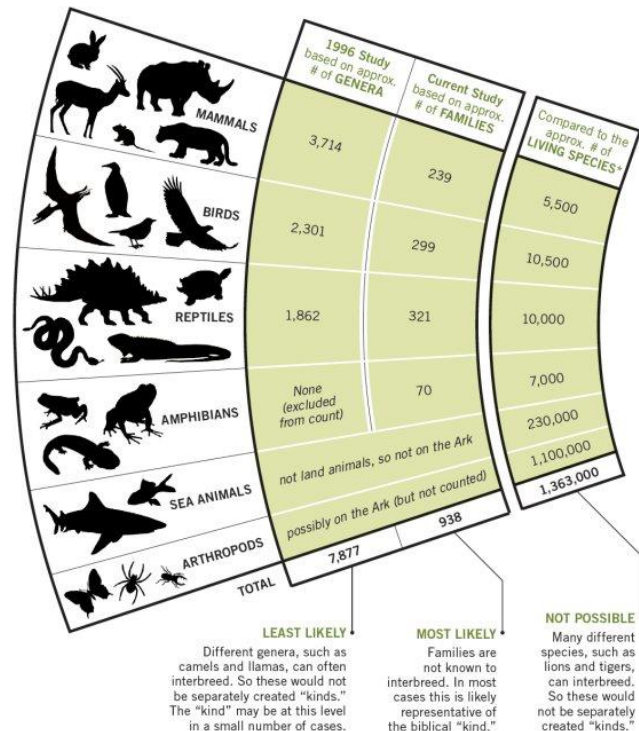
Drawing the Line for Ark Kinds

Over one million animal species have been named, but it’s a mistake to assume all were on the Ark. The Bible says Noah took only air-breathing land animals. So that excludes sea creatures and possibly insects and other invertebrates. Of the land vertebrates, there are only around 33,000 named living species (and a few thousand more fossil species). These are divided into fewer than 10,000 *genera* and 1,000 *families*.

So how many *kinds* of animals were on the Ark? The answer depends on which modern taxonomic level—order, family, genus, or species—represents each original “kind.” A 1996 study assumed the genus, but the new Ark Encounter is evaluating each family.

*What About Fossil Species?

The various studies of “kinds” have included fossil creatures in their lists of “families” and “genera.” Determining the number of fossil species is much more difficult. Since vertebrate fossils are often incomplete, there may not be enough material to identify the specimen as a new species of a known genus. Or, the physical differences may simply represent variations *within* one species, rather than differences *between* two species.



Previous Work

Even without bacteria, fungi, plants, and sea creatures on the Ark, lots of species remain to be accounted for. The key is to understand the word used in Scripture: *kind* (Hebrew: *min*). The Bible does not say God brought every individual or every species to Noah, since *species* is a modern concept. Instead, He brought a male and female of every “kind” (and seven of the clean animals).²

Over the centuries, there have been several estimates on the numbers and types of animals brought aboard Noah’s Ark. The first significant attempt was by the French mathematician Johannes Buteo (ca. 1492–1564).³ He went through all known animals, including the ones known from newly discovered North and South America. He estimated about 100 total “kinds,” or 300 individuals (along with 3,650 sheep to feed the carnivores on the ship). These were all mammals because he did not think it necessary to count reptiles and birds separately, which could more easily find space. (He didn’t know about dinosaurs!)

Our understanding of biology has grown steadily over the centuries, leading us closer to the true number. We now know more about the full diversity of land animals, for instance. We have also learned that many species may belong to the same kind. If species can interbreed and produce hybrids, it is assumed that they descended from a pair of animals on the Ark that could interbreed.

For instance, big cats like lions and tigers can be interbred with each other, creating hybrid “ligers” and “tigons.” Indeed, it appears that all members of the cat family (Felidae) may be connected through a series of hybrid pairings that ultimately connects different cat species to each other. In such cases, it seems that only one original “kind” onboard the Ark produced all of these species. So if “kind” is above species, where does it lie in our modern taxonomy?

One of the most important studies among young-earth creationists was by John Woodmorappe in his technical book *Noah’s Ark: A Feasibility Study*.⁴ For the sake of argument, he chose the taxonomic rank just above the species—the genus. On this basis, he estimated that approximately 16,000 terrestrial vertebrate animals (consisting of nearly 8,000 genera of reptiles, mammals, and birds) were on board. However, Woodmorappe considered this a deliberate and huge overestimation, since he suspected that the “kind” was broader than the genus.⁵ Newer studies have indicated that “kinds” were generally at the level of family.⁶

Current Approach

When Answers in Genesis decided to move forward with the Ark Encounter project, they needed to take another look at the “Ark kinds.” Partnering with other creation scientists, the Ark Encounter team is working toward a full tally and description of the “kinds” likely represented on the Ark.

In 2011, the initial team of creationists published an article detailing the approach they would take.⁷ The team will rely on all the best available scientific methods and evidences, including breeding records and statistical studies. Based on past studies, the team recognized that the taxonomic rank of family is the closest representation of the “kind.” This is not to say that the “kind” and the family are identical in every case: the team may determine that a few “kinds” are broader or narrower than families, as they explore all the available information.

Team members Jean Lightner and Tom Hennigan have been the lead researchers on the terrestrial vertebrates and doing the bulk of the work. Both have years of experience in “kinds” studies—Jean is a veterinarian and Tom an ecologist and associate professor at a Christian college. While the list of various living families of amphibians, reptiles, mammals, and birds is large (it includes hundreds of families), it is not as large as Woodmorappe’s estimates.

Georgia Purdom, a geneticist with Answers in Genesis, oversees the whole project. In 2011 she approached me about assisting with the number of extinct families from the fossil record, and I was thrilled. In the first phase a student and I published an estimate of the number of both living and extinct families based on leading references.⁸ That

paper suggested 719 total kinds of mammals, terrestrial reptiles, and birds. We did not include amphibians, but the future studies will.

So, How Many Were There?

Currently, I am overseeing students in vertebrate paleontology at Liberty University to finalize a list of extinct families. Jean Lightner and Tom Hennigan are finalizing numbers of living families.

So far, the current estimate of living and extinct vertebrate *families* is about 950. While we will continue to evaluate these families to see if they should be split up or combined with other families for our final estimate of the “kinds,” 950 families is a good approximation. Given that most animals were brought onto the Ark by twos, while “clean” birds and mammals were brought by sevens, this means that Noah cared for approximately two thousand land-dwelling vertebrate animals.

More to Come!

The Ark Encounter team has just begun publishing the final estimate of Ark “kinds” in peer-reviewed creationist literature as a series of technical papers. The first paper, by Jean Lightner, was published in November of 2012.[9](#) Each paper will discuss the methods, the resulting numbers of “kinds,” and descriptions of each. Combined, these works will help the Ark Encounter artists and planners faithfully represent these creatures in the full-scale replica of Noah’s Ark. Some no doubt will be familiar, but others will be unlike any animals you’ve *ever* seen! The amazing variety of God’s initial work at creation far exceeds the greatly limited variety we see among surviving species today.

The fossil record has expanded our imaginations about the wonderful possibilities of God’s creation. By His grace and by His leading, the Ark Encounter team hopes, once again, to give a loud witness to the Creator’s amazing wisdom, His judgment of sin during the Flood, and His provision of salvation. Jesus Christ, the Son of God and the Creator of the universe, is the One who brought the animals to Noah to be saved. Later He died on the Cross for sins, so all who would come to Him would be saved for eternity.

Dr. Marcus Ross is the assistant professor of geology and assistant director for the Center for Creation Studies at Liberty University. He holds a master’s degree in paleontology and a PhD in geosciences from the University of Rhode Island.

How Long Did It Take for Noah to Build the Ark?

by [Bodie Hodge](#) on June 1, 2010

Some confuse God's statement in [Genesis 6:3](#) as describing the time it took Noah to build the Ark. It says:

[Genesis 6:3](#)

And the LORD said, "My Spirit shall not strive with man forever, for he is indeed flesh; yet his days shall be one hundred and twenty years."

However, these 120 years are a countdown to the Flood.¹ In other words, mankind's violence had reached its peak and God declared that 120 years was the "drop dead" date for mankind who is a mortal being ([Genesis 6:3-7](#)). From a quick look, these 120 years would seem to be the absolute maximum for the time given to build the Ark, but the Scriptures reveal much more allowing us to be more accurate.

For example, Noah was 500 years old when Japheth, the first of his sons, was born ([Genesis 5:32](#)). And yet, Noah's second son, Shem, had his first son two years after the Flood, when he was 100 ([Genesis 11:10](#)).² This means that Shem was 98 years old when the Flood came and it also means that Shem was born when Noah was 502 years old. So, for Noah to begin having children at 500 means that Japheth was indeed the older brother, as per [Genesis 10:21](#), being born when Noah was 500. Ham is mentioned as the youngest of Noah ([Genesis 9:24](#)).

When God finally gave Noah instructions to build the Ark, it was not at the beginning of the 120 year countdown. God told Noah that *he, his wife, and his three sons and their wives* ([Genesis 6:14-18](#))³ would go aboard the Ark at this same time. Deducing that Shem was born 98 years before the Flood, it could be no more than this. But even more so, Ham hadn't been born yet! If we were to assume the same time between Ham and Shem as between Japheth and Shem, then Ham could have been born around 96 years before the Flood.

Although the Bible is silent on the exact timing, it is reasonable to assume that some time elapsed for the three sons to grow up and find a wife. I would be most comfortable giving a range of anywhere from 20 to 40 years making Ham no less than 16 at his marriage.

So if we think about this logically and tabulate it:

Years until the Flood	Event	Bible Reference
120	Countdown to the Flood begins	Genesis 6:3
100	Noah has Japheth, the first of his sons, when he was 500 years old.	Genesis 5:32 ; 10:21
98	Noah has Shem who was 100 two years after the Flood.	Genesis 11:10
? Perhaps 95 or 96 the same time between Japheth and Shem.	Ham was the youngest one born to Noah and was aboard the Ark so he was born prior to the Flood.	Genesis 9:24 ; Genesis 7:13
? Perhaps 20-40 years for all of the sons to be raised and find a wife	Each son was old enough to be married before construction on the Ark begins.	Genesis 6:18
~ 55-75 years (estimate)	Noah was told to build the Ark, for he, his wife, his sons, and his sons' wives would be aboard the Ark.	Genesis 6:18
Ark Completed		
?	Gather food and put it aboard the Ark.	Genesis 6:21
7 days	Loading the Ark.	Genesis 7:1-4
0	Noah was 600 when the floodwaters came on the earth.	Genesis 7:6

We would end up with a tentative range of about 55 to 75 years for a reasonable *maximum* time to build the Ark. Of course, it could be less than this depending on the age that Noah's sons took wives.

Consider that the Ark was completed *prior* to loading the animals that the Lord brought to Noah ([Genesis 7:1-4](#)) and that they had to take time to gather food and store it aboard the Ark ([Genesis 6:21](#)). So carefully considering the text, we can

conclude that the construction of the Ark did not involve the 120 years mentioned in [Genesis 6:3](#) but 75 years at the most.

Footnotes

1. Some have also described this as the longevity of mankind. For a number of generations after the Flood, people lived to be much older than this (e.g., Isaac lived to 180 years), so it is not referring to longevity.
2. Shem is often listed first (e.g., [Genesis 6:10](#), [7:13](#)) due to *importance* much as Abraham is listed first; yet, Shem was not the oldest. From the lineage of Shem and Abraham came Christ.
3. *Youngest* is used in ESV, NAS, and other translations for the word *qatan* which means small, young, or insignificant.

A NOTE ON THE OLIVE TREE

Reflecting on the Olive Branch

OLIVE TREE (Heb. *zayît*; Gk. *elaía*).† Any tree of the species *Olea*, but particularly the cultivated variety *Olea europaea* L.

The olive tree is a small evergreen native to Asia Minor and southern Europe. It stands no more than 10 m. high (33 ft.) and has a grayish trunk and bark. Its leaves are 6–8 cm. (2–3 in.) long and 1.5 cm. (.5 in.) wide and resemble the leaves of a willow; the upper surface of the leaf is dull green and leathery, and the lower surface is covered with fine white hairs. Olive trees grow best in the Mediterranean climate, which can have less than 200 mm. (8 in.) of annual rainfall. Although olive trees grow nearly everywhere in Palestine (Deut 28:40; cf. 8:8), they are cultivated especially in Gilead and the region west of the Jordan, where the lime and basalt of the region's soil are exceptionally well suited to them. Since the best ground is usually reserved for wheat, olive trees—which can take root in very shallow soil—are planted in particularly rocky soil or on mountain slopes (cf. “Mount of Olives”; e.g., 2 Sam. 15:30; Matt. 21:1).

The olive tree blossoms in early May, when the small, white, clustered flowers are vulnerable to the hot winds of the sirocco (Job 15:33). The fleshy, ovalshaped fruit, which is rich in oil, is green when immature and blue-black or dark green when ripe. Each berry is about 2 cm. (1 in.) long and 1.5 cm. (.6 in.) wide. Olives are harvested along with the grapes in the early fall (Isa. 32:10); the olives are gathered by beating the trees with sticks (Deut. 24:20). They can be eaten while still green, if first heated in lye and soaked in brine to remove the bitterness. See OIL, OINTMENT.

New olive shoots may spring up around an old stump (Ps. 128:3). More typically, new olive trees are grown by grafting an olive branch from a productive tree to a wild olive tree (Heb. *ēš šemen*; cf. RSV, Neh. 8:15; sometimes incorrectly called an oleaster, *Elaeagnus angustifolia* L.), a practice originating with the Phoenicians. Seeking to humble his Gentile readers, the apostle Paul compares them to a shoot taken from a wild olive tree (Gk. *agriélaios*) and grafted onto a cultivated olive tree (*kalliélaios*; Rom. 11:17, 24); the graft is “contrary to nature” because it does not follow the usual procedure of grafting a good branch to a wild tree.

Although olive trees can attain a very old age and are able to bear fruit for several hundred years, they take a long time to grow. The early Palestinian olive groves dated to pre-Israelite times (Deut. 6:11), and some modern trees are estimated to be more than one thousand years old. Because olive trees take so long to mature, they were protected in biblical times, even during war (cf. 20:19–20; 2 Kgs. 3:25). The wood of the cultivated olive was not even acceptable fuel for burning a sacrifice, unlike that of the wild olive (Mishnah Tamid. ii.3).

The exact species of the Heb. *ēš šemen* (lit. “oil tree”; so KJV, Isa. 41:19) is uncertain. It may designate either the cultivated olive (1 Kgs. 6:23, 31–33) or the wild olive (Neh. 8:15); but oil, in the form of turpentine and tar, can also be obtained from the pine (*Pinus halepensis* Mill. or *bruttia*; cf. KJV, JB, Neh. 8:15). Myers, A. C. (1987). In *The Eerdmans Bible dictionary* (pp. 778–779). Grand Rapids, MI: Eerdmans.