

Chapter Sixty-Five

“We’re Gonna Need a Bigger Boat”

[14] Make thee an ark of gopher wood; rooms shalt thou make in the ark, and shalt pitch it within and without with pitch.

[15] And this is the fashion which thou shalt make it of: The length of the ark shall be three hundred cubits, the breadth of it fifty cubits, and the height of it thirty cubits.

[16] A window shalt thou make to the ark, and in a cubit shalt thou finish it above; and the door of the ark shalt thou set in the side thereof; with lower, second, and third stories shalt thou make it.

[17] And, behold, I, even I, do bring a flood of waters upon the earth, to destroy all flesh, wherein is the breath of life, from under heaven; and every thing that is in the earth shall die.

[18] But with thee will I establish my covenant; and thou shalt come into the ark, thou, and thy sons, and thy wife, and thy sons' wives with thee.

[19] And of every living thing of all flesh, two of every sort shalt thou bring into the ark, to keep them alive with thee; they shall be male and female.

[20] Of fowls after their kind, and of cattle after their kind, of every creeping thing of the earth after his kind, two of every sort shall come unto thee, to keep them alive.

[21] And take thou unto thee of all food that is eaten, and thou shalt gather it to thee; and it shall be for food for thee, and for them.

[22] Thus did Noah; according to all that God commanded him, so did he.

It is an old, but still valid, skeptical question: how could this relatively small ark possibly have been big enough to store two of every kind of animal, bird, insect, and living creature on Earth? A cubit is supposed to be the length of a man's arm from the elbow to the tip of the middle finger. Obviously, that is not a consistent length. As a result, estimates vary, but a standard that has developed is that a cubit is 18–20 inches long. Using the longer measurement of 20 inches as a cubit, we find that the size of the ark, at most, was 500 feet x 83.3 feet x 50 feet (300 cubits x 20 inches = 6,000 inches ÷ 12 inches = 500 feet long by 50 cubits (83.3 feet) wide by 30 cubits (50 feet) high.

The ark was not even as big as a typical modern luxury cruise ship, and it was certainly not as high or wide. For example, the Carnival Cruise ship *Paradise* is listed at 855 feet long, so if it were just 145 feet longer, it would then be twice—*two times*—as long as the ark. And with its ten deck levels, the *Paradise* is 118 feet tall at the top pool deck, more than twice as high as the ark. At first glance, then, it is difficult to imagine that two of every type of creature in the entire world (including dinosaurs and all other now-extinct species) could fit and then survive for a

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year on something smaller than a modern cruise ship and insulated with pitch, apparently to keep it waterproof for a year.

Another issue that comes to mind when thinking about the literal plausibility of the ark saving all types of creatures is that there was only one small window in the ark for ventilation (a cubit across, so only 18–20 inches) because the entire ark had to be covered to keep all of the rain out. But how could one small window for the entire ark supply enough fresh air for all of those animals—especially for those down on deck 3? Also, if one visits a zoo, one might see the incredible amount of food that is required, as well as how much cleanup is necessary for all of the waste. Could only eight people really provide all of the adequate care for this many creatures for almost a year? Think how many people care for animals at just one zoo and then extrapolate that further to include the care that would be necessary for an entire ark of every species of animal in the world (including dinosaurs)—and enough fresh air coming through one little window for all of them. Consider also whether a big door on the side of the ark could have been constructed by Noah to keep water tight shut for almost a year with no leakage.

The really big issue here, however, is trying to determine just how many types of species there are, including all mammals, insects, birds, reptiles, etc. in the world. First, it is very difficult to come up with a precise number of species in the world. The estimated number of all species on Earth varies from 3 million to 30 million. A recent *Time* article put it at 8.7 million (and if there were a male and female of each, that estimated number would double to 17.4 million animals). I am not a scientist or biologist, and frankly, I have no idea how many species there are in the world, but would it be literally possible to collect a male and female of every type of creature in the world and then fit them all onto an ark smaller than most cruise ships? I found many estimates of the actual number of species on Earth. To be fair, most of them are water dwellers, but even the number of non-water dwellers is extremely high. The following list is typical:

- Animals:** estimated 3–30 million species
 - |—**Invertebrates:** 97% of all known species
 - |`—+—**Sponges:** 10,000 species
 - | |—**Cnidarians:** 8,000–9,000 species
 - | |—**Molluscs:** 100,000 species
 - | |—**Platyhelminths:** 13,000 species
 - | |—**Nematodes:** 20,000+ species
 - | |—**Annelida:** 12,000 species
 - | |—**Arthropods**
 - |`—+—**Crustaceans:** 40,000 species
 - | |—**Insects:** 1–30 million+ species
 - | |—**Arachnids:** 75,500 species
 - |—**Vertebrates:** 3% of all known species
 - |`—+—**Reptiles:** 7,984 species
 - | |—**Amphibians:** 5,400 species

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- |—**Birds:** 9,000–10,000 species
- |—**Mammals:** 4,475–5,000 species
- |—**Ray-Finned Fishes:** 23,500 species

It would be ludicrous to argue that the tens of thousands, or perhaps even millions, of non-water dweller species currently living on Earth, including insects and spiders, all somehow actually made it onto the ark (and then two of each, male and female). There also are a few types of animals that can reproduce asexually (aphids, cape bees, and turkeys, to name a few), so would there still have been a need for two of those kinds of animals? Was Moses even aware of such asexual-capable creatures when he wrote this part of Genesis?

It is also unclear whether literalists think that every type of dinosaur, and possibly all other extinct life-forms, were present on the ark too, but if so, then add whatever that number would be to the overall number of species on the ark. Keep in mind, though, that the overall number would be huge when one understands that more than 90% of all creatures that have ever existed on Earth are now extinct. Even so, they have to be added to the number on the ark unless they were already extinct by then. So, for instance, were there really two tyrannosaurus rexes, two brontosauruses, two mammoths, two stegosauruses, two pterodactyls, and two of each of all of the other thousands of various types of dinosaurs and countless other now-extinct animals on the ark? While we are at it, we should not forget about the two unicorns that also must have been on the ark (unless those two unicorns were gay, sterile, or extinct, and that is why they didn’t make it)!

Whatever that very high total number of creatures that would have had to have been on the ark to account for the thousands or even millions of non-water dwelling species living on Earth today (and multiplied by a factor of nine if we include all of the extinct species that make up over 90% of all creatures that have ever existed), it obviously would have been far too many creatures to all fit crammed into a small cruise ship-sized ark—not to mention the challenges of all those various creatures actually being able to survive on the ark for close to a year. Accordingly, literalists concede that such a high number of species would simply be impossible to fit on the ark. Interestingly, literalists do not appear to make the argument that God somehow miraculously miniaturized all of the hundreds of thousands or millions of species down to a microscopic size as they got onto the ark so they could easily fit and then returned them to their original size as they got off the ark, although some argue that Noah loaded only baby or infant animals and as a result reduced their size somewhat. I suppose literalists at least could attempt to make the miniaturization argument, however, because remember, “with God, all things are possible,” even apparently when it is not in any explicit text contained in the Bible.

Maybe God miniaturized all animals by giving Noah DNA test tubes containing the DNA codes and material of each creature and then that DNA was somehow reformulated into all of the species when Noah got off of the ark—a farfetched idea, to be sure, but at least it is a way that all species in the world could have fit. This type of miraculous “miniaturization” is not really the

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argument such literalists make; instead, although literalists do not admit it, their nonliteral, private-interpretation argument (which is made in an effort to save the story to still make plausible and logistical sense) is that perhaps only 5,000 to 10,000 actual “kinds” of animals were on the ark, and therefore, that much smaller number of general “kinds” of animals could have conceivably all fit on a small cruise ship-sized ark, even if tightly packed in. But why so few species on the ark if the world is now made up of so many more, perhaps millions more, actual species? Because according to the argument, not every single type of “variation” of creature had to be taken onboard the ark.

For example, take dogs, with over 400 genetically distinct breeds. Noah did not have two Chihuahuas, two greyhounds, two collies, two terriers, two poodles, two pit bulls, two Weiner dogs, two great Danes, two Doberman pinschers, two chows, two Labrador retrievers, two bloodhounds, two Pomeranians, and so on, on the ark. Instead, there was just one general male and female “dog” or “wolf,” and from those two, all of these specific types canine “breeds” just *evolved* through natural selection and/or selective breeding—and the same for frogs, ants, spiders, bears, beetles, and everything else. Dogs and wolves and all of these breeds are still the same *species*, however, so the argument really goes even further and includes jackals, coyotes, and other wild canines. For example, there was only a single pair of “cats” on the ark, just some sort of common cat-like ancestor, from which came all lions, tigers, cougars, cheetahs, foxes, and bobcats, as well as housecats such as Siamese cats, Persian cats, and tabby cats.

In other words, not all species of animals were necessary on Noah’s ark, given the fact that the specific varieties of all of these diverse life-forms currently in the world could have developed through, ironically, *a form of “evolution”* having taken place over just a few thousand years! Obviously, the text does not mention this anywhere in Genesis, but literalists must craft this kind of interpretive argument for the story to have any plausibility as a literal account. Of course, literalists would never admit that they need to partially rely on the theory of evolution to explain how Noah’s ark holding all animals is possible. Instead of evolution, they call it mere adaptation, or perhaps, at most, “*micro-evolution*,” as opposed to “*macro-evolution*.” So, according to them, this micro-evolution is undeniably true and even helps to support the story by making the actual number of animal types small enough to logistically fit on Noah’s ark. Thus evolution, or “micro-evolution,” explains all of the later diversity and variety of life-forms (millions of species) within very general classes (or “kinds”) of animals. “*Macro-evolution*,” however, in which micro-evolutionary changes over hundreds of millions of years, instead of over just a few hundred years or even a few thousand years, could produce much more substantial change than just a husky and a Chihuahua from a common canine ancestor, or even a lion and a housecat from a common feline ancestor, is a flawed scientific theory concocted by atheistic scientists who hate God. Notwithstanding that charge against evolution, however, “micro-evolution” still helps to prove that the biblical story of Noah’s ark is literally correct and plausible. So, to recap, the assertion is that hundreds of thousands or even millions of species have come from just 5,000–10,000 “general” species over a few thousand years. That seems like an awful lot of “micro-evolution” going on in a very short time, but thank God for evolution—

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sorry, micro-evolution—although it is apparently *extremely fast-acting* micro-evolution to produce all of these varieties of animals in such a short time.

Genesis 7

[1] *And the LORD said unto Noah, Come thou and all thy house into the ark; for thee have I seen righteous before me in this generation.*

[2] *Of every clean beast thou shalt take to thee by sevens, the male and his female: and of beasts that are not clean by two, the male and his female.*

[3] *Of fowls also of the air by sevens, the male and the female; to keep seed alive upon the face of all the earth.*

As if there were any room to spare, there are now even more animals to add into the mix here, in light of verse 2 and verse 3, which say that all clean beasts and fowls (birds), Noah was to take not by twos but *by sevens*, both male and female. This conservatively means seven types of each bird, but it could also mean fourteen of each kind, because if there were seven male and female pairs, that would make a total of fourteen of each type of bird. Referring to the estimated number of species listed earlier, note that there are an estimated 9,000 to 10,000 species of birds in the world. So does this mean that Noah must have taken almost 70,000 birds on the ark, or even close to 140,000 birds? It is difficult to estimate the number of “clean beasts,” but whatever that number would be, it also would have to be multiplied by seven, not just two. At some point, the story simply crumbles under the weight of its own logistical absurdity. The problem is that Moses basically had no idea how diverse all the species of creatures on the earth were when he wrote this story—he just assumed it would only be the limited number of animals in the ancient Middle East that he could see and was aware of, so that saving them all on a really big boat actually seemed plausible to him. The farce of literal plausibility grows as each kind of species of the world that was supposedly on the ark is considered, however.

For example, remember that in addition to saving all of the mammals, reptiles, amphibians, and birds, the ark also saved all of the *spiders and insects* of the world (“every creeping thing”). Literalist believers seriously advocating the plausibility of Noah’s ark often overlook or simply ignore (conveniently, I might add) all of the spiders and insects that would have had to have been on the ark too. Perhaps it is because insects and spiders are so small; however, their small size, huge variety, and wide geographical distribution pose an even more vexing logistical problem for Noah than did those of the larger species. Did Noah really find all of the various spiders, worms, and insects of the world, two by two, and put them on the ark? For example, did an ant queen and a termite queen, along with a male ant and a male termite, dutifully march (or fly, run, walk, or crawl) into the ark together? What about two black widow spiders, two flies, two praying mantises, two ladybugs, two earthworms, two bedbugs, two ticks, two mosquitoes, two daddy-long legs, two wasps, two grasshoppers, two butterflies, two dragonflies, two trapdoor spiders, two wolf spiders, two bees, and on and on, each of which have many, many—perhaps thousands of—other varieties? And what about bacteria and viruses, microscopic life,

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and rare insects that live in only certain caves in the world or underground, or parasites of any type that can live only in certain other animals? How did all of these various types of life-forms get collected and then survive on the ark? Did Noah really supervise them all on the ark, making sure, for example, that there were tapeworm parasites existing in the intestines of certain host animals that were also on the ark?

If the sheer absurdity of the huge number of the various mammals, amphibians, reptiles, and birds all fitting and surviving on the ark did not make me completely doubt the literal story of Noah's ark, then the alleged inclusion of all of the types of insects and spiders on Earth did. And let's not even get started on the hundreds of thousands of different invertebrates (although again, admittedly, many of those species would live in the water, so many, I suppose, did not die in the flood or need to be taken on the ark—although there is no specific mention of this). Still, there are 75,000 species of arachnids (spiders) and 1–30 million species of insects on Earth, yet Noah really collected two of each and took care of them all on the ark for almost a year?

I guess literalists can attempt to trot out micro-evolution again, but hundreds of thousands and even millions of spider and insect species evolving from a much smaller plausible number of common-ancestor species of spiders and insects that could fit on the ark seems to rely too heavily on the power of micro-evolution in just a few thousand years. Even the most hardcore evolution supporters would not believe that this much evolutionary change of so many new and different species could have taken place in such a short time! It is funny to think that evolutionists would be telling creationists not to expect such unrealistic, really impossible, miracles from evolution (unless God miraculously sped up the process of evolution to use "miracle evolution").

Literalists are in a difficult position here—between a proverbial rock and a hard place. First, the Noah's ark story is simply impossible, given the astronomical number and variety of species on Earth, especially birds, spiders, and insects, all fitting on a small cruise ship-sized ark. Even more absurd is the fact that fundamentalist literalists—who decry evolution as heresy and as an incorrect theory full of holes that was concocted by atheistic scientists who hate God—then hypocritically rely on the theory of evolution to make this biblical story plausible! These literalists seem to believe that they can have it both ways when it comes to evolution, so for them, the evolution of species is simultaneously both true and false.

Not only that, but once all of the species of the world were all on the ark, how was Noah able to somehow keep all of these creatures alive and healthy in their cages—especially insects and spiders, in what I suppose must have been their little insect and spider cages—on the ark for almost a year? Many insects cannot even live for a year, so did Noah oversee their breeding during those months of caring for all of the creatures of the world on the ark with just eight human caretakers on board?

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As if that were not enough to make one doubt the literal account of the story, how did Noah know what food to bring for each insect and spider and snake and bird and mammal to keep them fed and healthy for almost a year in this huge floating zoo? For example, 99% of what pandas eat is bamboo shoots. Did Noah know that, and if so, where did he get enough bamboo shoots to feed two pandas for a year? Were pandas even on the ark, or was there just a common bear-like ancestor from whom pandas, polar bears, grizzly bears, brown bears, black bears, koala bears, and all the rest, evolved? But wait, are panda bears and koala bears really even “bears,” or are they more like kangaroos, wombats, opossums, wallabies, and other Australian marsupials? If they are members of the marsupial family, were koalas and pandas on the ark, or did they evolve too (sorry, *micro-evolve*) from a common marsupial-like ancestor—two of whom must have swam the ocean from Australia and then traveled across southern Asia and to the Middle East to board the ark?

How were all of the carnivorous animals fed if they only eat the meat from other animals? How many additional animals did Noah have to bring on the ark not to save for posterity but to serve as food for almost a year for the carnivores that were being saved from the flood? Did Noah also bring other insects for the main insects to eat? And why did God command Noah to bring seven of every type of clean animal, and seven of each type of bird, and only two of every type of unclean animal? Perhaps these additional numbers of clean animals (and extra birds) were to serve as the food during the year on the ark for Noah and for the rest of the carnivorous animals—but what about the food for every other animal, bird, insect, and reptile? How did Noah even know what to feed them—and when and how to feed them? How did he keep all of these creatures clean? Was each creature cooped up in a cage of some sort for almost a year, or did it ever get a chance to walk, run, fly, crawl, or move around in the fresh air and sunshine on the top deck? What about water-dependent amphibians and reptiles, like certain kinds of frogs and alligators? How did they survive for almost a year without being able to go into the water, unless Noah let them swim around the sides of the ark every once in a while? Again, if the story is literally true, there have to be some logical, plausible explanations for all of these types of questions—unless the standard stock answer is “because the Bible says so, ’nuff said.”

Even larger logistical problems are present. How did species that live only on other continents, some separated by oceans, somehow get to the Middle East and dutifully march up and load themselves onto the ark, know exactly where to go and where to wait patiently, and live there for nearly a year while the ark floated until the flood waters receded? These concerns were mentioned earlier, but recall that polar bears and penguins would have to make it to the Middle East from the Arctic and Antarctica, as would kangaroos and Tasmanian devils from Australia and Tasmania, coyotes and bison from North America, and elephants, lions, zebras, and giraffes from Africa. Also, on the island of Madagascar (a big island off of the southeastern coast of Africa), 70% of the mammals, 90% of the reptiles, and 99% of the amphibians are endemic only to Madagascar, but they too all somehow traveled to the Middle East and then travelled back again to Madagascar after the flood. But perhaps the oceans were much shallower back then such that there were landmasses bridging the world to the Middle East, making swimming an

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ocean unnecessary. Even if there were large oceans to cross, perhaps God simply transported the animals miraculously through the air. Remember, whenever there is a scientific impossibility or a logical implausibility in the Bible, there is a reliable, permanent miracle trump card that can always be played to address and explain away any inconsistency or implausibility.

For example, how did all of the animals in the entire world gather together without any of them killing one another for almost an entire year while being confined on a big boat? If the explanation for all of this is that it was simply a huge miracle of God, requiring God's extreme detailed intervention to make this tremendous logistical challenge possible down to the last detail, then why didn't God simply skip the whole enterprise and just create all of the innocent animals anew after all of the evil people and the animals of the Earth were destroyed by the great flood? If God was going to have to perform all of these really big miracles anyway, why did He even bother having Noah build the ark? Why didn't God simply suspend Noah and all the animals in a big magic bubble on the moon for almost a year until the big flood was over? Why should the magic bubble on the moon story be considered any more or less ridiculous and unrealistic than the Noah's ark story? Either story could be easily explained by the stock rationale "all things are possible with God" or "God could have done it"? If God created the entire universe, certainly, He could have created an ark *or* a big magic bubble on the moon. Why should those scenarios seem any more outlandish or implausible than the ark?

One final issue regarding the survivability of all of these animals once they got off of the ark would have been the complete lack of genetic diversity in their respective gene pools. This would have made it very difficult for them to survive after the ark, in any event. So if the story of Noah's ark is true, every species in the world would have had this dangerous lack of genetic diversity as there would have been only two animals for every species, or "kinds," in the world—and the offspring of each would have to inbreed with one another. But again, God must have temporarily eliminated this serious genetic problem, at least until the population of every species was built back up. At that later point, however, if a species' genetic diversity ever dwindled down again in the future, the lack of genetic diversity problems we now see would return for any and all endangered species (apparently, animal incest is neither a sin nor a problem).