Was the account of Noah's Ark a real event?

Dr. Colin HARRIS, 5th September 2025

The children's book *All these Animals to think about!* by Patricia Harris uses the story of the flood and the animals entering Noah's Ark as an analogy for various responses to the call of God. God is so full of love for each of us that he does not want us to perish. And like us, they start with objections and excuses about accepting God's requirements. Some overcome their resistance and others remain stubborn or sceptical.

God's word, however, is true. Of course, the animal stories in this book are fictional, but the event that lies behind it was disturbingly, factually real. There really was an evil, violent world where people were selfish, unkind and violent. Sound familiar? And God's patience really did run out and he did judge them.

There was, however, a man who found favour with God and his name was Noah. His father, Lamech called him Noah meaning "rest" or perhaps "comfort", because he hoped his son would comfort them in all their hard work because the land had been cursed.

When he grew up, the Bible says that "Noah was a righteous man, blameless among the people and walked faithfully with God"[1]. So God spared him and enabled him to save his family, the animal kingdom … and long with them, the human race.

You may have doubted the reality of this story, but much research has been carried out in recent years which reveals the plausibility of these events.

Numerous flood stories

If there had been a world-wide flood of massive proportions leading to the extinction of much of life, you would expect to see various reports on the subject, wouldn't you? Well, there are.

Let's start with the Mesopotamians who developed one of the first organised urbanised civilisations of the world more than four thousand years ago. They have a parallel Noah story, but he's not called Noah, which means "rest" or "consolation", they call him Atra-Hasis meaning "exceedingly wise". The Babylonian gods get upset with humans for making too much noise: "The noise of mankind has become burdensome to the gods, and the gods are disturbed by the tumult." So, they try various attempts to reduce their numbers with various strategies like disease and famine. However, the god, Enki, who is kind and gracious towards mankind, gives advice to his favourite man, Atra-Hasis, which helps to attenuate the suffering. This interference makes the other gods so angry

[1] Genesis 6.9 (NIV).

that they decide to send a great flood: “The gods agreed to send the flood. They went to the great god Enlil, and Enlil said, 'Let the flood sweep over them. Let the waters rise, and let them be swept away.’”. Furthermore, Enki was made to swear that he would not talk to the humans about it. So he didn’t talk to any humans. He just went down to the house of Atra-Hasis, and when the man lay down to sleep, Enki spoke to the walls: “Separate yourself from your house, build a ship, spurn your possessions, save your life.”. Atra-Hasis got his boat built and then just before the flood arrived invited his family, friends and two of every animal to join him. And so mankind and living creatures were saved.

In a later account, which is a chapter in the *Epic of Gilgamesh*, the survivor of the flood is called Uta-napishtim, which means “he has found life”. Once again, Uta-napishtim is told to build a boat for his family and “all the animals of the field”. In parallel with the Genesis account of Noah, once the ark comes to rest on a mountain, Uta-napishtim sends out birds including a dove and a raven to see if it is safe. And when he finally steps out, he offers sacrifices to the gods who enjoy the sweet savour.

In support of these stories, there is an artefact displayed in the British Museum, a clay tablet called the *Babylonian Map of the World* which dates from around the 7th century BC, much later than the above accounts. It displays six mountains, one of which us called “Urartu”, which in Hebrew is Ararat. According to British Museum curator, Irvin Finkel, the accompanying text suggests that a keen traveller would find the ark on that mountain.[2]

Now the Greeks also have a catastrophic flood story related by Apollodorus of Alexandria in his vast account of the gods and the titans and the beginnings of mankind. The flood concerns Deucalion, the son of Prometheus and his wife, Pyrrha, the daughter of Epimetheus and Pandora, the first woman. When they heard that Zeus was planning to destroy Bronze Age civilisation with a flood. Prometheus advised his son to build a wooden “chest”, which he did and filled it with provisions for him and his wife. They thus survived the great flood landing on Mount Parnassus where they sacrificed to Zeus, who enabled them to have children. Thus, Deucalion and Pyrrhus became the source of mankind.

All these accounts include divine wrath, the choice of saving worthy individuals, a universal flood which destroys the rest of mankind, the withdrawal of the waters, a sacrifice to God, or to the gods, which is approved and then the repopulation of the world by the survivors.

In addition to these more familiar accounts, there are other universal flood stories narrated all over the world. In India, the events are described in the *Shatapatha*

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[2] Irving Finkel, “The Babylonian Map of the World with Irving Finkel | Curator’s Corner S9 Ep5”, The British Museum, London, 1 August 2024, 17 min., 59 sec., https://www.youtube.com/watch?v=LUxFzh8r384.

Brahmana. The righteous and pious King Manu encounters a small fish called Matsya (later considered an avatar of Vishnu), who requests his protection against being eaten by bigger fish. The fish tells Manu, ""A flood will carry away all creatures. Save me, and I will save you". Manu looks after Matsya, who grows up safely, and eventually releases him into the ocean. Matsya indicates to Manu the timing of the flood and advises him to build a ship to survive it. When it comes, Matsya pulls the ship off to the mountains where Manu will start a new life as the progenitor of humanity.

In addition to the above, we find universal flood stories in China, South-East Asia, among North American Indians, and then in South America among the Mayas, the Aztecs and the Incas, not to mention diverse tales from Africa, Polynesia and Australia. Given the universal spread of these accounts, does it not seem obvious that in spite of the variations they all point to one real cataclysmic event in our distant past?

The Paleontological Paradigm

For a fossil to form, three conditions are required: first, there must be hard parts like bones; secondly, the creature must not be eaten or destroyed immediately after death; and thirdly, it must be covered by a thick layer of sediment to prevent decomposition and generate the fossilisation process.

In Chile's Atacama Desert, along the Pan American Highway there is a place called Cerro Ballena, which translates "hill of the whales". The reason for its name is the existence of around 80 baleen whale fossils of which twenty are complete. It sits at an altitude of around 50 metres above sea level which is an unlikely place for whales to gather. If we think of the process of fossilisation and the height of the whale, which depending on the animal might be at least above 3 metres, then a great deal of sediment must have arrived in a very short space of time. Not only would the animal have been covered, but a respectable weight of sediment must have collected to prevent decomposition. We have to imagine in what circumstances would 5 or 6 metres of sediment have appeared? And then, why did these massive creatures get cut off from the sea? One likely scenario would be that at the end of a great flood, while the waters were receding, the whales could have been trapped behind a ridge and unable to return to the sea. Then, the vast amounts of sediment carried by the flood would have been laid down on top of the whales. Although, secular geologists resist this conclusion, it certainly does explain why so many whale fossils have been discovered here.

The ancient philosopher, Xenophanes (c. 570 -c. 478 BC) was also puzzled by the marine fossils he discovered in the mountains of Greece and today it is recognised that marine fossils can be found on land in many places including at the top of the Andes and even at the summit of Mount Everest, 8.8 km above sea level.

The Limitations of Gradualistic Geology

Today's geologists have built their understanding on the intellectual foundations laid down at the end of the 18th century by Scottish Deist and Freemason, James Hutton, which were then popularised in the 19th century by another Scotsman with deistic views called Charles Lyell. (Charles Lyell influenced Charles Darwin to adopt the same gradualistic methods in the field of biology).

To understand the direction they took in science, we need to delve into their theology, philosophy and state of mind. Deists believe there is a God of creation, but refuse the revelation of the Bible and the nature and work of Jesus Christ. What has been called the "Enlightenment" was generally fuelled by Deists and in spite of their undeniable achievements in various fields of human activity their domination of the public sphere has sadly led us to reject the possibility of a personal relationship with God through Jesus Christ and has relegated God's message to humanity as revealed in the Bible to the level of myth. Since then, atheistic influences in society have re-used and built on the work of Deists to render belief in God entirely unnecessary and cancel any need for gratitude towards Him for the beautiful creation he has provided us. Significantly, it has removed any obligation we might have towards Him as the creator of our world.

One of James Hutton's premises, which has been naively accepted by the secular scientific community, is called Uniformitarianism. Taking a step of guesswork, Hutton claimed that "the present is the key to the past", meaning that geological processes have always functioned in the way they do today, that is in a gradualistic manner. According to scientific method, uniformitarianism is an unverifiable assumption. No-one can go back 4,000 years and check, but we do have some writings of oral traditions of those who were alive at the time and as we have seen, they testify to at least one cataclysmic event.

More recently, belief in uniformitarianism has been challenged and especially in the light of recent carefully observed cataclysmic processes such as those manifested during volcanic eruptions. The 1980 Mount Saint Helens volcanic eruption in Washington state was the first to occur in the USA since 1917, thus allowing United States Geological Survey researchers to deploy modern volcano-monitoring techniques for the first time on their home territory and provide an exact detailed description of the dramatic modification of geological features even at some distance from the mountain.

On 18 May 1980 the north flank of the mountain collapsed creating an avalanche of 2.3 km^3 of rock some of which finished up 23 km away. The North Fork Toutle River valley

was covered with a deposit across an area of 60 km^2 (25 km from east to west) to an average depth of 45 metres, and in some places as deep as 195 m.[3]

Close to the volcano, forests were flattened in a matter of seconds in a fan-shape extending over 32 km as an ash cloud shot out of the volcano at 350 km/h and possibly reaching the speed of sound at the front.[4] Trees and other vegetation were pulled into Spirit, South Fork Castle and Coldwater Lakes leaving giant dense log mats covering the surfaces of the lakes. 70% of Spirit Lake was covered at first, but progressively the logs have been sinking vertically downwards to the lake bottom leaving less than 20% covering in 2021.[5]

Powerful lahars (mud flows) descended down the river valleys especially down the North Fork Toutle River valley introducing to the west, over 50 million cubic metres of sediment into the Cowlitz and Columbia River as far away as 120 km.[6]

Another indication of cataclysmic non-Uniformitarian geological processes can be seen in mountainous areas or by the coast where multiple uncovered rock layers have been bent. For example, in the Grand Canyon, there are over a kilometre of sedimentary layers on top of the basement rocks: the bottom sedimentary layer is Tapeats sandstone and then above this, there are various other layers including Bright Angel Shale, Muav Limestone and eventually Kaibab Limestone at the top. All these layers were bent together at a step-like fold called the East Kaibab Monocline.

When a rock layer dries out the natural cement in the layer hardens the rock like concrete. If you try to bend it, the rock will shatter. However, what we see are these multiple layers all bent together, an indication that they were all quite fresh at the same time. Some geologists might say that the layers were bent when seismic forces generated heat. However, researchers have tested this hypothesis and found that these bent rock layers show no evidence of having been exposed to high temperatures. Their composition is the same as the unbent layers elsewhere. So, the most likely explanation is that all these layers were formed successively during the months of Noah's flood. And

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[3] U.S. Department of the Interior, U.S. Geological Survey, "Chronology of the 1980 Eruptive Activity", *The 1980 Eruptions of Mount St. Helens, Washington* by Robert Christiansen and Donald Peterson (1982): 23; U.S. Department of the Interior, U.S. Geological Survey, *Post-eruption changes in channel geometry of streams in the Toutle River drainage basin, 1980-82, Mount St. Helens, Washington*, by D. Meyer, K. Nolan, J.E. Dodge, Open-file Report 85-412 (1985): 102, https://doi.org/10.3133/ofr85412.

[4] Stephen Harris, *Fire mountains of the west: the Cascade and Mono Lake volcanoes* (Mountain Press Publishing Company, 1988), 205, https://archive.org/details/firemountainsofw0000harr.

[5] U.S. Department of the Interior, U.S. Geological Survey, "Changes in the Organic Material in Lakes in the Blast Zone of Mount St. Helens, Washington", *Hydrologic Effects of the Eruptions of Mount St. Helens, Washington, 1980*, by D. M. McKnight, J. M. Klein, and R. C. Wissmar (1984): 3.

[6] U.S. Department of the Interior, U.S. Geological Survey, "Lahar movement, effects, and deposits", *The 1980 Eruptions of Mount St. Helens, Washington,* Richard Janda, Kevin Scott, K. Michael Nolan, and Holly Martinson, (1982): 463.

when the Earth produced intense seismic activity after the flood, these layers were able to bend together without cracking.[7]

These contemporary observations suffice to discredit Uniformitarianism and draw attention to the existence of cataclysmic processes operating on the surface of the Earth. It is likely that during or following the great flood, seismic activity and disturbed climatic conditions contributed to shaping our present world in a much more rapid and radical fashion than secular geology wishes to admit. The fact that we did not see it happen and that our landscape is fairly stable today is no proof against previous violent conditions occurring in the past.

The Seaworthiness of the Ark

The dimensions of the ark are specified in Genesis 6.15 as 300 cubits long by 50 cubits wide (beam) and 30 cubits high. A cubit is the distance from the elbow to the tip of the middle finger and this is considered to be about 45 cm. So the dimensions in metric would have been about 135 x 22.5 x 13.5 m. There were three decks, so allowing for some boat-like curvature, there would have been a surface are of about 9000 m^2, a little bigger than a professional football pitch. We will need to know that later to understand how the animals were contained.

In terms of navigation, let us consider the seaworthiness of the ark in the conditions of a great flood. Is it plausible for a ship of those dimensions to float safely in rough seas? A scientific study of ark has been carried out by staff working for the Korea Research Institute of Ships and Ocean Engineering, Daejeon. [8]

In their study entitled “Safety Investigation of Noah's Ark in a Seaway” they considered three parameters which concern the safety of a vessel: structural safety, overturning stability, and seakeeping quality. Good structural safety prevents the ship from breaking up. Adequate overturning stability ensures the vessel will not capsize in rough seas, and good seakeeping quality is necessary for the safety of the crew and cargo. Since, they only knew the dimensions and construction material they considered various hull shapes in their study. Their findings showed that except for one hull design, “the Ark was 13 times more stable than the standard for safety required by the ABS [American Bureau of Shipping] rule”. Therefore, they concluded that the Ark’s length-beam-draft ratio was reasonable for the safety of the hull, crew and cargo in the conditions of the flood, and was even capable of navigating waves over 30 m high.

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[7] Andrew A. Snelling, “Folded Rock Layers,” *Answers 4*, no. 2 (April–June 2009): 80–83, https://answersingenesis.org/geology/rock-layers/rock-layers-folded-not-fractured.

[8] S. W. Hong et al, “Safety Investigation of Noah's Ark in a Seaway”, *CEN Tech. J.*, (vol. 8, no. 1,1994), https://dl0.creation.com/articles/p028/c02813/j8_1_26-36.pdf.

Providing space for the animals

What about the animals? How many animals would the ark have contained? Would there have been enough space for them all?

Today there are about 6,500 mammal species, 12,000 reptiles and 11,000 birds. Noah was told to take 7 pairs of every clean animal and one pair of every unclean animal. The clean animals were those that were considered edible at the time.

If we imagine that they had the same species 4348 years ago, we can imagine the quantity of wildlife aboard the ship. There are about 70 clean animal species (excluding fish) so in today's terms, the total would have come to nearly 60,000 animals, which would be rather a lot to contain. But Genesis 7 does not refer to species, it refers to kinds ("min" in Hebrew), which reduces the numbers significantly. A kind is close to the present notion of family in zoological terms, but not quite the same. There are several methods of establishing a kind, but if we take an example from the canine family, we could say that wolves, coyotes, dingoes and domesticated dogs could be considered as one kind.

Researchers at the Ark Encounter in Williamstown, Kentucky, USA have conducted a study to estimate the maximum number of kinds using the criteria of hybridisation, cognitum, and statistical baraminology. [9] Hybridisation is an indication of which animals can breed together, which naturally puts them in the same "kind". Obviously, this information remains unknown for many animals so this approach is complemented by the next two methods. The cognitum approach compares animals according to similar features. For example, the woolly mammoth, owing to its resemblance to elephants would be in the pachyderm kind. Finally, there is statistical baraminology which uses statistical methods to compare physical characteristics and genetic traits (DNA and protein sequences) to establish whether animals belong to the same kind.

Applying these approximate methods has given a total of 1373 animal kinds in existence. So, calculating the 7 pairs of each clean kind and the pairs of unclean animals, the researchers came to a grand total of 6,658. Considering the 9000 m^2 available on the ark, let's say 1000 m^2 would have been required for stores, 1000 m^2 for passageways and stairs and 200 m^2 for Noah's family, that leaves around 1 m^2 for each animal. That is not spacious but it seems quite feasible, especially considering that many of the animals were small and they may well have been younger creatures. (Young animals would have had longer to reproduce after the flood.)

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[9] Jean Lightner, Tom Hennigan, and Georgia Purdom, "Determining the Ark Kinds," *Answers Research Journal* 4 (2011): 195–201, https://answersresearchjournal.org/determining-the-ark-kinds.

How did we get 30,000 species today from 1,373 kinds?

Today we have an understanding of the architecture of cells and genetics which was not available to Charles Darwin. The famous 1951 discovery of DNA's double helix by Watson and Crick in Cambridge was really just one step in discoveries about our genetic material by hundreds of scientists. Considering the animal kinds in the ark, one hypothesis is that all the genetic material for diverse species was already available in those animals saved on the ark. For example, the dog kind would have contained the genetic codes for various species with the appropriate DNA sequences for skeletal shape, hair types, eye colours, brain tissue and size. And as the animals spread out away from the Mountains of Ararat, the animals would have sought the best natural conditions which would suit their characteristics and from one generation to the next various species could have developed.

To be honest, this is another theory, but once again it does re-establish the story of Noah's flood as a plausible historic event thanks to our 21st century understanding of science.

The Details of Noah's account

Finally, we will consider the original account itself in the book of Genesis. Whilst the information on many points is lacking, some details such as the dating are very precise. In Genesis 7, God told Noah to get everyone into the ark seven days before the rain. That would have enabled him and his family to prepare the animals for the departure. On the seventeenth day of the second month the waters rose. Unfortunately, we do not know when Noah's year started. Considering other ancient civilisations, the Hebrews and the ancient Mesopotamians began their year (and their first month) on the first new moon after the spring equinox. This time of year was associated with the barley harvest and the sprouting of nature. They measured the passing of time with lunar months (29.53 days), but twelve lunar cycles only came to 354 days and so, to keep in step with the solar year of 365 days, they had to make adjustments by occasionally adding a thirteenth lunar month. Having said that, for practical accounting purposes, the Mesopotamians also used a fixed 30-day month.

The Egyptians also used a 30-day month, but they envisaged the beginning of their year in summer when the Nile overflowed and irrigated the flood plain. They thus fixed the first day of the year with the rising of Sirius just before sunrise. Establishing what calendar Noah used is uncertain, but since the early stories of Genesis take place in Mesopotamia, we might assume that beginning of Noah's year began in Spring and as we examine the text, it would appear that he employed a month of thirty days. In any case, with all that rain falling, it would have been difficult to observe the cycles of the moon!

As for the water, there were two sources: the floodgates of the heavens, which produced the rain but also, the springs of the great deep bringing water from below ground. This induced forty days and forty nights of rain, forty being the number associated with trial, during which time the ark floated and the water level rose until it was 15 cubits (6.75 m) above the mountains. According to the article cited above, “Safety Investigation of Noah's Ark”, it is assumed that the draught of the ark (the depth of the hull in the water) was half the height. Since the height of the ark was 30 cubits, the draught must have been 15 (6.75 m). We can speculate how this information was retrieved: Noah’s crew must have observed the ark floating just above the mountain tops! Six or seven meters is not very much, but it would have ensured that even the people who had run to the mountains for safety would have drowned. Judgement was complete. Only the people and creatures in the ark were saved. Moreover, if the water covered the mountain tops, the flood must have covered a vast area.

After the forty days of rain, the springs of the deep and the floodgates of the heavens were closed and a wind blew over the earth. The water steadily receded and after a hundred and fifty days, on the seventeenth day of the seventh month, the ark came to rest on the mountains of Ararat. Considering that the flood started on the seventeenth of the second month, we have a hundred and fifty days equivalent to five months. The Hebrew and Mesopotamian calendar is based on lunar months, and since a lunar month is equivalent to 29 days 12 hours and 44 minutes, months are approximated to 29 or 30 days. However, in this account, we have five months equivalent to 150 days. We can, therefore, assume that they were using 30-day months and not the traditional Hebrew calendar. This was a system that was occasionally employed to facilitate accounting in ancient Mesopotamia but also the standard system in Ancient Egypt. At the end of the year (12 months of 30 days), five days could be added to synchronise with the solar year of 365 days. This is an indication that the story was not made up by later Hebrew writers. It may well have been the standard calendar adopted in the antediluvian world!

So, the ark had run aground on the top of one of the mountains of Ararat. Notice that it is plural. The notion of it arriving on the single Mount Ararat in eastern Turkey is a later convention. Ararat in Hebrew is equivalent to Urartu, which includes Mount Ararat but also the mountains of present-day Armenia called the Gegham Mountains. However, it took another 74 days before the mountain tops became visible on the first day of the tenth month. Considering the volume of water, that is not necessarily surprising.

After forty days, once again a period of testing and waiting with his family, Noah decided to send out first a raven and then a dove to see if the water had dried up. We do not know what happened to the raven but the dove came back. Seven days later, he sent it out again and this time it brought back an olive leaf, a freshly plucked olive leaf. This suggested that somewhere nearby, probably high up on the mountain slopes, an olive

tree was still standing and the dove had found it. An olive leaf does not sound much to us, but for Noah surrounded by mud and desolation, it must have been a joy to see. Seven days later Noah sent out the dove again and this time it did not return.

It was the first day of the first month and all the water had dried up, but there were still vast quantities of moist sediment laid down during the flood which would need time to dry. These would become the various kinds of rock layer we have today such as sandstone, limestone and shale. The surface layers needed time to dry and harden and Noah had to wait another month or so.

Finally, on the 27th day of the second month, Noah, his family and all the various animals left the ark. Assuming, like the ancient Egyptians they lined up the beginning of the first month with the solar year, the time spent in the ark would have come to 375 days, i.e. a year and ten days.

In conclusion, we can see that this report has elements which give it plausibility. There are two periods of forty, which are numerically significant being the number of trial and testing and then we have the repetition of seven days, but these symbolic numbers are not necessarily contrived. Finally, we have Noah, his family and the animals leaving the ark on a unritualised day after a year and ten days to begin a new life in a wasteland. The details of the account give the impression that this is more of a real-life experience than a contrived legend.

Conclusion

We have seen how, from a scientific point of view, the account of Noah's flood is credible. Around the world, we have various accounts of judgement by universal flood with a small group of people being saved and the animal kingdom preserved. We have seen how Deist scientists, who had already dismissed the authority of biblical revelation, developed the fields of geology and biology based on false assumptions. And yet, 21st century scholarship in palaeontology, geology and biology has shown that the flood story is totally plausible. In terms of the actual account in Genesis, we see at least two phenomena that confirm the plausibility of the event. First, the Korean naval engineers have shown that the vessel was safe to weather the rough seas which the flood created and secondly, that the detail of times provided for the various phases are both meticulous and reasonable.

None of this proves that the story was true, but it does counter those arguments which deny it could ever have happened and shows that is possible for a scientifically-minded person to have confidence in biblical revelation. Finally, it is a question of our faith and our will through the connection we can have with God deep in our hearts. This gives us hope for we can see that God has a plan for those, like Noah, who are willing to trust Him and act justly. If you accept that, you may wish to have another look at the story of

Jesus as told in the four Gospels, since, like the Ark was to Noé, it is He who is now the key to our eternal survival…

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