



The Biblical Flood

A Scientific Approach

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— *Foreword* —

Skeptics of the past and present ridicule the Biblical account of the Great Flood of Noah's day. What kind of ark could have survived such a catastrophe? Would it have been large enough to carry such an enormous load of people, animals, and food? And most puzzling of all, where did all the water come from . . . enough to bury some of the mountains of earth?

In the last century the answers to these questions have been uncovered. First, it has been proven that the ark had the most ideal design, construction, and capacity for the circumstances of the Deluge. And second, Isaac N. Vail's theory (known as the Vailian Canopy Theory) that the earth's atmosphere was once circled by great rings of water which later collapsed onto the earth, gives a clear, rational explanation of the cause of the Flood. Geological evidence in favor of just such a sudden disaster mounts every year. And in addition, it gives new meaning for two ancient and mysterious scriptures:

“And God said, Let there be a firmament [atmosphere] in the midst of the waters, and let it divide the waters from the waters. And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so.” Genesis 1:6, 7

“ . . . by the intention of God the skies existed from of old, and the earth with water above and water below, arranged for the purpose of God, by means of which the then existing world perished, by the water having rushed down.” 2 Peter 3:5, 6 (Ferrar Fenton's translation)

The matter in this booklet is based on articles which appeared in Bible Study Monthly—England.

The Building of the Ark

A moderately detailed specification for the construction of the Ark is given in the Book of Genesis. It must be remembered that the vessel was not intended to proceed by any kind of motive power nor to steer a course. It had but to float on the surface until the flood abated; its construction had to be of a type that would withstand turbulent water but it required neither sails, oars nor rudder. It is true that the Babylonian legends include a steersman to manipulate the steering-oars characteristic of Babylonian ships, and even recorded his name, Puzur-Amurri, but to steer a ship the size of the Ark by the primitive methods known to the Babylonians would have demanded a veritable army of steersmen, and this legendary portion is certainly an embellishment.

The word *ark* is, in the Hebrew Bible, *tebah*, a word so archaic that scholars do not know to what language it belongs. Dr. Yahuda has suggested that it comes from the Egyptian *tebet*, meaning a box or chest, the only other occasion on which the word is used is to describe the covered basket of bulrushes in which the babe Moses was committed to the river, which supports the suggestion. The Greek *kubotos* and Latin *arca*—from which the English ark is derived—both mean box or chest. The term is well descriptive of the structure which Noah built, it was nothing at all like the orthodox ship's hull surmounted by a gable-roofed dwelling house which is so often pictured and caricatured in children's toys. Students of the Genesis account decided many years ago that the Ark was a three-floored structure having a flat base and two sides which sloped toward each other and met at an angle at the top. It was, so to speak, triangular in cross-section, the ground floor being the widest. The length was very great in relation to the width and height so that it presented the general appearance of a long three-sided box. With the ends rounded to withstand the force of the waves, such a structure would float partially submerged and be, to a great extent, unaffected by the violence of waves and currents.

Over seventy years ago an experimental vessel was built in Denmark to the same proportions as the Ark—but very much smaller—and of the same constructional style. This boat was thirty feet long, five feet wide, and three feet high from the flat base to the angle formed by the meeting of the two sloping sides. Tests carried out in the Baltic sea by the designer, a naval architect named Vogt, showed that the proportions of the vessel were ideal for maximum resistance to stresses

set up by the force of the sea. The Copenhagen newspaper, *Dagbladet*, of 31st August, 1904, reporting these experiments, said, in part: "The Royal Shipbuilding yard has recently completed the construction of a remarkable vessel. It is 30 feet long, 5 feet wide, and 3 feet high, and with its slanting sides most resembles the roof of a house. It is a new Noah's Ark, constructed after the design of Mr. Vogt, the engineer, the Carlsburg Fund bearing the expense of its production . . . The remarkable thing about the Bible measurements is that after thousands of years' experience in the art of shipbuilding they must be confessed to be still the ideal proportions for the construction of a big ship . . . The Ark was not intended to sail, but to lie still on the water, and to give the best and quietest condition for the comfort of its inhabitants, and this is ensured by means of the triangular shape. In a storm the motion of the Ark would be reduced to a minimum . . . If the greatest living engineer in the world was given such a commission as this, to construct as large and strong a vessel as to lie still upon the sea, and as simply constructed as the Ark, he could not make a better vessel." According to another Copenhagen newspaper, *Donnebrag*, the vessel "drifted sideways with the tide, creating a belt of calm water to leeward, and the test proved conclusively that a vessel of this primitive make might be perfectly seaworthy for a long voyage."

Three hundred years earlier, in 1609, Peter Jansen, of Noorn, Holland, had embarked upon a much more ambitious project. He built a vessel to the proportions of the Ark, one hundred and twenty feet long, twenty wide, and twelve high. It was found to behave so steadily in the sea and to have such ample stowage in relation to its weight that a number of similar boats were built. They fell into disuse only because of the difficulty of arranging for motive power and steering.

We come then to the Divine instructions to Noah relative to the building of this celebrated vessel. It is not necessary to suppose that God gave all the details in the form of a kind of celestial set of working drawings and that all Noah had to do was blindly to follow them. Much more likely is it that the knowledge necessary to build this amazing structure came to Noah over a long period of perhaps many years and that a great deal of study and research was necessary on his part before he could pick up his tools and commence.

It is probably true that no one who has not had the benefit of an engineering training can properly appreciate the tremendous mechanical

problems with which Noah was confronted. It was not just a question of nailing a few planks together and making them water-tight. If our understanding of the length measures of the ancients is well founded, the Ark was some 540 feet long, 90 feet wide and 54 feet high. Lest it be thought that such an enormous timber structure could never be built, and even if it were built, would never float, it can be pointed out that the Egyptians in the third century before Christ were building ships 400 feet long by sixty wide, propelled by four thousand rowers. The British warship, *Victoria*, in the early nineteenth century, one of the last wooden warships to be built, was nearly 300 feet in length. Since the advent of iron the sizes of ships have exceeded that of the Ark. The famous steamship, *Great Eastern*, built in 1854, was 680 feet long by 82 feet wide. In more modern times many of the oil tankers which are so familiar a feature of the high seas exceed 1,000 feet in length, twice that of the Ark. There is nothing unreasonable therefore in the apparent size of the Ark, but Noah must have been an engineer of considerable technical qualifications even to design on paper—or the then equivalent of paper—the structure which became the means of saving those who were to start life afresh on the earth.

“This is the fashion which thou shalt make it of” says the account “the length of the ark shall be three hundred cubits, the breadth of it fifty cubits, and the height of it thirty *cubits*.” (Gen. 6:15) There were many cubits in the ancient world, for each nation had its own system of length measures, and cubit lengths in one historical period were not necessarily the same as in another. As Babylonian, Assyrian, Jew, Egyptian, Greek, met and mingled so their length measures were modified to suit each other. The records from which Moses translated the story as we have it in Genesis were probably in terms of the ancient Sumerian cubits but Moses would almost certainly have converted the figures to the Egyptian cubit of his time just as we now convert them to English feet to make them intelligible to the modern reader. Various authorities give values for the Egyptian cubit in common use at the time of Moses as between 206 and 216 inches, taking the larger figure the Ark would be, as just stated, 540 feet long by 54 high by 90 wide. The fact that it was a three-floored structure and that the outer shell as well as the floors must have been enormously thick to withstand the stresses imposed by the initial impact of the flood waters requires something in the region of this height as a minimum in order to give adequate headroom and in this respect the story is consistent with itself.

Interestingly enough, one of the accounts of the Flood from the library of the Assyrian king Asshurbani-pal, written by an Assyrian scribe about 650 B.C., gives the dimensions of the Ark (as translated by the Assyriologist Francois Lenormant in 1880) as 600 cubits long by 60 high by 60 wide. The Assyrians at that time used, for buildings and large constructions, the ancient Sumerian short cubit of 10.8 inches, and this rendered into English feet gives the same length and height as in the Genesis account. Completely to correspond, the 60 cubits width in the Assyrian tablets should be 100, but it is very possible that the original archaic tablet, believed to date from about 1700 B.C., from which the Assyrian scribe made his copy, did have 100 at this point and that a small illegibility or obliteration in the clay tablet misled him. The obliteration of four small marks from the cuneiform numeral 100 converts it into 60, and such obliterations on cuneiform tablets are common and mislead modern scholars in the same way that they must have misled copyists in much older times. The ancient tablets leading to the Assyrian story diverged from those leading to the Genesis account certainly no later than about 2100 B.C. so that this agreement as to the measurements is quite a good witness to the historicity of the narrative.

For the benefit of the studiously inclined it may be interjected here that this 10.8 inch length for the short cubit was established by another Assyriologist, Oppert, nearly a century ago when he investigated the ruins of the royal town of Sargon of Assyria at Khorsabad, finding an inscribed tablet giving the length of the city wall as 24,740 short cubits, the walls were still there and he found them to measure 7,422 yards, a figure which has since been repeatedly checked, so that it was easy to fix the precise length of the short cubit, or *span* as it is often called nowadays.

It is perhaps not readily appreciated that in all probability Noah and his family carried much more than a collection of animals and a store of food in the Ark. According to the narrative he had been plainly told that the world he knew was to be completely destroyed with all its works. Only his own family would survive the Deluge to start a new world. It is in the highest degree unlikely that a man possessing the faith to believe such a Divine intimation and the intelligence to build such a vessel would fail to take with him as much in the way of useful materials as he could with which to commence his great task when the Flood was over. The antediluvians must have attained a high degree of proficiency in the arts

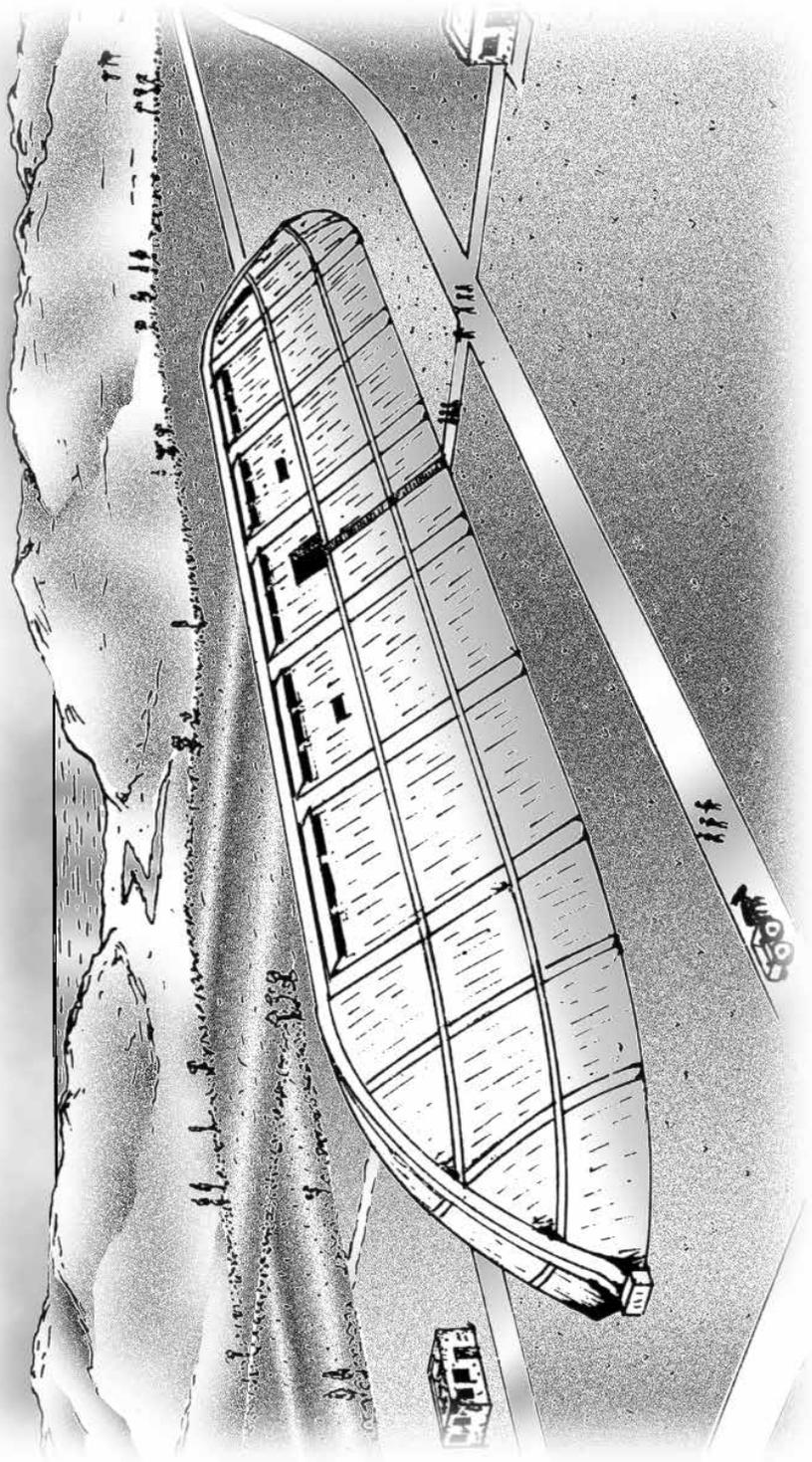
and sciences and it is very probable—almost a certainty—that the vast lower floor of the Ark was crammed with materials, tools, useful articles, and perhaps objects of art and beauty too, saved from the old world wherewith to facilitate the commencement of life in the new. It is perhaps significant that the Babylonian accounts do catalogue in some detail the treasures of gold and silver and articles of daily life which Noah is supposed to have stored aboard his vessel.

This tremendous construction had three floors, “with lower, second and third stories shalt thou make it.” (Gen. 6:16) More than half of the total capacity was on the lower, the ground floor, the flat bottom of the vessel, ninety feet wide and perhaps fifteen feet high from floor to ceiling. This great space, amounting to nearly 50,000 square feet, was almost certainly used for storage.

The middle floor, sixty feet wide, was perhaps devoted to the storage of food and “articles wanted on voyage”. When the Ark was afloat, fully loaded, it would be anything from half to two-thirds submerged, so that both this and the lower floor would be below the water line. Only the top floor could receive air and light directly from outside.

The top floor, thirty or more feet wide and over five hundred long, would afford ample living accommodation for the family and the animals that had been taken on board. Here were the *rooms* or *nests* of vs. 14—compartments, pens and stalls for the various classes of creatures. This would be a strange looking place, like a long corridor with its two walls sloping steadily above until they met at an angle about sixteen or eighteen feet overhead. This is probably the meaning of the rather obscure phrase in vs. 16 “in a cubit shalt thou finish it above.” The cuneiform sign for *cubit* and the primitive pictograph which preceded it in the days of picture-writing (this at the time of Eber and Peleg, Gen. 10:25) suggested an angle and this expression “finished in a cubit [or angle] above” might well denote what we call the *apex*, the angle at the ‘top of the Ark formed by the meeting of the two sloping sides, much as we might say it finished in an inverted V at the top. This is shown more clearly in the accompanying engraving which, incidentally, also gives an impression of the size of the Ark compared with the people and houses shown to the same scale.

Probable Appearance and Size of the Ark



How did the navigators fare for light and air? Flood or no flood, they could not exist without either. There were apparently two kinds of windows in the Ark, both on the upper floor only. "A window shalt thou make to the ark" is the Lord's instruction in vs. 16. The word *window* here is *tsohar* which is a technical term meaning an opening for sky light and air. The same word is used about twenty times in the Old Testament for *noon, noonday, and midday*. In its structural sense it denotes a long and narrow aperture running along the tops of buildings near the roof to admit air. All Egyptian temples had such an aperture, usually about six inches high, broken up by supporting columns every few feet. It would seem that such a narrow opening ran along the entire length of the Ark, on both sides, just below the top, and this served for the entry and egress of air and sufficient light, in the brilliant sunshine of Iraq, for the inmates.

The *window* of chap. 8:6 through which Noah put the birds who went out to explore the drying earth, is *challon* which is the regular Old Testament word for windows of the orthodox type. We may reasonably conclude that the *tsohar* was high up along the eaves of the Ark and gave fresh air and light at all times. Lower down in the sides of the upper floor, and perhaps only in the living quarters of the family, were other windows, probably made of transparent material, which could only be opened when the water was calm.

Chapter 8:13 tells how Noah, after the abating of the waters, "removed the covering of the ark, and behold the face of the ground was dry." This allusion to a "covering" is interesting. The word is *mikseh* which is used elsewhere for the covering of ram's skins and *badger* (dolphin) skins which covered the Tabernacle in the Wilderness as described in the Book of Exodus, and is allied with words meaning to cover as with garments. It will be shown later on that at the first onset of the Flood the Ark must have been completely submerged for a few minutes and must therefore have been made completely watertight from the outside world. Evidently the *tsohar* or window which normally gave light and air to the vessel was fitted with some kind of watertight covering, which could be locked in position at will to exclude all possibility of ingress of water, and opened again once the Ark was safely afloat in calm water. This may have been the *covering* which Noah removed, apparently for the last time, fifty-seven days before leaving the Ark. In the meantime it probably served as protection against spray, rain and wind in stormy weather.

“The door of the ark shalt thou set in the side thereof.” (Gen. 6:16)
Somewhere along the upper floor existed the only means of entry and exit—a door capable of giving admission to the largest creature or article intended to be taken in, and made completely watertight when closed, as it was for the whole of the time the Ark was afloat. The lower floors would of course be reached from the upper floor by means of stairways or sloping ramps.

Genesis 6:14 states that the Ark was built of *gopher wood* but nobody knows just what particular species of the vegetable kingdom is thus indicated. Commentators of the nineteenth century assumed an air of oracular wisdom and discoursed learnedly of “cypress or other resinous wood, capable of immersion in water” which was a pretty safe guess having in mind the purpose of the Ark’s building. Gesenius connected the word with kopher which was used for pitch and from that obtained the idea of resinous wood. It has been left to linguistic experts to find the truth. Gopher is the Hebrew transliteration of the Babylonian *gipparu* which means forest timber of any kind. Noah was told to build the Ark of timber well covered with pitch (bitumen) to make it watertight. Some later copyist or translator, not recognizing the meaning of *gopher*, took it as a proper name and added *wood* after it.

Those who like figures may be interested in the result of a simple engineering calculation which shows that the Ark may well have absorbed something like 6,000 tons of timber in its building, requiring the felling and dressing of a veritable forest of giant trees. Thus built, it would be capable of carrying some 25,000 tons of cargo without danger of foundering. But an apparently casual remark in Gen. 7:20 may enable us to approximate its lading a little more accurately. “Fifteen cubits upward did the waters prevail, and the mountains were covered.” That apparently implies that at no point in the Ark’s course was the water less than fifteen cubits deep, that fact could only have been observed if the Ark itself *drew* just that depth of water. It seems a logical conclusion that the vessel floated submerged to a depth of fifteen cubits, just half its height, when loaded, and this in turn means that it displaced three-quarters its own volume of water, some 27,000 tons. It follows that if the structure itself did weigh about 6,000 tons, then Father Noah must have stowed away animals and goods to an aggregate weight of 21,000 tons.

How long was this gigantic craft in building? It is not possible to say, for no hint is given. The cryptic reference in Gen. 6:3 to a period of one

hundred and twenty years has sometimes been suggested to denote a *period of grace* during which the antediluvians had the opportunity of repentance while the Ark, taking visible shape before their eyes, gave additional point to the preaching and warnings of Noah. We do not know. The work must have taken a good many years and it must have employed hundreds of workers. There cannot be much doubt about that. Noah must have been a man of wealth and power to have had the material means to plan and execute so stupendous a project. The ancient legends depict him as king of his country and there is nothing impossible about that. Suffice it that he was a man of faith and he believed God and acted out that belief in carrying out a command that must have seemed utterly fantastic to all who heard of it. And the greatest test of faith must have been at the moment when, with all his twenty thousand tons of stores and goods and animals safely inside, Noah and his family climbed into the giant vessel which they had built, heard the door close heavily upon them and shut them away completely from the outside world, and sat down in the darkness to wait. . .

The Flood was Upon the Earth

We come to Noah and his family, sitting inside the Ark, counting seven slow days from the tenth day of the second month until the seventeenth day, waiting for the fulfillment of God's word and the coming of Divine judgment. It really does not matter to us how the Flood came or what was its actual cause, all the evidence, documentary and geologic, is that it was a colossal invasion of the sea from the south, be the originating phenomenon behind that invasion what it may. We are really concerned with understanding as accurately as we can, from the brief record we have, just what was the experience of Noah and his family during that momentous year and eleven days during which the antediluvian world came to its catastrophic end.

So our thoughts come back to those eight persons of faith, the only ones in all the world who believed God, shut up inside the only possible haven of refuge from the wrath to come, surrounded by a heedless and scornful world which went on with its daily interests, unbelieving, ignorant. And far to the south of that land with its shining cities, away at the other end of the southern ocean which they had probably never explored, there rushed towards them the Angel of Vengeance which was to sweep their land with the besom of destruction and leave God's world ready for a fresh start.

It does seem that a number of allusions in the narrative, in addition to the physical evidences, are best explained on the basis that it really was the descent to earth of the "waters of the firmament" that caused the Deluge. This may become more evident as the story unfolds. And if such be the case then the first act in the drama was played, not in the land of Iraq where the Ark waited, but seven thousand miles away in the Antarctic. This presentation is built upon that assumption. If in fact the premise is not justified, and the gigantic tidal wave which undeniably did cause the deluge owed its origin to other and more mundane causes, then the effect would be much the same but on not so widespread a scale. It is this fact which lends so much support to the Valian canopy theory as the cause of the Deluge, the Bible account can hardly be satisfied by anything of a lesser nature.

Gravitating, over an immense period, closer and closer to the Poles, the masses of suspended water finally broke through the denser atmosphere near the earth and descended to its surface, probably in the form of snow and ice crystals, bringing with them cold of an intensity that had not been known in those hitherto genial regions since man had been on earth. The effect of the *canopy* was to maintain a reasonably warm and genial climate over the whole planet. That condition was abruptly terminated and the Polar seas subjected to the intrusion of colossal masses of ice-cold water. Geologists claim that at some time in recent geological history the oceans were quite suddenly increased in depth by some 300 feet, if it could be thought that this was in fact due to the waters of the Deluge then the catastrophe involved some eight million cubic miles of water and the relatively sudden addition of this to the Polar seas would have immediate repercussions.

The first would be the creation of a giant *tsunami* or series of tidal waves, spreading out from each Pole over the oceans. Tidal waves are fairly common, often due to submarine earthquakes, and can be as much as 500 feet high and travel across the ocean at 500 miles an hour. Ships hardly notice them because the wave is in the form of a long swell, sometimes a hundred miles or more from front to rear, which lifts the ship almost imperceptibly, and the real damage is when the wave hits the land, it may be five or six thousand miles away. In this instance the waves traveled northward across the Indian Ocean, as they became restricted between the converging coasts of Africa and India, and the sea-bed became more shallow, their speed lessened but their height increased. And the continuing fall of the waters from the heaven sent more and more waves

in succession. Then came the wind. The forcible displacement of the Antarctic atmosphere by so great a volume of alien water meant that the air had to go somewhere, and go it did, in a roaring tempest of ice-cold wind which increased the impetus of the speeding waters and followed them northward. And as it did so the warmer air of the antediluvians' homeland, laden with water vapor, was in turn displaced by the icy blast and forced upward into the upper skies, there to erupt into storms of thunder and lightning such as man had never seen before, and down came the rain—rain of unimaginable intensity—rain born of the frightful conflict between hot and cold air that was raging in the upper atmosphere—rain that heralded a complete and drastic change in the climatic conditions of the earth.

When a tidal wave reaches the coast its waters bank up to a terrifying height and if the land is low-lying the destruction is immense. What is said to be the highest such wave recorded in modern times hit the coast of Kamchatka, Eastern Siberia, in 1737. That wave was 210 feet high. The wave resulting from the volcanic eruption on the island of Santorin in the Mediterranean in the fifteenth century before Christ is calculated to have been 100 feet high when it swept over the island of Crete, destroyed ninety thriving cities and virtually all the inhabitants, completely wiping out the Cretan civilization. The story of the Flood has been repeated, on a lesser scale perhaps, many times in subsequent world history.

The available data is too uncertain to hazard an estimate of the height of the “forward wave” which first struck the doomed cities. Its probable speed can be calculated: leaving the Antarctic at 500 miles an hour it would travel up the Persian Gulf at about sixty miles an hour and burst over Noah's land at that speed. A glance at a large scale map will show that the mountainous coastlines of Arabia and Persia, and the tortuous entrance to the Gulf, would tend to limit the force of the waters before they began to spread over the low-lying lands of Eastern Arabia and Iraq. Nevertheless, more and more water came in from the ocean, driven still by the relentless wind and the continuing fall of the canopy waters, so that the inundation of the land became, as Genesis states, progressively deeper over a span of forty days.

Perhaps the best picture of the position as it actually affected Noah in the Ark is given by the experience of the captain and crew of the U.S.A. battleship, *Wateree* in 1868.

During the afternoon of 8th August 1868 the seaport town of Arica, Peru, was wrecked by a severe earthquake. The *Waterree*, with several other ships, was at anchor in the port. Soon after dark the lookout reported the coming of a tidal wave. Says the eye-witness report "Its crest . . . showed frightful masses of black water below . . . we could do nothing but watch this monstrous wave approach . . . we could only hold on to the rails and wait for the catastrophe. With a terrifying din, our ship was engulfed, buried under a half-liquid, half-solid, mass of sand and water. We stayed under for a suffocating eternity, then groaning in all her timbers, our solid old *Waterree* pushed her way to the surface, with her gasping crew still hanging on to the rails." The report goes on to say that the ship was then carried along at a very great speed in the darkness and after a time became motionless. The crew concluded they had run aground, and waited for the morning. When dawn came they found that their vessel was lying on the lower slopes of a mountain two miles from the sea. Not far off lay a Peruvian navy ironclad on her side, and an English three masted sailing ship. The vessels had been carried over sand dunes, a valley and a railway line, all around was a scene of desolation. From marks on a mountain precipice near by they found that the water had been nearly fifty feet deep before it receded.

In that case the waters receded. In the case of Noah they went on until they filled the entire plain, five hundred miles long by three hundred miles wide, and increased their depth continuously under the pressure of the sustained flow from the south. To the heedless and unbelieving multitudes it must have been a terrifying sight. When tidal waves strike the lands surrounding the Pacific Ocean, Japan, the East Indies, South America, and so on, where they are comparatively frequent, advance warning of their coming is given by an observing station located on Hawaii, and the people flee to the mountainous regions. In the antediluvian world there were no mountainous regions, the land was, and is, flat and little higher than sea level. And they had rejected advance warning. Maybe no written description can fitly convey the sight that met their incredulous eyes.

Away in the south, across the whole horizon, where normally golden fields met blue sky, appeared a long gray wall, a wall of immeasurable height, seeming almost to touch the sky, a moving wall, a living wall. Even as the spectators watched, it advanced, its upper line swallowing up the heavens, its base submerging the fields, at incredible speed, its whole visible face rippling and moving, glimpsing white streaks and patches of foam, bearing

down upon them like an avenging fury. They saw now the foot of the giant wave, a surging torrent of boiling foam stretching out before it, carrying on its brow heaps of debris, and they saw that foam surge over and swallow up the long black vessel which had been the butt of their jokes for so many years past. They saw the Ark leap up as it were to meet the oncoming Flood and they saw it disappear into the depths of the great wall of water which swept over it as if it had been a match stick. Then the avenging colossus gathered homes and palaces and temples, trees and shrubs, men and women, into one confused mass, and carried them all away, mingled with the sand and clay and gravel scooped up from the plain by the torrent. All that was left of that godless world lay buried beneath many feet of silt and mud, never again to see the light of day. And as the relentless waters rolled on, speeding to the north, a frightful conflict began in the heavens above. The wind, whipped up to gale force, resolved itself into a tempestuous cyclone and the heavens dropped water, a torrential downpour such as the world had never known since the days of man, a downpour that was to continue unceasingly for forty days and forty nights.

At the first impact of the waters the Ark would have been completely submerged but its triangular shape and wide flat base would offer minimum resistance to the onrush and eliminate danger of capsizing. But it must have been a terrifying experience for the occupants, shrouded in pitch darkness and unable to do anything to help themselves. That phase passed—it probably lasted only a few minutes—and the buoyancy of the vessel brought it to the surface, where it floated, borne along by the current but in no danger.

The events of the months that followed are graphically related in the 7th and 8th chapters of Genesis, in much more detail than in the Babylonian and Assyrian accounts which have survived. There can be no doubt that the Bible account is the oldest; it bears all the signs of being the work of an eyewitness. The other records are legends, copied and re-copied from time to time by Sumerian and Babylonian and Assyrian scribes, although derived at the beginning from the same story that we have in the Bible they have been altered and modified through the centuries and combined, in some degree, with sundry recollections of other lesser river-floods which devastated Iraq in the centuries following the Deluge. Thus Noah is stated to have been king of the city of Shuruppak, which was not founded until at least five hundred years after the Deluge. The legendary narratives however have preserved a vivid impression of the onset of the Flood waters and because they do confirm that the catastrophe was due

to an invasion by the sea from the south the relevant part of the account is repeated here. There are many versions—some twenty-six tablets or portions of tablets exist, giving variant details, and the translations which have been made vary greatly in style and phraseology so that it seems best to present a compound rendering which preserves the common testimony of the various tablets as nearly as possible.

“With the coming of early dawn there appeared on the horizon a black cloud. Ramman (the stormgod) thundered in the midst of it, and the lord Nabu (the messenger of the gods) marched in front, devastating the mountains and the plain. Nergal (the god of the abyss) made the storm to burst, and Adar (the god of war) advanced, overthrowing all before him. The Annunaki (the spirits of the earth) lifted up their flaming torches, with the brightness thereof they lit up the earth (this refers to lightning). The inundation swelled up to the sky. The daylight was turned into darkness, and the waters rose on the mountains. The hurricane attacked in fury, and the deluge swept over houses and temples.

“For six days and six nights blew the floodwind as the south-storm swept the land. The hurricane, the great-sea-waves and the diluvian rain continued in all their strength. Hurricane and flood marched on, subduing the land. The great ship was tossed by the hurricane upon the mighty waters. Then when the seventh day approached the flood-carrying south-storm subsided. The terrible great-sea-waves, which had assailed after the fashion of an earthquake, grew weaker. The sea grew quiet, the tempest was calmed, the flood ceased. I beheld the sea, its voice was silent, and the land was as level as a flat roof.

“I opened the window, and down on my face streamed the sunlight. Into the distance I peered, to the horizon bounding the sea, and there was no land. Then twelve measures away there appeared an island [this *measure* was probably the *geshu* of ten Babylonian stades which would make the distance about fifteen miles] and on the mountain of the land of Nisir the ship came to rest.

“For six days Mount Nisir held the ship fast. On the seventh day I sent out a dove, and let her go where she would. The dove flew hither and thither but found no resting-place and she returned. Then I sent out a swallow and she flew hither and thither but found no resting-place and she returned. Then I sent out a raven, she flew away and found the waters sinking. She ate and rested and did not return.”

The similarity to the Genesis account is obvious, the only marked difference is that the initial stage of the catastrophe is said to have lasted for six days instead of the Biblical five months. The Bible is however much more explicit in its detailed account of the progress of the Flood. Verses 17 to 20 of Genesis 8 describe its increasing depth as more and more water arrived from the south. From indications near the site of Ninevah it would seem that the Flood reached this point which means that over the south Babylonian plain the water was at least nine hundred feet deep and could have been more. Note the indication in Genesis of the steadily increasing depth over the first forty days: "The flood was forty days upon the earth, and the waters increased, and bare up the ark, and it was lifted up above the earth . . . and the waters prevailed, and were increased greatly upon the earth, and the ark went upon the face of the waters . . . and the waters prevailed exceedingly upon the earth and all the high hills were covered . . . fifteen cubits upwards did the waters prevail, and the mountains were covered." If the waters attained a depth of nine hundred feet the rate of increase would only be one foot an hour, quite imperceptible to the occupants of the Ark. It would inevitably go with the current and wind towards the north and by the end of the forty days find itself more or less toward the northern end of the Babylonian plain.

"And the waters prevailed upon the earth an hundred and fifty days." (Gen. 7:24) After the first forty days, for the rest of this five months the waters remained more or less stationary, held at their abnormally high level partly by the pressure of further tidal waves coming in from the south and partly by the fierce wind-storm still emanating from the same source. But the end of this condition was at hand. "God made a wind to pass over the earth, and the waters assuaged. The fountains of the deep and the windows of heaven were stopped, and the rain from heaven was restrained. And the waters returned from off the earth continually." (Gen. 8:1-3) What this means is that the down rush of waters from above the Poles diminished and stopped, and with that cessation the great tidal waves ceased to flow and the gale force wind from the south died away and was silent. The turbulent skies above the Ark with their almost continuous thunder and lightning became quiet, and the torrential rain ceased to fall. A new phenomenon became apparent to Noah, another wind, not a gale as had raged from the south, but a softer, gentler wind, came from the northeast and began to urge the pent-up waters back to the source from which they had come.

This wind that God had made to pass over the earth whose effect was to assuage (shakak—to subside) the waters, is a most intriguing part of the story. It had its origin in natural causes which no later writer could have known about had the Deluge story been a later invention, it is one of the evidences that this account is by an eye-witness. With the disappearance of the aerial waters the sun was shining down upon the flooded plain with unaccustomed brilliance and power—the Babylonian legends all make special mention of the sunlight when the Ark was opened—and the time was April, verging on to summer. Just as the Poles were now going to be much colder, so the land Noah knew was destined to be much warmer. A new climate pattern was being initiated, induced by this difference in temperature between the tropical and temperate regions. The air over the equator is warm and light, colder and heavier air from the temperate regions is continually pouring in and driving the lighter, warmer air upwards. The earth's rotation gives these incoming north and south winds a twist towards the west so that they appear in the northern hemisphere as northeast and in the southern hemisphere as southeast winds. These are known as the trade winds and in the days of sailing-ships were important aids to mariners. As the seasons change the hot region towards which the *trade winds* blow moves north and south with the sun, hence the latitude affected by the trades moves north and south correspondingly. Hence there is a region in which the trades blow in summer but not in winter, in the northern hemisphere this lies between latitude 30 and 42 degrees, which is the precise latitude of Iraq, the scene of the Flood.

So it came about that during that year of the Flood the changed climatic conditions produced the trade winds for the first time. The wind that God “caused to pass over the earth” to assuage the waters was the northeast trade, blowing down from southern Europe and Siberia into Iraq, persistently from April to September, just the relevant months in the Biblical narrative. By September the water was virtually gone.

The Flood took five months to drain away. That may seem a long time, but another look at the map shows that the Persian Gulf connects with the ocean by an extremely narrow passage, only thirty miles wide, flanked on both sides by high mountain ranges. All the pent-up waters of the Flood had to escape through that narrow passage. The water had taken five months to attain its maximum depth, it now required five months to subside.

The cradle of the world is supposed to have been in Armenia. Geology tells us that the land of that vicinity was at one time a quiet settling pond, as evidenced by heavy alluvial deposits. In this vicinity the Ark floated, and by divine protection landed on Mt. Ararat its precious freight for the world's new start.

Concluding Thoughts

The story of the Great Flood in the days of Noah, and the building of the Ark, has been told many times. But in the telling and retelling it has often lost much of the accuracy of the Biblical account. The story of the Great Deluge, as it is actually taught in the Scriptures, is a proof of the authenticity of the Bible by its reasonable explanation of the events concerning the construction of the Ark and the cause of the Flood.

As the story of the Great Deluge is reasonable when viewed from the proper standpoint, so it is with the rest of the inspired Scriptures. They are logical and harmonious when properly understood. Unfortunately, the Bible does not often seem so sensible and consistent because past and present interpretations of it have often been unreasonable (as was true with interpretations of scriptures concerning the Flood). However, the error should be attributed to theology, and not to the accuracy of the Holy Scriptures.

One example of this is shown in the belief of the Dark Ages that the earth is flat and rests on pillars. Theologians of the past even quoted Bible verses which, supposedly, proved it to be true. But this was a product of theology, not the Bible. Much to the contrary of the thought that the earth is flat and rests on pillars, we read in Isaiah 40:22 of "he that sitteth upon the circle of the earth." Again we read in Job 26:7—he "hangeth the earth upon nothing."

Another example of this difficulty is the failure to recognize the ages and dispensations of the Bible. In failing to recognize the time periods of the Bible, scriptures are often applied to the wrong time or age. To illustrate: It was truth in Noah's day that a flood was coming, while Adam and others had known nothing of it. It would not be preaching truth now to preach a coming flood, but there are other dispensational truths constantly becoming due.

In Second Peter, the third chapter, there is a case of this difficulty in understanding ages and dispensations. This chapter describes three great periods of time, and the order or arrangement of things which exist during these three ages. Each of these time periods and its social arrangement is called a *world*. In verse six of this chapter we read: “the world that was, overflowed with water and perished.”

In this reference to the flood it is evident that the literal earth did not perish, but rather that the society then existing was destroyed by the flood of waters. The next verse describes our present social arrangement as “the heavens and earth which are now,” also called in Scripture “the present evil world.” (Galatians 1:4) “The heavens and earth which are now” are no more literal than “the world that was.” Second Peter 3:7 goes on to explain that the present social order (described as “heavens and earth”) is to end by being burned with “fire” (symbolic of destruction), and will be replaced by a “new heavens and earth” (verse 13), also called “the world to come” in Hebrews 2:5. Yet all this takes place upon the literal earth, as we have shown, for “the earth abideth forever.” Ecclesiastes 1:4

Failure to understand ages and dispensations has resulted in much confusion. From misunderstanding the preceding scriptures, many well-intentioned Christians have concluded that after creating the earth to be man’s home, God now intends to burn up both the earth and the heavens. But this view is not reasonable, and we have found it to be unscriptural, also.

What we do find is that God has a plan, called “**a plan of the ages**” (Ephesians 3:11, corrected translation). We have seen that there are three primary ages in this plan—the world that was, the present evil world, and the world to come, also called “world without end.” (Isaiah 45:17) And from the outline of God’s plan as revealed in the Bible, we learn that the result of this plan is the removal and destruction of all evil and suffering. See 2 Peter 3:13; 1 Cor. 15:24-26.

But, if this is true, that the ultimate objective of God’s plan is the eradication of all evil, then why did God permit the present reign of evil to be a part of that plan at all? Despite all attempts to turn it aside, the question still remains—could not God have prevented all possibility of the entrance of suffering and death into the world?

God could have prevented the present reign of evil. He did not cause evil, but he permitted it to play a part in his plan because he foresaw that an actual experience with evil would be helpful and beneficial to all mankind. It will be beneficial to mankind because God's plan includes an opportunity for everyone who has ever lived to learn of the love and goodness of God in "the world to come wherein dwelleth righteousness." It will be an age in which love and justice shall rule with power. It will present such a striking contrast with this "present evil world," that it will forever impress upon the minds of people the evil results of breaking God's necessary laws for the preservation of the life, liberty, and blessings of all mankind. Surely this is what the angel meant, at the time of Christ's birth, when he spoke of "good tidings of great joy, which shall be to all people." Luke 2:10

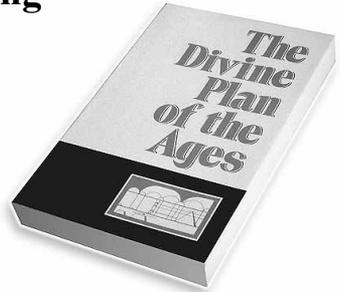
This thought of giving all men an opportunity for life is mentioned again in John 5:28, 29—"Marvel not at this: for the hour is coming, in the which all that are in the graves shall hear his voice, and shall come forth; they that have done good, unto the resurrection of life; and they that have done evil, unto the resurrection of **judgment**" (not *damnation*, see Revised Version, et al). Not only will all mankind be awakened from the sleep of death, but they will be divided into two classes: (1) those who awake to perfection of life (in heaven), and (2) those who awake to trial and judgment—an opportunity for life everlasting. This second class will not experience a change of nature from human to spiritual (as the Church class will), but will awake to life on earth as promised in the oft-quoted but little understood prayer of Jesus, "thy Kingdom come, thy will be done in earth, as it is in heaven." (Matthew 6:10) This idea of a universal government of earth is elsewhere mentioned in Ephesians 1:9, 10 (Weymouth translation), where it speaks of "God's merciful purpose for the government of the world when the times are ripe for it [that is, in 'the world to come']—the purpose which he has cherished in His own mind of restoring the whole creation to find its one head in Christ, yes, things in heaven and things on earth, to find their one Head in Him."

Yes, God intends to restore the whole creation. Everyone who has ever lived will be brought back to life. None will be destroyed without being given a full, fair opportunity when God's Kingdom is established here—on earth. (Revelation 21:8; Acts 3:23) No creature of the redeemed race will be too low for divine grace to reach, through the all-powerful and blessed agency of the Kingdom.

No degradation of evil will be too deep for the hand of mercy to fathom, no darkness of ignorance and superstition will be so dense in any heart but that the light of divine truth and love will penetrate its gloom and bring to it a knowledge of the joy and gladness of the new day, and an opportunity to share the same by obedience. No disease that can attack and pollute the physical system will be beyond the prompt control of the Great Physician. And no deformity, or monstrosity, or superfluity, or redundancy, or mental imbecility will be able to resist his healing touch.

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