# SCIENCE

## NOAHS FLOOD

## Is it Believable?

hundred years, the credibility of the Bible has come under serious question.

Many have found it difficult to believe in a book which speaks of Jonah and the "whale"; an extra-long day in the time of Joshua; Christ walking on water; Shadrach, Meshach and Abednego surviving the fiery furnace; Adam and Eve; the Israelites crossing the Red Sea; and a host of similar accounts written positive, it-actually-ppen fashion.

aps the long bibliaccount of Noah's Flood in Genesis has evoked more questions than any other. Is it unreasonable to believe in the Flood? In the Ark? Have modern scientific findings truly made the

scriptural account out of date?

While the many ramifications of the Flood cannot be discussed in a short article, this article will examine the *main* objections to the biblical Flood and the Ark. We will see that the Bible is consistent with other fields of knowledge. Scripture is reasonable!

Let's examine the various major









by Robert E. Gentet

Is the Flood merely a Hebrew myth? Does the biblical record of the Noachian Deluge and the Ark make sense in the light of modern, scientific findings? questions voiced about Genesis 6-9 and see how recent data actually verifies this ancient record.

#### Was the Flood Local?

It has now become popular among many to think of the Flood as merely a limited regional event. During the past century, the once commonly accepted universality of the Flood met with great opposition. One by one leading scientists and theologians sided with evolutionary and uniformitarian concepts. Soon no place was found for a worldwide deluge. Surely, it was reasoned, if the Flood is a reality, it was only a local Mesopotamian event.

It is not my purpose to present a comprehensive biblical exegesis on the universality of the Flood.

However, to assume anything else is clearly contrary to the weight of biblical revelation and reason.

The need for a sea-going Ark is a compelling reason to believe in the Flood's intercontinental effects. Why command Noah to build an Ark when he could have simply migrated to a non-flooded region? Neither would it make sense to take

animal representatives of all kinds aboard the Ark if only a limited area of the earth were to be in-undated (Gen. 6:19-20).

The specific reason for the Flood was to destroy all air-breathing land life — especially man himself (Gen. 6:17). Archaeology demonstrates that man had migrated around the world. Anything less than a universal destruction would not have accomplished God's primary purpose of the Flood.

So it is logical to believe that the Flood was of universal scope when both Scripture and reason are considered.

## Where Do You Get Enough Water?

But what, then, of the origin of the Flood waters? Is there enough water on the earth to entirely cover it?

If one observes a globe carefully, he might come to the conclusion that "earth" is an inapt name. For instead of being mainly terra firma, its surface is over 71 percent water. We live on a watery planet.

In addition, bear in mind the oceans average 12,450 feet in depth, while the average surface height of the land is only 2,600 feet. The proportion is clearly overwhelmingly in favor of the ocean and not the land.

We are not told in the Bible exactly how God flooded the earth. Remember the Flood was not a natural event. It was brought on supernaturally by God, though He used natural agents.

What are the natural facilities God could have used in accomplishing His purpose? Here are some of the possibilities: 1) Elevate the ocean basins and thus force water onto the land, 2) lower the continents as units, or 3) add water to the oceans from underground basins (see Scientific American, May 1966, article, "Water Under the Sahara.") God undoubtedly used a combination of factors to bring about His will.

In the same way, when the Flood waters receded, they would have

drained back into the place God made for them — the ocean basins and underground reservoirs.

## What About "All Those Animals"?

Did the Ark have sufficient capacity to carry representatives of all the land animals?

Consider the stated size of the Ark. "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).

Historical records for the exact length of the cubit in modern terms are vague. Our research places it at around 22.5 inches. If valid, this would mean the Ark was 563 feet long, 94 feet wide, and 56 feet high. Its three-million cubic-foot volume would have had a displacement in water weight of 66,000 tons. This is the same capacity as 1000 American railroad freight cars. That's ocean-liner size!

But if the cubit were equivalent to 18 inches, there would still have been plenty of room in its 450-foot length, 75-foot breadth, and 45-foot height hulk. This would still have given it a 500 freight car, 1.5 million cubit feet, carrying capacity.

It was not until the 19th century that larger vessels were constructed.

It shows the existence of skilled knowledge and ability in that ancient world not again demonstrated until recent times. Archaeologists are confirming this generally unexpected level of knowledge as they find more and more evidence of advanced skills among early humans. (See such books as Mysteries from Forgotten Worlds by Charles Berlitz, Doubleday & Co., Inc., 1972.)

How much room did Noah need for "all those animals"? Some misunderstand, thinking that the Ark had to house representatives of every variety of animals. One pair of every kind of unclean (unedible) and seven pairs of each clean kind (edible) were taken aboard. Each "kind" of creature represented a number of varieties. For example, over 100 breeds of dogs have now

been developed. They are all of the same Genesis "kind." Only one pair of the dog kind needed to be on the Ark.

God originally put within each "kind" of creature a fantastic genetic capability. As time passed, more and more varieties appeared, but these variations of the same "kind" of creature did not all have to be aboard the Ark bodily. They were there genetically within the pair (or seven pairs, as the case may be) taken on the Ark.

It isn't necessary to consider sea life. It survived in the Flood waters. There were also many other simple forms of aquatic life that were not harmed by water.

Consider that some 60 percent of the animal kingdom live in the sea, and 28 percent of the animal kingdom are insects. The remaining 12 percent average the size of a rhesus monkey.

IF insects had to be taken on the Ark (and this is a moot question), with every pair of known modern species of insect given 16 cubic inches of space, only 21 freight cars of space would be required. (Counting Genesis kinds only, the required space is far less.)

Accurate estimates of the number of mammal, bird, reptile and amphibian species on earth today is about 18,000. (Again, recognizing that only kinds, not necessarily species, were included, there would have been far fewer actual animals aboard the ark.) Most animals are unclean, and there were a pair of each unclean animal. But let's be liberal and say 40,000 rhesus-monkey-size animals were on the Ark.

How much space would be required to house them? A letter about animal housing was sent to the London Zoo. Their answer was: "Most animals can be maintained in very close confinement indeed for long periods and remain perfectly healthy. A rhesus monkey, say, can be maintained indefinitely in a cage about 2 ft., 6 inches cubed" (15 cubic feet).

If the cubit were 22.5 inches long,



40,000 cages, each large enough for a rhesus monkey, would have only taken up 20 percent of the Ark's three-million cubic-feet carrying capacity.

So if becomes plain that the interior of the Ark was totally adequate for the animals, the food supply, and the humans aboard it during the Flood.

## How Did the Animals Get Where They Are Today?

Each isolated land mass or continent has animals or birds not found elsewhere. Australia has its kangaroo, koala bear, duckbilled platypus, and Tasmanian devil. North Amer-

. boasts the beaver, rattlesnake, raccoon, turkey and opossum. South America offers the llama, capybara, and sloth. Asia has its peafowl and panda bear. Africa has the giraffe, hippopotamus and zebra. Certain island groups also have kinds of animals not found elsewhere. How did all these animals become segregated after leaving the Ark?

Consider that God — not Noah — originally brought the animals to the Ark (Gen. 6:20). It would not have been a difficult matter for Him to see to it that they also redistributed themselves after the Flood. God is the Originator of animal migration. It was His will that the animals — as well as mankind —

plenish and repopulate limited geographical realms after the Flood (Gen. 9:1; 10:5; 11:8-9). It should be no surprise to see both men and animals even today basically segregated around the world. This principle ought to seem basic. All forms of life exist in the specific land areas where they can best flourish.

Neither are the major land masses of the earth as isolated as one might suppose. They have been even less isolated in the past. Witness the existing land bridge between Asia and Africa — the Sinai Peninsula — and Central America between the North and South American continents. The Bering Straits between North America and Asia are quite shallow. Thousands

of square miles are covered by water less then 150 feet deep. Large areas of present ocean between Southeastern Asia, the East Indies, and Australia are less than 600 feet deep. This illustrates that such present-day isolated communities are not impossibly separated from each other by great expanses of deep ocean. This factor may play a part in animal migration after the Flood.

Also, as men travel and migrate, they traditionally take with them familiar plants and animals. Some go with them accidentally. Many animals have spread to new areas in this manner — the rabbit to Australia, the English sparrow and European corn borer to the Americas, etc.

Recent discoveries are showing that much sea traffic existed in the ancient world. The Bible itself shows that Solomon's ships plied the seas and brought back precious items and animals to the Middle East from great distances (I Kings 9:26-28; 10:22; II Chron. 9:10). It is logical to conclude that animals were shipped between other areas as well.

It has also been demonstrated that animals have reached isolated islands on floating masses of vegetation or on storm and flood debris. This has been pointed out by such authors as Rachel Carson in her now classic work *The Sea Around Us.* Whenever an island emerges from the sea, it soon becomes the home of various sorts of animals and plants.

## Where Is the Flood in Geology?

Prior to the nineteenth century it was commonly believed the Flood was responsible for practically all geologic phenomena. Whenever a fossil was found, the finder would immediately think of Noah's Flood. But soon cracks in the idea developed. If Noah's Flood was truly responsible for most or all of the earth's fossils, then why isn't the fossil record thoroughly mixed up?

Why do certain layers only contain certain fossils? Why, for example, aren't dinosaur remains ever found mixed with tigers, lions and other forms of modern mammal life? Mammal remains are almost entirely missing from the world of the "terrible lizards."

This enigma multiplies when one considers that the stratigraphic record can only be understood to represent a passage of time greater than the year of Noah's Flood. The bulk of the geologic record represents a sequence of events which cannot be fitted into the short time span of the Flood itself.

For this reason, there was often a difference of opinion among theologians and nineteenth-century Biblebelieving scientists as to where the evidence of the Flood is to be found in the rocks. Estimates have ranged from the entire geologic column to a thin clay layer at the site of ancient Ur! (Sir Leonard Woolley, Excavations at Ur, London, Ernest Bonn, Ltd., 1954.)

A proper understanding must begin with a knowledge of both the Bible and the earth's silent, yet revealing, fossil record.

The avowed purpose of God in the Flood was to destroy both man and beast from the face of the earth. This is clearly the reason God sent a flood of waters. It was a time of great extinction. This is the first vital clue.

But we also need to remember that the Flood was a relatively recent event. Biblical chronology would place it about 43 centuries ago. Therefore we should expect to find the evidence for the Flood towards the top of the earth's layered sequence.

The third clue involves man himself and his world. We live in a world of mammals, birds, and flowering plants.

It should be a world quite similar to the pre-Flood world. The Ark, remember, housed representatives of all kinds of air-breathing land life forms. What we find around us today should fundamentally be the

same type of life Adam and his pre-Flood descendants saw around them. It would be logical to expect certain varieties to become extinct in the Flood, but their kind and type should still be with us today.

In summary, we could expect to find geological evidence of the Flood by: 1) noting a time of extinction in the fossil record, 2) looking toward the top of the geologic sequence of rocks, and 3) looking for an extinction of animal types which are familiar to us today.

What evidence is there, then, in the geological column which would lend weight to the worldwide catastrophe precipitated by Noah's Flood?

#### **Extinction Mystery**

Dr. George Miller, former supervisor of the famous Los Angeles La Brea Tar Pits, had this to say about the "sticky" problem of extinction.

"We have had two eras of mass vertebrate extinction in the world's existence: that of the dinosaurs... and that of the large mammals at the end of the Pleistocene or Ice Age.... When that period was over, mammoths, mastadons and sabertoothed cats were extinct — all over the globe.

"It is a mystery. The sabertoothed cats, for instance, were very successful animals. They....died out completely. Why? Catastrophe? Plague? Earthquakes? A change in environment or climate? We do not know.

"We do not know, either, the answer to the mysteries within the mysteries. For example: horses went through their own evolution only in the Western Hemisphere – so completely that it takes an expert to tell the bones of the last ancient horses from those of modern ones. They spread throughout the world reaching the other continents, we think, across the land bridge in which is now the Bering Strait. Camels followed almost the same pattern. Yet ... both horses and camels became extinct in the Western Hemisphere. Horses remained

wiped off the face of the Americas until the Spaniards reintroduced them a mere 500 years ago. Again, why?" (Holliday, Kate, West magazine, July 30, 1972, "By Tar Preserved," pp. 11, 14.)

This revealing quote gives some fundamental facts of paleontology — points we will do well to consider.

Note there have been Two times of mass vertebrate extinction in the entire history of the earth. The first was the extinction of the dinosaurs (and it could also be added, flying reptiles and marine reptiles). The second and more recent vertebrate extinction was that of mammals (commonly giant size compared with those living today).

The mammalian extinction is especially interesting. It is recent. Mammals are the dominant vertebrates of today. And, as might be suspected, their selective disappearance after a period of successful life is a mystery to science.

#### End of Giants

Take, for example, North America. At the end of the Ice Age, hunters in North America were killing the imperial mammoth in the west and the mastodon in parts of the northeast. Further north, the woolly mammoth lived carefree along the fringes of the glaciers. North America was an elephant's paradise.

But these giant, now extinct, forms of elephants were not alone. In that day of giants, we find beavers as big as bears, giant armadillos, giant ground sloths weighing as much as present-day elephants, bison with fantastic six-foot horn spans, the great saber-toothed cats and giant jaguars. These, along with horses and camels, vanished. Why? The land was well suited for them. The Ice Age was over. Yet about 70 percent of all native North American mammals with an adult body weight of over 100 pounds became extinct in a time of plenty.

About a hundred years ago, scientists began to see the magnitude of the extinction problem. Alfred R. Wallace, who developed the idea of

biological evolution simultaneously with Charles Darwin, was struck by the abrupt, strange and recent decimation of mammal life.

In 1876, Wallace noted: "We live in a zoologically impoverished world, from which all the hugest, and fiercest, and strangest forms have recently disappeared... yet it is surely a marvelous fact, and one that has hardly been sufficiently dwelt upon, this sudden dying out of so many large Mammalia, not in one place only but over half the land surface of the globe" (Alfred Russel Wallace, Geographical Distribution of Animals, New York: Hafner, 1962, Vol. 1, p. 150).

Now after 100 years, scientists know the effect was worldwide. A global disaster struck the earth after the Ice Age that hit the animal kingdom very hard. South America lost nearly all its large animals. Europe and Asia suffered losses as well. The day of giant mammals had come to an end.

One writer wisely noted: "The dinosaurs and the saber-toothed cats did not die out because they had somehow failed. They apparently died out because of some powerful and unusual forces entirely beyond their control" (Science Digest, "The Great Dinosaur Disaster," Daniel Cohen, March 1969, p. 52).

"Powerful and unusual" forces? Yes, indeed! And in the case of the recent mammal extinction, the agency appears obvious — the Noachian Flood! (The earlier dinosaur extinction has its place in time before the creation of man.)

Those readers who wish more information about the Flood are invited to write for our reprint article entitled "Worldwide Mammal Massacre.".

We have seen how the scriptural record presents a viable solution to a long-standing scientific mystery. Although many details are yet to be clearly understood, the Christian can remain confident that the findings of science continue to support the words of Scripture.