

# HOW COULD NOAH FIT ALL THE ANIMALS ON THE ARK?

## HOW MANY SPECIES ARE THERE IN THE WORLD TODAY

According to estimates published in 2014,\* there are more than 1.8 million documented species of organisms in the world. Over 98% of these species are fish, invertebrates, non-animals (like plants and bacteria). This means there are fewer than 34,000 species of known, land-dependent vertebrates in the world today.

\*IUCN 2014. IUCN Red List of Threatened Species, Version 2014.3. <[www.iucnredlist.org](http://www.iucnredlist.org)>. Downloaded 2014-11-10.

## IMAGINE THE EARTH AS IT WAS BEFORE THE FLOOD.

The forests are lush and fertile. The air is thick, warm, and fragrant. The completed Ark sits quietly on a hilltop like a great wooden fortress.

Guided in pairs, thousands of creatures flood into the Ark. There are perhaps millions of species worldwide, but only select representatives of every land-dependent, air-breathing kind are sent. Approximately 6,744 animals assemble inside—most are small, young, and easily kept. These chosen animals will reestablish their kinds in the new world.

## THE ARK NEEDED TO HOUSE THE ANCESTORS OF FEWER THAN 34,000 LAND DEPENDENT SPECIES.

## ANIMALS WERE BROUGHT INTO THE ARK?

might representatives of every land-dependent, and is a broader category than *species*, and

their kind, and of beasts after their kind, and of every living thing of the earth after his kind, and of every creeping thing that creeps on the earth, all come unto you, to keep them alive. (Genesis 6:20)

## ANIMAL KIND?

from the Hebrew words for "created" and "kind"), not related to any other animals. The study of

## HOW MANY KINDS WERE ON THE ARK?

estimate that among land-dependent vertebrates, both living and extinct kinds. In a worst-case scenario, Noah was responsible for fewer than 6,744 animals, most of them small and easily maintained.

## OBSERVABLE PROCESSES SHOW SPECIATION WITHIN KINDS, NOT EVOLUTION OF ONE KIND INTO ANOTHER KIND

### NATURAL SELECTION

Natural selection is an observable process in which creatures possessing specific traits survive better than others in a given environment. While commonly promoted as a driving force of molecules-to-man evolution, natural selection cannot bring about the changes required to turn one kind of creature into another. Natural selection is only able to act on pre-existing features, and contrary to popular belief, it cannot create new ones.

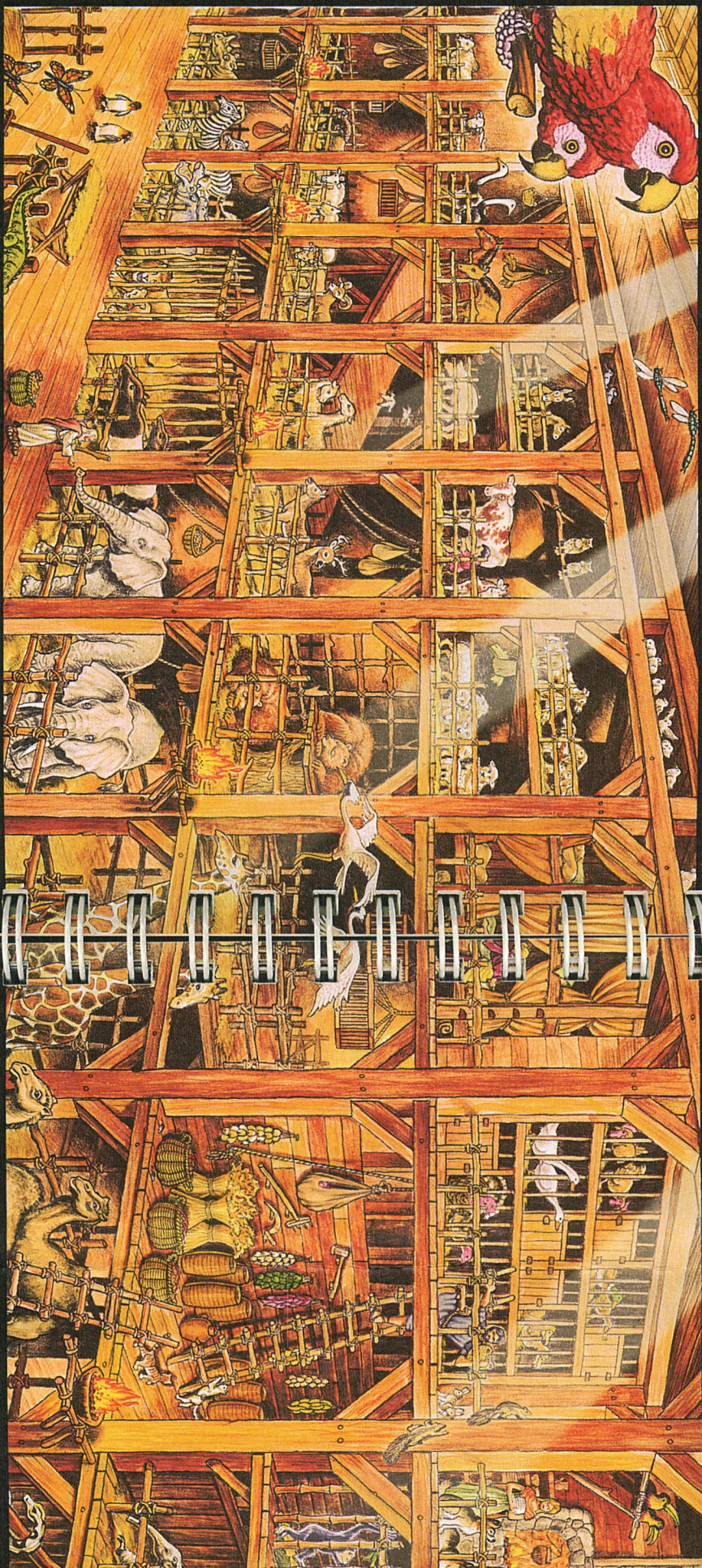
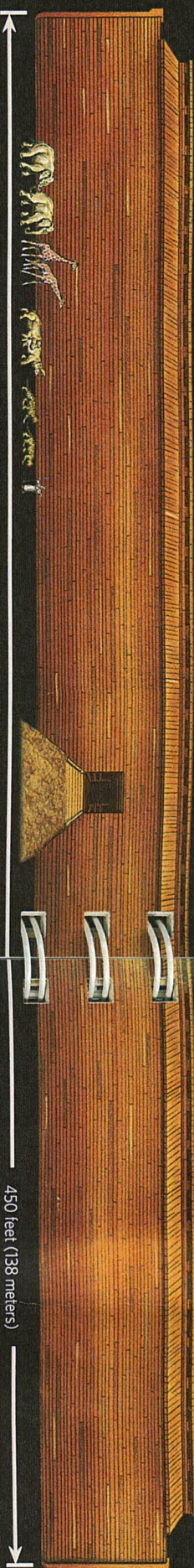
### MUTATIONS

A mutation is essentially a permanent change to the DNA of an organism. Evolutionists consider random mutations to be the primary means of producing new genetic information. However, the vast majority of observed mutations have negative effects, and the mutations that are either "neutral" or somehow beneficial still do not add the information necessary to transform one kind of organism into a totally different kind, such as dinosaurs evolving into birds.

### OTHER MECHANISMS

Other mechanisms are often cited that supposedly contribute to the evolutionary process, such as sexual selection, founder effect, and genetic drift. No one has demonstrated that these are capable of producing the vast amount of new genetic information required to change one kind of creature into a completely different kind.

# NOAH'S ARK



45 ft (13.5 m)



**About 100 to 120 Years**  
**God Grieves Over Corrupt Earth;**  
**Tells Noah to Build an Ark**

God is sorrowful about the great wickedness and violence in all the people on the earth, and sees their evil thoughts. He tells Noah, who is righteous and "walked with God," that He will destroy the people and the earth with a flood. God gives Noah plans to build an ark and be saved. Noah does everything God tells him to do. Building the ark took about 100 years when Noah was about the ages of 500 to 600. Gen. 6:3-22; 5:32, 7:16



**7 Days**  
**God Shuts Door of Ark**

God tells Noah and the animals to go into the ark. After seven days, God shuts them in. Genesis 7:1, 10, 16



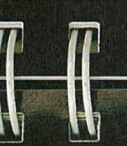
**40 Days**  
**The Flood Begins**

Underground waters burst forth and rain falls 40 days and nights covering the ground. Noah, his three sons, and their wives are safe in the ark along with every kind of animal and bird. Genesis 7:11



**110 Days**  
**Water Covers All The Earth**

After the rain ends, the water covers all the land and mountains. The ark floats safely high above the ground. Even the highest mountains are under more than 20 feet (greatly 7 meters) of flood waters. Nothing is left alive anywhere on earth, except for Noah and those in the ark. The water covers the earth for 150 days. God sends a wind across the waters and the waters recede. Genesis 7:17-8:1



**74 Days**  
**The Water Goes Down and The Ark Rests**

God does not forget Noah, his family, and the animals in the ark. He makes the water go down. On the 17th day of the seventh month of the year, the ark rests in the Ararat mountains, five months from the start of the flood. Genesis 8:1-4



**40 Days**  
**Mountain Tops Are Seen**

The water lowers. The mountain tops can be seen on the first day of the 10th month, two and a half months later. After 40 days, Noah checks the water. Genesis 8:5, 6



**28 Days**  
**Noah Sends Out Birds**

Noah sends a raven out of a window. Then he sends a dove every seven days. At last it brings an olive leaf, and finally it doesn't return. Genesis 8:6-12



**601 Years Old**

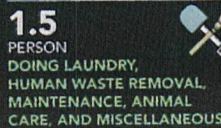
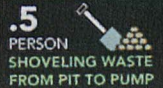
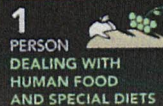
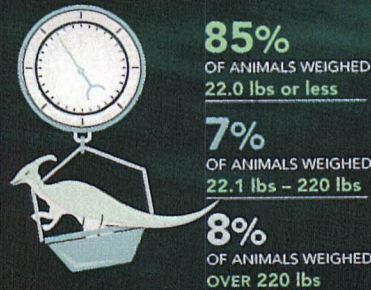
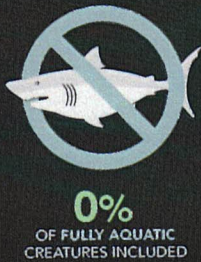
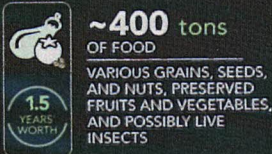
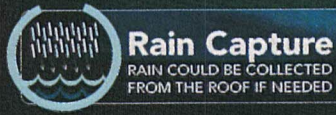
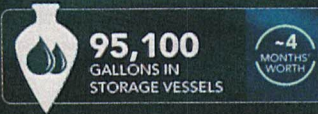
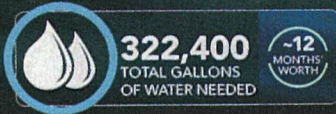
Noah was 600 years old when the rain began. Now he is age 601 on the first day of the year. Noah wonders if the land is dry. Genesis 7:11; 8:13



# EVERY THING FITS

Current estimates from Ark Encounter researchers place **1,398 animal kinds** on board the Ark.

Each of these animal kinds and their basic needs—such as food, water, and waste disposal—has been accounted for in the layout of the Ark.



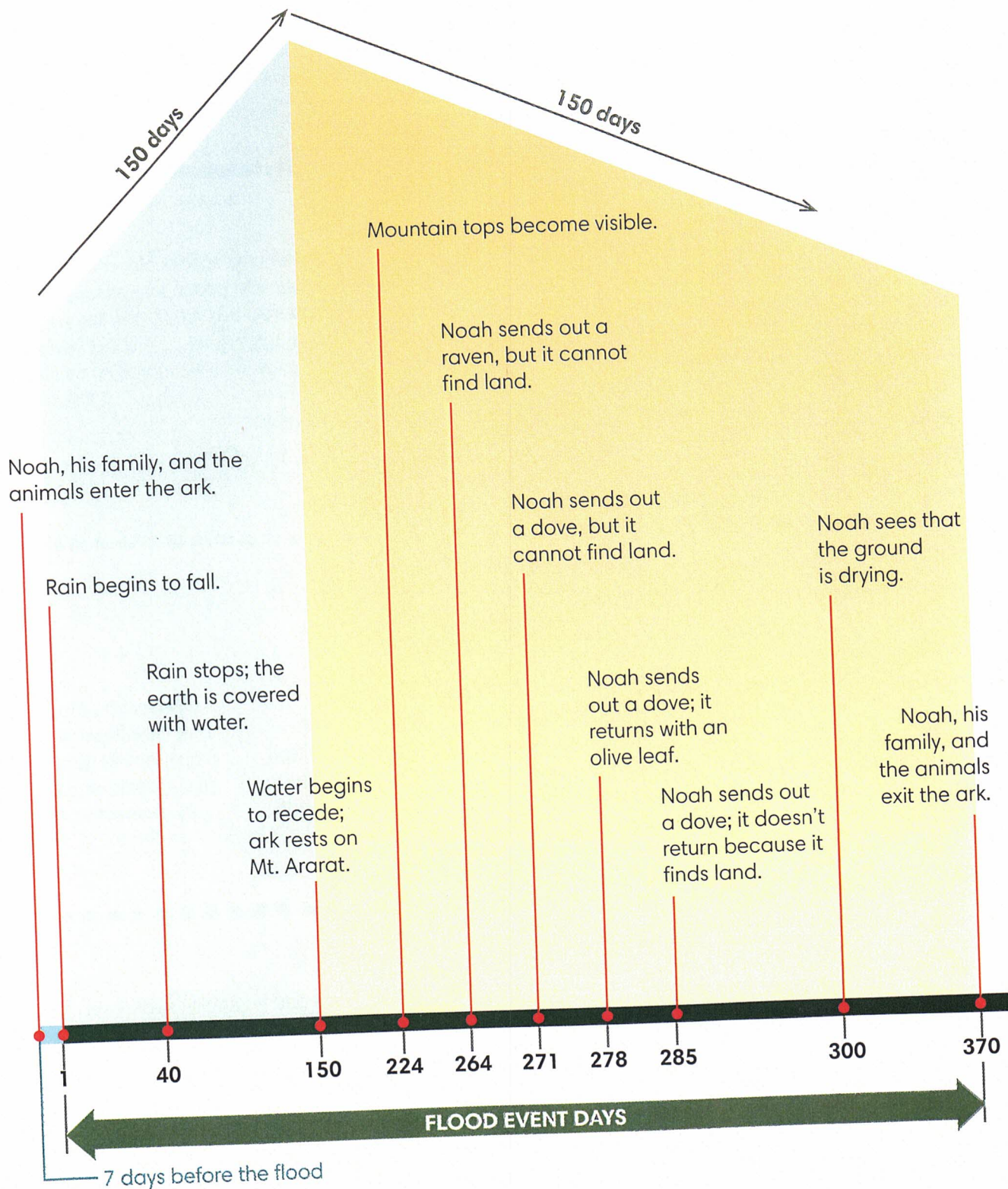
**447**  
TRACTOR-TRAILERS COULD FIT IN THE ARK [53 FT X 8.5 FT X 9.3FT]





# Chronology of the Flood

Genesis 7-8

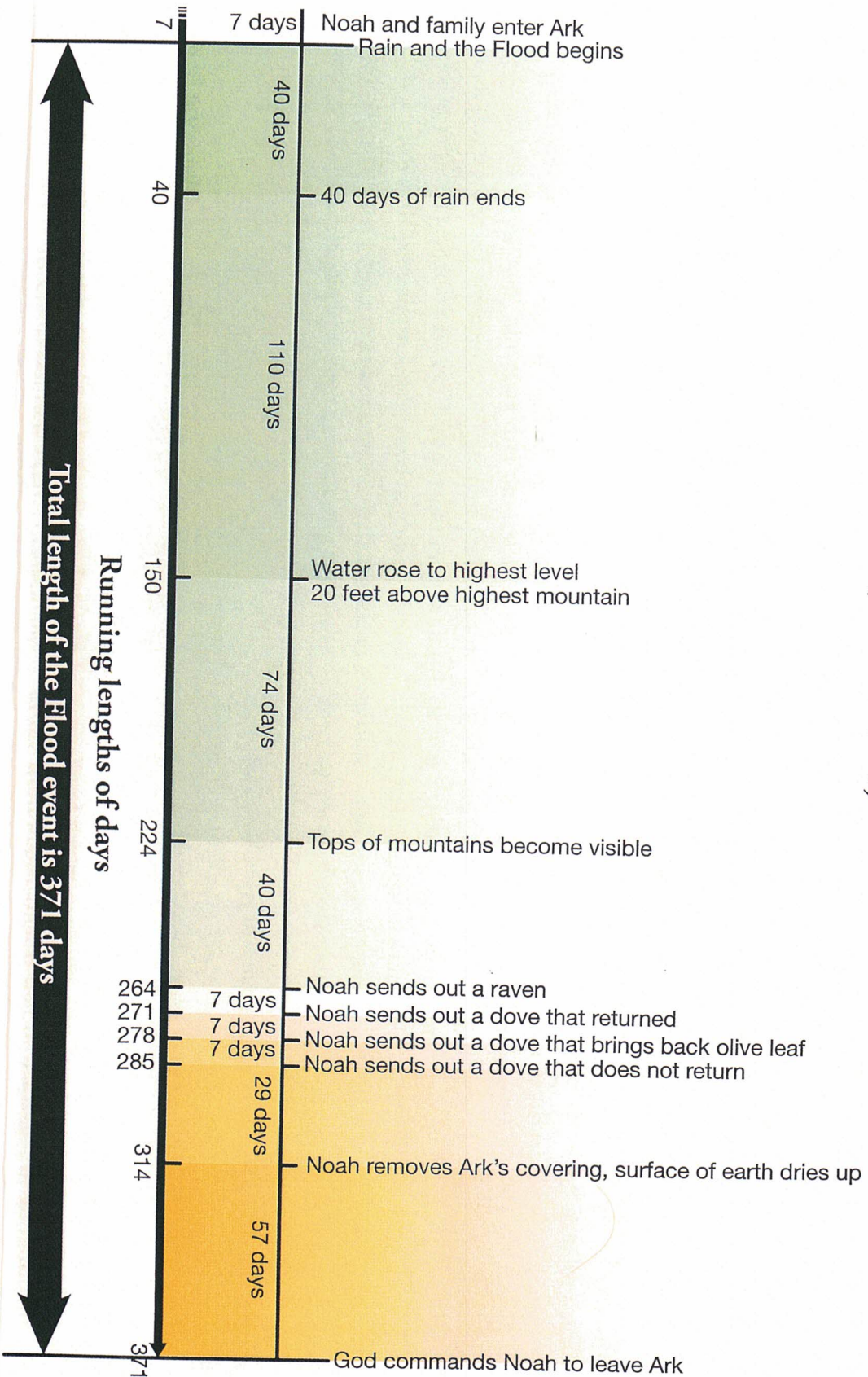






# Chronology of the Flood

(Genesis 7-8)

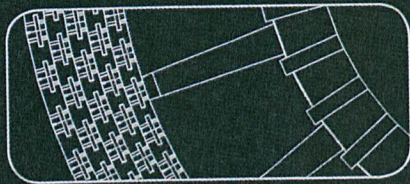




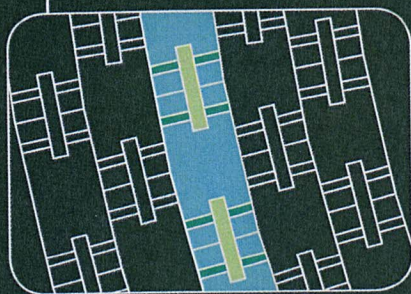
# BUILDING THE HULL

## EDGE-JOINTED PLANKING

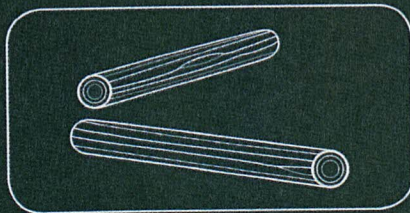
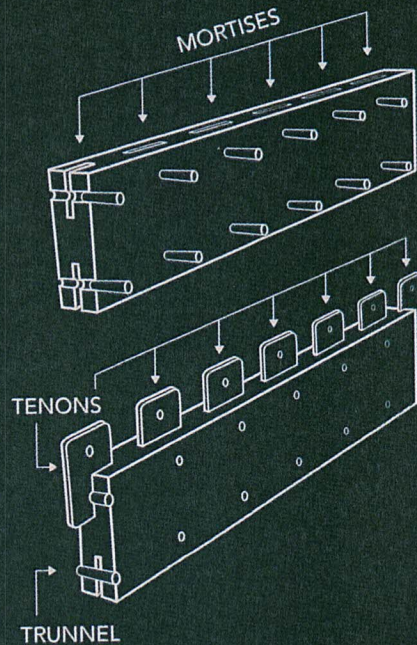
Ancient Greek ships featured planking with mortise and tenon joints. These interlocking pieces would prevent the planks from sliding and loosening up.



HULL DETAIL  
[SHOWING PLANKING LAYERS]



PLANKING LAYERS DETAIL  
■ PLANKS ■ TENONS ■ TRUNNELS



## TRUNNELS

Large wooden dowels driven through pre-drilled holes would further protect against sliding planks. Also, the wooden trunnels would expand in water making a watertight and permanent connection.



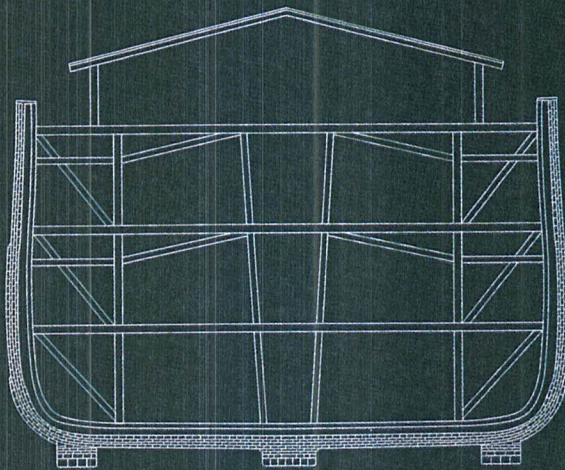
## PITCH

God told Noah to coat the Ark inside and out with pitch. Since petroleum-based pitch formed as a result of the Flood, the pitch Noah used was likely made from tree resin, providing further waterproofing for the Ark.

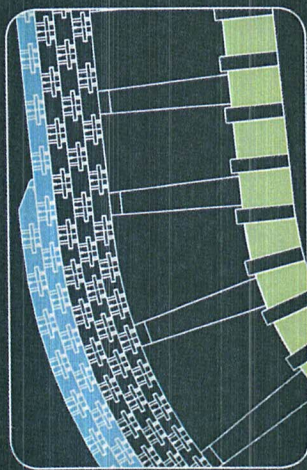
# BUILDING THE HULL

## WATERPROOFING & ENGINEERING

The problem with long wooden ships is that they tend to flex in the waves, causing the planks to slide against each other and break the waterproofing seal. To solve this problem, the hull must be constructed in a way that prevents the planks from sliding.



CROSS SECTION OF HULL  
[SHOWING PLANKING LAYERS]



HULL DETAIL  
■ SACRIFICIAL LAYERS ■ CEILING

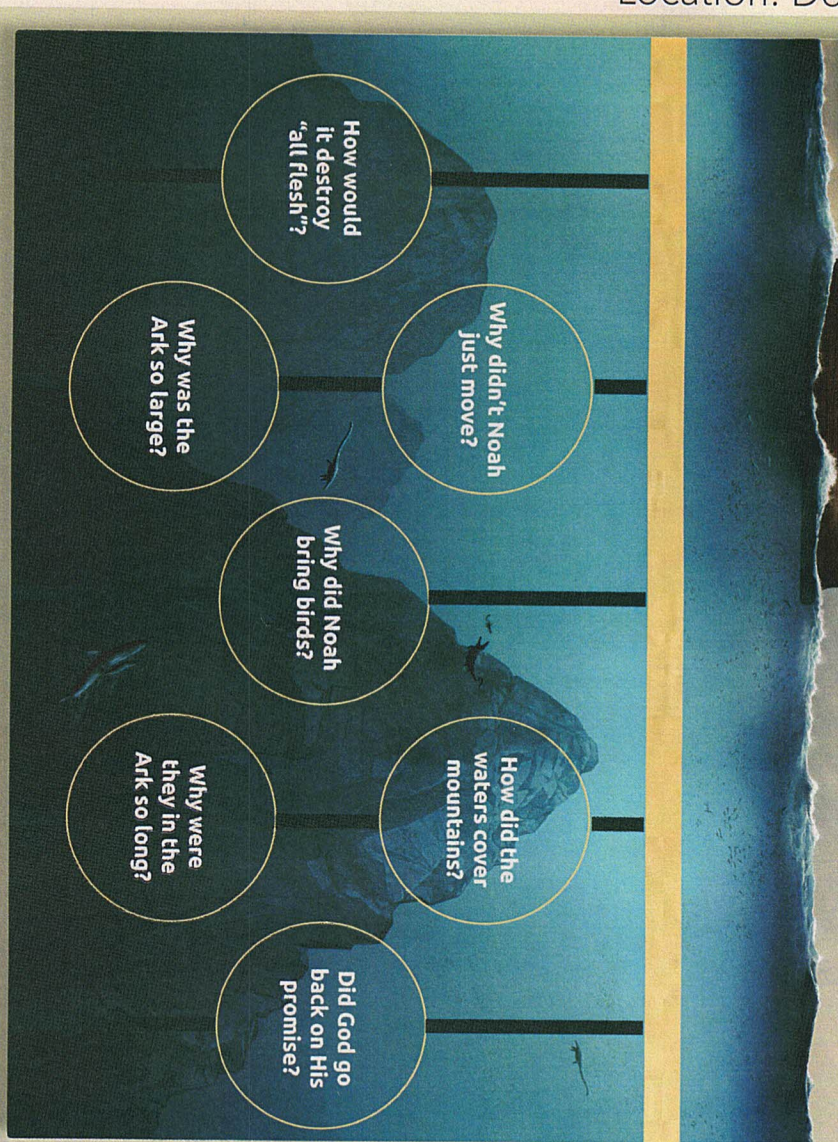
## MULTIPLE LAYERS

The Ark Encounter design features three layers of structural planking to improve shear resistance in the hull. It also includes two outer sacrificial layers below the waterline to protect against damage from scraping and collision.

## SHEAR-RESISTANT CEILING TIMBERS

The ceiling of a wooden ship consists of thick timbers attached to the inside of the hull. These timbers increase the strength of the hull and provide attachment points for the internal decks.

# If the Bible really meant to teach a local flood then....



Why didn't Noah just move?

How would it destroy "all flesh"?

Why was the Ark so large?

Why did Noah bring birds?

How did the waters cover mountains?

Why were they in the Ark so long?

Did God go back on His promise?

# If the Bible really meant to teach a local flood then...



Why would Noah need to build an Ark if the Flood were just a regional event? The animals and people could have easily moved out of the area before the Flood began.

God stated that the purpose of the flood was to destroy "all flesh" that lived on the land. The Bible does not even mention the worldwide extent of the devastation.

The Ark was large enough to house pairs of every kind of land animal on the planet. If the Flood were only a local or regional event, then the Ark could have been much smaller.

Why would Noah bring flying creatures aboard the Ark if the Flood were a regional event? They could have easily flown out of the area.



# THE FLOOD DROWNS THE EARTH

THE FLOOD COVERED ALL THE CONTINENTS

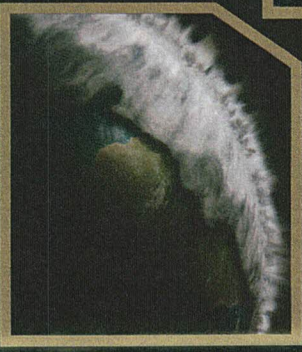


## THE FLOOD WAS A GLOBAL JUDGMENT

Human violence was worldwide, so judgment had to be worldwide. Animal violence was everywhere, so animals everywhere had to be destroyed. All land was cursed, so all land had to be restored.

## THE FLOOD WAS A GLOBAL CATASTROPHE

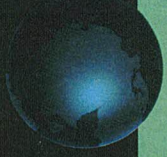
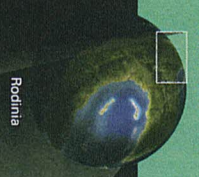
The Bible states the Flood covered all mountains, so the Flood had to cover all land on earth. The Bible states the Flood lasted over a year, so the Flood was not merely a local event.



# THE FLOOD REARRANGES THE EARTH

CONTINENTS MOVED RAPIDLY DURING THE FLOOD

BEFORE THE FLOOD



EARLY IN THE FLOOD



LATE IN THE FLOOD



...the same day all the fountains of the great deep were broken up, and the windows of heaven were opened.  
(Genesis 7:11)

### THE FLOOD BEGINS

Pangaea breaks up under water

Rodinia breaks up

Pangaea forms under water

Pangaea breaks up under water

TODAY

# A CLUE: MOUNT ST. HELENS

THE PRESENT PROVIDES HINTS ABOUT THE PAST



### 1 ASH CLOUD

A single ash cloud cools the earth a fraction  
A miniature example of the earth cooling after



### 2 LAVA DOME

When 11 years old, a new lava dome dates  
350,000 years old by potassium-argon (K-Ar)  
An example of radiotope dating difficult



### 3 LOWWIT CANYON AND STEP CANYON

Mudflows cut canyons out of solid rock in  
A miniature example of rapid erosion during  
after the Flood



### 4 ENGINEERS CANYON AND LITTLE GR

Mudflows cut canyons out of soft sediment  
A miniature example of rapid erosion during  
after the Flood





# HOW COULD SO FEW KINDS BECOME SO MANY SPECIES?



## IMAGINE STEPPING OFF OF A WORLD WIPPED CLEAN BY

The climate and land are fundamentally altered. Plant life is sparse, and there are fewer varieties than before. Across the globe, not a single landmark, tree, or land-dependent species remains. Thus far, this new world is harsh, uninhabitable. How did the animals respond to this alien environment? Scientists use models of rock layering, we can infer that the changes were significant. Physical trends among animals preserved in the fossil record show that many of the Ark kinds adapted quickly. The decade following the Flood exhibited post-Flood specializations—features that help animals survive in a post-Flood earth.

These changes within kinds demonstrate the mercy, grace, and

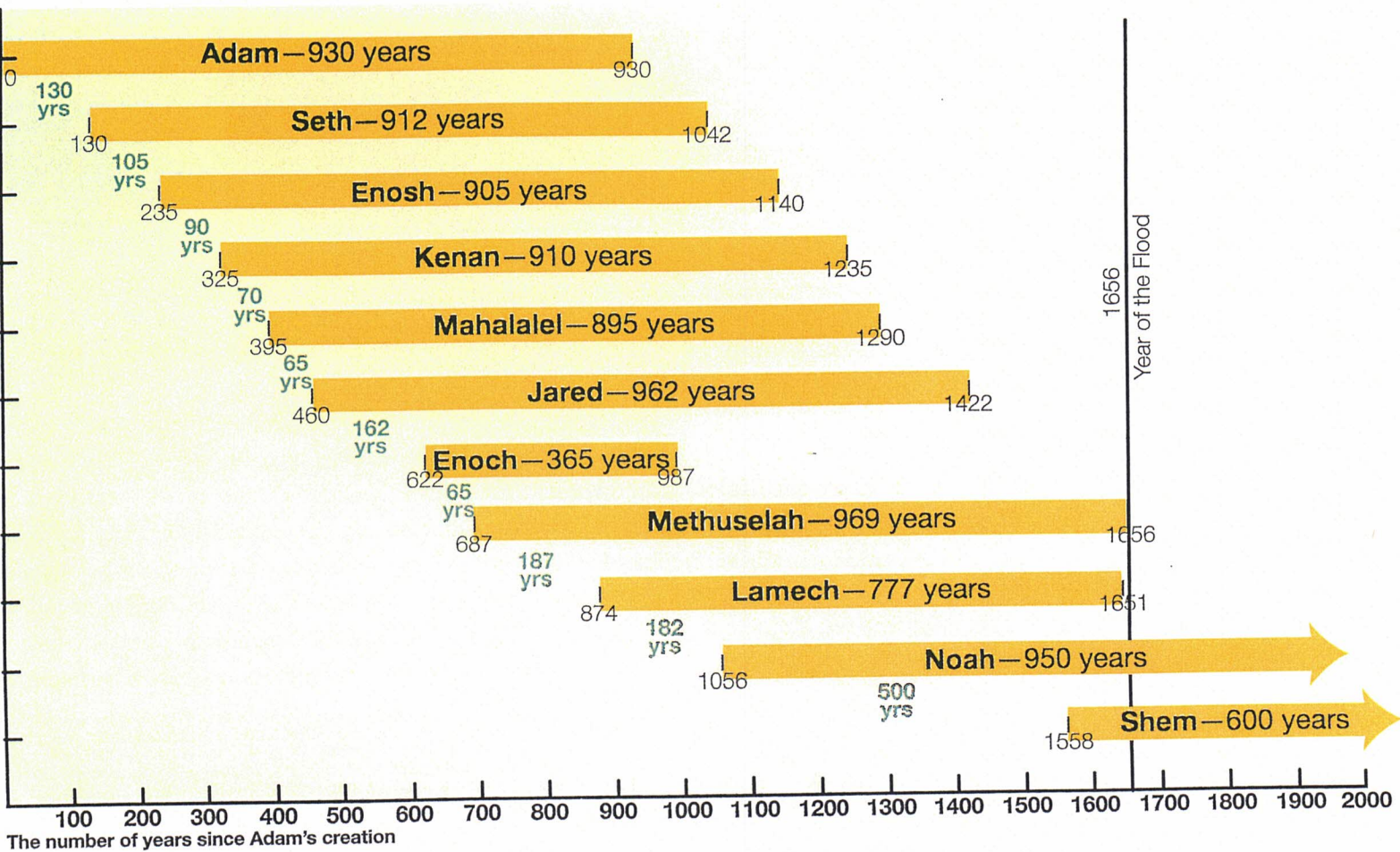


## THE EXIT

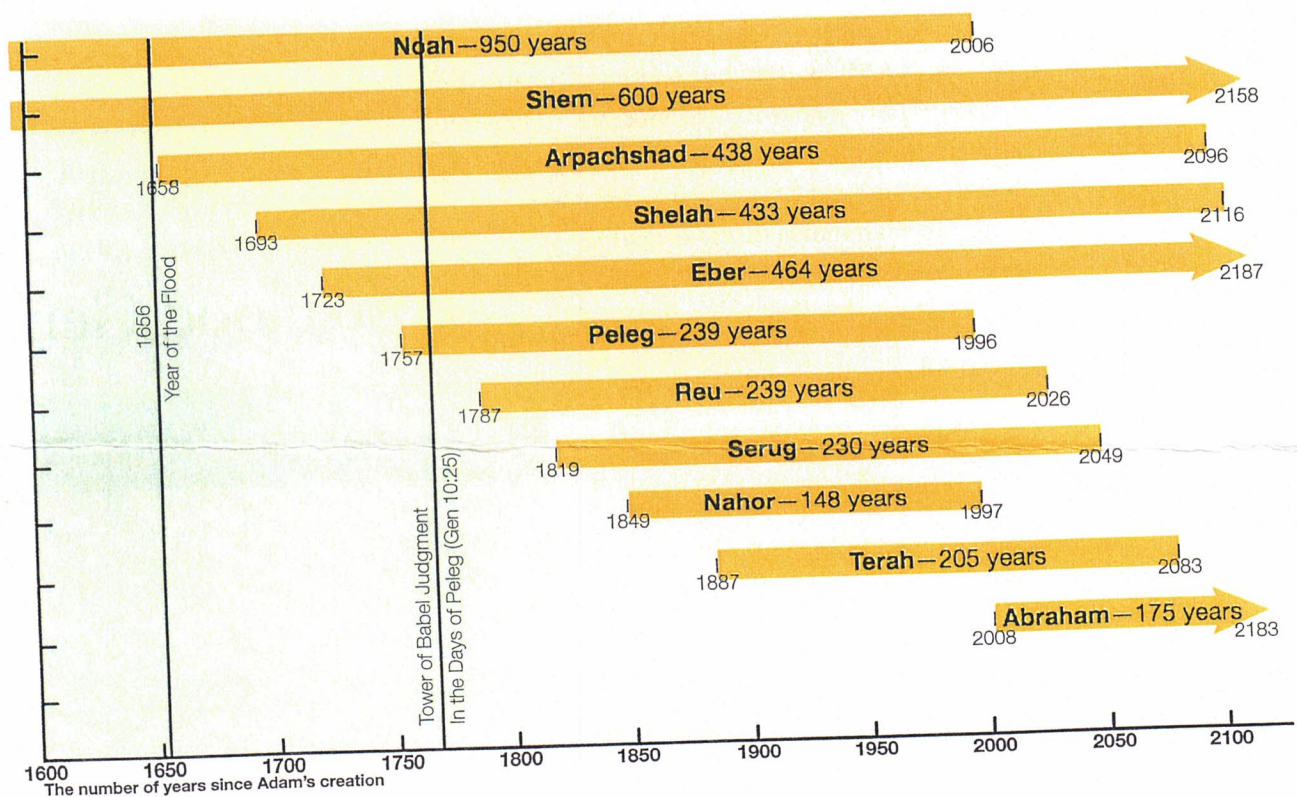
As the dog representatives exit the Ark, they find a very different world. Gone are the rolling hills and lush greenery of the pre-Flood earth. In their places stand mountains and a very different landscape. In this strange, empty landscape, the survival of the fittest is the only way to adapt. Thankfully, God has given



# Pre-Flood Genealogy (Genesis 5)



# Post-Flood Genealogy (Genesis 10-11)





# Extent of the Flood:

## Part I

UNIVERSAL FLOOD: EVIDENCE	LOCAL FLOOD: REBUTTAL
The language of the account, over and over expresses totality (Gen. 7:18-24).	The account is from the viewpoint of the narrator, and from his perspective it is total. "All" doesn't always mean "all" (Gen. 41:57; Deut. 2:25; 1 Kings 18:10).
If 150 days were needed for the water to recede, it must have been universal.	A large-scale local flood could take that long and, even with wind drying it, a universal flood would take much longer.
The size of the ark indicates that this was no local flood.	A large ark was needed because of the number of animals it had to house; the size is not related to the extent of the flood.
If the flood was only local, why was the ark necessary at all?	That is the way God chose to save. Building the ark gave Noah an opportunity to preach.
The purpose of the flood was the punishment of world-wide sin. A local flood would not do; some could have escaped.	God could have made certain all flesh was destroyed without flooding the entire globe.
There are universal traditions of people with accounts of a flood.	Many don't have the tradition (e.g., Egypt); many accounts do not claim the flood was universal; there are many differences in the various accounts.
There are world-wide traces of the flood. A universal flood is geologically supportable.	Evidence is scattered, inconsistent, and unsubstantial. There is no conclusive geologic evidence for such a catastrophe.
The promise of no future floods (Gen. 9:15) would be false if it had been only a local flood.	Though local, it still could have been greater than any since. Also, the promise is for no flood "to destroy all flesh"; intent is stressed.
A universal flood is the clearest meaning of the text and has priority.	Scientific evidence against universal flood is of such an extent that secondary reading of the text is necessary.
Ending ice ages, dissolving canopies, continental drifting, and/or changes in the angle of the earth were all used to create necessary conditions.	This argument is too theoretical and perhaps these phenomena would still be insufficient. Also, they do not explain everything.
The mountains of Ararat are high and since water seeks its own level and the ark came to rest there, they must have been covered.	The ark did not land on a peak of the mountain, but somewhere in that chain. Noah and his family could not possibly have gotten down from a peak.

# Extent of the Flood: Part II

LOCAL FLOOD: EVIDENCE	UNIVERSAL FLOOD: REBUTTAL
A local flood is indicated by the fact that the ark came to rest within 500 miles of its starting point.	God's guiding hand has accomplished things more remarkable.
To flood the entire globe would need 8 times the amount of water now available in our system. No miracle is mentioned. Where did it come from?	It came from an atmospheric source (canopy theory), but not that much was needed because the land was much lower, mountains were raised after flood.
Mixing of fresh and salt water would be disastrous for fish.	We don't know the adaptability of fish at that time, but even if most were destroyed, God could easily have preserved 2 of each species.
If 8 times our present amount of water rained down, there would have been a detectable dilution of salt waters.	The earth had much less water in its system before the flood, and salt water was much lower in saline content. Salt content would quickly equalize.
The amount of water required for a universal flood would have totally destroyed most plant life.	Enough plant life would have survived by floating and by preserved seeds.
There would be great difficulty not only in storing enough food, but in the actual caring for the animals.	It is suggested that most, if not all, of the animals hibernated to some extent.
The biblical record concerns itself only with those peoples interacting with Israel. Other lands were not involved.	The biblical record implies that the earth was populated by the descendants of Noah (see also Luke 17:26-30 and 2 Peter 2:5).
Noah did not go to Africa, China, etc., to preach repentance. The tone of the passage is local.	We are nowhere told that Noah spoke to everyone affected by the flood. Noah alone found favor in the eyes of the Lord.
The fossil sequence in geologic strata world-wide show little variation from what would be expected. A universal flood would have caused hopeless shuffling.	The sequence is often reversed. Also, fossil sequencing is based on the evolutionary model, which is here rejected.

Note: The evidence and rebuttals presented are not purported by their mere presentation to be scientifically accurate. We are unqualified to make that judgment. The chart only represents the arguments on each side, not a certification of their factuality. The major sources are: J. Whitcomb and H. M. Morris, "The Genesis Flood" (Nutley, N.J.: Presbyterian and Reformed, 1960); B. Ramm, "The Christian View of Science and Scripture" (Grand Rapids: Eerdmans, 1954); W. Ault, "The Flood," in "The Zondervan Pictorial Encyclopedia of the Bible" (Grand Rapids: Zondervan, 1975).

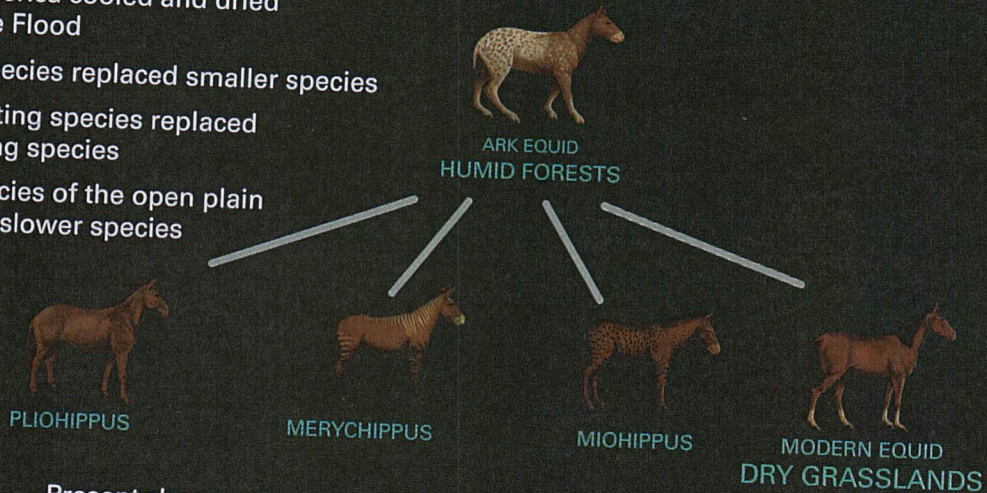
# LIFE RECOVERS

GO OUT OF THE ARK...AND BRING EVERY LIVING THING THAT IS WITH YOU...THAT THEY MAY BREED ABUNDANTLY IN THE EARTH, AND BE FRUITFUL AND MULTIPLY UPON THE EARTH. (GENESIS 8:16-17)

## ORGANISMS CHANGE RAPIDLY AS THE EARTH CHANGES

As North America cooled and dried following the Flood

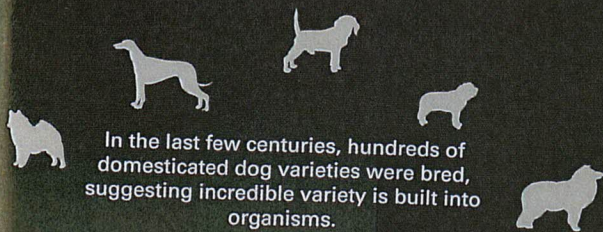
- larger species replaced smaller species
- grass-eating species replaced leaf-eating species
- swift species of the open plain replaced slower species



Present changes are too small and too slow to explain these differences, suggesting God provided organisms with special tools to change rapidly.

## VARIETY RECOVERS RAPIDLY AFTER THE FLOOD

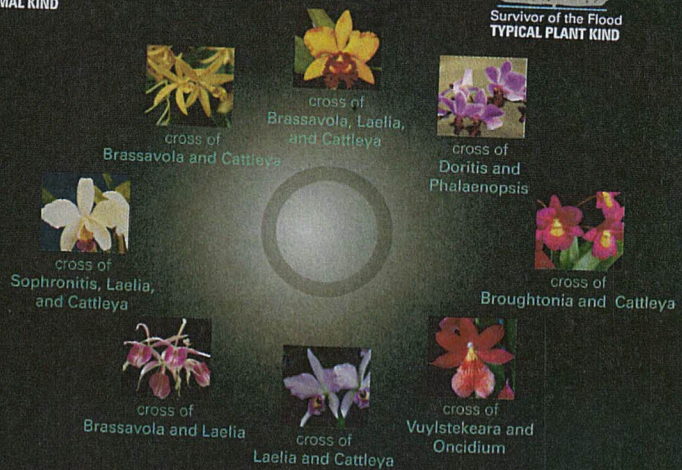
Two of each kind of land animal (and more of the clean animals) were represented on the Ark. Other species in each kind appeared rapidly after the Flood. The Creator built this variety into the original organisms at the creation.



In the last few centuries, hundreds of domesticated dog varieties were bred, suggesting incredible variety is built into organisms.

The dogs leaving the Ark generated all the dog species in the present, including coyotes, wolves, and foxes.

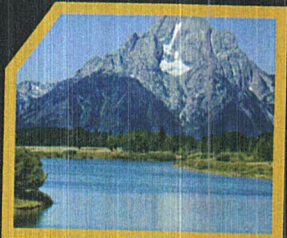
PAIR OF CANIDS ON THE ARK



Hybridization is common within families of many plants and animals, suggesting they arose recently from a common ancestor.

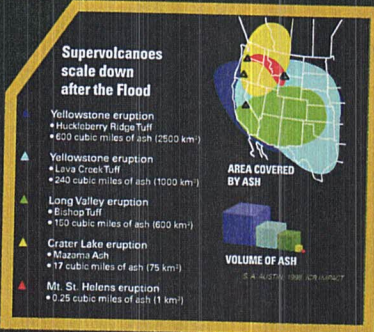
# THE LAND RECOVERS

THE CRUST SETTLES DOWN AFTER THE FLOOD



*Even today, the Grand Tetons rise while Jackson Hole sinks.*

The Flood moved continents, rocks, and sediment on a global scale. Thick crust at the end of the Flood needed time to sink to the proper level, and thin crust needed time to thicken.



The motion of the crust generated catastrophes, large at first, smaller in time. Supervolcanoes and superquakes rocked the earth for centuries, gradually diminishing in size and frequency to the quakes and volcanoes we have today.



*Rhino preserved in ash from a supervolcano*

While organisms refilled the earth and changed rapidly with the climate, catastrophes buried them, preserving a record of these turbulent times.



# ONE ICE AGE OR MANY?

DIFFERENT WORLDVIEWS LEAD TO DIFFERENT CONCLUSIONS

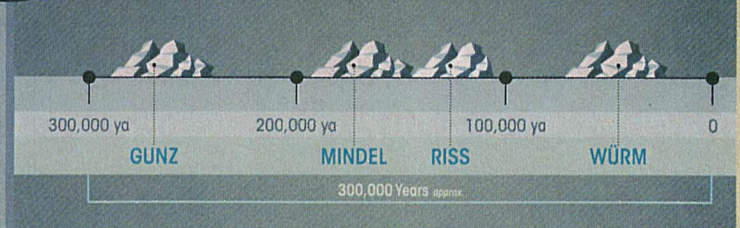
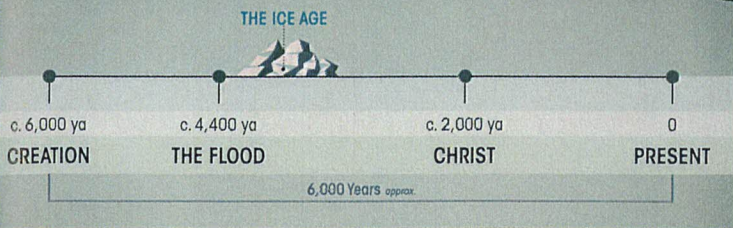
## BIBLICAL VIEW

Our *biblical model* maintains that there was only one ice age, and it came about as a result of the global Flood.



## SECULAR VIEW

The leading *secular model* holds that there were at least four major ice ages, each exhibiting periods of glaciers advancing and retreating.

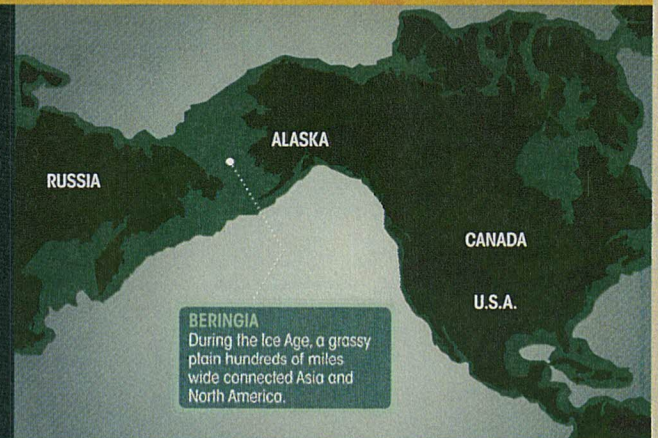


# LAND BRIDGES

## HOW COULD LAND ANIMALS REACH DISTANT PLACES?

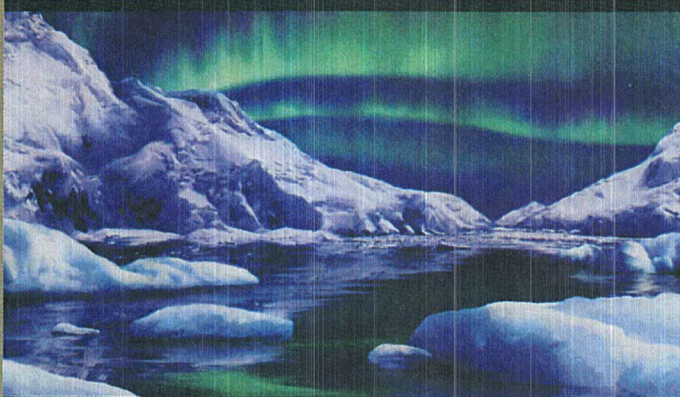
After the Flood, massive volumes of water would have remained on the land masses in inland seas, long since drained or dried up. Tremendous amounts of water were trapped in the buildup of snow and ice on land. With so much water removed from the ocean, sea levels would have been hundreds of feet lower, exposing land bridges to nearly every continent on the globe.

In addition to these natural bridges, land animals could have reached distant shores via other means, including swimming, floating debris, and with people on boats.



# THE ICE AGE

## AN AFTEREFFECT OF THE GLOBAL FLOOD

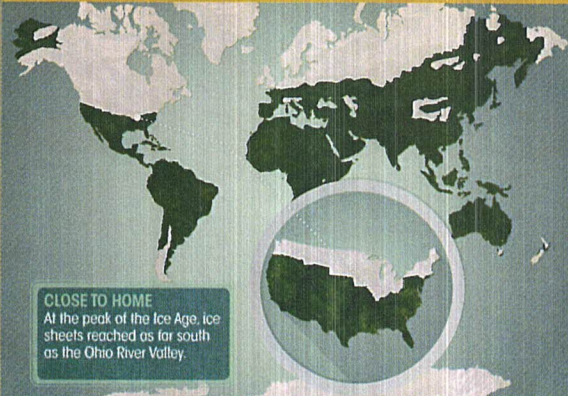


The global Flood devastated the entire earth and left evidence in the form of fossils and sedimentary layers around the world. Repercussions of this catastrophe rocked the planet for many decades as the unique conditions of the Flood plunged the earth into the Ice Age. Rapidly changing environments brought difficult challenges for living creatures as they endeavored to fill new surroundings.

# EXTENT OF THE ICE AGE

## WHERE WAS THE ICE?

## HOW LONG DID THE ICE AGE LAST?



**CLOSE TO HOME**  
At the peak of the Ice Age, ice sheets reached as far south as the Ohio River Valley.

Glaciation during the Ice Age stretched across virtually all of Canada. The ice reached all the way to modern-day southern Illinois, and many of the northern states were covered. All of Antarctica as well as much of Europe and Russia were also covered.

According to the Creation/Flood model, the effects of the Flood continued for many years, ultimately bringing about the earth's single Ice Age. This unique event would have peaked and greatly diminished within a few hundred years of its start.



# Once upon a time

there was an old man of God.  
His name was Noah and his task was quite odd.

One day, the Lord said to build a little boat.  
"Make it nice and cute, but who cares if it will float.

Be sure to make room for an elephant or two,  
And for monkeys and giraffes in your floating wooden zoo.

It will rain quite hard for forty days and nights  
'Cause men are so mean and have started many fights."

So kind old Noah built his little wooden ark  
And all his friends laughed when told about his lark.

The rain beat down and the dark clouds loomed,  
The lightning flashed and the thunder boomed.

All of the creatures were packed tight into the ship  
But when the first wave hit, Noah's boat did a flip.

The ark was demolished from floorboard to rafter  
And no man or beast lived happily ever after.

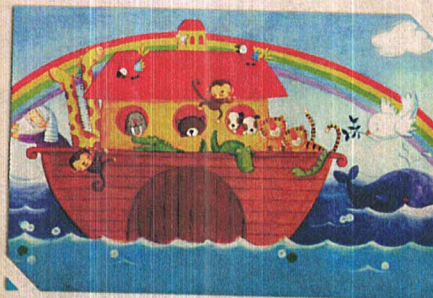


IF I CAN CONVINCING YOU  
 THAT THE FLOOD WAS NOT REAL,  
 THEN I CAN CONVINCING YOU THAT  
 HEAVEN AND HELL  
 ARE NOT REAL.

## 7D'S OF DECEPTION

The Bible explains that the size of the Ark was 300 x 50 x 30 cubits. Using artistic license and stylizing the Ark is not necessarily sinful, but these cute arks drastically distort Scripture and make the account look like a fairy tale.

## DISREGARDING GOD'S WORD

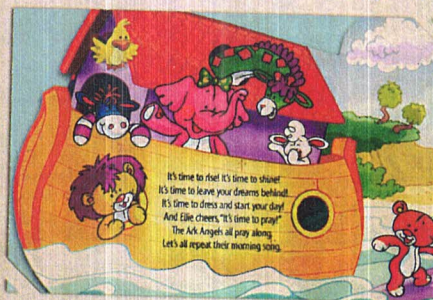


Fairy Tales, Holy Ghost & All. Copyright Publishing, Ltd. 2013

## 7D'S OF DECEPTION

Fairy tale ark stories often focus on cute animals on a fun boat ride. But the Flood account is about the righteous and holy God judging an exceedingly sinful world with a cataclysmic Flood while showing mercy to Noah's family and the animals.

## DISTORTING THE MESSAGE



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Location: Deck Two

## 7D'S OF DECEPTION

Many of the fairy tale arks are extremely cute and were surely drawn with great intentions.

However, cute things are not necessarily innocent or harmless, and good intentions can lead to disastrous consequences.

## DECEPTIVELY CUTE

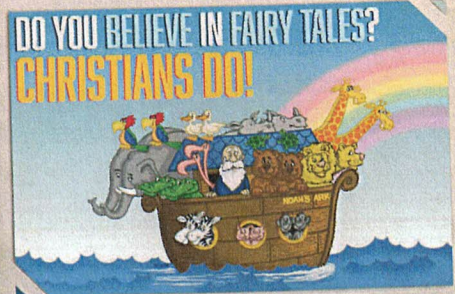


Fairy Bible, My Very First Bible, Moon Books & More, Inc., 2012

## 7D'S OF DECEPTION

Many atheists and other skeptics love to use fairy tale arks to mock the Bible. Christians should be defending the truth of God's Word against skeptical attacks rather than providing ammunition to enemies of our Lord.

## DISCREDITING THE TRUTH



This image is a reproduction of all rights reserved by the author using a third party and is not the Bible.

## 7D'S OF DECEPTION

The cute fairy tale arks are not only marketed to children; thousands of items featuring whimsical arks have been made for adults too. The abundance of these fanciful objects attacks the truthfulness of Scripture.

## DESTRUCTIVE FOR ALL AGES



Fairy Bible, My Very First Bible, Moon Books & More, Inc., 2012

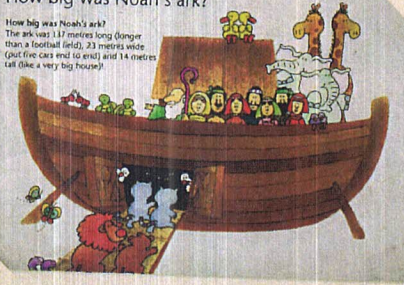
## 7D'S OF DECEPTION

Some children's books send mixed messages by citing the biblical dimensions of the Ark while displaying an image of a fairy tale ark. Presenting contradictory information confuses readers rather than properly instructing them.

## DISORIENTING THE READER

How big was Noah's ark?

How big was Noah's ark?  
The ark was 117 metres long (longer than a football field), 23 metres wide (just five cars end to end) and 14 metres tall (like a very big house).



John P. Green, How Big Was Noah's Ark? (Illustrated Press, 1991)

## 7D'S OF DECEPTION

By treating Noah's Ark and the Flood as fairy tales rather than sobering reminders of divine judgment on a sin-filled world, these storybooks frequently trivialize the Lord's righteous and holy character.

## DEFAMING GOD'S CHARACTER

Long ago, a man named Noah knew a great flood was coming. All the world's dry land was going to be underwater!

Quickly Noah built an ark to rescue the animals.

When it was time to get on the ark, Toby and Tilly's tiger noticed that the animals getting on the ark were so pudgy.

"What is this?" Toby said. "I was going to help get everyone on board."



John P. Green, Noah's Ark: A Fun-Filled Storybook (Illustrated Press, 1991)

AND EVERYONE DIED  
EXCEPT THE 8 PEOPLE  
IN THE ARK.

GENESIS 7:23