

WYOMING  
ARCHAEOLOGICAL  
SOCIETY

# THE WYOMING ARCHAEOLOGIST



SEPTEMBER 1972

VOL. XV

NO. 3



THE WYOMING ARCHAEOLOGIST is published quarterly by the Wyoming State Archaeological Society, Grant H. Willson, Editor. Address manuscripts and news items for publication to: The Editor, 1915 East 15th Street, Cheyenne, Wyoming 82001.

NOTE: Membership period is from January through December and includes all issues published during current year regardless of the month the subscription commences. All subscriptions expire with the Winter issue and renewals are due the first of January each year.

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### EDITOR'S NOTES

You can't imagine how nice it is to hear from an old member who has strayed clear from Casper to Calgary, and who has such an interesting article for us. Art Randall reports that....."Our chapter, the Calgary chapter, is a rather active branch of the Archaeological Society of Alberta. Most of our speakers are graduate students from the University of Calgary who are finishing up their doctoral work. Most of the papers deal with the archaeology of British Columbia, Alaska and the Arctic. There has been a push lately for archaeological work in the Arctic, some of it even being sponsored by oil companies.

"I am sure the membership of the Wyoming Archaeological Society has grown by leaps and bounds, and I probably would know only a few, but give my regards to my old friends. Best of luck for the continued success of the Society."

We must really beat the drums for the Foundation, and chapters should work on reaching 100% goal in contributions.

WYOMING  
ARCHAEOLOGICAL SOCIETY, INC.



Dear Fellow Members:

The Summer meeting was a great success. Even the weather cooperated and the Saturday afternoon trek into the Castle Gardens area was most rewarding. Despite the old BLM sign just east of Moneta, which says "29 miles to Castle Gardens", the new route only measured 17 miles. I guess Henry Jensen shortened the route for us, and I thought it was exceptionally thoughtful of him to stage the "Gift of the Waters" pageant in Thermopolis on the same weekend. I do know, now, that when Henry says, "four wheel drive would be best", you had better have just that, or a well trained team of goats.

The Sunday trek was up, over, down, and around some of the roughest Pre-Cambrian granite outcrops along the south flank of the Owl Creek Mountains. We all agreed that this Indian Trail, which has so deeply interested Henry Jensen that he has traveled and mapped it extensively, is worthy of further study and that the effort that went into building hundreds of the stone piles, obviously marking this trail, simply defies explanation.

We nooned under the spreading cottonwoods at the famous Lysite Hilton with those wonderful hosts, Henry and Clara Jensen. Late Sunday afternoon we were rescued from the clutches of Badwater Creek by the wonderful hospitality of Jim and Mary Helen Hendry.

Please mark the following dates, November 11 and 12, for the Workshop at the University. This is a non-football weekend after most hunting seasons, so plan to attend--now. Bill Sutton will mail to each chapter complete information before the first of November.

See you all in Laramie.

Grant

ARROWHEAD ROCK  
By Mrs. Al T. (Dee) Visborg

(Site is almost on the Montana-Wyoming border  
Forks Ranch, Decker, Montana)

One half mile from my home, which is on the Montana-Wyoming border about thirty miles east of Decker, Montana, there stands an ancient workshop that has been pot-hunted for years.

The Rock is on a hill above Hanging Woman Creek, approximately one thousand yards from the old creek channel. The area abounds with game birds and game animals, large and small. The creek does not run all year, but has water near this location even in the driest of times. A few large Cottonwood trees and box-elders mark the spot.

The nearby hill overlooking the creek has produced some flakes and a few artifacts. Many large campsites lie near this area where Hanging Woman Creek is joined by its West Prong. Several small warm springs keep open water all year.

It is a large sandstone outcropping from which the surrounding sandy soil has eroded. It is capped with harder stone which has numerous large natural bowls on top. These were used to cook in. The rock was also the site of arrow manufacture. The two near by rocks show no signs of similar use.

When I became interested in hunting arrowheads, a neighbor suggested screening at the Rock. Armed with a small piece of screen and complete ignorance, I marched to the Rock. My first discovery was among the hundreds of flakes washed out around the base. I dismissed the round piece of shell with a hole in the center as an old button from a shirt. I dropped it in a can with the chips and forgot it. My next visit to town found me buying every book the bookstore had on archaeology. Imagine my surprise and search for the "button" when, in a book, I discovered it was a shell bead!

I screened alone with a large stationary screen, loading a bucket with material and carrying it to the screen some distance from the Rock.

The material consists of sandstone rocks native to the area, ashes turned to black soil, a lot of charcoal, numerous chips, bones, arrows and broken pieces of large worked tools.

The sandstone rocks can be picked up anywhere around the area and most are burned. There are at least a ton of these.

There was so much charcoal in the main pits that everything was coal black when screened, including me.

I screened almost a bushel basket full of chips. Most of them are the native grey and red shale. Many are very large thin flakes. There are some flakes of opaque brown material and petrified wood that are very pretty.

There are many small rodent bones which I guess to be ground squirrels or chipmunks. There are a few large buffalo bones from not more than one buffalo. There are some smaller bones that could be deer. Most of the larger bones are broken into small chips. Many are burned.

There are bits of red ochre and bits of oyster shell as if they made the shell beads there.

The shell beads were found at various depths in locations screened completely around and on top of the Rock. I have eight complete beads and three broken pieces. They are quite fragile. To complete the necklace are six carefully smoothed bone "spacer" beads of varying sizes. More of these could have been lost through the screen as they are quite small in diameter.

Upon finding the lovely, needle sharp antler awl, I started to watch bones closer and began to discover more bone tools. I have twelve bone drills or piercers.

About half the arrows are side notched with straight or concave bases. The rest are not notched. Dr. Frison believes them to be unfinished. Most are very thin and finely worked. Only a few of the arrows were whole, but with luck and Elmer's glue, I pieced together many that were broken in half. Sometimes the broken halves of one arrow were screened on opposite sides of the Rock.

There are scrapers, knives, and broken pieces of many more. There are also a few pieces of broken manos. When Dr. Frison examined the site, he picked three pieces of broken rock from my huge pile of rock. With a little glue they became my first and only whole metate.

The location is so eroded that there are no levels of occupation. It seems to me that there was a heavy occupation during a relatively short period of time. I have screened all of the heaviest concentration of material from around the Rock during the last four years. Once in a while I go back, dig in a new place and screen a few flakes and occasionally a broken base or point.

The approximate totals of artifacts I have screened follow: 114 broken bases, 98 broken points, 58 nearly whole arrows, 46 perfect arrows, over 100 scrapers, blades, drills, graters and tools I cannot identify. There are worked pieces that may be unfinished arrows and scrapers.

As I catalog my artifacts, my imagination pictures the Rock several hundred years ago. I see Indians hunting, cooking and resting there. For me this is as much fun as actually finding the artifacts.

Mrs. Al T. (Dee) Visborg



Fig. 1

View of site - looking to the west.

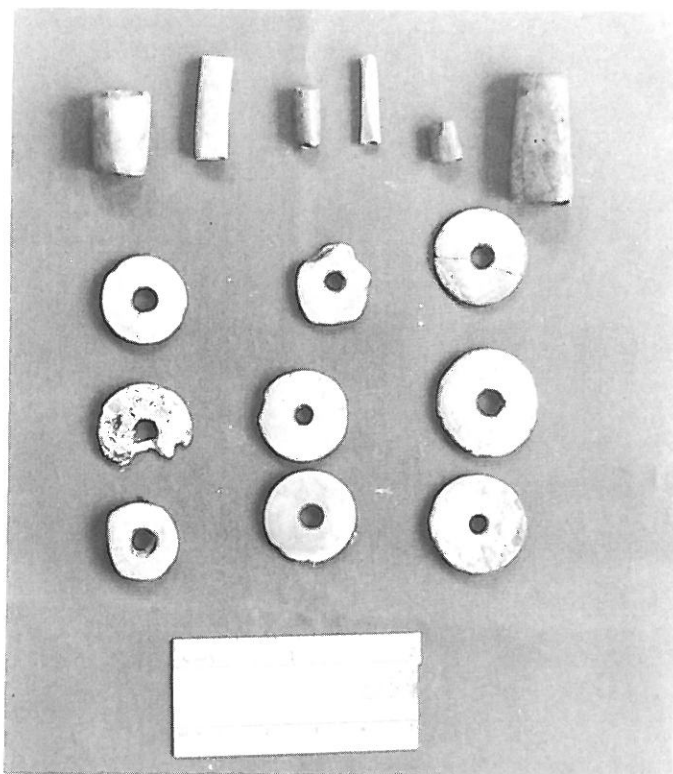


Fig. 2  
Tubular bone beads (top)  
and flat shell beads.



Fig. 3  
End scrapers, notched  
flakes, and broken tips  
from perforators.





Fig. 4  
Side notched pro-  
jectile points.

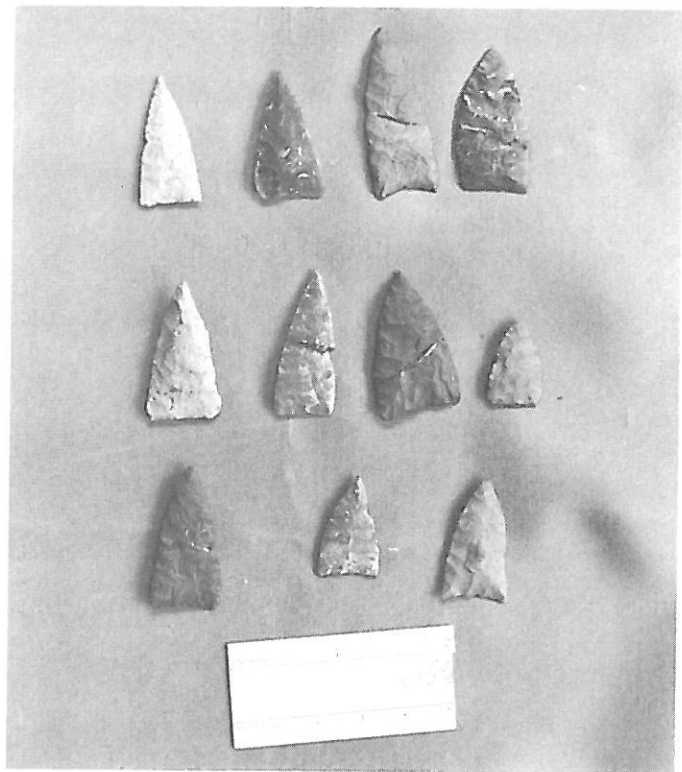
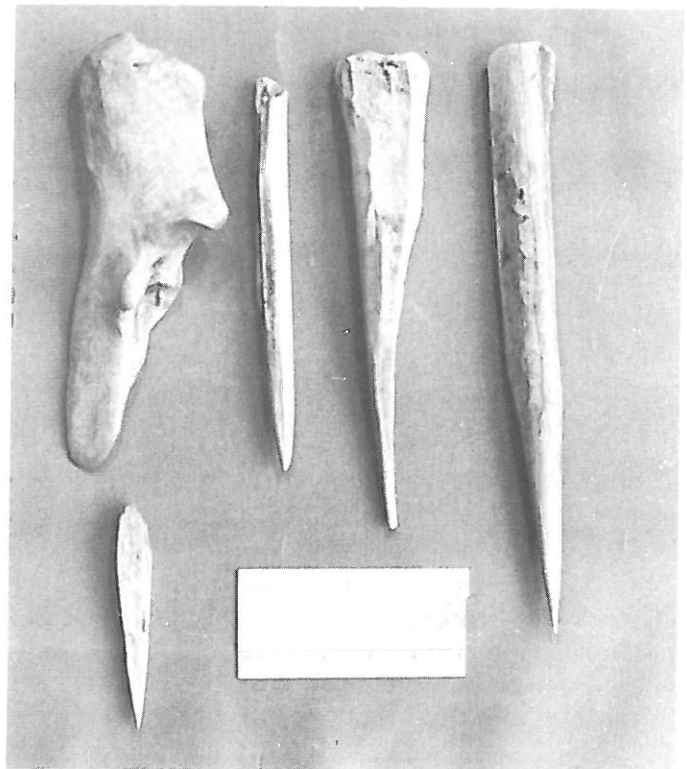


Fig. 5  
Unnotched projectile  
points.



Fig. 6  
Retouched flake scrapers (upper left and center) and end scrapers.

Fig. 7  
Deer or antelope ulnae tool (upper left) and deer metatarsal awl (lower left) and broken splinter bone awls (center and right).



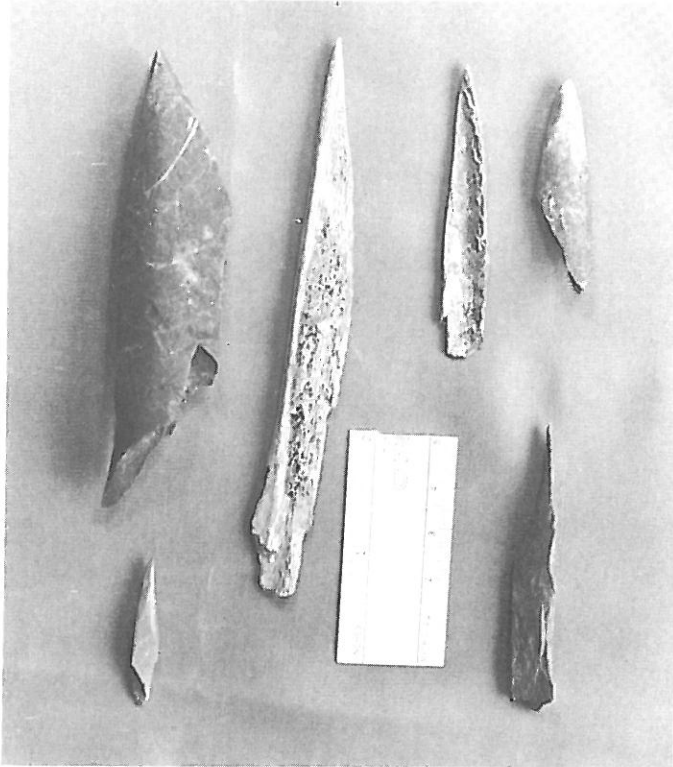


Fig. 8  
Long bone fragment  
knapping tool (upper  
left) and rib splinter  
awls.

Fig. 9  
Chert Chopper.



THE BIBLICAL FLOOD

Geological and Archaeological Evidence

By

Arthur G. Randall

## ABSTRACT

Both geological and archaeological evidence has been found for the Biblical Flood in six selected areas in Mesopotamia. These from south to north are Ur of the Chaldees, Susa, Fara, Nippur, Kish and Nineveh. Three natural catastrophes are postulated for the flooding of the Tigris - Euphrates River area - earthquake and tidal wave, rapid melting of glacial ice, and the downpouring of rain. Dates on the flood range from 4,290 to 5,960 years before the present.

## INTRODUCTION

There are over 80,000 works in 72 languages which describe the Biblical Flood. Over 70,000 of these mention the wreckage of the Ark. Evidence for the flood can be documented archaeologically and postulated geologically. A problem of great concern is whether the flood of the Tigris – Euphrates River area is one of a shallow river overflowing or is it the Biblical Flood which covered a much larger area.

The Bible tells of a flood that destroyed all mankind and leaves the impression that it covered the entire earth. Geologists cannot document a flood of such a scope. Archaeologists have found evidence for a flood in Mesopotamia generally centered along the Tigris and Euphrates Rivers.

Recording evidence for the Biblical Flood is one of profound interest and will intrigue geologists as well as archaeologists for many years to come.

## BIBLICAL ACCOUNT OF THE FLOOD

The narrative of the Deluge or Flood, as contained in the Book of Genesis from the Holy Bible, consists of two interwoven versions, the Yahwist and Elohimic. The Yahwist narrative states that the flood was caused by a rain which lasted forty days. Noah sends out a dove at the end of this forty-day period, and it fails to return. He then sends out another dove, which returns with an olive branch. The dove is sent out again but fails to return. Noah waits seven more days, then builds an altar and gives a sacrifice to God. The Elohimic section of the narrative states that the flood is caused by an upsurge of subterranean waters. It increases in

intensity for 150 days and then begins to recede in the seventh month. The Ark then grounds on one of the mountains of Ararat.

In the Book of Genesis, God commands Noah to build an Ark of gopher wood. The length is to be 300 cubits, the width 50 cubits, and the height 30 cubits. The cubit was a common unit of measurement in ancient times among the Babylonians, Egyptians, and Hebrews. At that particular time in history at least two types of cubits were known, the common cubit and the cubit which was a hand-breadth longer than the common cubit. Transferred into our own standard of measurements, the cubit would then be 18 inches and 24 inches. According to the lower standard, the Ark would be 600 feet long, 100 feet wide, and 60 feet high. It is, however, virtually impossible to ascertain the exact size of the Ark.

When Noah was 600 years old the flood began after it had rained for forty days and forty nights. The water depth of the flood is unknown, however, the Bible states that the mountains were buried by 15 cubits (22.5 to 30 feet) of water. The flood lasted 150 days and the Ark finally came to rest upon the mountains of Ararat. The quotation from the Bible "mountains of Ararat" is very important as many mountains of various elevations are present on the northeast side of the Tigris - Euphrates River Valley. Thus the Ark could have settled down on any of the mountains in the vicinity of the Iranian-Iraqian border. In the Epic of Gilgamesh, the Ark came to rest upon Mt. Nisir (Figure 5) which is a 9000 foot peak located southeast of the confluence of the Great Zab and Tigris River.

## THE EPIC OF GILGAMESH

The most remarkable of all flood stories outside of the Bible (Rehwinkel, 1951) is the Babylonian account of the flood. The flood narrative was etched upon clay tablets and were among thousands which were brought from the ancient library of Assurbanipal in Nineveh to the British Museum. Nineveh is located along the banks of the upper Tigris River. These tablets were discovered by George Smith, a British orientalist in 1872. Some 20,000 clay tablets were found in the ancient ruined palace of Assurbanipal, who reigned from 668 to 626 B.C. The tablets were covered with cuneiform inscriptions. Smith spent much time deciphering the cuneiform writings and he noted it resembled the Flood of Noah incident. The Epic of Gilgamesh thus evolved from the interpretation of the cuneiform writings.

Gilgamesh in search for his ancestor, Utnapishtim, found him on an island. Utnapishtim relates to Gilgamesh that he is a true worshipper of the god Ea. In accordance of the god Ea, Utnapishtim built the ship which resembled the biblical Ark. The flood raged for six days and nights. The flood, wind, and a cyclone destroyed the land. On the seventh day the flood ended. The ship came to rest on Mt. Nisir.

Despite the precise descriptions in the Epic of Gilgamesh, Mt. Nisir has never tempted the archaeologists to search for the remains of this giant ship (Keller, 1956). Mt. Ararat, which belongs to the Biblical tradition, has been the goal of several archaeological expeditions. Mt. Ararat lies in eastern Turkey, near the borders of Iran and Russia. Its snow-capped summit lies at 16,946 feet.

There is still one great question. Is the Babylonian flood identical



with the Flood of Biblical tradition? This question remains unanswered.

### QUEST OF THE ARK

The search for the Ark started prior to 1833 when a shepherd is reported to have seen a great wooden ship on Ararat. In that same year, a Turkish expedition set out to verify the shepherd's find. They did report seeing a wooden bow sticking out of the south glacier.

Nearly 60 years later in 1892 an agile ecclesiastical, Dr. Nouri, of Jerusalem and Babylon, found a wreckage of a ship in ice near the headwaters of the Euphrates.

During World War I, a Russian flying officer, Rowkowitzki, announced that he had spotted the wreckage of a fair-sized ship on the south side of Mt. Ararat. Czar Nicholas II immediately dispatched a crew to photograph it. Supposedly it was described and photographed, but all records perished, presumably in the Revolution.

Several American and Russian flyers, during World War II, reported that they spotted the Ark on Mt. Ararat.

On July 6, 1955, a French industrialist by the name of Fernand Navarra, found several spinters of wood from the Ark. One wooden beam was imbedded in solid ice on top of Mt. Ararat. Paris and Madrid not using carbon 14 dating techniques set the age of the oak beam at 5,000 years. Later in 1969 Fernand Navarra returned to the mountains of Ararat with a crew and reported seeing remnants of a great, broken, ice-bound ship nearly three miles above sea level.

Conclusive evidence for the discovery of the Ark is lacking.

Perhaps some day archaeologists will find it.

### GEOLOGICAL EVIDENCE

There are two major schools of thought which pertain to the Biblical Flood. Many people believe the flood was world-wide, in other words the entire land surface was covered by several hundreds or even thousands of feet of water. Some scholars maintain the flood was limited in its areal extent and that it covered only that portion of the civilized world known today as Mesopotamia or in particular the Tigris - Euphrates River valley.

The date of the Biblical Flood varies. Keller (1956) states that the flood occurred nearly 5,980 years ago while a Bible Chart prepared by Owen Klooster lists the flood as 2,348 B.C. or 4,319 B.P.

Geologically speaking from 4,000 to 6,000 years ago, is only a few minutes. If the flood was world-wide, the effects of it should be visible in most parts of the world. Wave-cut terraces, sand beaches, bars, and water-laid deposits containing fossils should be readily visible. To the writer's knowledge, no such deposits of vast areal extent exist. There is definite geological evidence of huge inland lakes in North America such as Lake Bonneville in Utah, Lake Lahontan and Lake Franklin in Nevada, and Searles Lake in California. These lakes are only a few thousand years old and are the result of the melting of the most recent glaciers. One can argue that considerable geologic evidence for the flood did exist and subsequent elements of erosion such as the wind, rain, ice, and running water have destroyed all traces of it. This is difficult to believe because many hundreds and even thousands of square miles should have escaped erosion and

destruction.

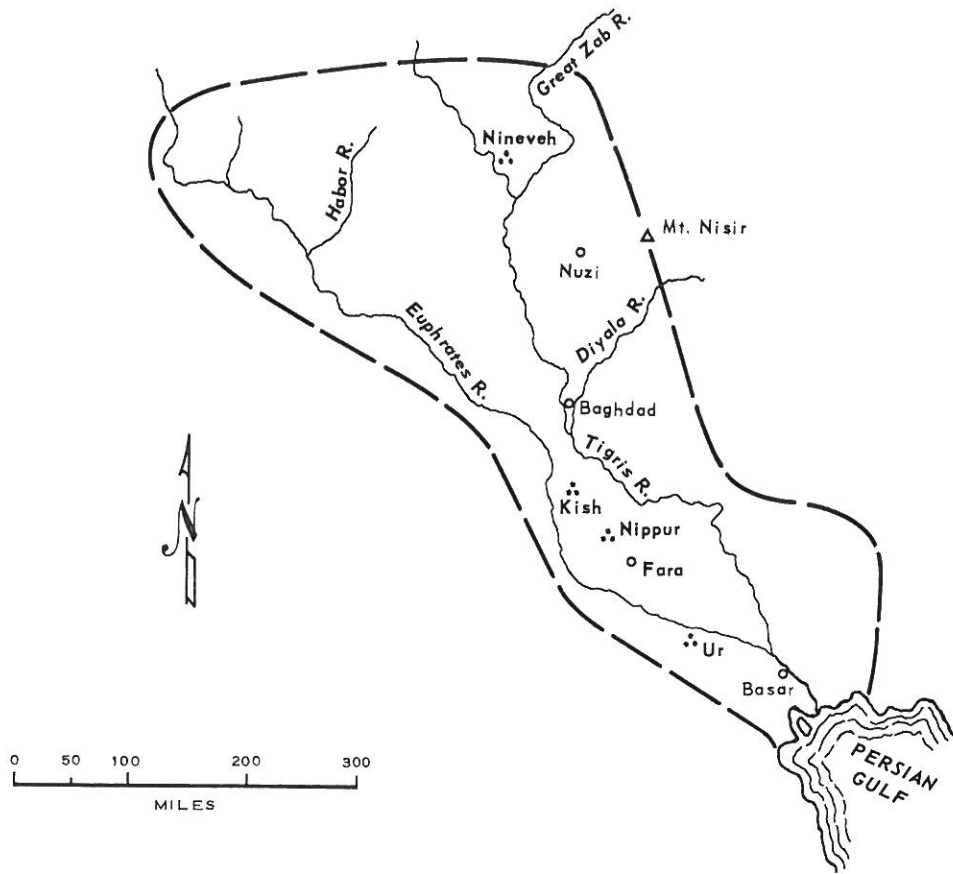
There are at least three phenomena which might explain the Biblical Flood. Two are directly related to geological events and one indirectly.

#### EARTHQUAKE-TIDAL WAVE POSSIBILITY

The Biblical world at the time of the patriarchs was approximately 162,000 square miles in size (Figure 1). The patriarchs lived from 2,000 to 1,600 B.C. At the time of Noah, the Biblical world must have been considerably smaller, perhaps only 100,000 square miles. So a flood that covered from 80 to 90 percent of the area would appear world-wide to the people who lived in Mesopotamia.

Within the world several orogenic or highly unstable belts can be mapped. One such belt occurs on the west side of the Indian Shield and passes through the east edge of the Persian Gulf and enters the Mediterranean Sea (Figure 2). The land surface in this region is very unstable in this orogenic belt, and it is subjected frequently to devastating earthquakes and accompanying tidal waves. Figure 3 shows a geologic cross-section or profile through the center of the Persian Gulf. One can see the area is broken by numerous faults which are the result of orogenic activity. This same northwest trend of faulting can be projected into the Tigris-Euphrates River valley area. Any significant movement along these faults would cause an earthquake and subsequent down-dropping of the earth's surface which in turn would permit the waters of the Persian Gulf to rush in.

Several earthquake belts (Figure 4) occur in the Mesopotamia area. In fact the area is surrounded on three sides by earthquake belts where frequent and violent earthquakes can occur.



**FIGURE 1**  
**BIBLICAL WORLD AT THE TIME OF PATRIARCHS**  
 2,000–1,600 B.C. (after Nelson Keyes, ?)

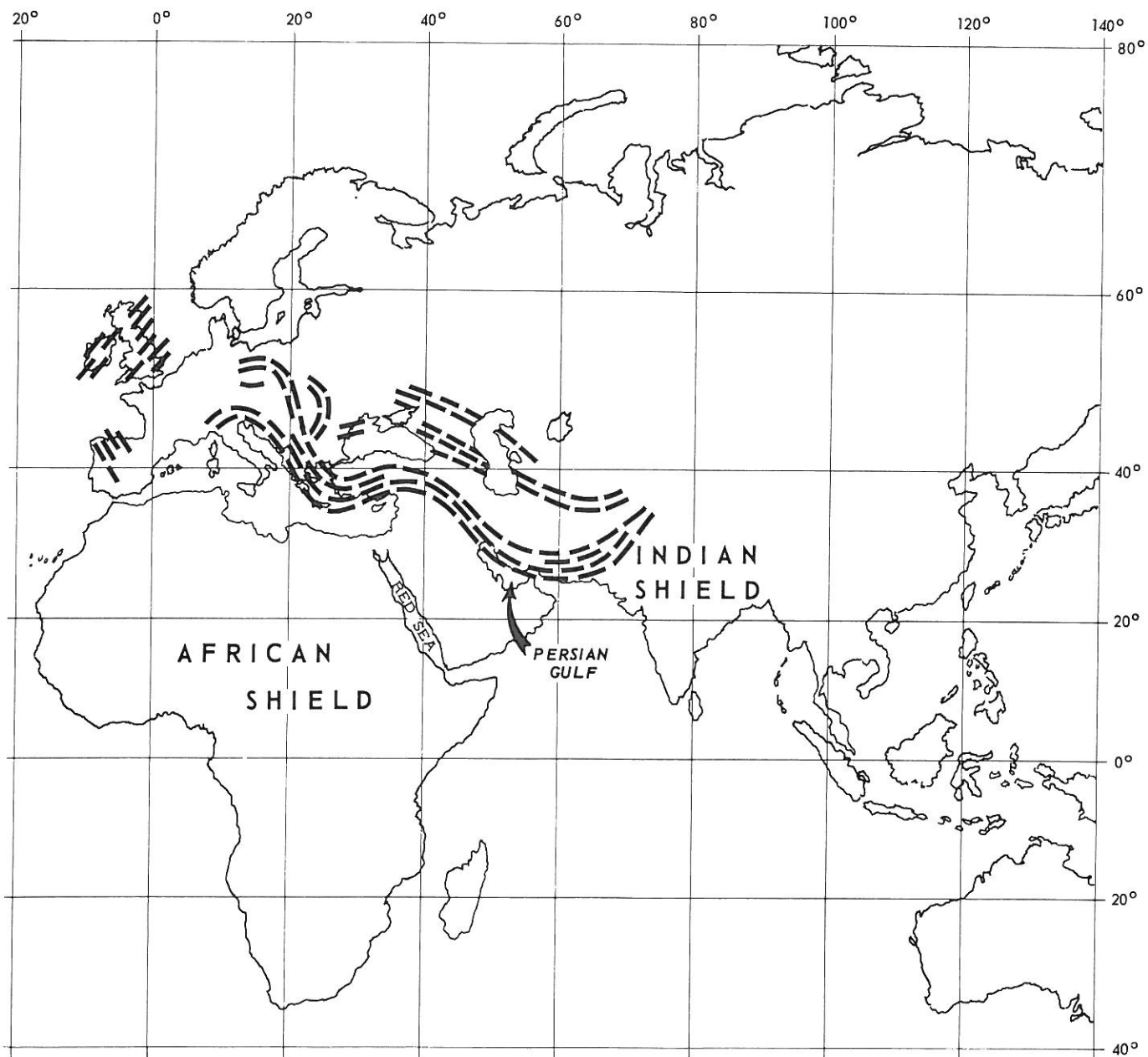


FIGURE 2  
 OROGENIC BELTS OF THE MESOPOTAMIA AREA

(after Weeks - 1959)

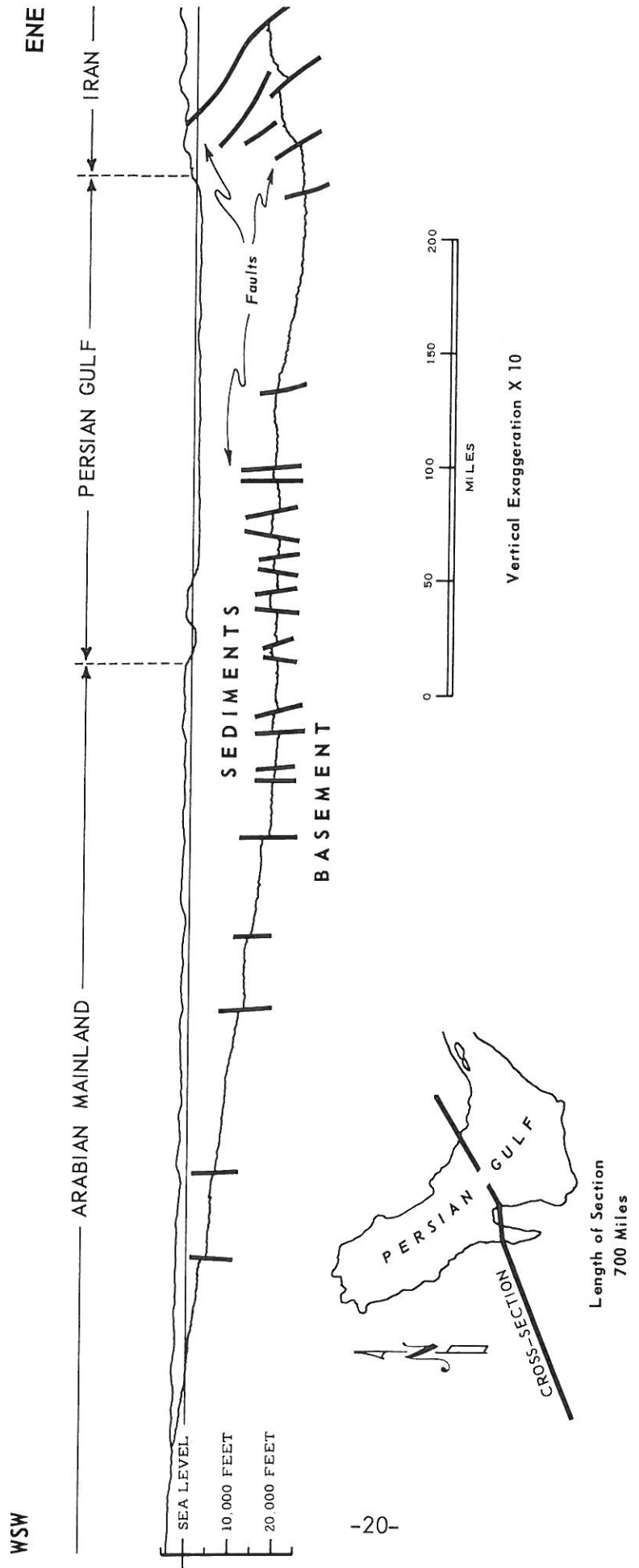


FIGURE 3  
REGIONAL CROSS SECTION THROUGH THE MESOPOTAMIAN GEOSYNCLINE

(after D.A. Greig — 1958)

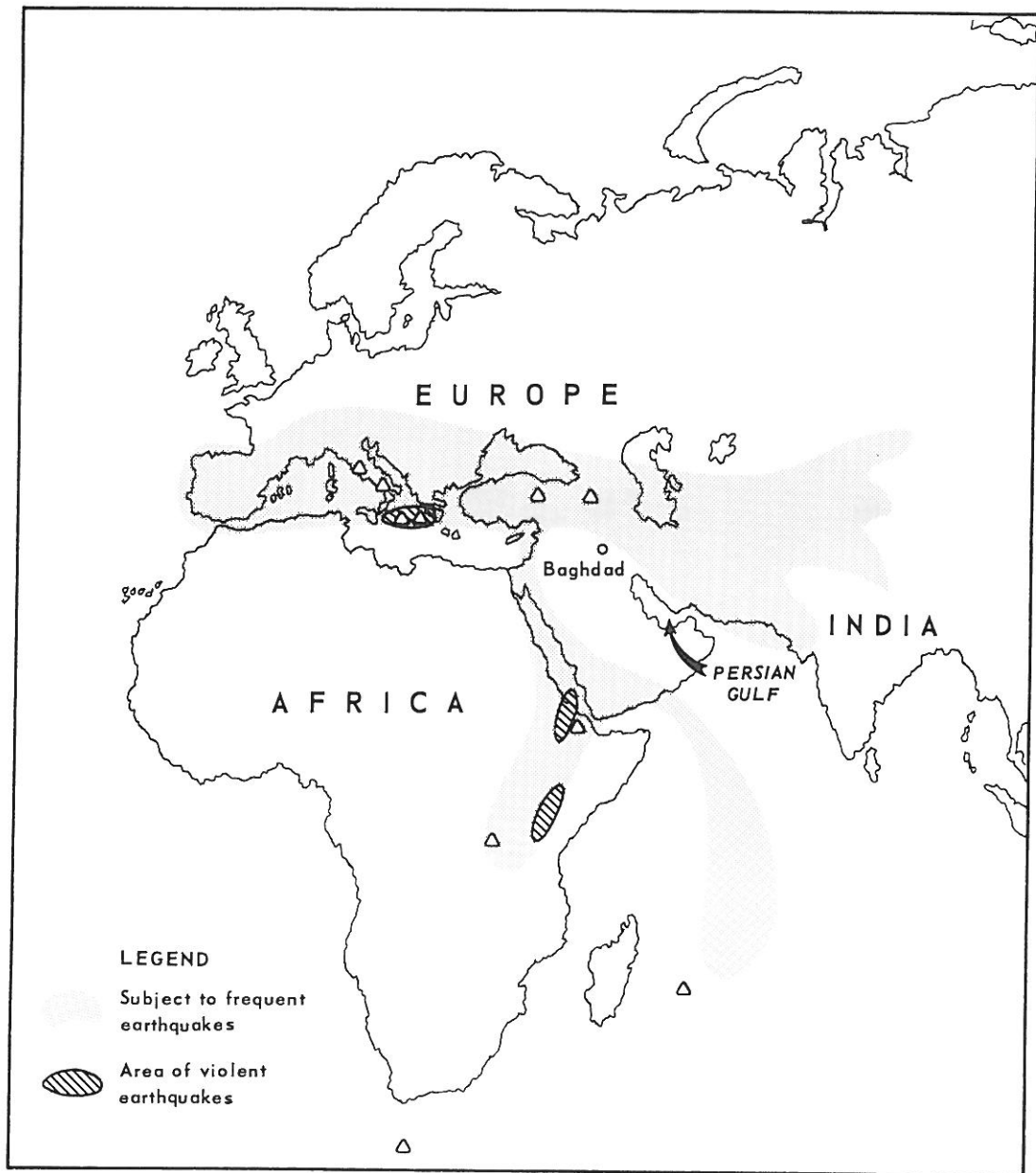
The Bible suggests that an earthquake did occur in the sixth hundredth year of Noah's life as it states "the same day were all the fountains of the great deep broken up, and the windows of heavens were opened". If the waters did rush in and cover the land surface by 656 feet of water in the Tigris-Euphrates River valley, it would have covered over 90,000 square miles or nearly all of the world as it was known to the people of that time. Water only 328 feet deep would have covered 68,000 square miles (Figure 5). Of course, there is no known way to ascertain the exact depth of the water during the Biblical Flood. Archaeological evidence (Woolley, 1950) indicates that the area affected was perhaps 400 miles long and 100 miles wide (40,000 square miles).

#### GLACIAL POSSIBILITY

It is known that the sea level has risen 300 feet since the melting of the last vast ice sheet or glacier (formed during the Wisconsin Stage in North America and in the Würm Stage in Europe). Large ice fields existed in the Mesopotamia area from 10,000 to 25,000 years ago (Figure 6). It is possible that a sudden rise in temperature during the 600th year of Noah's life could have caused the melting of the ice and a subsequent rise of the waters of the Persian Gulf and Tigris-Euphrates Rivers.

#### RAIN AND FLOOD POSSIBILITY

Genesis Chapter 7 states "And the rain was upon the earth forty days and forty nights", and "The flood was forty days upon the earth; and the waters increased, and bore up the ark, and it was left up above the earth" and "Fifteen cubits upward did the waters prevail; and the mountains were covered";



**FIGURE 4**  
**DISTRIBUTION OF VOLCANOES AND EARTHQUAKE BELTS IN THE**  
**AFRICA-MESOPOTAMIA-EUROPE AREA. ACTIVE AND RECENTLY**  
**EXTINCT VOLCANOES SHOWN BY SMALL TRIANGLES.**

(after Longwell, et al-1939)



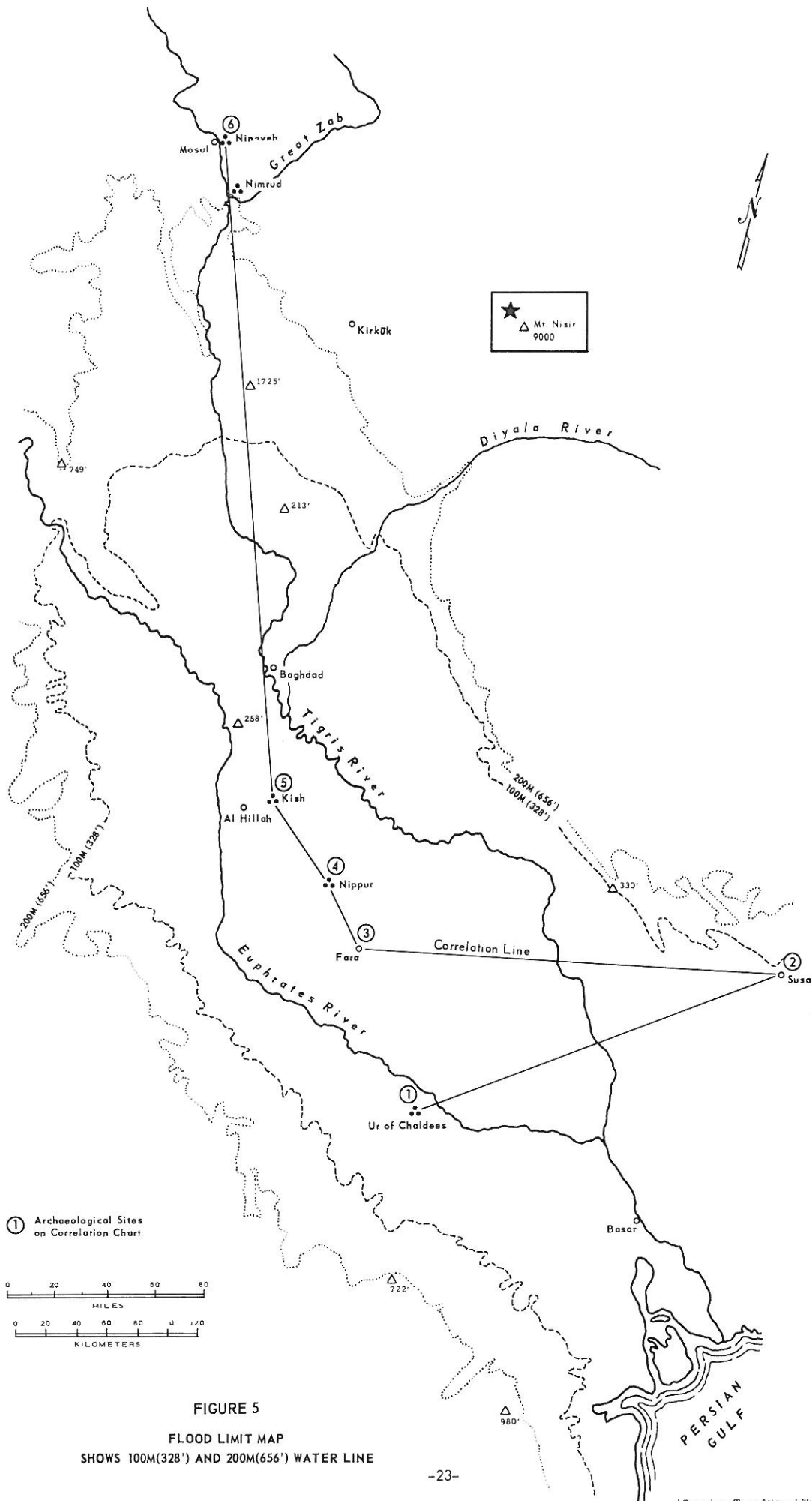


FIGURE 5  
 FLOOD LIMIT MAP  
 SHOWS 100M(328') AND 200M(656') WATER LINE

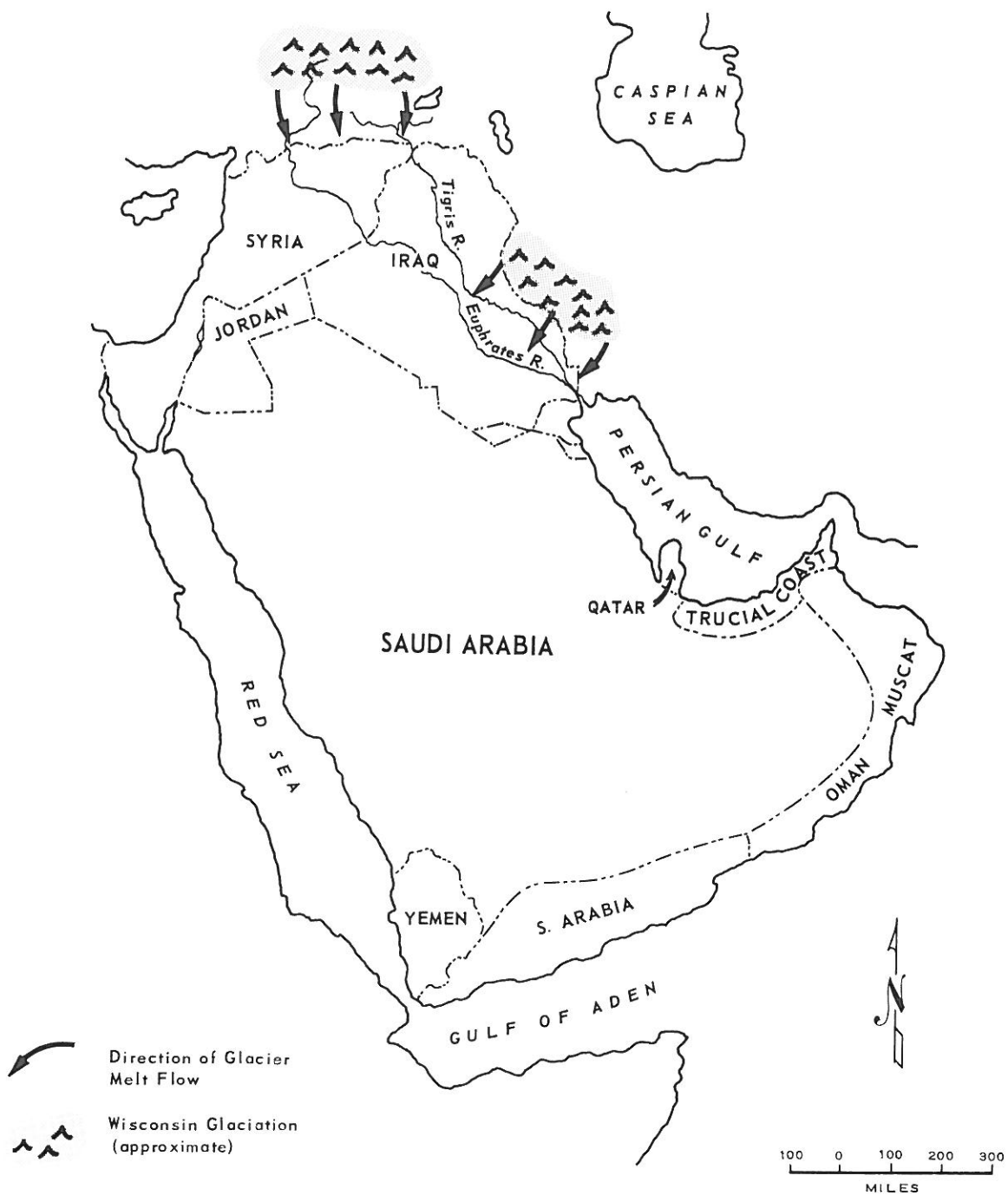


FIGURE 6

MESOPOTAMIA AREA SHOWING APPROXIMATE EXTENT OF WÜRME GLACIATION

and "The waters prevailed upon the earth an hundred and fifty days".

The Bible leaves the impression that the flood was large and deep. If the terrain consisted of low hills, 15 cubits (from 23 to 30 feet) of water would have covered all the area. But if the 15 cubits of water is interpreted as covering all the high mountains, and if some of the mountains were from 10,000 to 17,000 feet in elevation, then the flood waters would have been extremely deep.

Torrential rains could have been caused by the warm and humid air masses from the Indian Ocean and Mediterranean Sea meeting with the cold air of the present glacial mountains of southwestern Iran and Turkey. Sudden chilling of the warm air masses would cause downpours of a long duration.

The Biblical Flood could have been caused by not only one of the aforementioned possibilities but by a combination of two, three or even more.

#### ARCHAEOLOGICAL EVIDENCE

Archaeological evidence for the Biblical Flood is common. Thousands of articles have been written about archaeological excavations in the Biblical World and many of them deal with the flood.

Six sites will be discussed mainly because of their geographical distribution (see Figure 5). Five of them are located near the Tigris and Euphrates River, and one is situated in the foothills of the Zagros Mountains.

#### UR OF THE CHALDEES

Ur is located about 10 miles west of the Euphrates River nearly 55 miles west of the Garden of Eden near the confluence of the Tigris and Euphrates.

In the first excavation, Dr. C. Leonard Woolley, a noted British

archaeologist during the field season of 1929, found evidence for the flood at Ur. He conducted the excavation for the University of Pennsylvania and the British Museum. They began digging in the Royal Cemetery and near the end of the season at a depth of 60 feet, they found and dug through an eight foot sterile clay layer. Above the clay layer was evidence for many civilizations as pot sherds, ashes, mud brick, etc., were numerous. Below the eight foot clay bed they dug through another level of human habitation (Figure 7). Decayed mud brick, ashes, pot sherds, richly-decorated pottery, flints, clay figurines, fragments of clay plaster, and reed stem imprints (Woolley, 1954) were found beneath this clay layer. Woolley was convinced that this eight foot clay and silt layer represented the Flood of Noah which was deposited 5,929 years ago. He could not announce to the world that he had found evidence of the Great Flood on the strength of only one excavation so he put his crew to digging another pit in the same vicinity. Here again he found the same clay layer, but it was 11 feet thick. The third excavation was located on top of a low mound and a deep pit on this feature yielded several distinct cultures but no flood clay. Dr. Woolley surmised this mound was an island that was not buried by the flood waters. He also stated that in order to have 11 feet of silt deposited the water would have to be at least 25 feet deep. In this flat low lying land in Mesopotamia, a flood of this depth would cover an area about 400 miles long by 100 miles wide. A profile of the Ur site is shown on the correlation chart in Figure 7.

#### SUSA SITE

Some 160 miles northeast of Ur lies the city of Susa (Shūsh) in the foothills of Iran (Persia) along the Zagros Mountains. These ancient ruins are

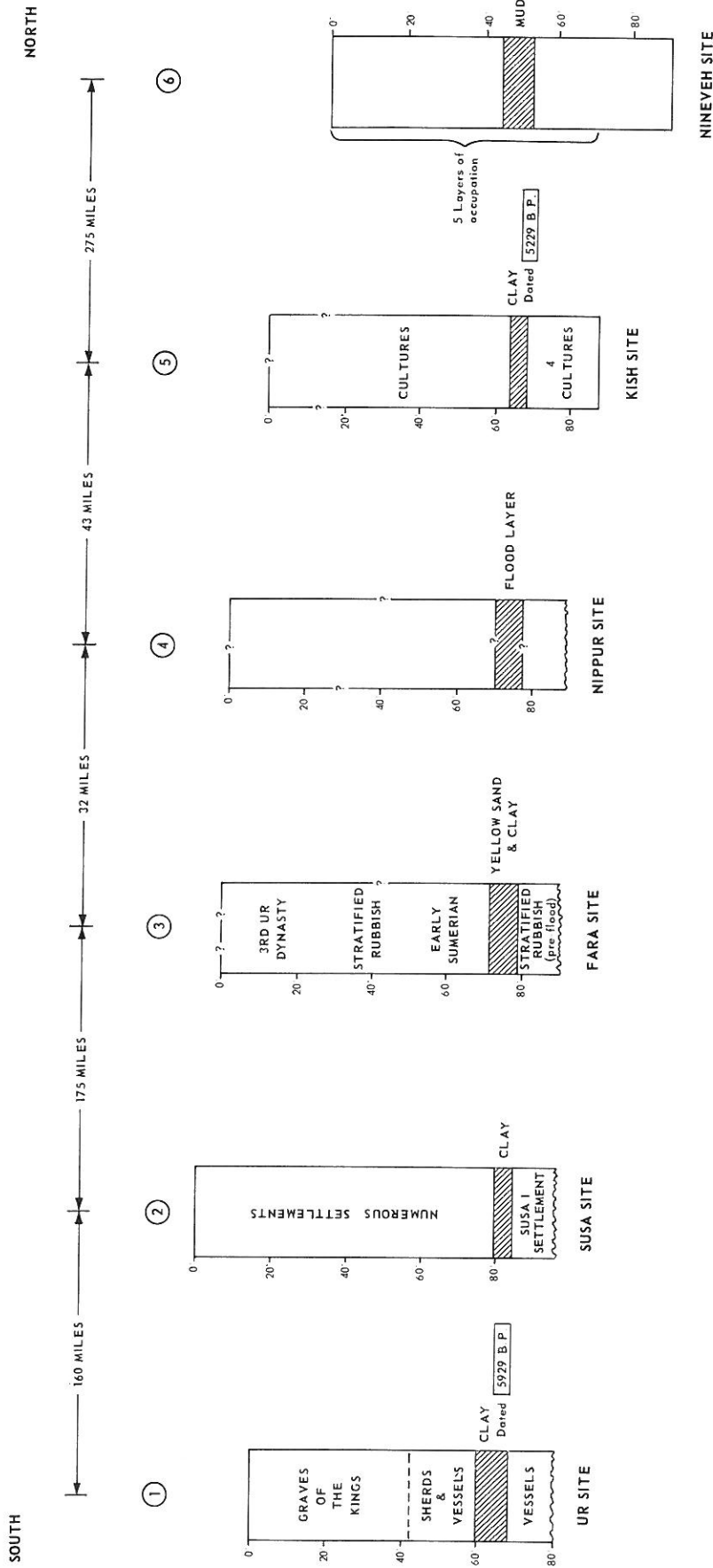


FIGURE 7  
 CORRELATION CHART SHOWING STRATIFIED  
 ARCHAEOLOGICAL COLUMNS WHICH INDICATE  
 A FLOOD LAYER IN THE TIGRIS-EUPHRATES  
 RIVER VALLEY AREA IN MESOPOTAMIA

situated on the banks of the Karkheh River which is an eastern tributary of the Tigris. A French expedition under the leadership of M. Jacques de Morgan carried out an extensive series of digs on the mound concealing the ancient city of Susa, the Biblical Shushan of Nehemiah and Esther (Rehwinkel, 1951).

At a depth of 84 feet de Morgan and his diggers found relics of the first pre-flood settlement. This settlement known as Susa I consisted of a great quantity of painted pottery, some simple household articles such as axes made of copper, circular hand mirrors, also made of copper, and some small receptacles which from their size and shape have been termed cosmetic pots. Evidence for the flood is indicated by a five foot layer of clay which contained no relics at all and it separated an upper 84 foot cultural layer from Susa I. The 84 foot layer contained several unbroken continuity of settlements from its base to the very top.

With the identification of the flood layer at Susa, the width of the flood must have been at least 160 miles (Figure 5 and 7). It has been suggested that an extended period of drought made the place uninhabitable at Susa and subsequently led to its abandonment, and that the layer of clean soil would accumulate from dust and sand carried there by the wind. Nearly everyone agrees, however, that a drought would not extend over a period of centuries but would last only at the maximum of a few years.

#### FARA SITE

A low-lying desolate group of mounds beaten by the desert sands were excavated by Dr. Eric Schmidt of the University Museum of Pennsylvania in 1931 (Halley, 1939). Fara, the home of Babylonian Noah is located 50 miles

southeast of Babylon between the Tigris and Euphrates Rivers (Figure 5). Dr. Schmidt found the remains of three cities. The oldest was pre-flood; the middle Early Sumerian; and the youngest was contemporaneous with the third Ur dynasty.

The flood layer which consisted of yellow dirt and a mixture of sand and clay was between the middle city and bottom city (Figure 7). Beneath the flood deposit there was a layer of charcoal and ashes, a dark coloured cultural refuse which may have been wall remains, painted pottery, skeletons, cylinder seals, stamp seals, pots, pans, vessels with an appearance that indicated the population had "hastily deserted their homes, leaving their belongings behind".

#### NIPPUR SITE

Nippur lies approximately 30 miles northwest of Fara midway between the Tigris and Euphrates Rivers.

Professor H. V. Hilprecht of Pennsylvania University discovered evidence for the flood in this excavation (Figure 7).

#### KISH SITE

Professor Stephen Langdon of Oxford excavated the ruins at Kish which lies some 40 miles northwest of the Nippur site. Kish is a suburb of Babylon and is nearly eight miles east of the Tower.

In the field season of 1928-1929, Professor Langdon found a five foot bed of clean water-deposited clay which he identified as being 5,229 years old. Beneath the flood layer were found four pre-flood occupations, the first of which was destroyed by the flood (Halley, p. 52, 1939) and the bottom occupation was destroyed by another flood. There were 19 feet between the two layers. The lower flood

layer was dated at about 5,930 years ago. Under the upper flood layer a chariot complete with four wheels, made of wood and copper nails, was found.

### NINEVEH SITE

Nineveh lies approximately 275 miles north of Kish on the banks of the Tigris River. The Epic of Gilgamesh inscribed in cuneiform writing on several clay tablets were found in the ancient library of Assurbanipal in Nineveh.

In 1932 and 1933 Mr. M. E. L. Mallowan, Director of the British Museum Excavations at Nineveh, describes the sinking of a 90 foot pit through the flood layers (Figure 7). Seventy feet of the 90 feet represented five pre-historic strata of occupation. Nearly half-way down, between the 2nd and 3rd strata from the bottom, a layer of viscous mud and river sand was encountered. It is believed that this eight foot layer represents the flood. There was a distinct difference between the pottery beneath this wet layer, and that above it.

Unger (1954) states that Nineveh was one of the earliest village settlements in Mesopotamia dating back to 5,000 B.C.

### DATING OF THE BIBLICAL FLOOD

Some selected dates for the Biblical Flood are shown in Table 1.

Table 1 - Selected Biblical Flood Dates

<u>SITE</u>	<u>REFERENCE</u>	<u>AGE (B.P. = BEFORE PRESENT)</u>
Unknown	Klooster (1943)	4,291
Unknown	Patten (1966)	4,770
Kish	Halley (1939)	5,229
Ur	Kelley (1956)	5,956



## CONCLUSIONS

Geological and archaeological evidence suggests that the Biblical Flood was rather limited in areal extent covering perhaps from 50,000 to 100,000 square miles in the valley of Tigris-Euphrates of Mesopotamia. Geological evidence for a world-wide 5,000 year old flood is lacking. A flood that covered the wide valley of the Tigris and Euphrates Rivers would appear to the ancient people of Mesopotamia to be world-wide as that area was the center of their cultural life. It is postulated that the flood could have been caused by an earthquake and tidal wave combination, by rapid melting of glacial ice, or by down-pouring of rain.

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