**Noah’s Flood**

**A Booklet Analysis**

**by**

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prologue

As a scientist I spent my entire adult life studying and analyzing data so the prospect of retiring this skill after 30 years was difficult. As I get closer to my maker I thought, what better way to apply myself than the study of scripture? It can’t hurt right? The result is this ‘work in progress’ you see before you. With God willing I will move beyond Genesis, chapter and verse, and more will follow.

**About my Methods**

I am neither a theologian nor a bible or history academic. I do not speak Arabic, Greek, or Hebrew and I have no expectations of contributing anything novel to the thousands of years of scholars, rabbis, and historians who come before me. I am also not here to judge the age of the earth, if Noah was man or myth, if Nephilim giants once roamed the earth, or if Methuselah lived to 969 years of age. I *am* here to accept the events and dates of the bible at face value, find historical and scientific context, and compare differing bible faith interpretations, be it the flood date in the Septuagint or King James Bible version that differs by a thousand years, or the age Terah had Abraham, 70 for the Hebrews and 130 years of age for the Christian version. After all despite our differences in faith I think we all *must* agree that *both* can’t be right!

This is a fluid project and as such I am happy to revise my “hypotheses” or positions as new data becomes available. In fact, to *not* do so would be to ignore the scientific method I employ. While I will strive to focus on the facts and avoid opinions, I may take the liberty of presenting my own “best” fit option(s) in my conclusions. In the end however divine intervention will always “trump” any logic and readers will always choose their own path.

Finally, my content here does not benefit from millions of reviewers like my source sites such as Wiki. I therefore ask to use caution in reusing any content for educational purposes.  Please feel free to contact me with your comments at my e-mail at the bottom of any page.

1. The gilgamesh and noah flood

The Genesis Flood Wiki prologue reads as follows:

“Numerous and often detailed parallels make clear that the Genesis flood narrative is dependent on the Mesopotamian epics, and particularly on Gilgamesh, which is thought to date from c.1300–1000 BCE.”

For a source that is supposed to be impartial to imply 1) no biblical flood occurred and 2) if one occurred it was only the Gilgamesh flood, is a rather bold statement. The word “clear” [that the Bible is based on a flood myth from Gilgamesh] really inspired me to hunt down facts that might smash this theory. A famous quote from Thomas Huxley, a renowned British biologist from the 1800s, once said, “The great tragedy of science – is the slaying of a beautiful hypothesis by an ugly fact.” I went therefore on my quest to find such a fact or facts.

* 1. The Epic of Gilgamesh

Most historians agree that Gilgamesh was the [same as] King Gilgamesh of the Sumerian city-state of Uruk who ruled sometime between 2900–2700 BC. In later years Gilgamesh became deified and stories of his legendary exploits became woven into several long epics one of which is The Epic of Gilgamesh, written first in Cuneiform, then Akkadian during the Middle Babylonian Period 1600 – 1155 BC by a scribe named Sîn-lēqi-unninni. The most complete surviving version of the these stories is recorded on a set of twelve clay tablets dating to the seventh century BC (600-700 BC) found in the Library of Ashurbanipal in the Assyrian capital of Nineveh in 1853. While many pieces of it are missing, or damaged, scholars and translators chose to supplement the missing parts of the epic with material from earlier Sumerian poems or from other versions of the Epic of Gilgamesh found at other sites throughout the Near East. The following is a summary of tablets 1-12 as the actual text is over 120 pages. Tablets 11-12 which include the flood narrative are presented as a complete 166 line set.

**Summary of Epic of Gilgamesh**

In the beginning Gilgamesh is described as an oppressive ruler so Anu “God of the Sky” creates Enkidu to confront Gilgamesh. The two men wrestle and Gilgamesh wins and they become close friends. In tablets III through V Gilgamesh and Enkidu travel to the Cedar Forest to defeat and kill the demon Humbaba by calling in God Shamash who blows eight winds in Humbaba's eyes blinding him. Humbaba begs for mercy but the heroes decapitate him. In Tablet VI Gilgamesh returns to Uruk, where Ishtar (Inanna) comes and demands he become her husband. Gilgamesh refuses so Ishtar goes to her father Anu and demands he give her the Bull of Heaven which she sends to attack Gilgamesh but Gilgamesh and Enkidu kill the Bull and offer its heart to Sun God Shamash. The God’s collectively declare Gilgamesh or Enkidu must die as punishment for having slain the Bull of Heaven and they choose Enkidu who then grows sick, has a dream of the Underworld, then dies. Tablet VIII describes Gilgamesh's inconsolable grief over his friend's death and the details of Enkidu's funeral. Tablets IX through XI relate how Gilgamesh, driven by grief and fear of his own mortality, travels a great distance to find the home of Utnapishtim [Babylonian or Mesopotamian “Noah”], the sole survivor of the Great Flood, who was rewarded with immortality by the gods. The journey to find Utnapishtim involves challenges. Gilgamesh encounters and slays lions and meets a scorpion man and his wife but once Gilgamesh tells them his purpose they allow him to pass. Gilgamesh wanders through darkness for twelve days before he finds a beautiful garden by the sea in which he meets Siduri, the divine Ale[House]wife who tries to prevent Gilgamesh from journeying further. Gilgamesh refuses so she directs him to Urshanabi, the ferryman of the gods, who ferries Gilgamesh across the sea to Utnapishtim's homeland. When Gilgamesh arrives he asks Utnapishtim how to become immortal and Utnapishtim tells him the whole [Flood] story and his resulting immortality and then tells Gilgamesh he cannot obtain immortality so Gilgamesh returns to Uruk. It is at this point the epic stops being a coherent narrative. Tablet XII is an appendix corresponding to the Sumerian poem of Gilgamesh, Enkidu and the Netherworld. At the beginning of Tablet XII, Enkidu is still alive, despite having previously died in Tablet VII, and Gilgamesh is kind to Ishtar, despite the rivalry in Tablet VI.

* 1. The Gilgamesh Flood Story- Tablet 11

Here I include all the lines translated into English from the Flood part of the Epic, Tablets 11-12. The **bold text can be read alone** to provide a summary.

**1 Gilgamesh spoke to him, to Ūta-napišti the Far-Away:**

2 "As I look at you, Ūta-napišti,

3 Your form is no different, you are just like me,

4 You are not different at all, you are just like me.

5 I was fully intent on doing battle with you,

6 [but] in your presence my hand is stayed.

**7 How was it that you attended the gods' assembly, and found eternal life?"**

**8 Ūta-napišti spoke to him, to Gilgamesh:**

**9 "I will disclose to you, Gilgamesh, a secret matter,**

**10 and I will tell you a mystery of the gods.**

**11 "The city of Shuruppak — a city you yourself know,**

**12 the [city that] is situated on the [banks] of the Euphrates** —

**13 that city was old and the gods were inside it,**

14 (when) **the great gods decided to cause the Deluge.**

15 "Their father

[Anu](#_DocTools_ScreenTip_412" \o "God Firmament 'Sky') took the oath,

16 (as did) their counsellor, the hero

[Enlil](#_DocTools_ScreenTip_414" \o "God of Earth, Wind, and Air.) ,

17 their chamberlain,

[Ninurta](#_DocTools_ScreenTip_413" \o "God war.) ,

18 their inspector of waterways,

[Ennugi](#_DocTools_ScreenTip_415" \o "god of irrigation)

19 "Prince

[Ea](#_DocTools_ScreenTip_416" \o "Ea, the cleverest of the gods, the god of wisdom and crafts. ) was likewise under oath with them,

20 (but) repeated their words to a reed fence:

21 "'Reed fence, brick wall! Reed fence, brick wall!

22 Listen, O reed fence! Pay heed, O brick wall!

**23 O man of Shuruppak, son of Ubara-tutu,**

**24** **demolish the house, build a boat!**

**25 "'Abandon riches and seek survival!**

**26 Spurn property and save life!**

**27** **Put on board the boat the seed of all living creatures!**

**28 "'The boat that you are going to build,**

**29**

[her dimensions](#_DocTools_ScreenTip_420" \o "The size of this Ark and shape were very close to that of the Babylonian Ziggurat. Why would it measure the same?  Because the Ziggurat with its seven stages associted with 7 planets symbolized the heavenly ladder by which the Goddess Istar crossed the boundary. This was also said to be the function of the Ark that Utnapishtim was told to build. (Assyriologist quote)) **should all be matching:**

**30**

[her breadth and length should be the same](#_DocTools_ScreenTip_35" \o "Note this does not specifiy height. although line 29 above it does state 'all dimensions shall be the same' implying a cube. ) **,**

**31** **cover her with a roof, like the**

[Apsû'](#_DocTools_ScreenTip_421" \o "Roofing like the Apsu means the roof was veiled in mystery.)

32 "I understood and spoke to Ea my master:

33 'I hereby concur, my lord, with what you told me thus.

**34 [I] have paid attention; I shall do it.**

35 (But) how should I answer the city, the crowd and elders?'

36 "Ea opened his mouth to speak,

37 saying to me, his servant:

38 'Then also you will say to them as follows:

39 'For sure the god Enlil has conceived a hatred of me!

40 I cannot dwell in your city!

41 I cannot tread on Enlil's ground!

42 [I shall] go down to the Apsû, to live with Ea, my master;

43 'On you he will rain down plenty!

44 [An abundance] of birds, a riddle of fishes!

45 ... riches at harvest time

46 In the morning he will rain down on you bread cakes,

47 in the evening, a torrent of wheat'.'

**48 At the first glimmer of dawn,**

**49 the population began assembling at Atar-hasis's gate.**

**50 The carpenter was carrying [his] axe,**

**51 the reed-worker was carrying [his] stone.**

(52-56 are fragmentary)

**57 "On the**

[fifth day](#_DocTools_ScreenTip_407" \o "Only outer shell complete.) **I set in place her (outer) surface:**

**58 one "acre"**

[[200 x 200 feet]](#_DocTools_ScreenTip_405" \o "Assuming acre is same as acre today.) **was her area, ten rods**

[[200 feet]](#_DocTools_ScreenTip_404" \o "A rod was 12 cubits, and a Sumerian cubit was about 20 inches so 10 rods is 200 feet.) **each her sides stood high,**

**59 at ten rods each, the edges of her top were equal.**

60 "I set in place her body, I drew up her design:

**61 I gave her six decks,**

62 I divided her into seven parts,

63 I divided her interior into nine.

64 "I struck the water pegs into her belly,

65 I found a punting pole and put the tackle in place.

**66 "Three times a myriad of**

[bitumen](#_DocTools_ScreenTip_406" \o "Tar to seal.) **I poured into the furnace,**

67 (fragmentary)

68 three times a myriad was the oil that the workforce of porters was fetching,

69 apart from the myriad of oil [that] libation consumed

70 there were two myriads of oil [that] the shipwright stowed away.

71 "For the workmen I butchered oxen,

72

[every day](#_DocTools_ScreenTip_408" \o "Unknown number days to complete the boat.) I slaughtered sheep.

73 Beer, ale, oil and wine

74 [I gave my] workforce [to drink], like the waters of a very river!

75 They were celebrating as on the feast-days of the New Year itself!

76 "At sun-[rise] I set my hand [to] oiling;

**77 [before] sundown the boat was**

[finished](#_DocTools_ScreenTip_409" \o "To me i see no evidence of total time it took to build Ark. It did take 5 days only to build outer shell per line 57.) **.**

(78-80 are fragmentary)

.. At the first glimmer of dawn,

**82 I loaded aboard it whatever silver I had,**

**83 I loaded aboard it whatever gold I had,**

**84 I loaded aboard it whatever seed I had of living things, each and every one.**

**85 "All my kith and kin I sent aboard the boat,**

**86 I sent aboard animals of the wild, creatures of the wild, persons of every skill and craft.**

87 "

[Šamaš](#_DocTools_ScreenTip_410" \o "Sun God.) had set me a deadline -

**88 'In the morning he**

[will rain down bread-cakes on us](#_DocTools_ScreenTip_417" \o "Per Ea he told the people if they help him and stay it will rain down food.) **, in the evening a torrent of wheat.**

89 Go into the boat and seal your hatch!'.

90 "That time had arrived:

91 'In the morning he will rain down bread cakes, in the evening, a torrent of wheat'.

92 I watched the look of the weather:

94 "I went into the boat and sealed my hatch.

**95 To the man who sealed the boat, the ship-wright Puzur-Enlil,**

**96 I gave the palace with all its goods.**

97 "At the very first light of dawn

98 there came up from the horizon a black cloud,

99 within it did Adad bellow continually.

100 "Šullat and Haniš were going at the fore,

101 "throne-bearers" travelling over mountain and land.

102 Errakal was ripping out the mooring poles;

103 Ninurta, as he went, made the weirs overflow.

104 The Anunnaki bore torches aloft,

105 setting the land aglow with their brilliance.

106 The still clam of the storm god (passed across the sky),

107 (all that was bright) was turned into gloom.

(108-111 fragmentary)

**111 "Like a battle [the cataclysm] passed over(!) the people.**

**112 One person could not see another,**

**113 Nor people recognise each other in the destruction.**

**114 "Even the gods took fright at the**

**[Deluge](#_DocTools_ScreenTip_411" \o "I am assuming bread cakes preceeded the deluge of water??) !**

**115 They withdrew, they went up to the heaven of Anu.**

116 The ones who were curled up like dogs, lying out in the open.

117 "The goddess, screaming like a woman in childbirth,

118 Bēlet-ilī, the sweet-voiced, wailed aloud:

119 "'Indeed the past has truly turned to clay,

120 because I spoke evil in the assembly of the gods.

121 How was it I spoke evil in the assembly of the gods,

122 (and) declared a war to destroy my people?

123 It is I that gave birth (to them)! They are my people!

**124 (Now) like so many fish they fill the sea.'**

125 "The gods, the Anunnaki, were weeping with her,

126 the gods were humble, sitting in tears,

127 their lips were parched, being stricken with fever.

**128 "For six days and seven nights,**

**129 there blew the wind and the Deluge, the gale [and flattened the land].**

**130 When the seventh day arrived,**

**131 the gale relented, [the Deluge and the battle].**

132 The sea grew calm that had fought like a woman in labour,

**133 the tempest grew still, the Deluge ended.**

134 "I looked at the weather, and there was quiet,

**135 but all the people had turned to clay.**

136 The roof plain was level like a roof.

**137 "I opened a vent, and sunlight fell on the side of my face.**

138 I fell to my knees and sat there weeping,

139 tears streaming down the side of my face.

140 "I scanned the shores, the edge of the sea:

141 In fourteen places there emerged a landmass.

**142 "On**

[Mount Nimuš](#_DocTools_ScreenTip_418" \o "Suggested to be in the Zagros mountains same as Mount Ararat in Uratu which lies higher. Possibly chosen as it lies close to Assyria.) **the boat ran aground,**

143 Mount Nimuš held the boat fast and did not let it move.

144 One day, a second day, Mount Nimuš held the boat fast and did not let it move.

145 a third day, a fourth day, Mount Nimuš held the boat fast and did not let it move.

146 a fifth, a sixth, day, Mount Nimuš held the boat fast and did not let it move.

**147 "When the seventh day arrived**

**148 I brought out a dove, setting it free.**

**149 Off went the dove, ...**

**150 No perch was available for it, so it came back to [me].**

**151 "I brought out a swallow, setting it free.**

**152 Off went the swallow, ...**

**153 No perch was available for [it], so it came back to me.**

**154 "I brought out a raven, setting it free.**

**155 Off went the raven and it saw the waters receding.**

**156 It was eating, bobbing up and down, it did not come back to me.**

**157 "I brought out an offering and sacrificed to the four corners of the earth,**

**158 I strewed incense on the peak of the mountain.**

159 Seven flasks and seven I set in position,

**160 below them I heaped up (sweet) reed, cedar and myrtle.**

**161 "The gods smelled the savour,**

**162**

[the gods smelled the sweet savour](#_DocTools_ScreenTip_419" \o "Per the epic the Gods were so impressed with this they convince Enil to make him and his wife immortal.) **,**

**163 the gods gathered like flies round the sacrifice.**

* 1. The Gilgamesh & Noah Flood “Which is Myth?”

First let us judge each narrative at face value and consider *which* narrative seems more believable. Here the Bible narrative must be the more credible choice.

The flood epic aside, the [other] 125 pages of Gilgamesh tales within which the flood epic is included are filled with fanciful events and figures such as scorpion men, and seems to be have written with an entertainment purpose as opposed to an actual historical account. The biblical account on the other hand includes many seemingly “unnecessary” details such as the exact number of days, number clean and unclean animals, exact dates [even the month and day] and depths of the water and thus reads much more like a historical account. Myths however tends to start as a historical event and then develop in time [through retelling] into the more embellished form or “myth” but rarely does this process occur in reverse, where an untruth or “myth” becomes more refined and factual over time. This ‘methodology’, while not proof by any means favors the bible version as being the more likely *original* “history” and The Gilgamesh Flood Epic the more embellished “Myth” version of the bible. In short if the Genesis author(s) *did* use the Gilgamesh epic as their source it would require a very elaborate set of lies to end up with the bible version, many [details] of which simply are not needed to convey the concept like exact days of the months. Further, the flood is taught by Jesus in the New testament [thus in essence ‘referenced’] where Jesus stood firmly on the historicity and likened it to end of times (Matthew 24:36–44). If the Genesis Flood never happened in any form, we have a big problem accepting the rest of the bible as truth, at least for Christians.

Even if we entertain the possibility of the Gilgamesh as being the progenitor version, only the Biblical Ark size, shape, function, build and animal loading time, and flood duration could occur within the laws of nature. The Gilgamesh Ark would be seemingly unstable because it was a cube and might just “tumble” in the rough seas whereas the Noah Ark actually is in agreement with modern day ship designs. This comparison is summarized in Table 1 where it can be seen that only the Ark dimensions closely correlate to the modern version.

**Table 1: Dimensions of Genesis and Gilgamesh Ark v. Wyoming Schooner1**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Wyoming1** | **Noah Ark** | **Gilgamesh Ark** |
| **Length (ft)** | 450 | 450 | 200 |
| **Width (ft)** | 50 | 75 | 200 |
| **Depth (ft)** | 33 | 45 | 200 |
| **Ratio L:W:D** | 9 : 1 : 1.5 | 6 : 1 : 1.7 | 1 : 1 : 1 |

1 The Wyoming built in 1902 is the largest reported wooden ship ever built. The Wyoming was built of pine and had iron strapping supports and buckled in rough seas and needed continuous bailing. The Ark was bult of gopher wood with a tensile strength much superior to pine or oak. Also use of other metals as support can not be discounted.

The Gilgamesh Ark also seems to have been loaded in an impossible time frame namely 7 days- see later discussions on loading of animals. Finally, just because we have a documented *written* copy of the [Gilgamesh] version on tablets that pre-dates the bible’s *written* version in no way means the latter copied the former. Firstly, no one can say if an older copy of the Bible version didn’t at one time exist that is now lost. Using this logic had we found *that* copy [of the bible’s version] first we should assume Gilgamesh then copied the bible. Second, the biblical version, as true for the whole Tanach, was believed to be an oral history excruciatingly preserved in every detail handed down by the Hebrew Patriarchs. Finally, even if no written or oral version existed, God could have [also] breathed the words or “history” through Moses.

* 1. Dating the Gilgamesh & Noah Flood

Regardless the question of which event could have occurred first. If we accept Gilgamesh lived c. 2900-2700 BC this would have pre-dated Noah according to Masoretic or Christian flood date of 2347 BC [Creation 4004 BC] by about 400 years meaning a) the Gilgamesh flood was real and happened first and was thus not copied from the bible, or b) the Gilgamesh Flood [with Gilgamesh as main character] was made up later [possibly based on the bible flood] and is thus the “Mythical” version. Note- While the Gilgamesh character lived some 400 years before the flood [Masoretic dating], the earliest written evidence we have of the Gilgamesh Flood Epic occurs 2100-2000 BC some 300 years after the Masoretic flood date of 2347 BC meaning the Gilgamesh version fits best as the “embellished” mythical version of the historical [earlier] bible flood narrative. The Septuagint LXX dating which starts creation earlier at 5554 BC places the flood at 3298 BC would in this case pre-date Gilgamesh and thus also be supportive of a Biblical event having occurred first thus again, the Gilgamesh version is the myth. In summary, either way we look at the evidence favors that the Gilgamesh version is the mythical one.

In conclusion, if the bible as shown here seems to be the more credible source, why is the “prevailing” scholarly assumption, as we saw in Wiki, that the bible copied from Gilgamesh and not the other way around.

1. the Cases Against a Global Flood

As a scientist I took the position here of reviewing the more “implausible” claims with an open mind to see if the events described are feasible using only God’s natural laws (no divine intervention). While I summarize the more popular cases I must defer to the “real” experts that precede me, such as John Woodmorappe “Noah's Ark: A Feasibility Study”. His analyses [as well as many others on the internet] address just about every conceivable question Christians and critics have ever asked about the feasibility of the Ark and its claims. Please feel free to contradict my findings and/or inform me of any of your “unsolved” cases. I will be happy to evaluate them for a natural law solution.

* 1. All the Animals…
		1. Fitting all the Animals on the Ark

Plenty of folks smarter than me have presented complicated calculations to prove that the Ark would have been more than adequate size for this task so I will not revisit this topic. Woodmorappe [and others] estimate 8,000 “kinds” where the designation of “kind” is thought to be much broader than the designation “species.” There are over 400 dog breeds all belonging to one species (Canis familiaris). I am not a biologist but as a scientist I do see a bit of a challenge achieving genetic diversity in a very short say 4000 years from one species. A fox, wolf, and shih tzu or dachshund are of same specie but how all could have evolved so quickly. Same argument for the house cat which is the same specie as the lion. Insect turn-over might allow such diversity in such a short time but others, like elephants, with nearly 2 year gestation period, seem unlikely. Luckily for us, he [and others] have shown by careful calculation even if we allow ALL “kinds” [estimated by some to be 17,600] they could easily fit volume and weight wise on the Ark with room to spare for food and water. Also nothing excludes the transporting of infants as in the case of Elephants, Lions, etc, that might as adults pose weight/feeding, or ‘other” issues.

In addition to the question of *fitting* the perhaps bigger question is *how* every animal gets *to* the ark in the first place whether by voluntary or involuntary travel. Flighted birds and insects is “seemingly” an easy one so most people leave it alone but I point out these may be the most challenging category to collect without using divine intervention! But what about penguins? That would be one heck of a “journey”. A “general” response to this question is that unlike the Gilgamesh case, we have time. Recall the [Noah] Ark was bult over 120 years maybe for all we know precisely because of this issue; to find solutions for the polar bear and other distant and /or slower animals to make the journey. I could not resist however calculating the “walking” time for the penguin case:

Speed Penguin: 5.6 mph
Antarctica to Israel: 8,837 miles
Travel Time (8 h /day): 66 days

In fact even the slowest creature the garden snail at 0.0006 mph would travel [and its progeny] over 600 miles in 120 years. Note also nothing precludes Noah from sending out scouts to collect the animals. This said, others point out, that some [animals] are separated by oceans like Australia, and others would not survive the climate changes. Some here argue that 6000 years ago perhaps species such as the polar bear did not exist and has [since] evolved.

For what it’s worth, the

[Book of Jasher](#_DocTools_ScreenTip_2" \o "A book mentioned twice in the Old Testament. It covers the period from creation to Joshua's conquest of Canaan. Notably, it describes the lives of key figures like Adam, Noah, and Abraham, providing extra context and stories not found in the canonical Bible. It's important to note that the authenticity and historical accuracy of the Book of Jasher are debated among scholars and the oldest copy recorded only dates to 1600s whereas other \"certifiable' bible apocrypha like Book of Enoch have been found as scrolls dated to 200 BC. In short it is highly debatable where one should use this book as a source at all.) states that Noah clearly ‘had help’ from God; 1behold I [Lord] will gather to thee all the animals of the earth, 2And thou shalt … seat thyself by the doors of the ark, and all the beasts, the animals, and the fowls, shall assemble and place themselves before thee, 3And the Lord brought this about on the next day, and animals, beasts and fowls came in great multitudes and surrounded the ark.

* + 1. Feeding all the Animals

So again, many others have addressed this question in excruciating details- think excel spread sheets-so I provide here only a summary of those works. The Ark narrative requires keeping a minimum of one pair per “kind” [and seven pair clean] alive for 1 year on the Ark. The fact that only one male and one female of each (clean) kind was called out [no extras] seems very optimistic to me. Woodmorappe and others have shown the calculation whereby there was plenty of room for both the animals and the food and water. He also showed by calculation that the eight on board could manage this process albeit by making a few divine-like assumptions like animals helped with the tasks. This aside, others bring up the diverse food required, from bamboo for Pandas to hay, to meat for the carnivores [however recall during the antediluvian period NO animals even man ate meat not until post flood].

**Conclusion:** We examined the fitting, loading, and feeding of the animals into Noah’s Ark. The “fitting” of all animals on the Ark seemed feasible using natural laws of science. Regarding the loading, while an Antarctic or Australian snail may provide a challenge it would seem the Penguins could have made the journey with plenty of time to spare. The Gilgamesh Ark building and loading period was only days thus could NOT have been feasible however the bible allowed enough time “120 years” to gather and load all animals. This 120 years may not have been “just” a coincidence or “just” to leave enough time for man to reform as claimed. In fact this could be yet another example of a seemingly unnecessary fact that at first analysis does not make sense yet after some study in fact does makes sense. Note in the bible such cases are found almost continually! Were the authors if lying really this smart and devious? Why not just say Ark was loaded in 30 days or 100 days? Maybe because that was not what happened. Maybe it took 120 years as claimed to organize the whole project!

In summary our analysis has not uncovered any “ugly” fact that would disprove the possibility that the animals could have been gathered, boarded, and maintained for one year. We did not however address the problem that no ‘ready’ food was available as one year of salt water would likely kill all plant life on earth. In conclusion, while “the animal issue” may be “feasible”, this may be one of those cases where we could have used a little divine intervention.

* 1. Water Covering the “Highest” Mountain

“ **20**Fifteen cubits [25 feet] above did the waters prevail and the mountains were covered up.” So let’s perform our “thought experiment” of whether there is enough water. Here are some calculations on the matter most of which I borrow from others. If all atmospheric and ground water simultaneous flooded earth sea level would increase from 0 to 138 meters (453 feet). Israel lies at average 1667 feet so there is not enough water in that scenario to flood Israel. NOW this analysis, as did all others I found, assumes the geology of the ocean did not change thus does not “use” the ocean waters in the calculation only the ‘excess” above and below. Using data from the USGS if the earth were a smooth shell [no mountains same elevation] the oceans alone would cover the planet to a depth of 8,200 ft. (2,500 m), so clearly this problem is more complex than most of the secular claims that “there simply is not enough water”. When we take into consideration [as the bible in fact claims] that wide-spread “rearrangement” [think plate tectonics] of [ocean] geology took place it would seem very possible enough water exists. Furthermore the 25 foot [depth] statement does not tell us for how long this depth was achieved. One could envision Tsunami like waves that take out all creatures then recedes. In fact there are numerous counter-arguments to debunk the claim that not enough water on earth exists to cause a world-wide flood.
Note: Arguments like covering the top of Everest [29,000 feet] could never have been achieved has no relevance for me. Maybe by ‘mountains covered’ in verse 20 it is meant where humans live on mountains. I see no reference in the bible to mount Everest.

Calculations:

Earth Water Volumes (USGS in Km3)

Ocean 1,338,000,000
Frozen 24,064,000
Ground 23,400,000

Total 34,594,000

\*Per USGS if all frozen water [24,064,000] on earth melted sea level would increase from 0 to 70 meters (230 miles). To get total rise in waters I thus added ground water [23,400,000] to this and got ~ 2 x or 138 meters (453 feet).

**Conclusions**: If we assume ocean bottom topography remained unchanged and only involve non ocean water sources from above and below we saw only a *change* of ca. 453 feet of sea level thus insufficient water. We also provided data from USGS that if the world was smooth the depth across the world would be over 8200 feet (2.5 Km or 1.5 miles) and this latter calculation would be more than enough water to kill all living things if we assume the entire surface of the earth was rearranged during the flood, which in fact in fact the bible supports. Thus in order for this hypothesis of world-wide flood to “hold water” it requires we revise our hypothesis to include “rearrangement” of ocean floor and/or Plate tectonics and/or some sort of Tsunami type event. The latter [tsunami] is not an attractive idea as a wooden Ark may not fair well. I am not a geologist but I can only guess that changes in the earth’s continental plates might not be consistent with accepted geology over the last 6000 years. Obviously much more work is indicated here but such a world destructive flood seems as feasible so long as geology science would allow the required 'rearrangement' in ocean topography.

Note: The bible statement “so that all high mountains were covered 15 cubits” does not have to mean “the” Mount Ararat at 17,000 feet is where the Ark landed. Ararat in fact referred to a region thus many surmise the Ark landed more like in Turkey in the hills above the Tigris-Euphrates basin.

* 1. Genetic Diversity from "Six People & Two Animals"

By the 17th century believers were faced with the issue of reconciling the global distribution of species with the Genesis account such that all human and animal life had sprung from a single point on the slopes of Mount Ararat. One obvious answer is that following the destruction of the Tower of Babel man spread out and took the animals with him yet there are issues with this hypothesis. In 1646 Sir Thomas Browne wondered why the natives of North America would take rattlesnakes with them [to America] but leave the horses behind. One influential theory to rationalize the specie diversity [today] versus the “starting point” held that the biblical Ararat was striped with varying climatic zones and as the climate changed in the world the associated animals moved as well eventually spreading to repopulate the globe. Furthermore, if all species were re-established from Noah after the flood would not there be a rather consistent distribution or spread of species in the world? How do we explain isolated islands and continents like Australia, Madagascar, Galapagos Islands, with very “unique” species. The Galapagos are home to numerous species found no where else on earth like the great Tortoise. The Komodo dragon is only found on isolated Philippine islands. Did Noah collect and redeposit these oddities to these islands if so how did he get them there? Thus while ‘feasible’ ‘Perhaps’ [I am not a geneticist], a more consistent hypothesis is the current science, namely they were spit off hundreds of millions of years ago from mainland.

* 1. The Egyptian Pyramids

There is general acceptance among scholars that the Great Pyramids were built around 2550 BC. The Christian and Hebrew “Masoretic Text” accepted dates for the flood of ca. 2347 BC are therefore about 200 years *after* the Great Pyramids. The pyramids however show no evidence of water infiltration and the fossils [associated with the flood] are many feet BELOW the pyramids. Furthermore “Egypt” was founded by Mizraim, Noah’s grandson born to Ham *after* the Flood so Mizraim’s descendants could not have built the Great Pyramids of Egypt until after the Flood.With all this evidence, the Great Pyramids are clearly a post-Flood structure. Accepting this as truth we are left with but three possible outcomes, 1) the flood did not occur, 2) The flood did occur but not in Egypt, 3) the pyramid dating is wrong, or 4) the biblical [Masoretic] flood dating is wrong. The first and second case needs no explanation as it is self-evident. The third case, that the Pyramid dating is in error, which is put forth by many Biblicists, might be reasonable if it were not just a 2550 - 2347 = 200 year correction however some pyramids were earlier in 2630 BC = 280 year error. Another strike against this idea is per the Bible we must allow time for Mizraim to be born, grow up, establish Egypt as world power, and build the pyramids. Per the original Hebrew Masoretic text, the Biblicist accepts King James Bible / Ussher date given for the “establishment” of Egypt as 2188 BC so we are now talking about a 2630 BC [earliest pyramids] minus 2188 BC [establishment of Egypt per Ussher] is now a 400+ year error for the pyramid dating. Such an error in the Pyramid [as well as the associated Egyptian King List] dating would require the rewriting of many hundreds of years of recorded ancient history not to mention invalidate our scientific and archaeological methods of dating. The most satisfying solution I see where we can keep intact BOTH our archeology and science as well as the full authority of the bible, is #4, namely to invoke an earlier flood date than the Masoretic given date of 2347 BC. The Septuagint timeline places the flood at 3298 BC or some 700 years before the pyramids. In fact there are many alternative creation dates that are at least 400 years earlier than the Masoretic/Ussher dating which would allow the flood to occur before 2600 BC, Sumerian being another. The Septuagint is chosen as it is generally considered second to the original Hebrew text in its use, accuracy, and popularity. Christians in the time of Jesus for example were thought to have used the Greek Septuagint LXX version as few during these times spoke Hebrew. The Syrian Christians also had an earlier date of 5490 BC for creation [and thus the flood]. In fact any sect that proposes creation dates at least 400 years earlier than Ussher/Masoretic would theoretically “solve” this problem.

* 1. Geology Science "The "Ugly" Facts"

The great tragedy of Science," wrote Thomas Henry Huxley, is "the slaying of a beautiful hypothesis by an ugly fact." The following concepts are taken in part from Steven Ball, Ph.D. “A Christian Physicist Examines Noah’s Flood and Plate Tectonics”. The interested reader should read his whole booklet. I herein summarize a few of his more compelling cases several being very clear without the need to invoke any science at all.

* + 1. Effects of Mixing Fresh and Salt Water Life

A massive flood would by sheer definition “mix” all salt and fresh water life meaning fossils would also be expected to be a mixture. They are not. Finally, a massive flood and mixing of waters would destroy all fresh water species and Noah did not take them with him thus from “where” did the fresh water life we have today evolve?

* 1. Creation Science

There exists for those unaware an entire science which takes as their premise the biblical infallibility thus a global flood did occur less than 6000 years ago and did wipe out all life on earth. As a scientist I have nothing against proposing a new theory or hypothesis that may at first see, implausible. In fact science is little different. We also propose ideas that at first appear implausible, i.e, Einstein and time travel. The difference is however if we are to use the word “science” our theories must [down-stream] be supported by All facts not just “some”. In short if we can’t “sell” our hypothesis to the larger scientific community then it has not risen to the high standard of science. In my opinion this is the case here. To be fair however I will present some elements from their position.

**Whitcomb and Morris's “The Genesis Flood”**

The Presbyterian and Reformed Publishing Company of Philadelphia published Whitcomb and Morris's “The Genesis Flood” in February 1961. The authors took as their premise biblical infallibility: "the basic argument of this volume is that the Scriptures are true".

When an Indiana school decided to use the book as their biology text, the Hendren v. Campbell district court case banned its use in public schools. Judge Michael T. Dugan, II, described it as "a text obviously designed to present only the view of Biblical Creationism in a favorable light", contravening the constitution by promotion of a specific sectarian religious view. As a tactic to gain the same scientific status as evolution at the Creation Research Society board meeting in the Spring of 1972, members were told to start using "scientific creationism", a phrase used interchangeably with "creation science". The main ideas in creation science are: the belief in "creation ex nihilo" (Latin: out of nothing); the conviction that the Earth was created within the last 6,000 years; the belief that mankind and other life on Earth were created as distinct fixed "baraminological" kinds; and the idea that fossils found in geological strata were deposited during a cataclysmic flood which completely covered the entire Earth. As a result, creation science also challenges the commonly accepted geologic and astrophysical theories for the age and origins of the Earth and Universe, which creationists acknowledge are irreconcilable to the account in the Book of Genesis.

Addressing a complete new set of geology let alone over-turning the science of Astronomy: Big Bang Theory, and the Theory of Evolution, is beyond this scope as well as my expertise. What I can say is the [far] greater global scientific community is not attracted enough to these ideas to even consider them and devise experiments to test them. My particular experience after 30 years as an experimentalist is if you propose “real science” it will attract enough followers to at least prove it one way or the other. If your science/hypothesis can’t gain enough traction in a scientific community filled with scientists then I suspect your claims either don’t hold water OR you are so advanced in your thinking we don’t yet understand your position. I will let the readers decide. I can however state the following MUST be TRUE for Creation Science to be correct. To be correct we will need to discard:

**Radiometric Dating**: Mainstream science relies on this such as Carbon (13C) and other isotope dating techniques verified by corroborating archeology, tree ring analysis, and even written history.

**Fossil layering “stratifications”**: The fossil record correlates [also] to Carbon dating – see above – and demonstrates a clear succession of life forms from primitive layers “things that are “not” woolly mammoths” to more recent strata higher up which, you guessed it, do contain mammoths. The creationist counter-claim here seems opposite to basic logic. The Creation Scientist suggests a “sorting” took place as all things settled. Remember a global flood requires all fresh and salt water life is MIXED equally thus how both the salt and fresh water organisms would separate up/down and left/right as well as separating into different eras is unclear to me. What we find is a logical deposit of older under and newer above and fresh water fossils in one place and salt in another, not “mixed”.

**Genetic Evidence**: The distribution of species around the world, as well as genetic evidence, supports the theory of evolution and common ancestry.

**Flood Geology**: We have addressed this. The sheer volume of water required for a global flood as described in the Bible would have left behind unmistakable geological traces that are not observed.

In summary, the Creation Flood Science perspective is largely based on a literal interpretation of religious texts, whereas mainstream scientific views are based on empirical evidence, including radiometric dating, the fossil record, genetics, and geological processes. The two perspectives offer fundamentally different explanations for the Earth's history and the diversity of life on it.

* 1. A “Global” Mesopotamian Flood?

Considering the over whelming evidence against a true “global” flood having taken place let’s now consider that the world according to Noah was not the entire globe rather was more limited.

* + 1. Bible Interpretations of "Global"

The Hebrew word for earth “erets” is the same word as for land, ground, field, or even Nation. From Steven Ball, Ph.D.: “we must be cautious concerning what the author was intending to describe. Otherwise we easily reach the wrong conclusions. For example the description of the famine in Genesis 41 the Hebrew writer describes the extent of the famine. Verse 54: “and the seven years of famine began to come, just as Joseph had said, then there was famine in all the lands (erets).” Verses 56 and 57 tell us “When the famine was spread over all the face of the earth (erets)...” and “And the people of all the earth came to Egypt to buy grain from Joseph, because the famine was severe in all the earth (erets).” Are we to interpret this to mean that the famine existed throughout all continents of the earth as we know it today? Are we to infer that the American Eskimos and Indians, the Australian Aborigines, the Chinese and Far East Islanders all came to Egypt to buy food? Not many Bible scholars would insist on this.” Thus in summary, “All the earth” in the Noah flood narrative, while “true” to the Hebrew writer, may not have included the whole earth since they did not know of it. Accepting this premise would allow us to consider the possibility of a regional flood.

* + 1. Flood Survivors- the Flood did not Kill All

The Nephilim were stated to have survived the flood and lived in Canaan yet this [would] counter God’s words: “and behold I am bringing the flood water upon the earth to destroy all flesh in which is the breath of life…” This would seem to indicate the flood may not have reached as far as Canaan as these human like beings were reported in many cases after the flood in the bible.

* + 1. History v. The Bible [“Masoretic v. Septuagint Dating”]

After Noah’s Ark landed in the north west Mesopotamia mountains of Ararat it is stated they settled in the Land of Shinar “country of two rivers” or Mesopotamia. The Septuagint [flood] timeline allows around 500 years for a Post Flood “rebirth” of Mesopotamia until the Tower of Babel. Ussher dating however leaves only 99 years to establish Tower of Babel “maximum urban” achievement thus seems less possible. Furthermore the Masoretic Flood dating requires a complete annihilation on all mankind in the middle of unified and huge Akkadian empire which clearly did not happen. Table 1 provides a side by side comparison of Septuagint and Masoretic bible dates versus the Flood and Tower of Babel and history of the times.

**Table 1:** **Flood & Tower of Babel: Septuagint-Masoretic-Historical Dating**

|  |
| --- |
| **Recorded Archeology History** |
| **Septuagint LXX**  | **James Ussher (Masoretic Text)** |
| **5445 BC** | **Creation Adam & Eve** | **4004 BC** |
| **▼** | **▼** |
| **3298 BC**  | **Noah’s Flood** | **2347 BC** |
| **▼** | **▼** |
| **2850 BC**  | **Tower Babel**  | **2248 BC** |
| **▼** | **▼** |
| **448 years from Flood to Tower Babel**Early Dynastic Period I -poorly known relative to periods that follow -mythical kings such as Lugalbanda, Enmerkar, Gilgamesh, and Aga ruled over Mesopotamia.  | **99 years from Flood to Tower Babel**Akkadian Empire at peak under Sargon of Akkad (2334-2279 BC) -urban city-states with mature ziggurats as a result of many cycles of war and conquest and slave labors |

Based on this analysis, a local flood seems possible using the Septuagint timelines. That’s said, Septuagint dating requires that a Tower of Babel, city states, and urbanism existed much earlier, in the late Ubaid early dynastic period, or about a thousand years earlier than accepted history and archeology.

If we use instead The Masoretic Text / Ussher dating more obstacles emerge to support a flood during this period. Archeologically this era is well documented as the Akkadian empire under Sargon I (2334-2218 BC) yet this period shows no break in history that might be expected for such a flood. Biblically it would also require either Nimrod or Ashur [depending on your position here] to have established “Babel, Erech, Accad and Calneh, and Nineveh” all in just 99 years [time from flood to Tower of babel] starting from just 8 people. In summary using Ussher dating of flood 2347 BC a local [or global] flood does not seem likely as it would have disrupted or destroyed a well established and documented contiguous history of Sargon I from 2334 to 2218 BC.

1. summary of noah’s flood

In this study of Noah’s Flood, Genesis Chapters 6-8, as to the question of whether the flood was “global”, and destroyed “all” life on earth some 6000 years ago, I present many obstacles within the confines of human logic, natural science, and historical fact. Besides the ’big issue’ of no recorded breaks in history elsewhere in the world, some of the more significant other hurdles presented were i) the mixing of salt and fresh water life thus killing off fresh water life- which Noah did not bring along, ii) such a “mixing” of all land, sea, and fresh water animals at the time of the flood should be born out by a world-wide homogenous or “mixed” fossil layer of which none exists. Besides these “individual” issues which I agree can be explained by instituting Creation science, perhaps the bigger “non” solvable issue with the global flood narrative is that even if we can explain each [of these] events we run up against a NUMEROUS collection of [such] facts. Thus even if all the global flood issues are explained it would still fail the court room criteria of “proven beyond a reasonable doubt”. Of course jury selection here would be critical in determining the outcome!

As I feel this argument will never be successfully “litigated”, I prefer instead to return my focus to scripture. In this regard the Masoretic flood dating of 2347 BC and Tower of Babel just 99 years later posed the most obstacles. Such a timeline would have destroyed a well-documented Mesopotamian Sargon I [local flood] and Egyptian Pharoh [if we include Egypt] history backed by both archaeology and written [tablet dated] history. Clearly no such flood reporting or archeology disruption is found. And even if this is explained, it remains, according to the bible itself, that we must in a mere 99 years re-establish to urban status the cities of Babel, Erech, Akkad, and Nineveh from 8 people. We did show however, that while inconsistent with current period archeology, the application of a Septuagint [or other earlier flood dating] would allow the possibility for a Noah like flood since little archaeological evidence exists during this period that would preclude it.

As with many Bible interpretations it seems the last one you read makes the most sense so here is mine. The Noah Flood scripture is best supported by accepting a more limited regional flood as opposed to a global [as we know it today] flood and if regional, a Septuagint flood date of 3298 BC, followed by a 400 year period to Tower of Babel, allows enough time for Asshur/Nimrod to establish “Babel, Erech, Accad and Calneh, and Nineveh”, best fits current archeology and recorded history.